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Revised 8/2/93

SUBJECT: Forwards Rev 25 to radiological emergency plan & revised EPIPs,including 20101, "Duties of Emergency Coordinator," 0-EPIP-20112, "Communications Network" & 20133, "OSC Activation & Operation."

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L-93-177
10 CFR 50.54(q)
10 CFR 50, Appendix E

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

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Emergency Plan Implementing Procedures and
Radiological Emergency Plan - Revision 25

Florida Power and Light Company (FPL) has issued Revision 25 to the Turkey Point Radiological Emergency Plan and has determined that the revision does not decrease the effectiveness of the plan. Attachment 1 provides a summary of the Turkey Point Radiological Emergency Plan Revision 25 changes. Pursuant to 10 CFR 50.54 (q), Attachment 2 provides one copy of the plan.

In accordance with the requirements of 10 CFR 50, Appendix E, Attachment 3 provides one copy of the following revised Emergency Plan Implementing Procedures (EPIPs) (Attachment 3):

Number	Title	Implementation Date
20101	Duties of Emergency Coordinator	06/15/93
20112	Communications Network	06/15/93
20133	Operations Support Center (OSC) Activation and Operation	06/15/93

EPIP 20101 was revised to incorporate the following changes:

1) modifications for the plant page audibility upgrade,
2) deletion of the requirement to merge the plant page system with the fossil plant system,
3) update information regarding the Metro Dade offsite medical assistance, and
4) incorporate changes to the Emergency Classification Table.

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EPIP 20112 was revised to reflect the modifications for plant page audibility upgrade. EPIP 20133 was revised to incorporate NRC and participant comments from the 1992 Evaluated Exercise.

Should there be any questions please contact us.

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Nuclear

TFP/OIH

Attachments

cc: Stewart D. Ebneter, Regional Administrator, Region II, USNRC (2 copies)
R. C. Butcher, Senior Resident Inspector, USNRC, Turkey Point Plant (no enclosure)

Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Emergency Plan Implementing Procedures and
Radiological Emergency Plan - Revision 25

ATTACHMENT 1

SUMMARY OF TURKEY POINT RADIOLOGICAL EMERGENCY PLAN - REVISION 25 CHANGES

ATTACHMENT 1

Summary of Turkey Point Radiological Emergency Plan, Revision 25 Changes

1) Definition of "annual" is added to Section 1.2. This definition is unchanged from past Plan and procedure practices.

2) Addition of "(EOPs)" to definition of Emergency Operating Procedures.

3) Addition of the National Oceanic and Atmospheric Administration (NOAA) to Section 1.2.

4) Definition of "quarterly" is added to Section 1.2. This definition is unchanged from past Plan and procedure practices.

5) Added "engineering" to technical support provided by Emergency Technical Manager in Section 1.2.

6) Reorganized Table 1-1 on page 1-11 to remove redundancies and make more clear. Did not change the intent of Table 1-1.

7) Added "radiation protection" to Figure 2-1 on page 2-2.

8) Added Monroe County to second paragraph on page 2-5 in the discussion of county response. Monroe County was omitted in previous revisions.

9) Removed Homestead Air Force Base on page 2-17.

10) Reordered Emergency Coordinator actions to better reflect order that actions would occur on page 2-17. Moved "Emergency Coordinator may delegate other responsibilities" to above note to make better sense.

11) Changed Emergency Coordinator to appropriate emergency response facility supervisor for awareness of relief on page 2-18. On-shift and Primary Emergency Teams are generally the same and due to training given to all emergency responders, there is no reduction in response between the two. Turnover in later stages in the emergency would be under the indirect knowledge of the Emergency Coordinator through the facility supervisor.

12) Corrected "Assistant Nuclear Plant Supervisor" on page 2-20.

13) Clarified wording in first paragraph on page 2-21 to indicate that the plant fire group is not a department but a "fire brigade".

14) Additional instruction has been added to the EOF description of page 2-33 to indicate that alternate EOF locations may be used in the case where a natural disaster has impacted EOF operation.

15) Addition of description of company radios and other communications have been incorporated into the EOF description on page 2-33. The removal of "direct line to the Control Room and TSC" does not reduce the communication capability between the site and EOF.

16) The following changes to Table 3-1, Emergency Classification Table, are proposed:

a) Section 2, page 3-6;

- Add "ONLY a" to caution in Alert, Site Area Emergency, and General Emergency to better clarify that LOCA is not to be used for classifying a steam generator tube rupture.
- Re-align "OR" in Unusual Event.
- Change caution in General Emergency to Consult Table 5-1 to apply to correct E-Plan table. (Table 2 is correct in EPIP 20101.) This change appears throughout Classification Table.

b) Section 10, page 3-14;

- Under Alert, add "Severe loss of control of radioactive materials as indicated by either A, B, or C:"
- Add "unexpected" to A.

Change is recommended by Training to provide more direction to operators. Questions concerning this classification have been raised, and proposed change provides clarification. This change does not decrease the conditions in which the Alert classification would be made.

c) Section 12, page 3-16;

- Add "DC" under item C for Site Area Emergency to clarify criteria.

d) Section 14, page 3-18;

- Replace HAFB with NOAA/NWS.

Change is made since HAFB weather information is no longer available 24 hours a day. NOAA/NWS has the capability to give accurate weather information at the site through the use of Doppler radar. All information that was previously obtained from a source 6 miles from the site can now be obtained for the conditions present onsite. This change does not decrease the capability to provide applicable backup weather information. The use of NOAA/NWS does provide much more accurate onsite weather information.

e) Section 15, page 3-19;

- Change A in Alert Emergency to:

  Confirmed hurricane warning with maximum projected onsite winds in excess of 200 mph.

- Change A in Site Area Emergency to:

  Confirmed hurricane warning
  AND
  Maximum projected onsite winds in excess of 225 mph
  AND
  Plant not expected to be in cold shutdown prior to the onset of hurricane force winds.

A note will be added for the Alert and Site Area Emergency stating that "if accurate projections of onsite wind speeds are not available within 12 hours of entering the hurricane warning, classify the event assuming onsite winds will be experienced based on the current hurricane track."

This change keeps an Alert or Site Area Emergency from being declared just because the site is in the hurricane warning area but will not experience high hurricane force winds. This change also allows the plant time after a hurricane warning to place the units in mode 5 prior to declaring a Site Area Emergency. The previous wording in the classification would call for an SAE as soon as the hurricane warning was issued, (as early as 24 hours before landfall). In both cases, the unnecessary declaration would put undue attention on the site by governmental agencies when more important public safety matters would need to be addressed. Response by plant staff will be the same regardless of the classification. This change does not decrease the effectiveness of the E-Plan.

f) Section 20, page 3-23;

- Rearrange "OR" throughout unusual event criteria.

17) Add "approximately" to the 15 minute reference for Division of Emergency Management notification.

This is in affect in other Region II sites and addresses the situation where the use of clocks that are not exactly synchronized record times that are just beyond the 15 minute time period. The intent of State and County notifications remains as soon as possible after classification and the procedural and equipment capabilities for 15 minute notifications are still in place. This change does not reduce the practice or capability to make notifications to the State and Counties within 15 minutes of classification.

18) Remove reference to PA cross connect capability on Units 1 & 2 side. Add reference to how fossil plant is notified of nuclear events on page 4-10.

Per discussion between John Kirkpatrick and Ross Butcher and Al Gooden, (NRC) removing the cross connect capability was acceptable. Administrative controls are in place or are being addressed in EPIP changes. A memo documenting the acceptance of this change by the NRC is attached to this letter.

19) Replace HAFB with "directly from National Oceanic and Atmospheric Administration" on page 5-3.

As discussed earlier, the use of NOAA Doppler radar provides actual onsite measurements of meteorological conditions.

20) Replace HAFB with NOAA reference on page 5-6.

21) Remove HAFB on page 5-7.

22) Update onsite population to include child development center, fitness center, and rifle range. Adjust other population to reflect current status on page 5-16.

23) Correct blank space on page 7-3.

24) Change wording on page 7-5 to indicate that E-Plan major elements are tested every 5 years to address IFI 92-07-01.

This clarification addresses NRC comments and closes CTRAC 92-557-34.

25) The letter of agreement for INPO has been updated.

Superseded pages Rev. 23
Emergency Plan
50-250/251
9302220097
2/24/93

TURKEY POINT PLANT

RADIOLOGICAL

EMERGENCY PLAN

REVISION 24

Reviewed by Plant Nuclear Safety Committee Meeting #92-271 Date: 12/29/92

Approved by: J. H. Goldberg Date: 2/1/93
President, Nuclear Division

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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 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 onsite and offsite.

4) Continuing maintenance of an adequate state of emergency preparedness.

1.2 Definitions

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

Company - Florida Power & Light Company (FPL)

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, firefighting, repair, and damage control.

Duty Call Supervisor - A designated supervisor assigned from the nuclear plant staff to provide 24-hour response to any radiological emergency upon notification by the Nuclear Plant Supervisor. He is responsible for notifying 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 Table 3-1, Emergency Classification Table, of this Plan. A radiological emergency at the Plant is classified in accordance with EP 20101 as an Unusual Event, an Alert, a Site Area Emergency, or a 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 Control Officer (ECO) - A designated Company corporate officer or senior manager who will have the authority during a radiological emergency to make policy and expend funds for emergency response activities.

Recovery Manager (RM) - A designated Company senior manager who will have responsibility during a radiological emergency for managing the Emergency Response Organization in the EOF.

Emergency Coordinator (EC) - The title assumed by the Nuclear Plant Supervisor 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 onsite emergency response actions.

Emergency Information Manager (EIM) - A designated Company corporate officer or Company manager who will serve as the principal public spokesman for the Company during a radiological emergency.

Emergency News Center (ENC) - A designated facility for use by the EIM in communicating with the news media.

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

Emergency Operations Facility (EOF) - A designated location from which FPL emergency activities will be coordinated.

Emergency Operating Procedures - 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 activate 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 - 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 Dade County Office of Emergency Management and Monroe County Office of Civil Defense.

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.

Governmental Affairs Manager (GAM) - A designated Company officer or senior manager who has the responsibility for liaison between the Emergency Control Officer and political officials of the local, State and Federal Governments during radiological emergency.

Ingestion 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.

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

Nuclear Division Duty Officer (NDDO) - A designated member of the FPL Nuclear Division Management with responsibility for responding to radiological emergencies on a 24-hour per day basis. He may serve as an interim Emergency Control Officer until the primary or alternates are reached.

Nuclear Division Management Center - that area of the Juno Beach Office that will be manned as deemed necessary by the ECO for assembly of Corporate emergency personnel prior to activation of the Emergency Operations Facility (EOF). The Nuclear Division Management Center is located in the "D" building, 4th floor, executive officer area.

Corporate Emergency Organization - A group of designated individuals from within the normal (non-nuclear plant site) Company organization who may cease normal activities and assume responsibility for augmenting FPL corrective, assessment and protective actions in the event of a radiological emergency at the Plant.

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

Operations Support Center (OSC) - An onsite Emergency Response Facility area where FPL operations, maintenance, health physics, and chemistry support personnel can report in an emergency and await assignment.

Offsite - All property outside the Protected Area.

Onsite - The area within the Protected Area.

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.

Protected Area - The area (within the Owner Controlled Area) occupied by the two nuclear units and their associated equipment enclosed within the security perimeter fence.

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

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.

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

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.

Site - The Turkey Point Power Plant Protected Area.

State - The State of Florida.

State Plan - The State of Florida's Radiological Emergency Management Plan for Nuclear Power Plants

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 onsite facility that serves as a work area for use by technical and management personnel in order to provide technical support to Control Room personnel

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

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 classification (Chapter 3).

3) Notification of offsite 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.

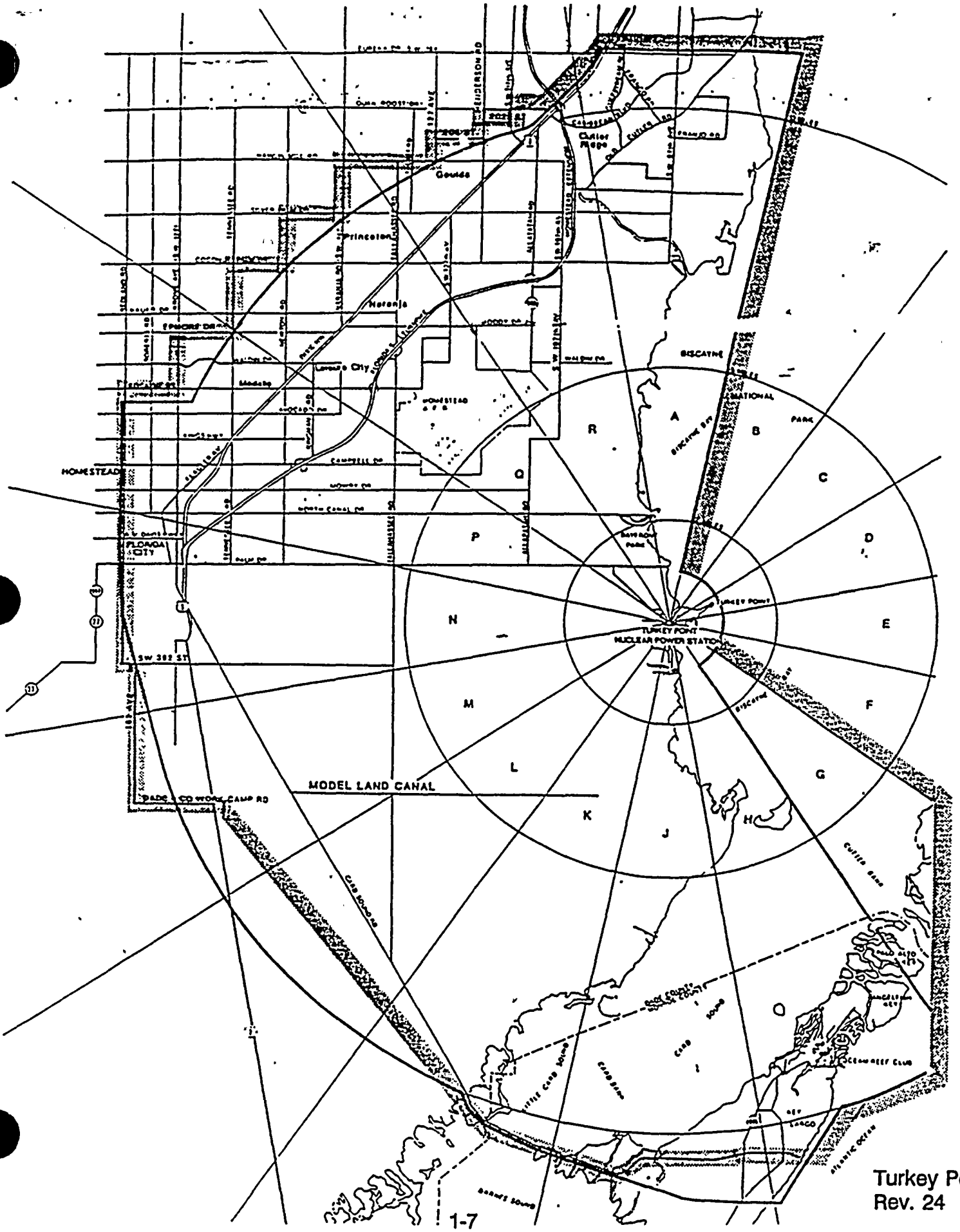
Off-normal events have been separated into the following four classifications of emergencies:

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 title with special responsibilities.

FIGURE 1-1

PLUME EXPOSURE PATHWAY EPZ



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 immediate response and an expanded response reflecting the need for a dynamic emergency response organization 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 expanded response capability, if required. During this phase, the Nuclear Plant Supervisor 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 offsite authorities.
5) Notification of appropriate FPL authorities.

During the expanded response phase, the Emergency Coordinator (for onsite response) Emergency Control Officer (for Corporate FPL and offsite response) will assess the situation and expand the emergency response as necessary. All available company resources (site and corporate) can be mobilized as needed during this period. State, county, and federal response organizations can be become fully operational, as required. Continuing corrective, assessment, and protective actions are underway, 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 onsite, if needed. The training program is designed to maintain the proficiency of the Emergency Response Organization.

The FPL individual in charge of onsite 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 and Corporate FPL and offsite expanded response phases, is the Emergency Control Officer. The individual responsible for Emergency Operations Facility operation during the expanded response phase is the Recovery Manager.

In Dade County, the individual responsible during emergencies is the County Manager. In Monroe County, the Chairman, County Board of Commissioners, provides direction and control during emergencies.

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

1.5 Supporting Plans and Agreements

Supporting plans and agreements are included in the Appendices of this plan. Appendix A, State of Florida Plan, contains a signed agreement by FPL, state and county officials. Additional material utilized in the preparation of the Turkey Point Plan are:

a) NUREG 0654, Rev. 1

b) NUREG 0578

c) NUREG 0737

d) 10 CFR 20

e) 10 CFR 50

f) EPA 520/1 - 75/001

g) Reg. Guide 1.97

TABLE 1-1

TYPICAL SEQUENCE OF ACTIONS

Detection of Off-Normal Conditions

Actions:

- o Individual identifies off-normal condition.
- o Individual immediately notifies Nuclear Plant Supervisor (NPS).

Immediate Response

Actions:

- o NPS diagnose condition and directs initial corrective action to control or mitigate the condition.
- o NPS classifies the condition in accordance with plant procedures. If the condition is classified as an emergency, the NPS through the Emergency Plan becomes the Emergency Coordinator (EC).
- o EC notifies Duty Call Supervisor.
- o EC directs corrective action to control or mitigate the condition.
- o The EC orders mobilization of the Technical Support Center and the Operations Support Center (as required for Alert classification or higher classification).
- o EC initiates necessary protective actions for onsite personnel.
- o The EC mobilizes onsite 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 the Emergency Control Officer. If the ECO or his alternate cannot be reached, the Nuclear Division Duty Officer (NDDO) is notified.
- o Duty Call Supervisor notifies plant management.
- o EC notifies NRC via ENS communications link.

TABLE 1-1

TYPICAL SEQUENCE OF ACTIONS

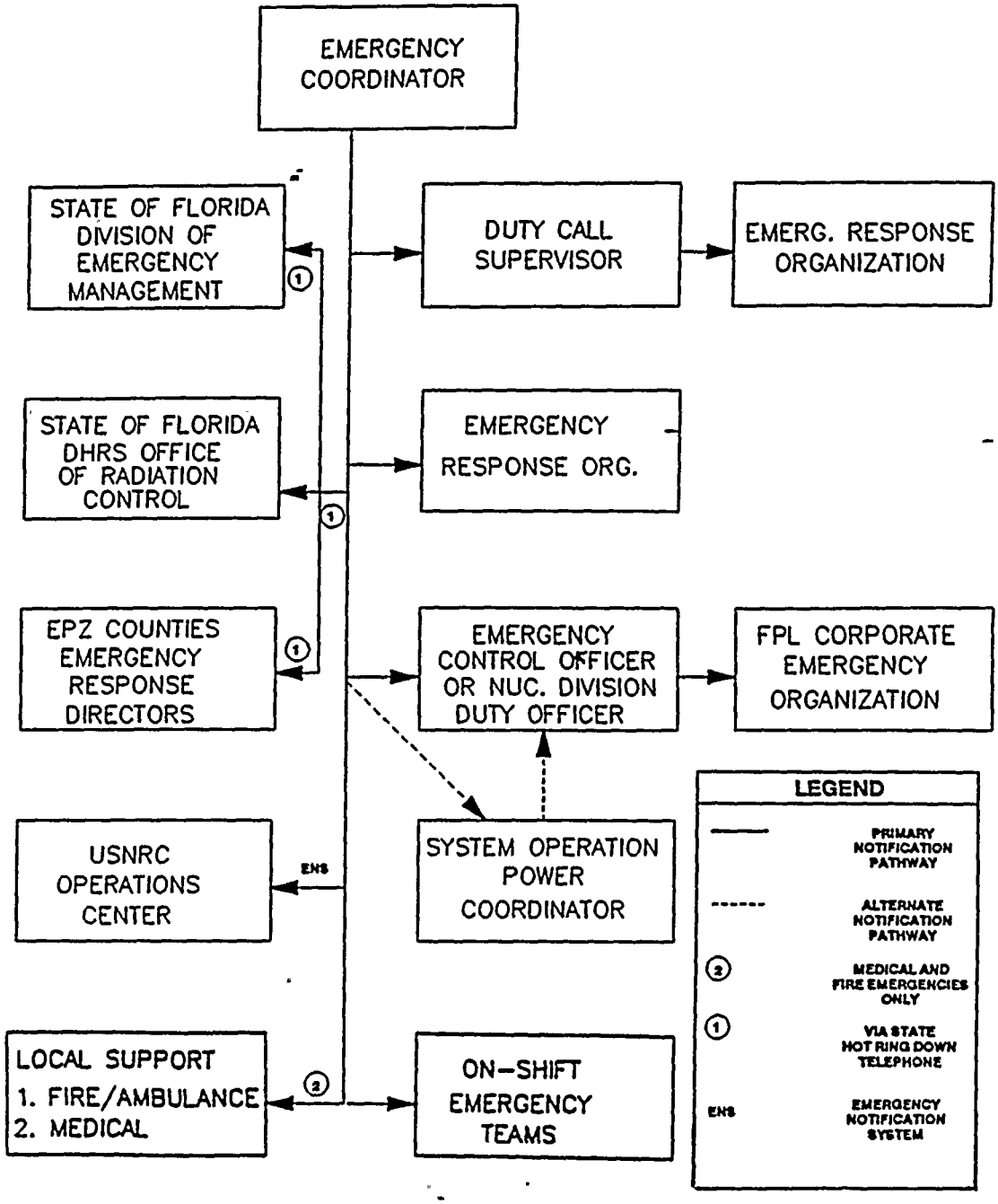
Expanded Response (Alert Class and Higher)

Actions:

- o ECO and RM proceed to Nuclear Division Management Center or the Emergency Operations Facility, as appropriate. RM notifies EC when EOF is operational and assumes responsibility for protective actions and for communications with offsite organizations.
- o EIM proceeds to the Emergency Operations Facility as appropriate and establishes communications with the ECO and Emergency News Center.
- o Once the EOF is operational, the RM relieves the EC of his offsite emergency response responsibilities (including communications with the state and county) and protective action recommendations to the public. The EC can now devote himself 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 RM continues assessment of conditions and control of FPL response until Plant conditions stabilize then closes out with verbal summary to offsite authorities or prepares for further long-term activities.

FIGURE 1-2

INITIAL NOTIFICATION



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 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 onsite.

5) Recommendation of protective action 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.

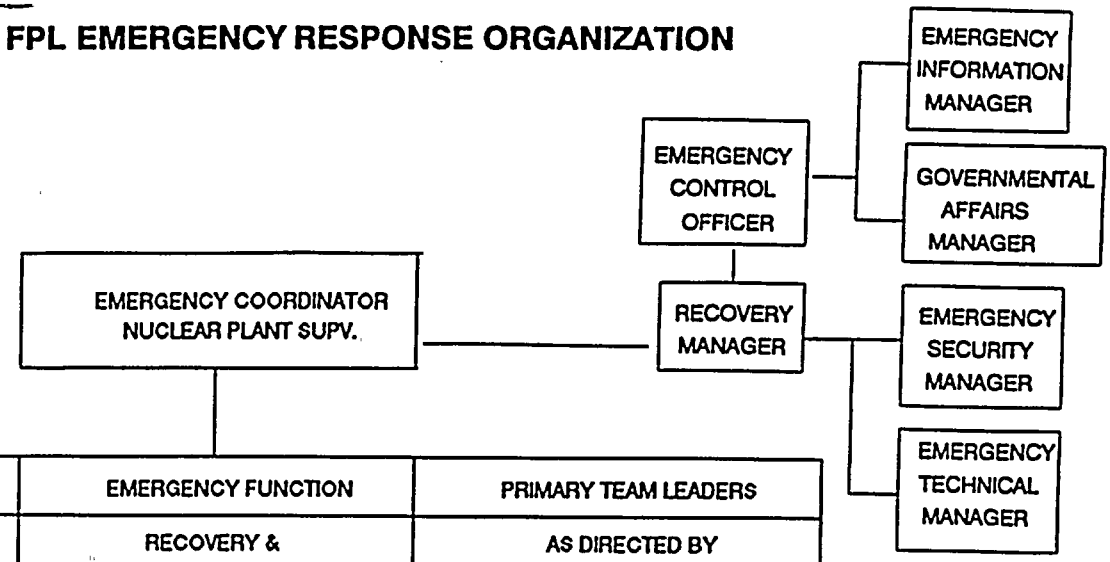
The Florida Power & Light Company Emergency Response Organization is described in detail in Section 2.2 and illustrated in Figure 2-1.

2.1.2 State of Florida 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



ON-SHIFT TEAM LEADERS	EMERGENCY FUNCTION	PRIMARY TEAM LEADERS
NONE	RECOVERY & RESTORATION	AS DIRECTED BY RECOVERY MANAGER
HEALTH PHYSICS REPRESENTATIVE	RADIATION	TSC HP SUPERVISOR
NUCLEAR WATCH ENGINEER / SENIOR NUCLEAR PLANT OPERATOR	FIRE	NUCLEAR WATCH ENGINEER / SR. NUCLEAR PLANT OPER.
CHEMISTRY TECH. / HP RADIATION PROTECTION MAN	FIRST AID	CHEMISTRY TECH. / HP RAD. PROT. MAN
AS DIRECTED BY SECURITY SHIFT SUPERVISOR	SECURITY	TSC SECURITY SHIFT SUPERVISOR
AS DIRECTED BY SECURITY SHIFT SUPV.	SITE ASSEMBLY AREA	SITE ASSEMBLY SUPV.
AS REQUIRED FROM AVAILABLE STAFF	EMERG. RESPONSE (RE-ENTRY REPAIR)	OSC EMERGENCY RESPONSE TEAMS

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 Annex H of 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.

State of Florida Department of Health and Rehabilitative Services

The Department of Health and Rehabilitative Services (DHRS) is the state agency authorized to provide technical support and expertise in Public Health matters.

The DHRS defined responsibilities include:

1) Emergency medical services, public health, and sanitation.

2) Economic and social services.

Through the Office of Radiation Control:

3) Radiological monitoring offsite.

4) Offsite radiological exposure control and protective response recommendations for offsite 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) Transportation of radiological emergency teams.

5) Within their authority, evaluate and exclude individuals from designated public areas.

These services will be provided in accordance with the State Plan (Appendix A).

Other State Agencies

As defined in the State Plan, the DEM can request support as necessary from the following state agencies:

1) Department of Transportation, Division of Road Operations.

2) Department of Agriculture and Consumer Services.

3) Department of Natural Resources, through the Department of Law Enforcement.

4) Department of Environmental Regulation, Division of Environmental Programs.

5) Florida Game and Fresh Water Fish Commission, through the Department of Law Enforcement.

6) Department of Military Affairs.

7) Division of Environmental Programs.

2.1.3 County Response Organizations

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

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

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

Annex Q also includes host plans for Dade County and Monroe County, respectively.

Boards of County Commissioners 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 Dade and Monroe Counties will be reserved and available for use by County Commissioners.

FIGURE 2-2a

STATE, LOCAL, AND FEDERAL RESPONSE BEFORE EXECUTIVE ORDER

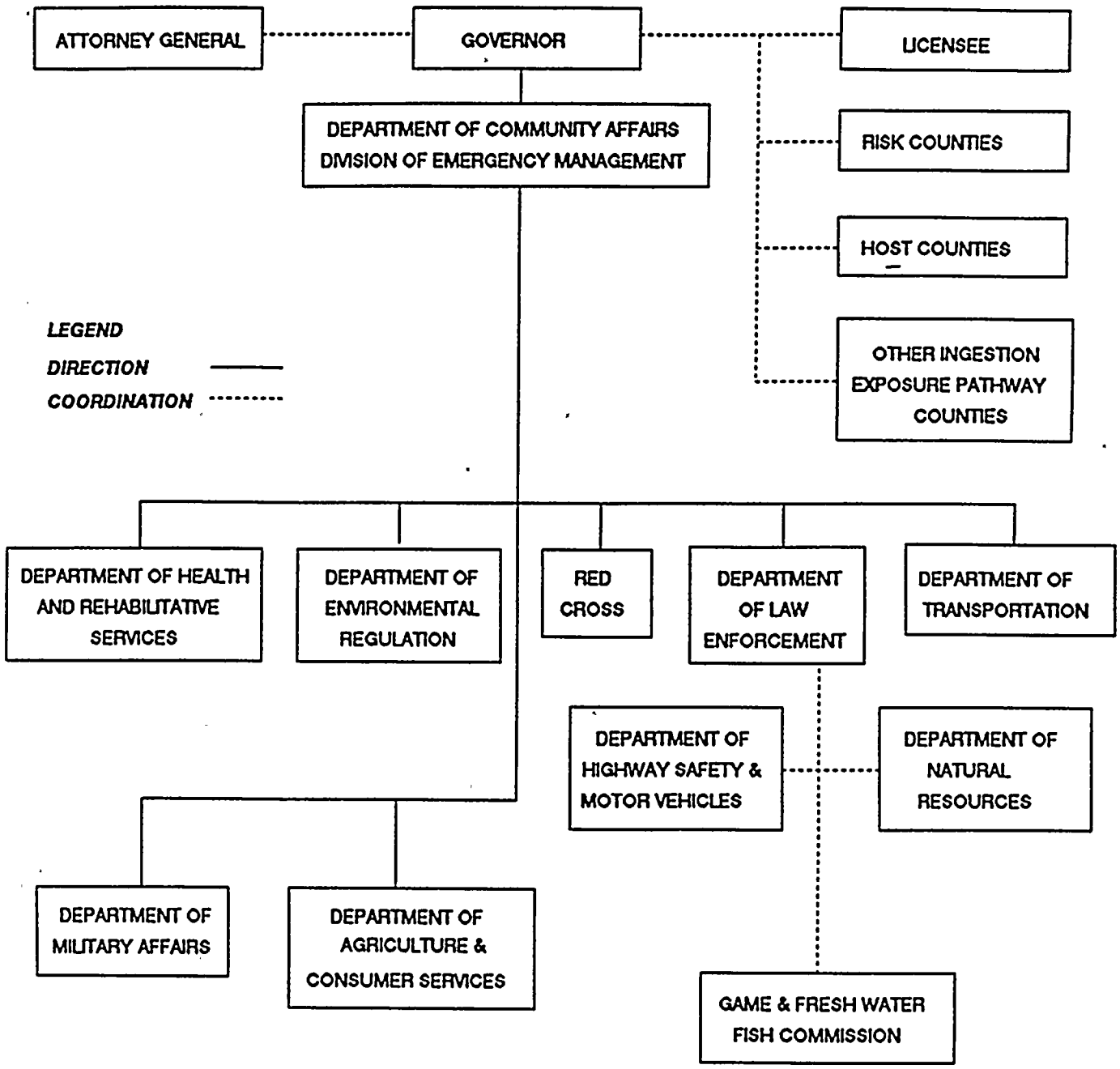
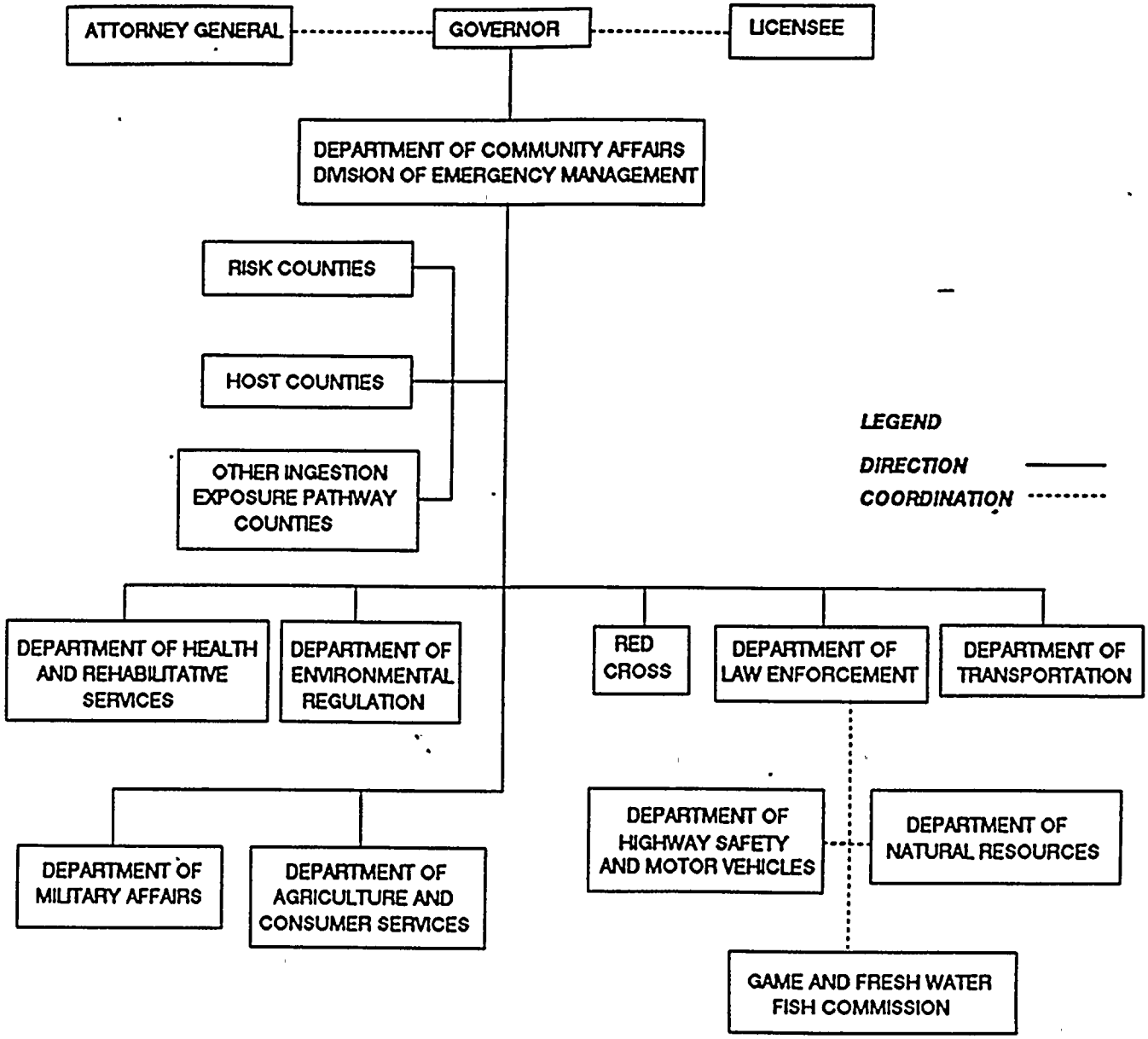


FIGURE 2-2b

STATE, LOCAL, AND FEDERAL RESPONSE AFTER EXECUTIVE ORDER



Decision to implement protective action recommendations will be made jointly by the Dade County Manager and Chairman, Monroe County Board of Commissioners and either the Governor or 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 Dade County Manager and Chairman, Monroe County Board of Commissioners, or their designated alternates. All County personnel and resources will be under the control of the County Commissioners. 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 Section VI and XII to Annex Q. Sections IX and XII also describe hosting responsibilities, including shelter location and operation, and evacuee registration, monitoring, and decontamination.

Responsibility for direction and control rests with the Dade County Manager and Chairman, Monroe County Board of commissioners, unless a disaster declaration under provisions of Florida Statues, Chapter 252 is in effect. If a disaster has been declared, responsibility for direction and control rests with the Governor or Director, Division of Public Safety Planning and Assistance.

The Dade County Office of Emergency Management reports to the County Manager and the Monroe County Civil Defense Division to the Board of Commissioners. 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 Chairman, Monroe County Board of Commissioners, and Dade County Manager have responsibility for overall emergency response planning. County Emergency Response Directors are responsible for actual plan development and updating. Dade County and Monroe County each have an Emergency Operations Center.

Dade County Office of Emergency Management and Monroe County Office of Civil Defense Directors

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

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 offsite areas including warning and evacuation.

3) Communications.

4) Public information.

5) Offsite radiological exposure control.

6) Coordination of arrangements for shelter and feeding of evacuees.

Metropolitan Dade County Public Safety Department and Monroe County Sheriff

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

1) Law enforcement.

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 (Dade County).

5) American Red Cross.

The Metropolitan Dade County Fire Department, by agreement with Florida Power & Light Company (Appendix B) will respond to fires onsite 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 within one hour after identifying the existence of an emergency condition. 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 (onsite activities) and the DEM (offsite activities), the Coast Guard can provide rescue assistance in accordance with their general authority as described in Appendix B.

U. S. Department to Energy (DOE)

Upon request by the DHRS, 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 Annex I Section IV of the State plan. DOE is responsible for coordinating the offsite 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 offsite. 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.

2.2 Florida Power & Light Company Emergency Response Organization

The purpose of this section is to describe FPL's Emergency Response Organization including both site and corporate organization resources. The Emergency Response Organization 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 "immediate" response organization consists of the plant duty shift and other plant personnel as available to be called in from offsite to diagnose the emergency and take corrective actions. The "expanded" response organization includes broader corporate resources which can be made available, if the emergency warrants, to assist in assessment actions, control, and stabilization.

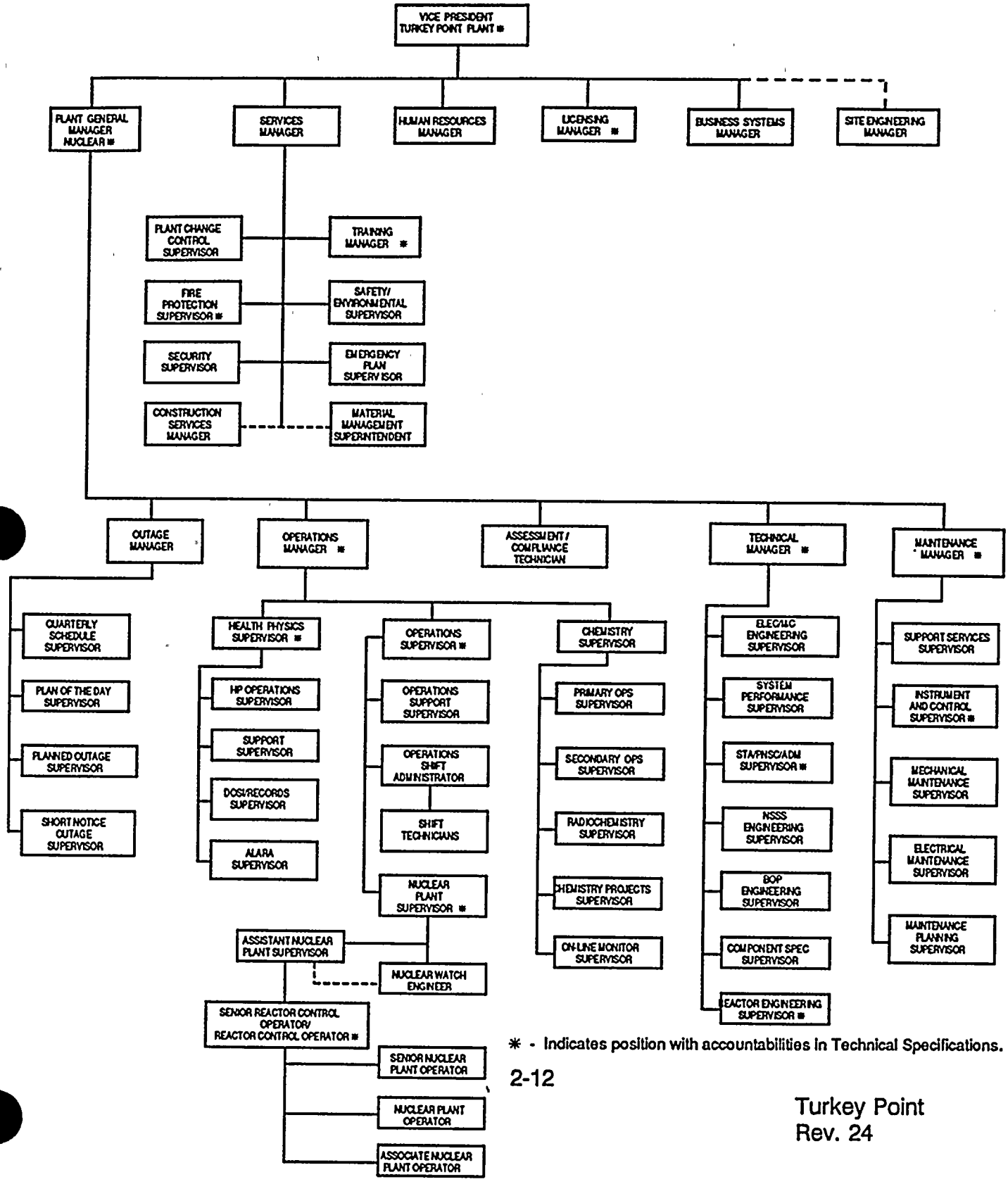
2.2.1 Normal Operating Organization

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 550 people. Key operating positions are described below:

FIGURE 2-3

TURKEY POINT PLANT NORMAL OPERATING ORGANIZATION



* - Indicates position with accountabilities in Technical Specifications.

Vice President, Turkey Point-Nuclear

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

Plant General Manager-Nuclear

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

Operations Manager-Nuclear

The Operations Manager-Nuclear has the overall responsibility for directing the day-to-day operation of the nuclear units. He reports directly to the Plant Manager-Nuclear and the Operations Supervisor-Nuclear reports to him.

Operations Supervisor-Nuclear

The Operations Supervisor-Nuclear has responsibility for directing the activities of the nuclear plant operating shifts, including the Nuclear Plant Supervisors, Assistant Nuclear Plant Supervisors, and the Nuclear Watch Engineers.

Nuclear Plant Supervisor

The Nuclear Plant Supervisor is responsible for the actual operation of the nuclear plant and fuel handling operations on his assigned shift. He directs the activities of the personnel on his shift and is cognizant of maintenance activity being performed while he is on duty. He reports directly to the Operations Supervisor-Nuclear.

Assistant Nuclear Plant Supervisor

The Assistant Nuclear Plant Supervisor is responsible for assisting the Nuclear Plant Supervisor in the administrative functions associated in operating the nuclear units. He is responsible for the actual operation of the nuclear plant and fuel handling operations when the Nuclear Plant Supervisor is absent from the control room. He reports directly to the Nuclear Plant Supervisor.

Nuclear Watch Engineer

The Nuclear Watch Engineer is the working operating foreman assigned for each shift. He reports directly to the Nuclear Plant Supervisor.

Health Physics Supervisor

The Health Physics Supervisor supervises the Health Physics Department. He is responsible for implementing and maintaining the plant's radiation protection program.

Chemistry Supervisor

The Chemistry Supervisor supervises the Chemistry Department. He is responsible for chemical and radiochemical monitoring, analysis, and evaluation. He supervises overall laboratory operation and ensures that chemistry training, record keeping and reporting requirements are met.

Reactor Engineering Supervisor

The Reactor Engineering Supervisor supervises the Reactor Engineering Department. He is responsible for reactor operation, nuclear physics testing, fuel burnup calculations, fuel shuffles
during refueling, and various administrative duties.

Maintenance Manager

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

Technical Department Manager

The Technical Department Manager supervises the Shift Technical Advisors and other general plant engineers and technicians including the Document Control Section.

Site Quality Manager

The Site Quality Manager supervises the Quality Control/Quality Assurance Department. He 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.

Plants Nuclear Safety Committee (PNSC)

The PNSC functions to advise the Plant General Manager - Nuclear on all matters related to nuclear safety. Specific responsibilities of the PNSC are identified in Technical Specifications.

2.2.2 Emergency Response Organization

The Emergency Plan is structured so that, insofar as practical, normal company operations are not significantly disrupted. Personnel are designated as part of the Emergency Response Organization and arrangements are made for others in the normal corporate organization 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 their responsibilities.

The Manager-Nuclear Emergency Preparedness is responsible for maintaining emergency preparedness as discussed in Chapter 7. He maintains a roster of Corporate Emergency Organization participants and their alternates. This roster is reviewed and confirmed periodically. Each participant is responsible for advising the Manager-Nuclear Emergency Preparedness or Emergency Preparedness Supervisor when his duties are changed such that he can no longer participate. In event of transfer or termination, the Manager-Nuclear Emergency Preparedness or Emergency Preparedness Supervisor is notified by the employee's department head and a replacement is named and trained.

2.2.2.1 Immediate Response Phase

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

The emergency response is initiated by any individual who discovers an emergency condition. This person notifies the Nuclear Plant Supervisor by the fastest means possible. This first phase is characterized by diagnosis and immediate action by the plant operators on shift.

Organization

If the diagnosis indicates that the condition is classified as an Unusual Event, an Alert, Site Area Emergency or General Emergency, then the Nuclear Plant Supervisor declares an emergency.

The Nuclear Plant Supervisor becomes the Emergency Coordinator and, as such, directs the Onsite Emergency Response Organization. During this initial phase, the operating staff constitutes 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 (Page 2-17) describes the emergency services that can be provided initially by plant staff. Figure 2-4 shows the immediate response organization.

Line of Succession

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

1) Assistant Nuclear Plant Supervisor (ANPS)

2) Nuclear Watch Engineer (NWE)

3) Any other member of the plant staff with a Senior Reactor license.

4) One of the Reactor Control Operators on shift.

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 his own, when it is safe in his judgement to do so. Following a proper turnover, the Emergency Coordinator may be relieved of his duties by a qualified member of the Plant Management staff.

Actions

The Emergency Coordinator initiates the following actions per plant procedures and using his judgement:

1) Orders corrective actions to bring the emergency under control.

2) Notifies the State Division of Emergency Management State Warning Point Duty Officer and the County Emergency Response Directors in accordance with plant procedures.

3) Mobilizes the Onsite Emergency Response Organization.

4) Notifies the Homestead Air Force Base, 31st Tactical Wing via dedicated phone line, if necessary.

5) Notifies NRC via ENS within one hour of declaration of an emergency condition.

6) Provides recommendations for offsite protective actions as discussed in Section 5.

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 (offsite).

Note: The Recovery Manager assumes the responsibility for notifying Federal, State and local authorities and recommending protective actions when the EOF is manned and operational. (The Emergency Coordinator may delegate other responsibilities.)

Plant Staff Emergency Assignments

A. On Shift Emergency Teams

1) The On Shift Emergency Response Organization is composed of members chosen from the onsite shift personnel. All are qualified in procedures and practices required for the performances of their duties as designated team members. The emergency response teams take action until the emergency condition is mitigated.

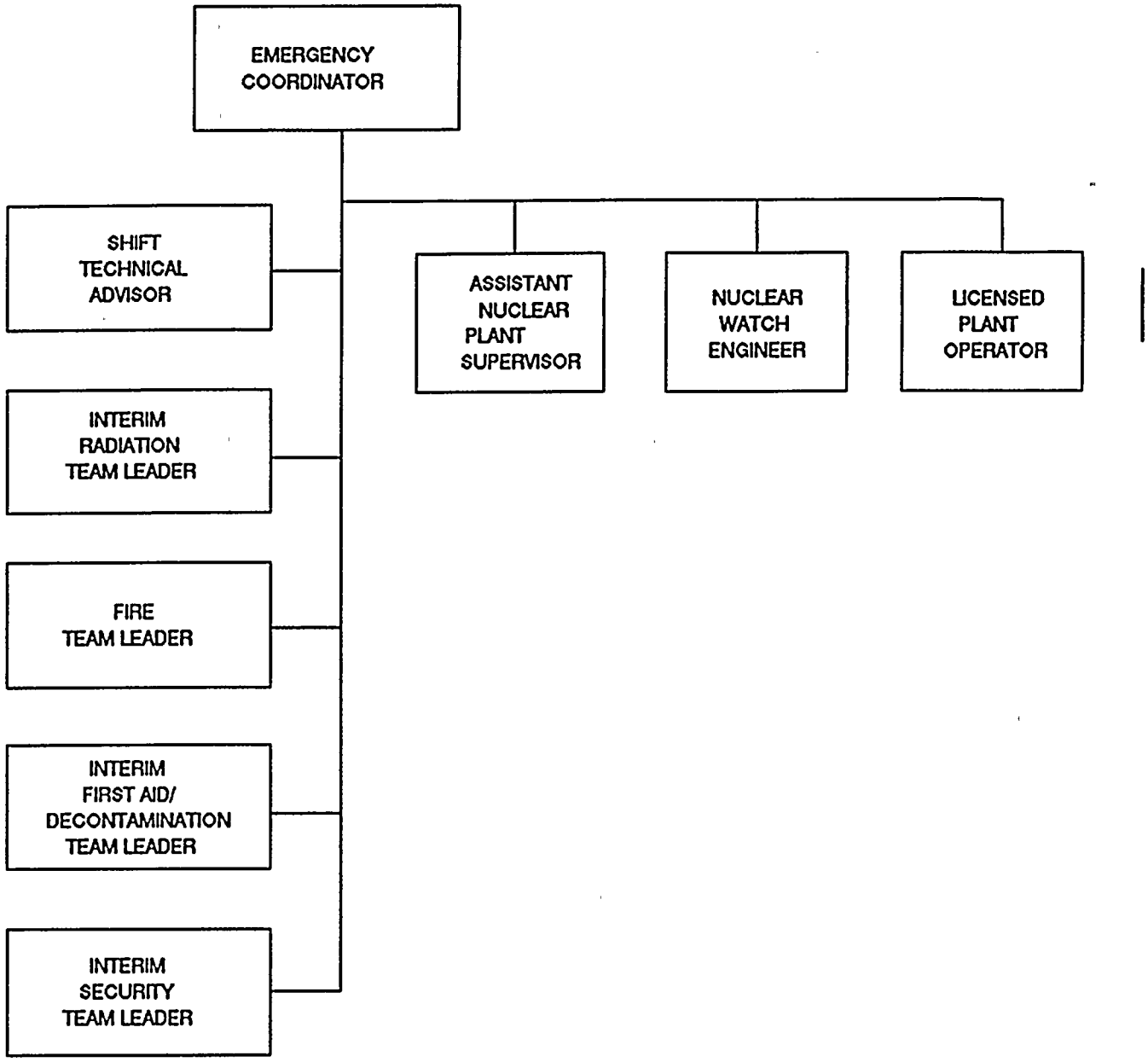
2) Members of an On Shift Emergency Response Team may consider themselves relieved only upon the specific instructions of a recognized superior. Merely knowing that a superior is present does not constitute a release from emergency duties and responsibilities.

B. Primary Emergency Teams

1) With the knowledge of the Emergency Coordinator, primary Emergency Response Organization members may relieve their counterpart on the On Shift Emergency Response Organization.

FIGURE 2-4

IMMEDIATE RESPONSE ORGANIZATION



C. Functional Areas of Emergency Activity

1) Plant Systems Operations and Assessments of Operational Aspects

The Nuclear Plant Supervisor on duty becomes the Emergency Coordinator in the event of an emergency. He may be relieved as the Emergency Coordinator by another member of the plant management staff who is trained as Emergency Coordinator. His normal alternate is the Nuclear Assistant Plant Supervisor. The Nuclear Plant Supervisor and Assistant Nuclear Plant 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 Health Physics Supervisor is the Health Physics Supervisor. He directs the radiological surveillance performed by the Health Physics technicians under the orders of the Emergency Coordinator. A Health Physics representative, onsite, is designated as the On Shift TSC Health Physics Supervisor. The TSC Health Physics Supervisor recommends appropriate protective actions to the EC when not covered by procedure.

5) Plant System Engineering, Repair, and 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) Firefighting

The Nuclear Watch Engineer is normally the Fire Team Leader. This position is manned continuously, but if he is not available, an alternate will be a trained senior nuclear operator. Fire Departments from Plant and Metropolitan Dade County will respond to fires onsite, if requested.

7) Rescue Operations and First Aid

a) Rescue Operations involve the First Aid Team, as necessary. Under the control of the TSC Health Physics Supervisor, entry to potentially hazardous areas will be made by the First Aid Team. Upon notification of the injury, the team will respond per the Emergency Coordinator's instructions.

b) The chemistry technician is the team leader for the First Aid Team with the Health Physics technician on shift as his alternate. Any First Aid trained employee could render first aid until the First Aid Team can be called in.

8) Site Access Control and Personnel Accountability

The On Shift Security Shift Specialist or designee 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. Notification of personnel in the owner controlled area will take place during the security sweep of the area. It is estimated that personnel accountability can be accomplished within 30 minutes of declaration of an evacuation [by the Security Force].

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 & Light company support personnel. Under the direction of the Emergency Coordinator or his 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.

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TABLE 2-2a

SHIFT AND EMERGENCY STAFFING CAPABILITIES

A. Normal Operations Shift Staffing

Position/Function	On-Shift
Senior Reactor Operator (NPS, ANPS, NWE)	3
Reactor Operator (RCO, SRCO)	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
Health Physics Technician	1

Note: Minimum shift crew composition is identified in Technical Specifications. Fire Team staffing is per Tech Specs. Security Force is per Security Plan.

B. Emergency Staff Capabilities

Major Functional Area	NUREG 0654, REV. 1 Table B-1 Guidance 30 min.*	60 min.*	Augment Staffing Capabilities****
1. Notification/Communication	1	2	
2. Radiological Accident Assessment And Support of Operational Accident Assessment Protective			
A. Senior Manger (EOF)	-	1	
B. Offsite Dose Assessment	1	-	
Rad/Chem Technician**	-	-	
C. Health Physics Technicians**	7	6	

* Estimated response time from receipt of notification.
** Combines all qualified individuals for similar functions from Table B-1.
*** This individual available for either or both positions.
**** 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

Major Functional Area	NUREG 0654, Rev. 1 Table B-1 Guidance 30 min.*	60 min.*	Augmented Staffing Capabilities****
3. Plant System Engineering, Repair and Corrective Actions			
A. Core/Thermal Hydraulics	1	-	
B. Electrical (TSC)/	-	1	
Mechanical (TSC)	-	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.
*** This individual available for either or both positions.
**** 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

Function	Responsibility	
	Immediate	Expanded
Command and Control	Emergency Coordinator (Nuclear Plant Supervisor)	Recovery Manager
Warning	Emergency Coordinator	Recovery Manager
Notification/Communications	Emergency Coordinator	Recovery Manager
Public Information	Emergency Information Manager	Emergency Information Manager
Accident Assessment	Emergency Coordinator (assisted by Shift Technical Advisor)	Recovery Manager (assisted by Emergency Technical Manager, Emergency Coordinator and TSC technical staff)
Fire	Fire Team Leader	Fire Team 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 (Shift Security Specialist)	Emergency Security Manager
Protective Response (Onsite)	Emergency Coordinator	TSC HP Supervisor
Radiological Exposure Control (Onsite)	Emergency Coordinator	TSC HP Supervisor

2.2.2.2 Expanded Response Phase

Initiating Action

The second phase is initiated by the Emergency Coordinator. His notification activities mobilize the Florida Power & Light Company Emergency Organization as well as state, local, and federal emergency response organizations. Mobilization of the FPL personnel proceeds to the degree necessary to respond to the severity of the accident as determined by the EC (onsite) and the ECO (Corporate FPL and offsite). The EC endeavors to put the plant in a safe condition. Responsibility for response is centered about the plant organization (including off-duty personnel notified to report to the plant) with assistance provided by the Corporate Emergency Organization. This phase represents the period where augmenting staff support is shaped by the determinations of the Emergency Coordinator and Emergency Control Officer as described below. Figure 2-5 shows the response organization that can develop during this period, if required.

Emergency Classification

Notification of any emergency as defined by this plan will be made to the ECO via the Emergency Coordinator. In an Alert, the FPL Corporate Emergency Organization will be notified by the ECO and at a minimum placed in a standby state.

Declaration of Site Area Emergencies and General Emergencies will initiate the establishment of the expanded response organization. The FPL Corporate Emergency Organization will be notified and mobilized.

Emergency Control Officer (ECO)

The ECO will be designated Corporate Officer or Senior Manager with the authority to establish policy and to expend the funds necessary to cope with any emergency situations that arise. He is responsible for notifying and mobilizing the Corporate Emergency Organization and activating the EOF. He is responsible for all FPL offsite emergency activities, including personnel assignments and communication arrangements. He provides for dispatching a Company representative, as necessary, to the Dade and Monroe County Emergency Operations Center.

Recovery Manager (RM)

The RM will be the Site Vice President or a designated Senior Manager who has knowledge of nuclear plant operations and design and who will be responsible for directing the Company's expanded emergency response organization. The RM can either report to the Emergency Operations Facility or designate a senior management level

person to respond on his behalf. The RM may report to the onsite Technical Support Center to obtain information depending upon his assessment of the situation. Specific responsibilities for the RM or his designee include the following:

1) To inform periodically the Emergency Control Officer of the onsite 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 offsite protective actions.

4) To assume from the EC, the responsibility for communicating such information to and coordinating with the state and county response organization.

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 for logistics support for emergency personnel (e.g., transportation, communications, temporary quarters, food and water, sanitary facilities in the field, and special equipment and supplies procurement).

Emergency Information Manager (EIM)

The EIM will be a designated Corporate Officer or Senior Manager experienced in disseminating information to the public via the news media. During this phase, the EIM can operate from the Emergency Operations Facility or the Emergency News Center, as conditions dictate. He will have the following responsibilities.

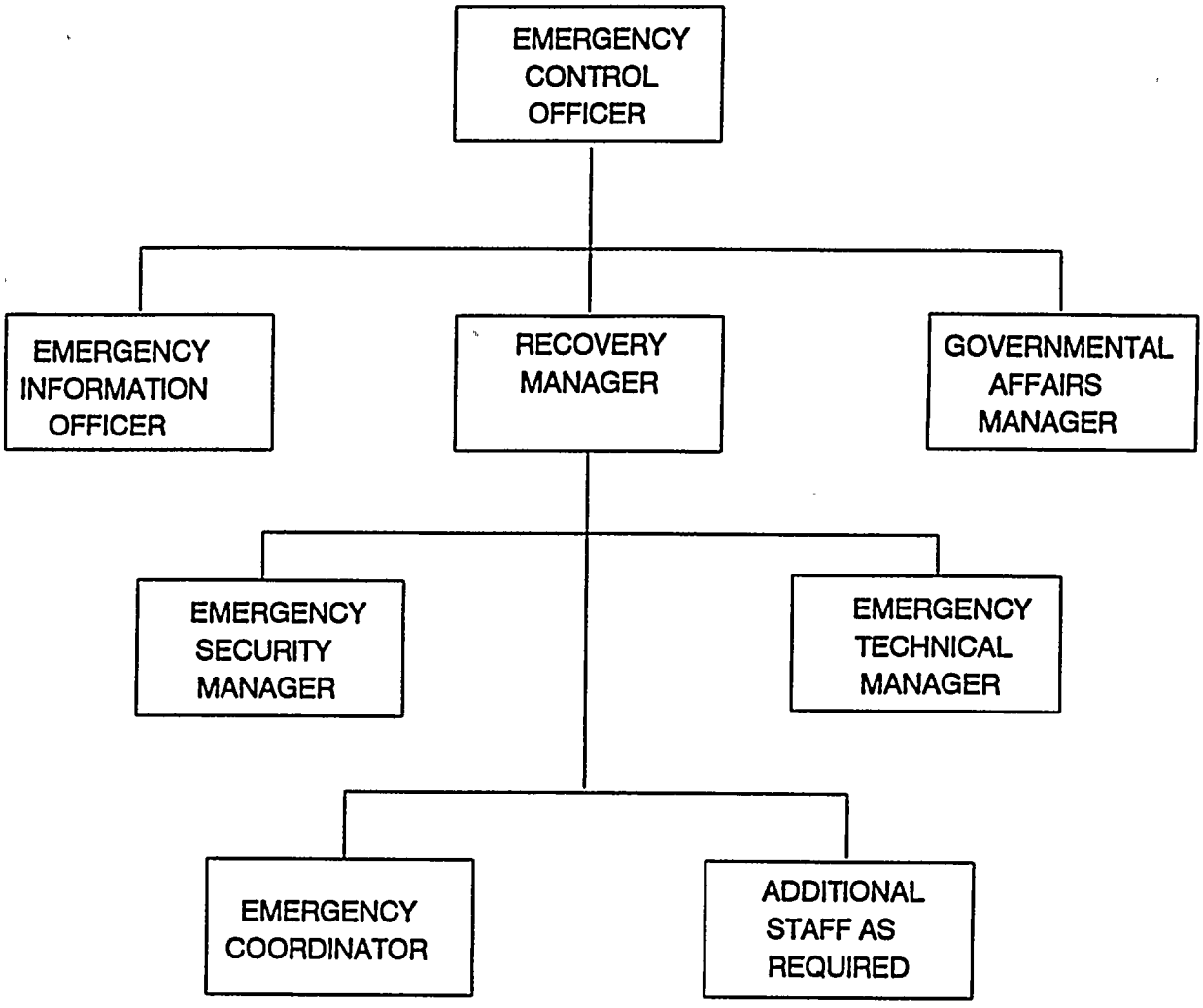
1) To act as principal public spokesman for FPL.

2) To disseminate available information from the ECO 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 will be a Senior Management level engineer with detailed knowledge of nuclear plant operations and design and who will be responsible for providing technical support and information regarding engineering design for the plant.

Governmental Affairs Manager (GAM)

The GAM will be a designated corporate officer or senior manager experienced in interfacing with political officials of the State, local and Federal governments. He acts as a liaison between the ECO and these political officials.

Augmented Staff Support

Additional staff support can be provided during this phase to augment the operating staff onsite and offsite. The Emergency Control Officer will have access to this support through the Corporate Emergency Response Directory maintained by the Manager, Nuclear Emergency Preparedness.

Lines of Succession

Lines of succession for the Emergency Control Officer and Managers of the Offsite Emergency Organization are controlled by procedures and are maintained by the Manager, Nuclear Emergency Preparedness.

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 six 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 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 six 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 one 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. The FEMA representative will also have access to Local Government Radio. 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 facilities.

2.4.1 Control Room

For any emergency response, the Control Room serves as the initial point of control. The Nuclear Plant Supervisor stations himself in the Control Room when he assumes 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 onsite personnel and offsite authorities in the event of an accident. This includes the State Hot Ring Down Telephone System, National Warning System (NAWAS), Local Government Radio (LGR), System, Emergency Notification System (ENS hotline) to the NRC Operations Center (in Bethesda, Md.), commercial telephones, Florida Power & Light Company radio system (UHF, 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 Emergency Control Officer. The Emergency Operations Facility will be activated for an emergency classified as a Site Area Emergency or General Emergency. The Emergency Control Officer may activate the Emergency Operations Facility in other emergency classes at his discretion.

The Emergency Operations Facility is maintained in the General Office. It provides for sufficient space to accommodate the Florida Power & Light Company response organization and representatives of the designated federal, state, and local authorities. I

The Emergency Operations Facility has an emergency communications network which includes commercial telephone lines and a direct line to the Control Room and TSC.

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

2.4.3 Technical Support Center

The Company maintains an onsite 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. I I

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 Bethesda, MD.) and the NRC Region II Office (in Atlanta, GA.).

2.4.4 Operations Support Center

The Company maintains an onsite Operations Support Center (OSC) to serve as an assembly point for auxiliary operators, who are not needed at their stations and emergency team 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 his 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 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 Lunch Room. 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. One alternate location which may be chosen is the Fire Watch/Procedures Group Area.

2.4.6 Emergency News Center

An Emergency News Center (ENC) 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 ENC. The ENC is located on the second floor of the General Office Building.

A Near-Site Information Center may be set up at the Homestead National Guard Armory if deemed necessary by the Emergency Information Manager. It is located at 807 N. E. 6th Avenue (just south of Campbell Drive) approximately 9 miles WNW of the Plant. The Emergency Information Manager will designate an individual to supervise the Near-Site Information Center, when activated.

2.4.7 Nuclear Division Management Center

The Nuclear Division Management Center is an area within the Nuclear Division offices at the Florida Power & Light Company Juno Beach location. The Emergency Control Officer and his staff may man the center to direct initial action of the Corporate

Emergency Organization (Figure 2-5) and to provide support and resources to the onsite organization until the ECO directs the Organization to staff the EOF.

2.4.8 Metropolitan Dade County Emergency Operations Center

The Dade County EOC will be the point from which county response activities will be controlled. The facility is located at 5600 SW 87 Avenue, Miami, Florida. communications include Hot Ring Down, NAWAS, RACES, Local Government Radio, teletype, police and fire networks, and telephone.

2.4.9 Monroe County (Plantation Key) Emergency Operations Center

The Monroe County (Plantation Key) Emergency Operations Center, located in the Government Center, will be where the county's emergency response activities are controlled. Communications include the Hot Ring Down, NAWAS, Local Government Radio, facsimile, police and fire radio, and commercial telephone. The Monroe County EOC in Key West will aid the Plantation EOC where possible.

2.4.10 Florida State Emergency Operations Center (State Warning Point)

The State's initial response comes from the State EOC in Tallahassee. Initial notification goes to the State Warning Point located in the EOC. The location is, 2740 Centerview Drive, Tallahassee, Florida. Communications include Hot Ring Down, NAWAS, LGR, facsimile, teletype and telephone. This facility is manned 24 hours a day by a duty officer.

2.5 Medical and Health Support

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

FIGURE 2-6

TURKEY POINT PLANT EMERGENCY FACILITIES LOCATION MAP

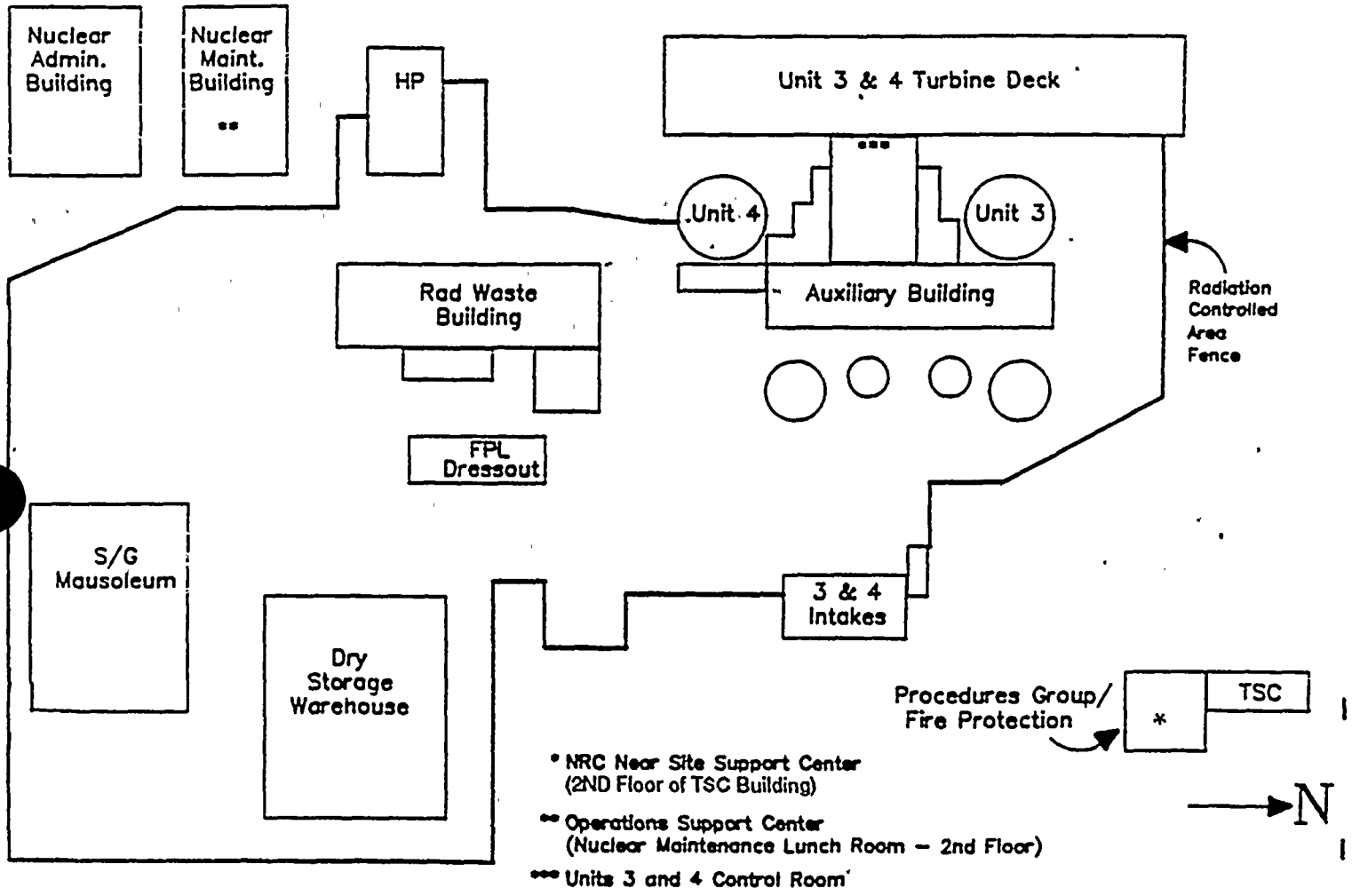


TABLE 2-3

ONSITE EMERGENCY RESPONSE FACILITIES EMERGENCY EQUIPMENT

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

2.5.1 Plant First Aid Facility

The plant First Aid Facility and ambulance are 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 two months and replenished as necessary by the Nuclear Maintenance Department (Substation is replenished and checked by Health Physics). 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 onsite as per Health Physics 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 South Florida Emergency Physicians, P.A. in the Emergency Room at Baptist Hospital of Miami, Inc., or by Emergency Room Medical Associates, P.A. (ERMA) at Mercy Hospital.

2.5.2 South Florida Emergency Physicians, P.A.

The South Florida Emergency Physicians, P.A., located within Baptist Hospital of Miami, Inc., 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.

South Florida Emergency Physicians, P.A., will provide for hospital treatment, medical examinations, and laboratory services for those employees and other persons designated by Florida Power & Light who allegedly have been involved in a radiation incident. 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 Company.

Primary Facilities

The facilities of South Florida Emergency Physicians, P.A. are located at Baptist Hospital of Miami. 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 external radiation exposures.

Backup Facilities

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

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 U. S. 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 NPS will determine the mode of transportation. The U. S. Coast Guard 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 all cases, 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

The system which has been adopted for categorizing off-normal events or conditions at the Plant has four classes. In order of increasing severity, these are: Unusual Event, Alert, Site Area Emergency, and General Emergency.

3.1 Unusual Event

The Unusual Event category applies to off-normal events or conditions at the Plant for which no significant degradation of the level of safety of the plant has occurred or is expected. Any releases of radioactive material which have occurred or which may be expected are minor and constitute no appreciable health hazard. FPL actions in response to an Unusual Event will be:

1) Assesses and respond as directed by the Emergency Coordinator.

2) Report the Unusual Event to offsite authorities (FPL and non-FPL) in accordance with plant procedures.

3) Provide periodic plant status updates in accordance with plant procedures.

4) Close out by verbal summary to offsite authorities, or escalate to a higher class.

3.2 Alert

This classification is represented by events which involve an actual or potential substantial degradation of the level of safety of the plant combined with a potential for limited uncontrolled releases of radioactivity from the plant.

FPL actions in response to this category will be:

1) Assess and respond as directed by the Emergency Coordinator.

2) The Emergency Coordinator augments resources by activating the onsite Technical Support Center and Operational Support Center.

3) Report the Alert Status to offsite authorities (FPL and non-FPL) in accordance with plant procedures.

4) Dispatch monitoring teams as directed by the TSC Health Physics Supervisor.

5) Provide periodic plant status updates in accordance with plant procedures.

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 offsite authorities, followed by a written summary within 24-hours, or escalate to a higher class.

3.3 Site Area Emergency

This classification is composed of events which involve actual or likely major failures of plant functions needed for protection of the public combined with a potential for significant uncontrolled releases of radioactivity from the plant.

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 onsite Technical Support Center, the onsite Operations Support Center, and the Emergency Operations Facility.

3) Report the Site Area Emergency Status to offsite authorities (FPL and non-FPL) in accordance with plant procedures.

4) Dispatch monitoring teams as directed by the TSC Health Physics Supervisor.

5) Provide periodic plant status updates in accordance with plant procedures.

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 offsite authorities.

9) Submit a brief written summary to offsite authorities within 24 hours after closing out the emergency.

3.4 General Emergency

This classification is composed of events which involve actual or imminent substantial core degradation and potential loss of containment integrity combined with a likelihood of significant uncontrolled releases of radioactivity from the plant.

FPL actions in response to this category will be:

1) Augment resources by activating the onsite Technical Support Center, the onsite Operations Support Center, and the Emergency Operations Facility.

2) Assess and respond as directed by the Emergency Coordinator.

3) Report the General Emergency status to offsite authorities (FPL and non-FPL) in accordance with plant procedures.

4) Dispatch monitoring teams as directed by the TSC Health Physics Supervisor.

5) Provide periodic plant status updates in accordance with plant procedures.

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 offsite protective action recommendations to the State DEM and counties.

9) Close out or recommend a reduction in emergency class when appropriate by briefing offsite authorities.

10) Submit a brief written summary to offsite 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 Table 3-1. 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.

Tables 3-2 and 3-3 contain listings of Process and Effluent Monitors and Area Radiation Monitors that may be used to initiate emergency actions. 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 initiate emergency actions. 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.

Note for Tables 3-1 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 3-1

EMERGENCY CLASSIFICATION TABLE

1. Primary Depressurization - ECCS Initiated Manually or Automatically			
UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Safety Injection initiated AND High head SI pump flow to the core			
Possible Control Room Indicators			
FI-943			

2. Primary Leakage/LOCA			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Plant in Mode 1-2-3-4 AND Either A or B: A RCS Leakage in excess of Technical Specifications 3.4.6.2, Reactor Coolant System Operational Leakage as indicated by either: 1) Unidentified RCS Leakage > 1 gpm, OR 2) Identified RCS Leakage greater than ten (10) gpm, or 3) RCS Pressure Isolation Valve Leakage greater than allowable, or 4) Any Pressure Boundary Leakage --- B Failure of any primary system safety or relief valve to close resulting in an uncontrolled RCS depressurization.	Plant in Mode 1-2-3-4 AND RCS leakage > 50 gpm AND RCS leakage within available charging pump capacity CAUTION: This section should not be used for events involving a steam generator tube leak/rupture or faulted/ruptured steam generator	Plant in Mode 1-2-3-4 AND RCS leakage > 50gpm AND RCS leakage greater than available charging pump capacity CAUTION: This section should not be used for events involving a steam generator tube leak/rupture or faulted/ruptured steam generator.	Either A or B: --- A. RCS leakage > 50gpm AND RCS leakage greater than available charging pump capacity AND Containment pressure > 20 psig CAUTION: This section should not be used for events involving a steam generator tube leak/rupture or faulted/ ruptured steam generator --- B. Plant in Mode 1, 2, 3, 4, AND RCS leakage > 50 gpm AND RCS leakage greater than available charging pump capacity AND Loss of containment integrity which provides a flowpath to the environment. CAUTION: This section should not be used for events involving a steam generator tube leak/rupture or faulted/ ruptured steam generator --- CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			
TI-465, 467, 469 IEC Flow Indicators	Charging/Letdown Flow Mismatch	RCS pressure Containment Pressure ARM's Charging/Letdown Flow Mismatch	RCS pressure Containment Pressure PRMS R-14

3. Steam Generator Tube Leak/Rupture			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Either A or B: A. Greater than 500 gpd steam generator tube leakage to any one steam generator per Technical Specification 3.4.6 2, Reactor Coolant System --- B. Greater than 1 gpm total steam generator tube leakage per Technical Specification 3.4.6 2, Reactor Coolant System	Either A or B: A. Confirmed steam generator tube leakage > 50 gpm AND Steam generator tube leakage within available charging pump capacity AND Loss of offsite power --- B. Steam generator tube leakage greater than available charging pump capacity.	Steam generator tube leakage greater than available charging pump capacity AND Loss of offsite power CAUTION: Consult Table 2, Page 35 for possible protective action recommendations	
Possible Control Room Indicators			
PRMS R-15 PRMS R-19	PRMS R-15 PRMS R-19 Charging/Letdown Flow Mismatch	PRMS R-15 PRMS R-19 Charging/Letdown Flow Mismatch	

4. Loss of Secondary Coolant			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Either A or B: A Steamline or feedline break which results in Safety Injection actuation. --- B. Failure of a steam generator safety or steam dump to atmosphere valve to close resulting in uncontrolled secondary depressurization.	Steamline or feedline break which results in Safety Injection actuation AND Evidence of significant (> 10 gpm) steam generator tube leakage in the affected steam generator.	Steamline or feedline break which results in Safety Injection actuation AND Confirmed RCS DEQ I-131 activity ≥ 300 µCi/gm AND Confirmed steam generator tube leakage > 50 gpm in the affected steam generator CAUTION: Consult Table 2, Page 35 for possible protective action recommendations	
Possible Control Room Indicators			
	PRMS R-15 PRMS R-19 Charging/Letdown Flow Mismatch	PRMS R-15 PRMS R-19 Charging/Letdown Flow Mismatch	

5. Abnormal RCS Temperature and/or Pressure			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Plant in Mode 1 - 2 - 3 - 4: Either A, B, or C <u>AND</u> A. RCS saturated or superheated B. RCS pressure >2510 psig C RCS pressure and /or temperature above Technical Specification 3.4.9, Pressure/ Temperature Limits			
Possible Control Room Indicators			
Subcooling Margin Monitor			

6. Fuel Handling Accident			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
	A spent fuel element has been dropped or damaged AND Release of radioactivity from the damaged spent fuel element has been detected.	Either A, B or C: A. Major damage to one or more spent fuel elements has occurred AND Affected area radiation monitors are $> 10^3$ mR/hr. --- B. Major damage to one or more spent fuel elements has occurred AND Containment radiation levels > 1.3 E4 Rem/hr --- C. Major damage to one or more spent fuel elements due to water level being below top of spent fuel.	
Possible Control Room Indicators			
	ARMS R-2, 5, 7, 8, 19, 21, 22 PRMS R-12, 14	ARMS R-2, 5, 7, 8, 19, 21, 22 PRMS R-12, 14 SFP Level Indication RI-6311A RI-6311B	

7. Loss of Safe Shutdown Functions/ATWS			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
	Either A, B, C or D: A. Reactor critical AND Failure of the Reactor Protection System to initiate a trip signal when a trip setpoint has been exceeded. --- B. Reactor critical AND Reactor fails to trip on automatic signal --- C. Reactor critical AND Reactor fails to trip on manual signal --- D. RCS temperature increasing due to loss of decay heat removal capability from all of the following: 1) RHR system AND 2) Forced RCS circulation AND 3) Natural RCS circulation	Either A, B, C or D: A. Inability to bring the reactor subcritical with control rods --- B. Plant in Mode 1-2-3 AND Loss of steam release capability from all of the following: 1) Condenser steam dumps AND 2) Atmospheric steam dumps AND 3) All steam generator safeties --- C. Plant in Mode 1-2-3 AND Loss of secondary heat sink has occurred AND RCS bleed and feed is required. --- D. Plant in Mode 1-2-3 AND RCS injection capability has been lost from: 1) Charging pumps AND 2) High-head SI pumps	Either A or B: A. Inability to bring the reactor subcritical AND RCS pressure $>$ 2485 psig. --- B. Inability to bring the reactor subcritical AND Containment pressure $\geq$ 4 psig. CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			

TABLE 3-1

8. Fuel Element Failure			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
RCS activity is greater than Technical Specification 3.4.8, Figure 3.4-1, limit for maximum RCS activity.	Either A, B or C: A Confirmed RCS DEQ I-131 activity ≥ 300 µCi/gm. --- B. An increase of > 1% fuel failure in 30 minutes. --- C. Total fuel failure of 5%.	Fuel element failure as indicated by A, B, or C: A. Confirmed RCS DEQ I-131 activity ≥ 300 µCi/gm. AND RCS T_{hot} > 620°F. --- B. Confirmed RCS DEQ I-131 activity ≥ 300 µCi/gm. AND Core exit thermocouples >700°F. --- C. Containment high range radiation monitor reading > 1.3 E4 Rem/hr.	Fuel element failure as defined in Site Area Emergency of this section AND Any of the following is imminent or in progress: a) LOCA with loss of containment cooling OR b) LOCA with loss of containment integrity which provides a flowpath to the environment OR c) Steam generator tube rupture with unisolable flowpath from the ruptured steam generator to the environment. CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			
	PRMS R-20 ARMS R-1 through R-6	Core Exit Thermocouples RI-6311A RI-6311B	

9. Uncontrolled Effluent Release			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
A release to the Unrestricted Area has occurred or is in progress which exceeds either A or B: A. Technical Specification 3.11 limits for gaseous release per 3/4-ONOP-067, Inadvertent Release of Radioactive Gas. NOTE: Direct Chemistry to perform offsite dose estimates per EPIP-20126, Offsite Dose Calculations. B. Technical Specification 3.11 limits for liquid release. NOTE: Direct Chemistry to perform release calculation in accordance with Offsite Dose Calculation Manual.	A release to the Unrestricted Area has occurred or is in progress which exceeds either A or B: A. Ten times Technical Specification 3.11 limits for gaseous release per 3/4-ONOP-067, Inadvertent Release of Radioactive Gas. NOTE: Direct Chemistry to perform offsite dose estimates per EPIP-20126, Offsite Dose Calculations. B. Ten times Technical Specification 3.11 limits for liquid release. NOTE: Direct Chemistry to perform release calculation in accordance with Offsite Dose Calculation Manual.	Performance of EPIP-20126, Offsite Dose Calculation or offsite surveys indicate site boundary exposure levels have been exceeded as indicated by either A, B, C, or D: A. ≥ 50 mRem/hr whole body for 1/2 hour B. ≥ 250 mRem/hr thyroid for 1/2 hour C. ≥ 500 mRem/hr whole body for 2 minutes D. ≥ 2500 mRem/hr thyroid for 2 minutes NOTE: Site boundary equals 1 mile radius from affected unit. CAUTION: Consult Table 2, Page 35 for possible protective action recommendations.	Performance of EPIP-20126, Offsite Dose Calculation or offsite surveys indicate site boundary exposure levels have been exceeded as indicated by either A, B, C or D: A. ≥ 1 Rem/hr whole body B. ≥ 1 Rem integrated whole body dose C. ≥ 5 Rem/hr thyroid D. ≥ 5 Rem integrated thyroid dose NOTE: Site boundary equals 1 mile radius from affected unit. CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			

10. High Radiation Levels In Plant			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
	Either A, B or C: A. Any valid area monitor alarm from an undeterminable source with meter greater than 10^3 mR/hr. --- B. Unexpected plant iodine or particulate airborne concentration > 1000 MPC as per 10 CFR 20 Appendix B, Table 1. --- C. Unexpected direct radiation dose rate reading or unexpected airborne radioactivity concentration from an undetermined source in excess of 1000 times normal levels.	Containment High Range Radiation Monitor reading > 1.3 E4 Rem/hr. NOTE: Direct Chemistry to perform offsite dose estimates per EPIP-20126, Off-Site Dose Calculations. (See Section 9, Uncontrolled Effluent Release) CAUTION: Consult Table 2, Page 35 for possible protective action recommendations.	Containment High Range Radiation Monitor reading > 1.3 E5 Rem/hr. NOTE: Direct Chemistry to perform offsite dose estimates per EPIP-20126, Off-Site Dose Calculations. (See Section 9, Uncontrolled Effluent Release) CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			
	Area Radiation Monitors	RI-6311A RI-6311B	RI-6311A RI-6311B

11. Other Plant Conditions That Could Lead To Substantial Core Damage			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
			Either A or B: A. Potential core damage indicated by all of the following: 1) Known LOCA greater than available charging pump capacity AND 2) Failure of ECCS to deliver flow to the core AND 3) Containment High Range Radiation Monitor reading > 1.3 E4 Rem/hr. --- B. Potential core damage indicated by all of the following: 1) Loss of secondary heat sink AND 2) RCS bleed and feed required AND 3) No high-head SI flow available AND 4) No RHR flow for greater than 30 minutes AND 5) No AFW flow for greater than 30 minutes CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			

12. Loss Of Power Conditions			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Either A or B: A Loss of offsite power to the: 1) A 4KV bus AND 2) B 4KV bus --- B Loss of onsite power capability as indicated by: 1) Loss of capability to power at least one vital 4KV bus from any of the four available emergency diesel generator.	Either A or B: A. Loss of all vital onsite DC power. --- B. Loss of offsite power AND Both associated emergency diesel generators fail to energize their associated 4KV buses. NOTE: Refer to Section 7, Loss of Safe Shutdown Function	Either A, B or C with fuel in the Reactor Vessel A. Loss of all A/C power for > 15 minutes. --- B. Loss of all vital onsite DC power for > 15 minutes. --- C. Emergency Coordinator leaves Control Room within the first 15 minutes of a loss of all A/C power.	The following situation exists for > 1 hr with fuel in the Reactor Vessel. a) Loss of all A/C power AND b) Loss of all feedwater capability. CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			
4Kv Bus Voltage 4Kv Bus Amps			

TABLE 3-1

EMERGENCY CLASSIFICATION TABLE

13. Contaminated Personnel			
UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Transportation of confirmed externally contaminated injured individual(s) from the site to a medical facility.			
Possible Control Room Indicators			

14. Loss Of Assessment Functions			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Either A, B, or C: A Loss of primary communications with offsite locations AND Loss of all backup communications with offsite locations - B Loss of primary onsite meteorological instrumentation AND Loss of all backup onsite meteorological instrumentation AND Loss of all communication with Homestead Air Force Base - C Loss of effluent or radiological monitoring capability requiring plant shutdown.	Plant in Mode 1-2-3-4: AND Most or all Control Room annunciator alarms lost for > 5 minutes	A plant transient is in progress AND All Control Room annunciator alarms lost for > 15 minutes	
Possible Control Room Indicators			

15. Natural Phenomena			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Plant in Mode 1-2-3-4 AND either A, B, C or D: A. Confirmed hurricane warning OR B Confirmed tornado in owner controlled area OR C Any earthquake detected onsite OR D. Hurricane/flood surge that prevents land access to the site	Plant in any mode including defueled. AND either A, B, C or D: A. Confirmed hurricane warning with maximum wind speeds in excess of 200 mph OR B. Tornado striking any power block structure OR C. Earthquake that could cause or has caused trip of the turbine generator or reactor OR D. Hurricane/flood surge that raises water level > 18 feet above MLW	Plant in Mode 1-2-3-4 AND either A, B or C: A. Confirmed hurricane warning with maximum wind speeds in excess of 225 mph. OR B. Earthquake has caused loss of any safety system function OR C. Hurricane/flood surge that raises water level > 18 feet above MLW and results in shutdown of turbine generator or reactor.	A major natural event (e.g., high winds, earthquake, flooding) has occurred, which could cause massive damage to plant systems resulting in any of the other General Emergency initiating conditions. CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			

16. Hazards To Station Personnel And Equipment			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Safety of nuclear plant or personnel threatened by either A, B, C, D, or E: A Aircraft crash onsite B Unusual aircraft activity over facility C. Toxic or flammable gas release D Turbine generator rotating component failure requiring rapid turbine shutdown E Onsite explosion NOTE: Explosion is defined as a rapid chemical reaction resulting in noise, heat, and the rapid expansion of gas.	Either A, B or C: A. A reduction in the level of safety of plant structures or components within the protected area due to damage caused by either 1), 2), or 3): 1) Aircraft crash OR 2) Missile impact OR 3) Explosion NOTE: Explosion is defined as a rapid chemical reaction resulting in noise, heat, and the rapid expansion of gas. B. Toxic or flammable gas release which threatens plant operation. C. Turbine generator failure resulting in casing penetration.	Either A or B: A. Plant in Mode 1-2-3-4 AND Safety systems have failed or damage to vital structure has been caused by either 1), 2), or 3): 1) Aircraft crash OR 2) Missile impact OR 3) Explosion NOTE: Explosion is defined as a rapid chemical reaction resulting in noise, heat, and the rapid expansion of gas. B. Toxic or flammable gas release into control or vital areas which renders one train of safety related systems inoperable.	
Possible Control Room Indicators			

17. Security Threat			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Declaration of a "Security Alert" due to either A, B, C, D, E, F, G, H A Bomb Threat B Attack threat C Civil disturbance D Protected area intrusion E Sabotage attempt F. Internal disturbance G. Vital area intrusion H. Security Force strike	Declaration of a "Security Emergency"	Declaration of a "Security Emergency" involving imminent occupancy of the Control Room or other vital areas by intruders	Physical attack on the plant resulting in occupation of the Control Room or other vital areas by intruders. CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			

18. Control Room Evacuation			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
	Control Room evacuation anticipated or required	Control Room has been evacuated AND Local control of shutdown systems has NOT been established from local stations within 15 minutes.	
Possible Control Room Indicators			

19. Fire			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Uncontrolled fire within the power block lasting longer than 10 minutes	Uncontrolled fire potentially affecting safety systems AND Offsite support required.	Fire which prevents a safety system from performing its design function.	A major fire has occurred which could cause massive damage to plant systems resulting in any of the other General Emergency initiating conditions. CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			

20. Loss of Engineered Safety Features/Fire Protection			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Power reduction started in accordance with Technical Specifications due to either: A) TS 3 3.1, Reactor Trip System Instrumentation, or B) TS 3.3.2, Engineered Safety Features Actuation System Instrumentation, or C) TS 3 5, Emergency Core Cooling Systems, or D) TS 3.6, Containment Systems, or E) TS 3.7.2, Component Cooling Water, or F) TS 3 7.3, Intake Cooling Water, or G) 3 7.5, Control Room Emergency Ventilation System H) T.S 3.7.8, Fire Suppression Systems. NOTE: Notify Fire Protection Department to consult FSAR Section 9.6, for further guidance on fire protection system requirements			
Possible Control Room Indicators			

21. Other Plant Conditions Requiring Increased Awareness (Emergency Coordinator's Judgment)			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Emergency Coordinator's judgment that other plant conditions exist which warrant increased awareness on the part of the operating staff and/or local offsite authorities. NOTE: Activation of the Emergency Response Facilities does not require declaration of an emergency or entry into a specific emergency classification.	Emergency Coordinator's judgment that other plant conditions exist which warrant the increased awareness and activation of emergency response personnel.	Emergency Coordinator's judgment that other plant conditions exist which warrant the precautionary notification to the public near the site and the activation of FPL and offsite agency emergency response personnel. (Reflects conditions where some significant releases are likely or are occurring but where a core melt situation is not indicated based on current information)	Emergency Coordinator's judgment that other plant conditions exist which make release of large amounts of radioactivity, in a short period of time, possible (Loss of two fission product barriers with potential for loss of the third, such as, actual or imminent substantial core degradation or melting with the potential for loss of containment.) CAUTION: Consult Table 2, Page 35 for required protective action recommendations.
Possible Control Room Indicators			

TABLE 3-2

PROCESS AND EFFLUENT RADIATION MONITORS USED FOR ACCIDENT ASSESSMENT

MONITOR	TYPE	MEASUREMENTS	SETPOINT SETTINGS
Containment air particulate monitors (R3-11, R4-11)	Photomultiplier tube scintillation	1×10^{-11} to 1×10^{-5} uCi/cc	4.60×10^{-7} uCi/cc
Containment radioactive gas monitors (R3-12, R4-12)	Beta-gamma GM Tube Thin Wall	1×10^{-7} to 1×10^{-1} uCi/cc	1.11×10^{-3} uCl/cc
Plant Vent Gas Monitor (R-14)	Beta-gamma GM Tube Assembly (4 tubes in parallel)	10 to 1×10^{6} cpm	3.6×10^{4} cpm
Condenser Air Ejector Monitors (R3-15, R4-15)	Beta-gamma GM Tube Thin Wall	10 to 1×10^{6} cpm	4×10^{3} cpm
Component Cooling Liquid Monitors (R3-17A, R3-17B, R4-17A, R4-17B)	Scintillation counter (NaI)	10 to 1×10^{6} cpm	4.4×10^{3} cpm
Waste Disposal System Liquid Effluent (R-18)	Photomultiplier tube scintillation crystal (NaI)	0 to 1×10^{6} cpm	2.8×10^{4} cpm
Steam Generator Liquid Sample Monitors (R3-19, R4-19)	Photomultiplier tube scintillation crystal (NaI)	10 to 1×10^{6} cpm	4×10^{3} cpm

TABLE 3-2

PROCESS AND EFFLUENT RADIATION MONITORS USED FOR ACCIDENT ASSESSMENT

MONITOR	TYPE	MEASUREMENT	SETPOINT SETTINGS
Reactor Coolant Letdown Line Activity Monitors (R3-20 R4-20)	GM Tube Thin Wall	0 to 1 x 10^5 mR/hr	5 x 10^2 mR/hr
System Level, Particulate Iodine Noble Gas Monitors (SPING)	Alpha/Beta scintillation crystal, photomultiplier tube scintillation crystal (NaI) Beta-gamma GM Tube	10^{-7} to 10^5 uci/cc	Varies with detector and channel.

TABLE 3-3

AREA RADIATION MONITORS

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

DETECTOR TAG. NO.	CHANNEL NUMBER	AREA MONITOR*	TYPICAL ALARM SETPOINT SETTINGS (mR/hr)
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	40
RD-1409	9	Tank & Pump Room	10
RD-1410	10	Chemical Storage Area	40
RD-1411	11	Cask Wash Area-Unit 4	10
RD-1412	12	Cask Wash Area-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	1
RD-1421	21	Spent Fuel Pit North wall-Unit 3	5
RD-1422	22	Spent Fuel Pit South wall-Unit 4	5
RD-1423	23	New Fuel Room-Unit 3	20
RD-1424	24	New Fuel Room-Unit 4	20

* 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)

	RANGE	ALARM SETPOINTS
RI-6311A GM Tube	1 to 1 x 10^{8} R/hr	High 1.3 x 10^{4} R/hr, High High 1.3 x 10^{5} R/hr
RI-6311B GM Tube	1 to 1 x 10^{8} R/hr	High 1.3 x 10^{4} R/hr, High High 1.3 x 10^{5} R/hr

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

INSTRUMENTATION	RANGE	NORMAL RANGE
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 - 104% (Hot S/D to Full Power)
R.C.S. T-hot (TR-*-413)	0-750°F	545 - 605°F
R.C.S. T-cold (TR-*-410)	0 - 750°F	545 - 550°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 - 574.2°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.)

INSTRUMENTATION	RANGE	NORMAL RANGE
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 - 53.3%
Steam Generator Level Narrow Range 474, 475 (LT-*-476, 478, 484, 485, 486, 488, 494, 495, 496, 498)	0 - 100%	40 - 60%
Steam Generator Level Wide Range (LR-*-477)	0 - 100%	62 - 68%
Steam Generator Steam Flow (FT-*-474, 475, 484, 485, 494, 495)	0 - 4 X 10^6 lbs/hr	0.5 - 3.3 X 10^6 lbs/hr
Steam Generator Feed Flow (FT-*-476 477, 486, 487, 496, 497)	0 - 4 X 10^6 lbs/hr	0.5 - 3.3 X 10^6 lbs/hr

TABLE 3-4

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

INSTRUMENTATION	RANGE	NORMAL RANGE
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 (FI-*-943)	0 - 100 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-*-6325 A, B)	-6 psi to +18 psi	-3"H_2O to 20" H_2O
Containment Pressure Wide Range (PT-*-6306 A, B)	0 - 180 psig	0 - 2 psig
Containment Temperature (R-*-1413)	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.)

INSTRUMENTATION	RANGE	NORMAL RANGE
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 initial 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 4-1 shows the initial notification flow. Table 4-1 presents the organizational titles and alternates for the primary response organizations communications links.

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 his 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 offsite 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 Nuclear Plant Supervisor 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.

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

The Nuclear Plant Supervisor directs the investigative actions to address the off-normal event. After investigation, he 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 by the Plant Public Address system. To activate the FPL Corporate Emergency Organization, the Emergency Coordinator notifies the Emergency Control Officer by the most readily available communications systems.

The Emergency Coordinator will relay his information to the Emergency Control Officer (ECO), or to the Nuclear Division Duty Officer (NDDO) if the ECO or his alternates cannot be reached. The ECO (or NDDO) notifies appropriate corporate response personnel by commercial telephone. If necessary, notification from the Emergency Coordinator to the ECO (or NDDO) can be accomplished via the Systems Operation Power Coordinator.

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

- Type of accident or incident.
- Affected unit.
- Assessment of the emergency condition (including the class of emergency).
- Information on personnel injuries, and an estimate of personnel radiation exposures.
- Offsite support already called in and/or required.
- An estimate of the magnitude of a radioactive material release and the area possibly affected.
- Actions already taken or recommended with respect to the evacuation of various onsite areas.
- Wind speed and direction; wind direction range (degrees) over the previous 15 min.
- Assessment of potential radiation exposure to persons offsite and any protective actions for offsite areas recommended.

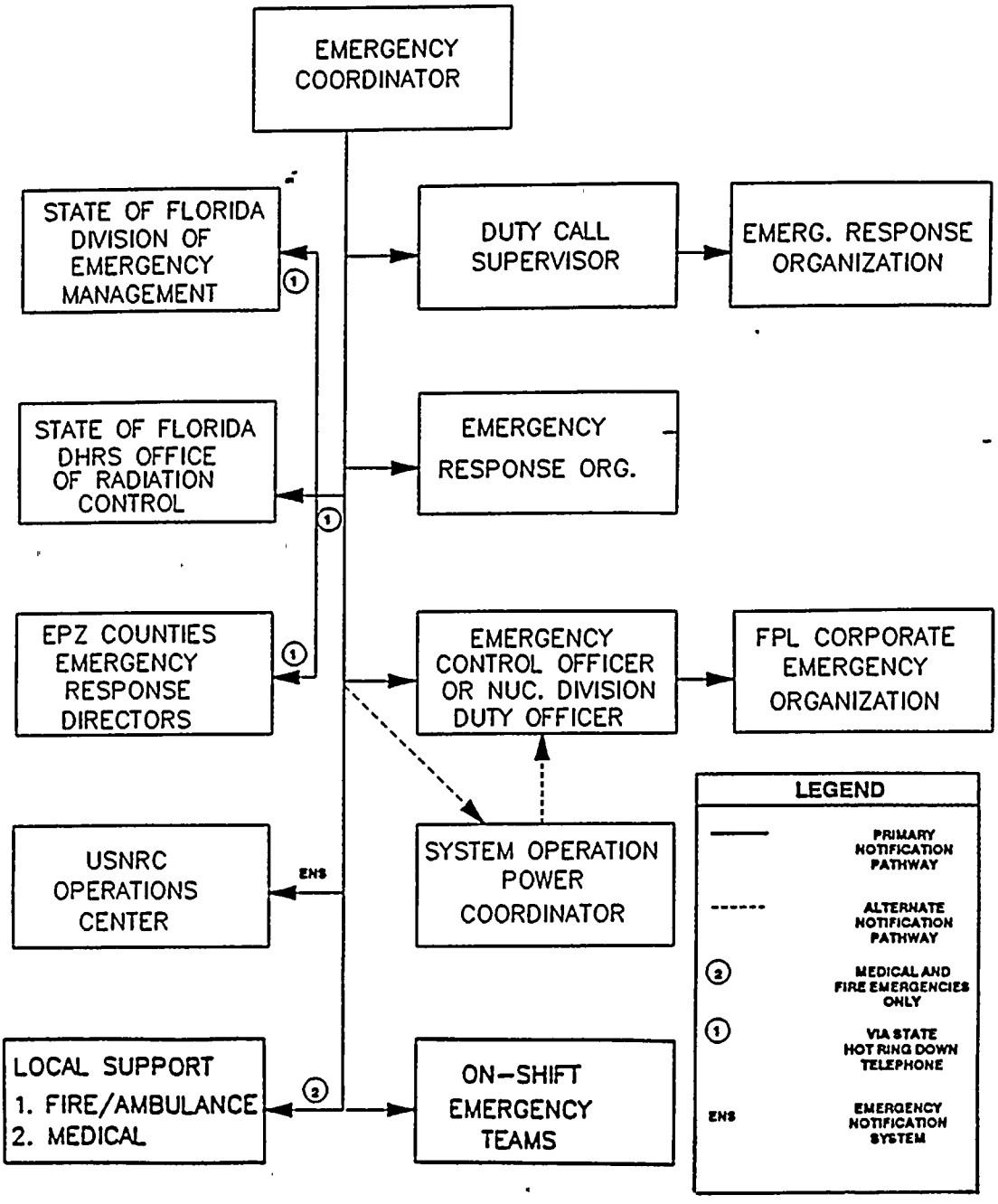
4.1.2 Communications

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

When the Emergency Operations Facility is activated, communications within the FPL Emergency Organization are accomplished primarily using commercial phones.

FIGURE 4-1

INITIAL NOTIFICATION



Follow-up messages regarding the prognosis for worsening or terminating of the event as well as requests for onsite support by offsite organizations will be made periodically and as needed by the EC to the RM. Recommendations for offsite protective measures to DEM may be included as part of follow-up messages.

4.2 State Agencies

State of Florida notification and communications procedures are presented in Appendix A.

4.2.1 Division of Emergency Management

Initial Notification

FPL's Emergency Coordinator will make initial notification within 15 minutes of declaring any emergency to the Division of Emergency Management via the Hot Ring Down Telephone System to the State Warning Point Duty Officer at the State Warning Point in Tallahassee. NAWAS and commercial telephone 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 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 system is a restricted circuit under control of DEM and local government. Its use is self-authenicating.

Communications

The Emergency Coordinator will maintain periodic contact with the State Warning Point, located at the State EOC in Tallahassee, via the Hot Ring Down network.

TABLE 4-1

COMMUNICATIONS RESPONSIBILITIES

The following positions are responsible for manning communication links among the listed organizations:

1) **FPL Onsite Emergency Response Organization**

Primary: Emergency Coordinator

1. NPS
2. Alternate as defined by plan and procedure.

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

2) **FPL Corporate Emergency Response Organization**

Primary: Recovery Manager

1. Vice President - Turkey Point-Nuclear
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 Annex E of the State Plan

4) **Metropolitan Dade County Emergency Operations Center, Miami**

Primary: Dade County Office of Emergency Management Director

Alternate: As described in Section V, Annex Q of the State Plan

5) **Monroe County Emergency Operations Center**

Primary: Monroe County Office of Civil Defense Director

Alternate: As described in Section V, Annex Q of the State Plan

TABLE 4-2

STATE OF FLORIDA
STATE OF FLORIDA NOTIFICATION MESSAGE FORM
NUCLEAR POWER PLANTS

1. A. TIME/DATE _____ B. REPORTED BY (NAME/TITLE) _____

2. SITE

A. CRYSTAL RIVER UNIT 3
B. ST. LUCIE UNIT 1
C. ST. LUCIE UNIT 2
D. TURKEY POINT UNIT 3
E. TURKEY POINT UNIT 4

3. ACCIDENT CLASSIFICATION

A. NOTIFICATION OF UNUSUAL EVENT
B. ALERT
C. SITE AREA EMERGENCY
D. GENERAL EMERGENCY

4. EMERGENCY DECLARATION TIME: _____ DATE: _____

5. INCIDENT DESCRIPTION OR UPDATE _____

_____

_____

_____

_____

6. INJURIES A. CONTAMINATED/NUMBER _____ 8. NON-CONTAMINATED/NUMBER _____

7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11, OTHERWISE CONTINUE WITH REST OF FORM.)

A. NO RELEASE
B. POTENTIAL (POSSIBLE) RELEASE
C. RELEASE IS OCCURRING - EXPECTED DURATION _____
D. RELEASED OCCURRED, BUT STOPPED - DURATION _____

8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CO-137)

9. RELEASE RATE:

		NOBLE GASES		IODINES
DEFAULT	(A) _____	CURIES PER SECOND	(C) _____	CURIES PER SECOND
MEASURED	(B) _____	CURIES PER SECOND	(D) _____	CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY	_____	_____
2 MILES	_____	_____
5 MILES	_____	_____
10 MILES	_____	_____

11. METEOROLOGICAL DATA (AT 10 METERS);

A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
B. SECTORS AFFECTED _____
C. WIND SPEED _____ MPH
D. STABILITY CLASS _____

12. RECOMMENDED PROTECTIVE ACTIONS:

A. NO RECOMMENDATIONS AT THIS TIME.
B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS:
(NOTE: IF MESSAGES REFER TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0-2	_____	_____	_____
2-5	_____	_____	_____
5-10	_____	_____	_____
10-___	_____	_____	_____

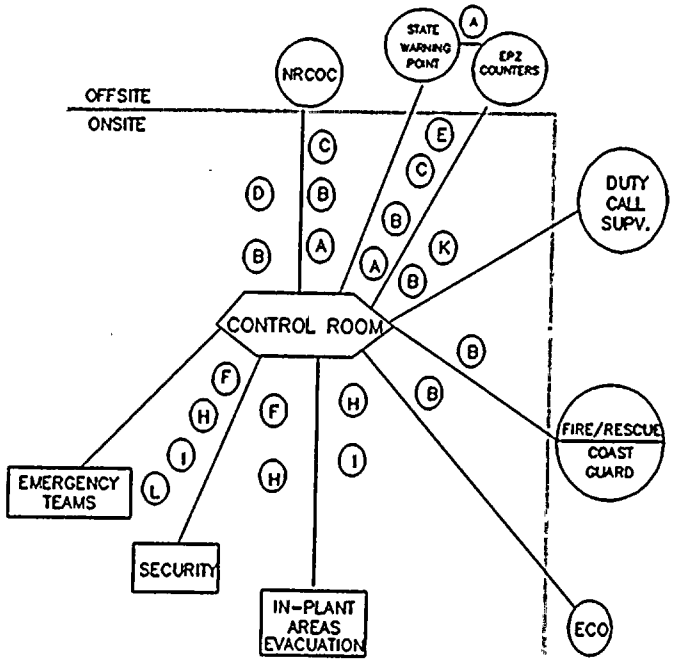
13. EVENT TERMINATED: A. NO _____ B. YES TIME _____ DATE _____

14. MESSAGE RECEIVED BY: NAME _____ TIME _____ DATE _____

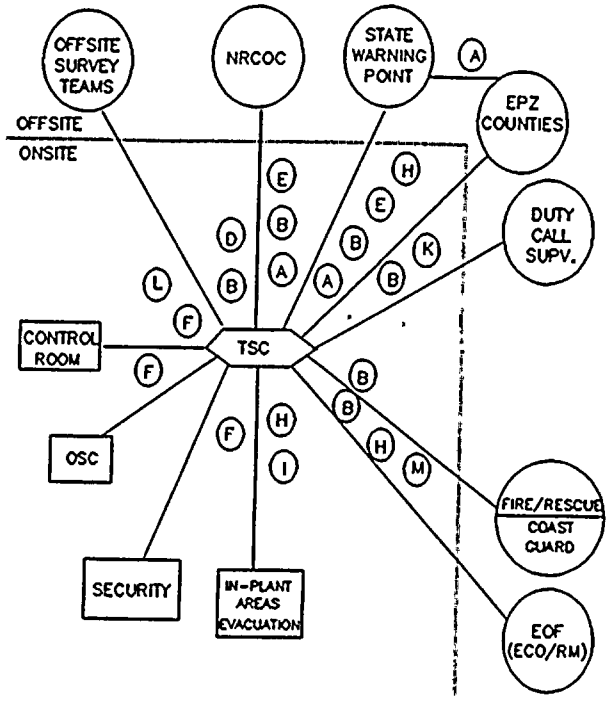
FIGURE 4-2

COMMUNICATIONS INTERFACES

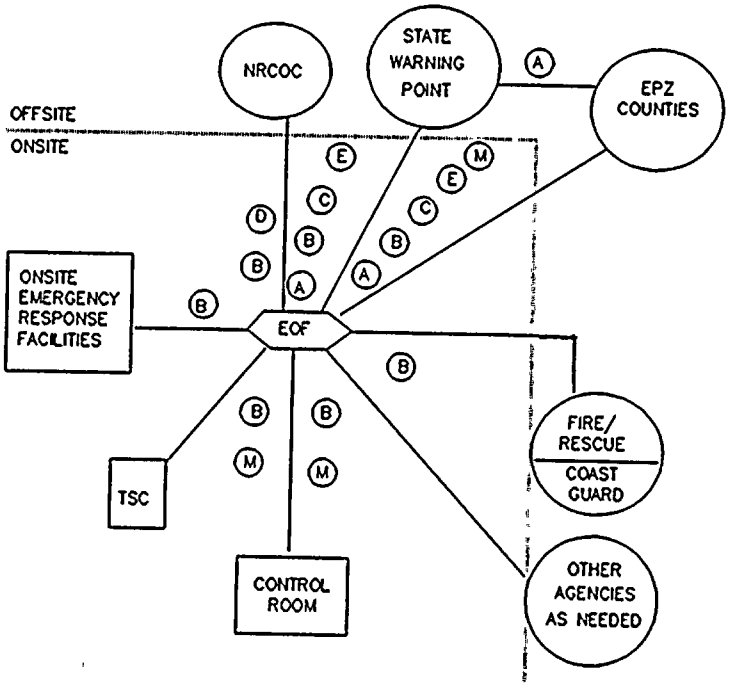
CONTROL ROOM (PRIOR TO TSC ACTIVATION)



TECHNICAL SUPPORT CENTER



EMERGENCY OPERATIONS FACILITY



LEGEND

- (A) HOT RING DOWN TELEPHONE
- (B) COMMERCIAL TELEPHONE
- (C) NAWAS
- (D) EMERGENCY NOTIFICATION SYSTEM (ENS)
- (E) LOCAL GOVERNMENT RADIO (LGR)
- (F) PLANT BELL EXTENSION
- (H) PA SYSTEM
- (I) ALARMS
- (K) PAGER
- (L) HAND HELD RADIOS
- (M) COMPANY RADIOS

4-2A.DRW
4-2B.DRW

FPL responsibility for communication with offsite agencies is transferred from the Emergency Coordinator to the Recovery Manager when he declares the EOF operational.

4.2.2 Department of Health and Rehabilitative Services

Initial Notification

The Division of Emergency Management (DEM) Duty Warning Point Duty Officer is responsible for notifying the Department of Health and Rehabilitative Services (DHRS). Notification is made to the Public Health Physicist and the Administrator, Office of Radiation Control. If required, the Public Health Physicist activates the Miami Field Team, the DHRS's Radiological Emergency Team and the Mobile Emergency Radiological Laboratory (MERL).

Communications

The Public Health Physicist maintains contact with the Division of Emergency Management (DEM) via vehicle radio as he travels to the FPL Emergency Operations Facility. Contact is maintained with the Mobile Emergency Radiological Laboratory (MERL) by the Division of Emergency Management (DEM) via Local Government Radio 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 offsite radiological monitoring teams. Annexes F and Q describe communications for field assessment teams.

4.3 Metropolitan Dade County Office of Emergency Management Director and Monroe County Office of Civil Defense

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 Dade County Department of Public Safety. The Emergency Management Directors can then be reached by telephone or by dispatching a patrol car. Also, the State Warning Point Duty Officer at the Division of Emergency Management Warning Point is responsible for confirming the receipt of emergency notice by the County Emergency Management and Civil Defense Directors. He is also 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.

Communication

The Dade County Emergency Management Director proceeds to the Dade County Emergency Operations Center and uses the communication channels available there. These include Hot Ring Down, NAWAS, RACES, Local Government Radio, teletype, police and fire networks, and telephone.

The Monroe County Civil Defense Director proceeds to the Emergency Operations Center and uses the communications channels available there. These include HRD, NAWAS, RACES, Local Government Radio, 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 Bethesda, MD 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 his designee completes this contact within one hour of the declaration of an emergency. Alternate commercial phone numbers are provided by procedure.

Communications

Communications with the NRC may be handled by telephone from the Control Room, the TSC (if activated), and the EOF (if activated).

4.4.2 U. S. Coast Guard

Assistance from the Coast Guard for onsite rescue activities can be requested by telephone call from the Emergency Coordinator or his designee or the Recovery Manager or his 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 Protected Area, 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 cancelling 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. However, they can be merged so plant-wide communications are possible.

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 receivers (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.

Radio Paging System

Telephones in the Miami Area inter-office dial system are interconnected to the Radio Paging System. This system is capable of reaching beepers in Dade, Broward, Palm Beach, St. Lucie, and Martin Counties. Beepers are regularly assigned to key personnel in the Corporate Emergency Organization as shown on the Corporate Emergency Response Directory, and additional beepers can be quickly assigned if required in an emergency. A beeper is also assigned to the Duty Call Supervisor. Assignment of beepers is shown in the Emergency Response Directory.

Company Radio System

The Company radio system consists of fixed base UHF and VHF radio equipment in the System Operations Power Coordinator's office, trouble dispatcher offices, service centers, and power plants.

In the event of interruption of 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 onsite locations. These radios will provide backup communications between the Turkey Point Plant, Systems Operations Office, EOF, and Juno Beach office. The System Operations Office has direct telephone lines and either direct, patch, or indirect radio contact with all plants, radio-equipped vehicles and service centers in the Florida Power & Light Company system.

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 pre-designated two-digit access "telephone numbers." The initial notification of an emergency is made via this system to the State Division of Emergency Management (State Warning Point-Tallahassee) and the County Emergency Response Directors. NAWAS serves as backup.

National Warning System (NAWAS)

The NAWAS is installed in the Control Room and the EOF. This system uses commercial dedicated telephone lies. The initial notification of all emergencies to the State Division of Emergency Management (DEM) and the county Emergency Response Directors will be made via the Hot Ring Down telephone using NAWAS as alternate. Additional phone numbers are listed in procedures if Hot Ring Down and NAWAS are inoperable.

Local Government Radio (LGR) System

The LGR System is installed in the Control Room, TSC, and EOF. This system, which operates on frequencies allocated in the State Division of Emergency Management (DEM), should be used to maintain communications with the DEM, the State Department of Health and Rehabilitative Services (DHRS) Mobile Emergency Radiological Laboratory (MERL), and the county Emergency Response Directors.

Emergency Notification System (ENS)

The ENS is installed in the NRC Resident Inspector's office, the Control Room, the TSC, and the EOF. The ENS utilizes the FTS-2000 network that is designed to facilitate notifications to the NRC.

4.7 Testing

As discussed in Section 7.1, Exercises and Drills, communication 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

Table 3-1 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. 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:

- o Containment purge system (both containments).
- o Gas decay tanks.
- o Auxiliary building ventilation system.
- o Unit 4 spent fuel pit ventilation.
- o Rad-waste building ventilation system.
- o Laundry facility ventilation system.

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 is 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 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 Onsite Sampling Resources

Both containment atmosphere and reactor coolant can be analyzed "on line" during an accident by utilizing the post accident sampling system.

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

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 a laboratory offsite with specialized material handling capabilities. 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 and on-line analysis. Transportation capability exists by prearranged letter of agreement between FPL and one of its vendors.

Reactor coolant grab samples can be taken within a shielded container and transported to a laboratory offsite with specialized material handling capabilities following an accident. Dedicated sample lines are installed which route a reactor coolant sample to an accessible, low background area. The sample lines are shielded to reduce the radiation exposure. Mechanical manipulators and a cart mounted shield are used to collect the sample and transport it to the laboratory. The coolant sample is analyzed for pH, boron, and radioactivity. Instructions on sample acquisition and on-line analysis are included 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 onsite. 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 offsite 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 (2 miles southwest), the South Dade site 60 meter tower (7 miles southwest), and the Homestead Air Force Base (5 miles northwest) obtained indirectly from National Oceanic and Atmospheric Administration (NOAA) Headquarters in Coral Gables. 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 Emergency Response Data Acquisition and Display System (ERDADS).

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 DHRS. The EOF and NRC can receive timely meteorological information through the TSC, upon request.

5.1.4 Source Term and Release Determination

As discussed in Section 5.1.3 certain meteorological parameters are required for the calculation of offsite 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 EPIP-20126, "Offsite Dose Calculations" 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 FSAR. 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 plant vent.

5.1.5 Exposure and Dose Rate Determination

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

EPIP-20126 "Offsite Dose Calculations" 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 NUREG-0654 and EPA P.A.G.'s. 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 using available tables and/or an interactive computer

program which presents results and pre-determined 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 Offsite Monitoring

Dosimetry

The Florida Department of Health and Rehabilitative Services maintains a system of approximately 35 TLD 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 onsite radiological laboratory serves as the primary facility with backup provided by: 1) the Health Physics counting room facilities; 2) St. Lucie Plant Radiological facilities; 3) the State of Florida's Mobile Emergency Radiological Laboratory. Analysis of offsite environmental samples will be performed at the state's Mobile Emergency Radiological Laboratory. This mobile lab can be in position near the site within six to eight hours of notification. A DHRS representative dispatched to the EOF will coordinate all state offsite field monitoring data and sample media.

TABLE 5-1

SUMMARY OF AVAILABLE METEOROLOGICAL DATA

SOURCE	DATA	DISPLAY
Turkey Point Land Management 10-meter tower	Wind Speed Wind Direction Sigma-Theta	ERDADS Strip chart record
South Dade Site 60 meter tower	Delta T (60-10m) Wind Speed Wind Direction	ERDADS Strip chart records
Homestead Air Force Base (Class A NWS Station) via NOAA	Wind Speed Wind Direction Cloud Cover Ceiling Height Air Temperature	None; via telephone

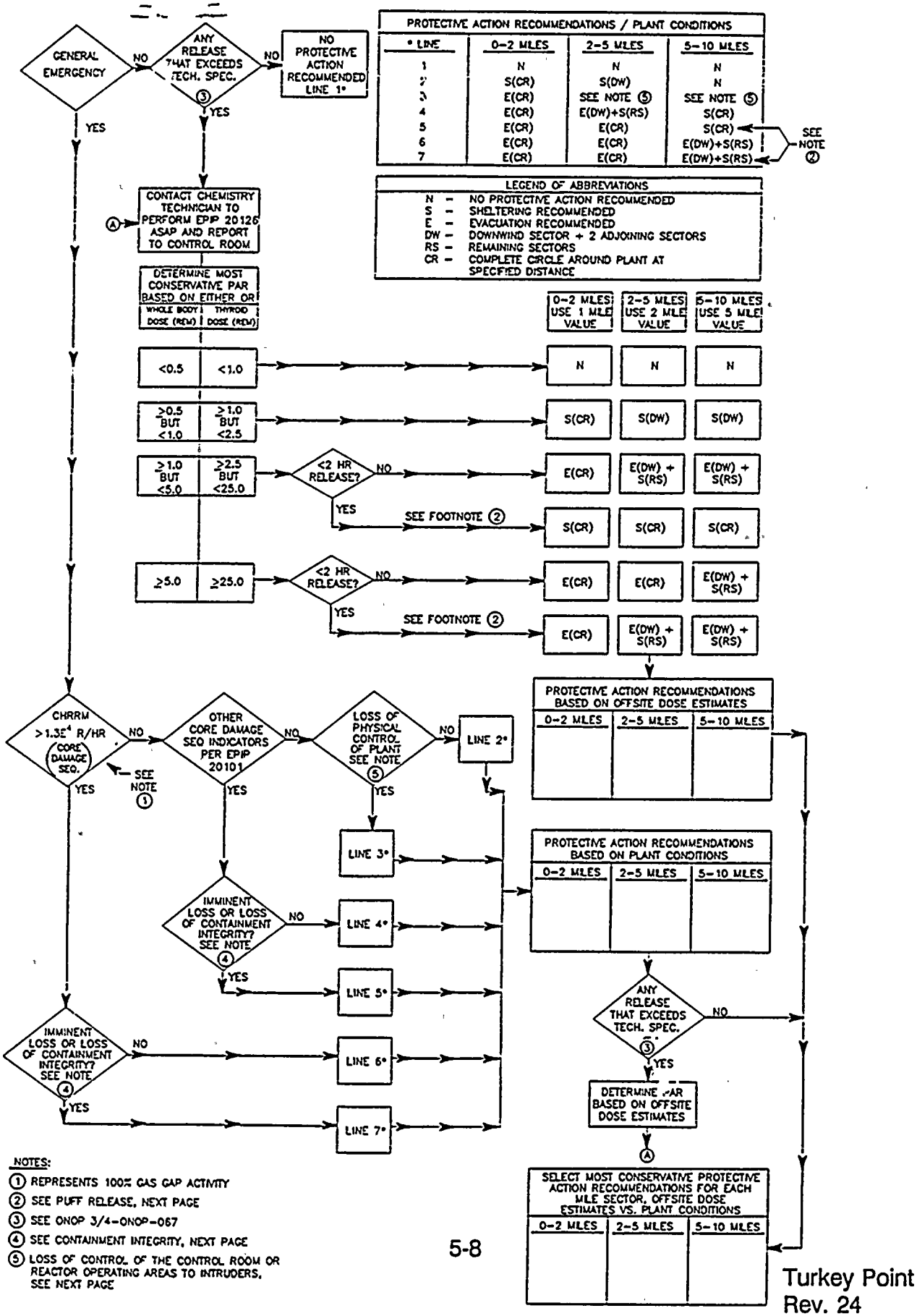
TABLE 5-2

SOURCES OF METEOROLOGICAL DATA

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

FIGURE 5-1

PROTECTIVE ACTION RECOMMENDATIONS BASED ON PLANT CONDITIONS AND OFFSITE DOSE ESTIMATES



NOTES:

① REPRESENTS 100% GAS GAP ACTIVITY

② SEE PUFF RELEASE, NEXT PAGE

③ SEE ONOP 3/4-ONOP-067

④ SEE CONTAINMENT INTEGRITY, NEXT PAGE

⑤ LOSS OF CONTROL OF THE CONTROL ROOM OR REACTOR OPERATING AREAS TO INTRUDERS, SEE NEXT PAGE

PROTECTIVE ACTION RECOMMENDATIONS BASED ON PLANT CONDITIONS

If a "PUFF" type release is imminent or in progress as indicated by the following conditions:

(1) Containment failure has occurred or is imminent, and
(2) Rate of release is much greater than designed leak rate, and
(3) Either the total or major portion of radioactivity is projected to be released with 2 hours or less, then

in addition to the appropriate protective action recommendations the following statement and information should be given:

"Florida Power & Light Company recommends sheltering those areas that can't be evacuated before plume arrival."

WIND FROM			WIND TOWARD	
SECTOR	DIRECTION	DEGREES	DIRECTION	SECTORS
A	N	348-11	S	H J K
B	NNE	11-33	SSW	J K L
C	NE	33-56	SW	K L M
D	ENE	56-78	WSW	L M N
E	E	78-101	W	M N P
F	ESE	101-123	WNW	N P Q
G	SE	123-146	NW	P Q R
H	SSE	146-168	NNW	Q R A
J	S	168-191	N	R A B
K	SSW	191-213	NNE	A B C
L	SW	213-236	NE	B C D
M	WSW	236-258	ENE	C D E
N	W	258-281	E	D E F
P	WNW	281-303	ESE	E F G
Q	NW	303-326	SE	F G H
R	NNW	326-348	SSE	G H J

Containment Integrity

If loss of containment integrity is suspected, the following actions should be taken. If containment pressure is greater than 4 psig - verify PHASE A containment

isolation and containment ventilation isolation valves are properly closed, as required. At containment pressure greater than or equal to 20 psig verify isolation valves for both PHASE A and B and containment isolation valves are properly closed. If possible, and accessible, secure identified leak path(s).

If loss of containment integrity is still suspected (e.g., unmonitored leakage through electrical penetration room, equipment, personnel or emergency hatch, etc.) instruct Health Physics personnel to survey for leakage in specified area(s) by external gamma survey and/or charcoal air sample and analysis.

NOTE: For loss of control of plant to intruders, base 2-5 mile and 5-10 mile PAR on other existing General Emergency conditions. If no other conditions exist (intruder only), no protective actions for the 2-5 miles or the 5-10 miles sectors should be given.

Field Monitoring - State

Annex I of the State Plan discusses the State role in accident assessment. It describes agencies and their missions, specialized personnel, special equipment (e.g., helicopters), and other matters related to field monitoring within the plume exposure EPZ. Section VII to Annex H 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 discussed in Section V of Annex H of the State Plan. Field team communications are described in Annex F of the State Plan. Monitoring equipment is described in Section VII of Annex H. Composition of field teams is discussed in Annex H of the State Plan. Deployment times are also discussed therein.

County plans also discuss accident assessment. For example, the Metro-Dade County Plan (Annex Q) indicates that the County Health Department Director will cooperate with DHRS with respect to accident assessment procedures. Annex Q also indicates that the Metro-Dade County Office of Emergency Management will be involved in assessment activities as well.

Section III of Annex I of the State Plan, discusses the measurement of iodine in air, and the use of such measurements in assessment activities.

Field Monitoring - Plant

EPIP 20129 provides methods for activation of emergency field monitoring teams, dispatching these teams throughout the plume EPZ and communications. Equipment and instrumentation is maintained for two offsite monitoring teams. Equipment and instrumentation is maintained in the OSC for numerous onsite 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 Health Physics Supervisor by portable two-way radios or cellular telephones. The procedure packs include sampling techniques, measurements 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 offsite radiological assessment is exchanged, arrangements have been made for State DHRS representatives to be stationed at the EOF. Direction and control of field operations for the Department of Health and Rehabilitative Service will be the Public Health Physicist Supervisor of Surveillance and Laboratories. He will conduct/supervise accident assessment and response of the field teams from a post at the EOF (Section III of Annex I of the State Plan). Office space and communications are provided therein and have been described in EPIP 1212 "Activation and Use of the Emergency Operations Facility (Turkey Point)". Prior to the arrival of DHRS personnel, coordination of this information will be through follow-up communications with DEM and the Plume Exposure EPZ counties.

DOE offsite monitoring assistance, if required, will be requested by the DEM in consultation with DHRS. Lead responsibility for coordination with DOE is assigned to DHRS.

5.2 Protective Response

This section describes the protective actions onsite, and the data provided to assist the state and county in determining appropriate offsite protective actions.

5.2.1 Protective Actions

Onsite

Onsite 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 onsite during an emergency will be provided protective equipment as prescribed by the TSC Health Physics Supervisor, the OSC HP Supervisor, and plant procedures. Radioprotective drugs will not be issued to emergency workers unless prescribed by a physician after an approximate exposure of 25 rem (with allowable protection factors taken in account).

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.

Decontamination

Personnel decontamination facilities are available in three 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) Decontamination Facility - The Florida City Substation has personnel decontamination capabilities available.

   Vehicles will be decontaminated with the use of Metro-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 beta-gamma sensitive probes.

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

Offsite

Offsite areas are the responsibility of the respective County Emergency response agencies, the DHRS and the Division of Emergency Management of the State of Florida. Control of radioactive contamination and public safety in offsite 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 offsite areas will be performed under the direction of the DHRS.

Annex I of the State Plan, discusses evacuation time estimates and their use in determining protective actions.

The Metro-Dade County Plan and the Monroe County Plan (both Annex Q, Figure Q-16) 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 offsite doses are available, the EPA Protective Action Guides in conjunction with plant conditions.

5.2.2 Onsite Warning and Response

During an emergency, the relocation of persons onsite 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 onsite personnel 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 judgement prior to moving personnel from the Owner Controlled Area. Such conditions as release status, release duration, plant conditions and meteorlogical 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

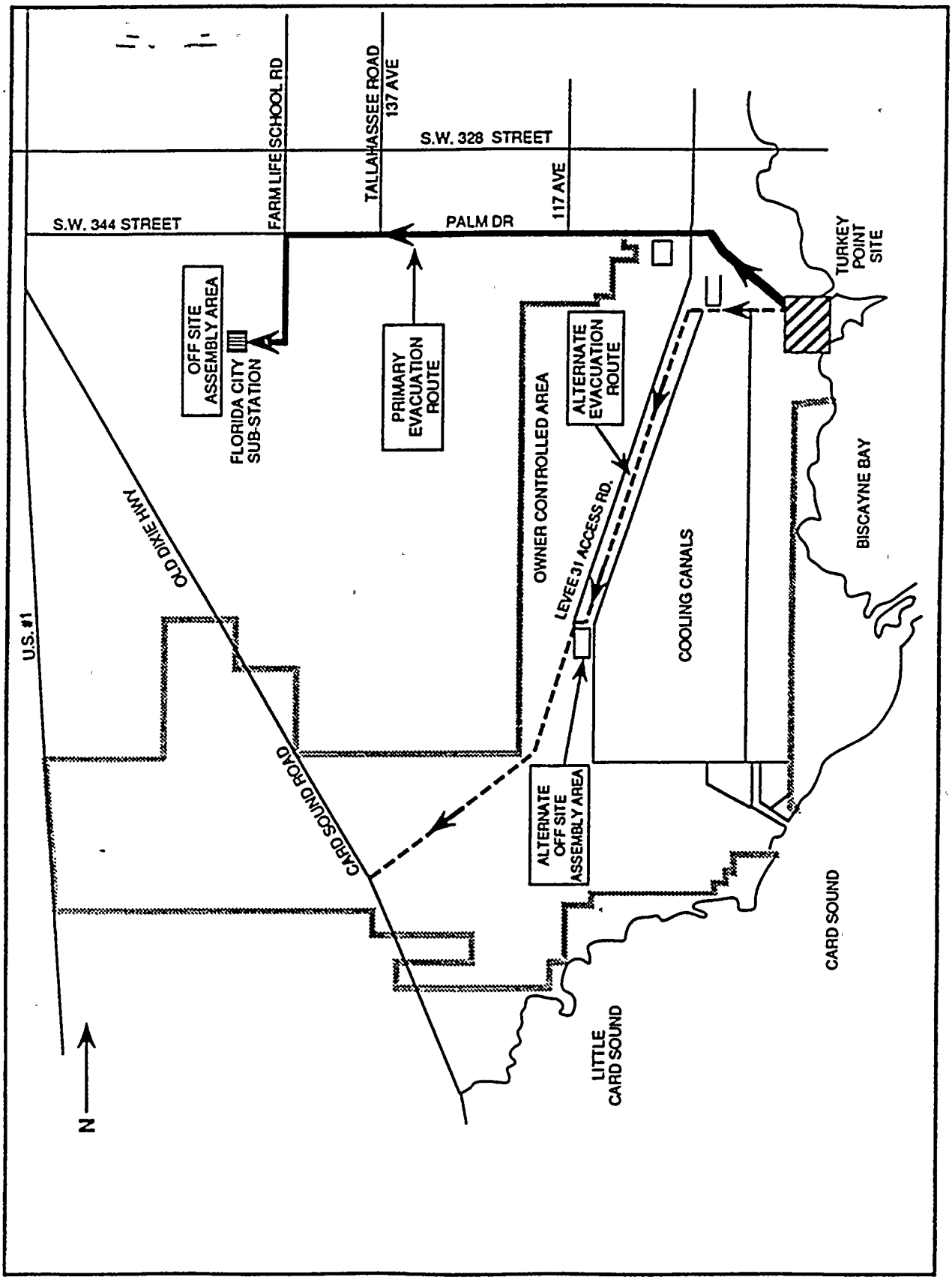


TABLE 5-3

TYPICAL POPULATION WITHIN THE OWNER CONTROLLED AREA

AREA	POPULATION	COMMENTS
Plant Nuclear Fossil Contractors	 800 120 1400	FPL & Contractor at shift change, with 1 unit in outage.
Cooling Canals present 2-3 times/year, normally 25	35	Includes visitors
Picnic Area Barn)	300	Occasional use only (Red
Girl Scout Camp	30	Occasional use only
Boy Scout Camp	60	Occasional use only
TOTAL	2745	

5.2.3 Offsite Area Protective Measures

An Offsite 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 Department of Health and Rehabilitative Services as specified in the State of Florida Radiological Emergency Plan for Nuclear Power Plants. Annex Q of the State Plan describes evacuation measures and provides maps indicating designated evacuation routes.

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

The 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 exposure pathway during emergency conditions.

It will be the responsibility of the 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.

A summary of evacuation time estimates appears in Table 5-4 (Figure Q-16 in State Plan). Figure 5-5, (Figure Q-15 in State Plan) is a map of the Plume Exposure Pathway EPZ and indicates the evacuation study areas described in Table 5-4. Maps describing evacuation routes, monitoring points, and reception centers are provided in Annex Q, Section XII of the State Plan.

The emergency classification system used by the State includes certain protective actions which are automatically triggered upon the occurrence of designated emergency classifications. These are discussed in Annex D to 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 Annex I. The State and County plans point out that EPA Protective Action Guides will be an important basis for protective action recommendations.

5.2.4 Public Warning and Information

Annex Q, to the State Plan, provides information on warning of the public and discusses warning procedures for 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. Annex E and Annex G to 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. Annex G also provides procedures for the timely and accurate collection, coordination, and dissemination to the public of such information. In an Alert, Site Area Emergency, or General Emergency, a press section in the State Emergency Operations Center will be the state's primary source for release of public information. An official spokesperson for the State, the Public Information Officer (PIO), will establish press sections in the State EOC and at FPL EOF. Through these press sections, the PIO will establish contact with wire services, newspapers, radio, and television. Information releases will be coordinated with Federal and local agencies.

Annex G of 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. Annex G discusses annual orientation of the media. Annex Q also indicates TV and radio stations which would be used.

5.2.5 Population Exposure Estimates

Population exposure estimates are discussed in the State Plan. Dose calculations assessment and monitoring in the Ingestion Pathway EPZ, and dose rate determination are discussed in Annexes H, I, J, K, and M.

5.2.6 Special Need Populations

The State Plan (Appendix A) contains a discussion of evacuation of special needs populations in Annex Q of the State Plan.

5.2.7 Population Distribution

Annex Q of the State Plan includes maps and tables showing population distribution.

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TABLE 5-4

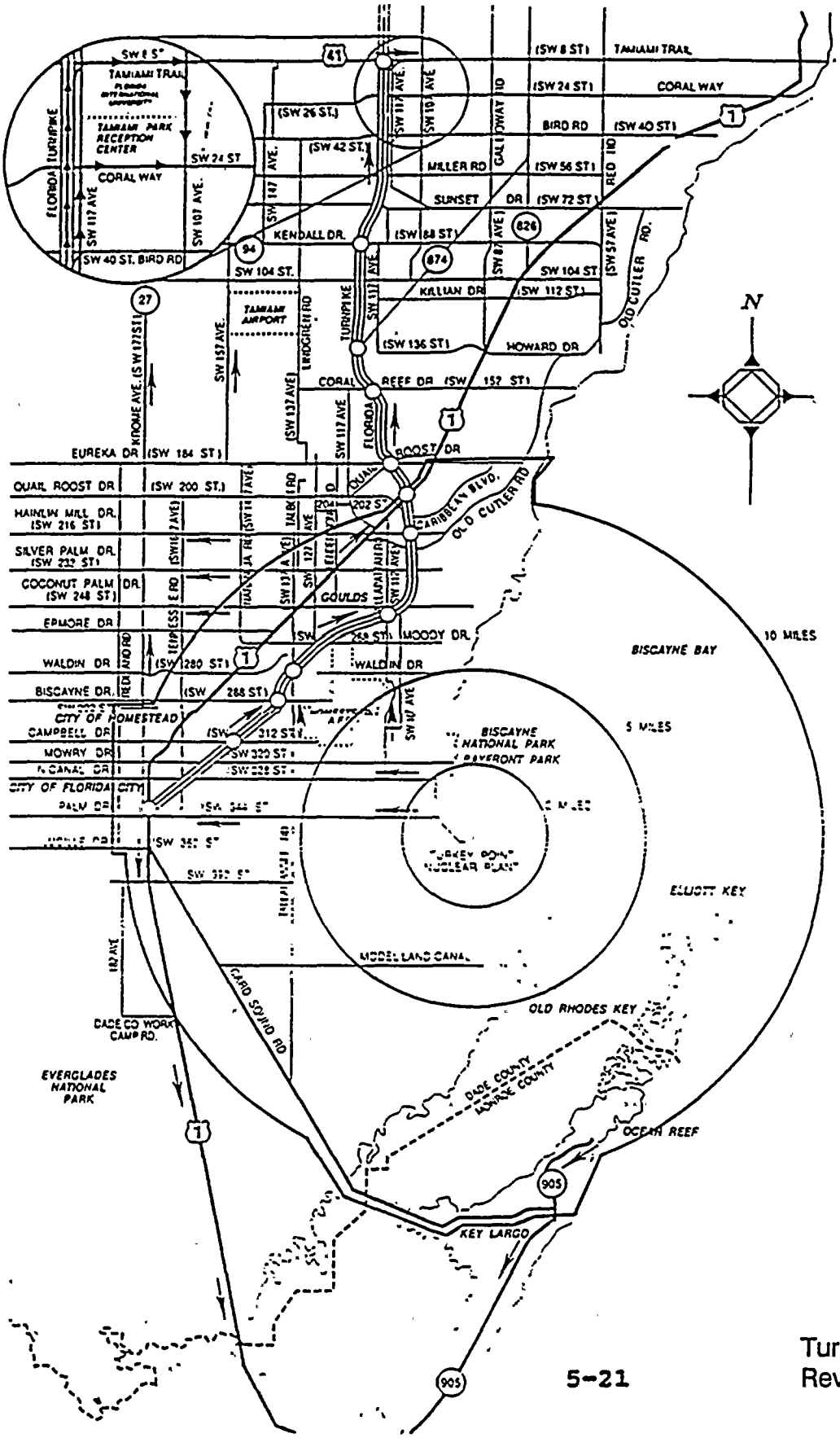
EVACUATION TIME AND TRAFFIC CAPACITY ESTIMATES

COUNTY AFFECTED	APPLICABLE SECTORS	ESTIMATED # OF AUTOMOBILES & CAPACITY (AUTOS PER HOUR)	POPULATION EVACUATION TIME ESTIMATES (0-10 MILES)			
			Normal Weather		Adverse Weather	
			Minutes	Hours	Minutes	Hours
Dade	A, R, Q	17,681 (8,700)	430	7.16	445	7.41
Dade	P, Q, R	34,231 (8,700)	419	6.99	434	7.24
Dade	M, N, P, Q	33,424 (8,700)	419	6.99	434	7.24
Monroe	H, J, K, L, M	5,635 (1,030)	228	3.80	243	4.05
Dade and Monroe	A, R, Q, P, N, M, L, K, J, H	51,357 (9,730)	434	7.23	449	7.48

FROM STATE OF FLORIDA RADIOLOGICAL EMERGENCY MANAGEMENT PLAN FOR NUCLEAR POWER PLANTS, REVISION 12/92.

TABLE 5-5

DADE AND MONROE COUNTY EVACUATION ROUTES



5.2.8 Alert and Notification System

An alert and notification system has been installed and will be used by the Dade and Monroe County Emergency Response Directors for alerting the population of the need to possibly take protective actions. The system consists of approximately 41 electronic sirens located throughout the Plume Exposure Pathway EPZ. 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 Broadcast System (EBS) radio station and await emergency information.

5.3 Radiological Exposure Control

5.3.1 Onsite Radiation Protection Program

An objective of emergency response is to minimize radiation exposure to individuals both onsite and offsite. 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.

1) Efforts should be made to limit radiation exposures to the quarterly exposure limits established for routine operations. Shorter stay times and portable shielding should be used when possible to minimize personnel exposures.

2) Where exposures to personnel are expected to exceed those permitted by 10 CFR20, the following guidelines will be met:

(Note: Additional information concerning these guidelines and their implementation is contained in the FPL Radiation Protection Manual, EPIP 20111 and EPIP 20130.

a) This exposure, with the exception of exposure received for personnel rescue actions(life saving only), must be explicitly authorized in advance by the Emergency Coordinator (EC).

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

b) Any volunteer authorized (by the EC or RM) to receive greater than regulatory exposure limits should be a healthy male. No women of child bearing age will be selected to perform these emergency actions.

c) Whole body exposure received by emergency workers is to be considered occupational exposure and retained as part of the individual's dose history. Whole body exposure limits have been established as follows:

- Under emergency conditions not requiring action to prevent serious injury or a catastrophic incident, personnel exposure should not exceed 5 rem to the whole body or 25 rem to the thyroid.

- A planned emergency exposure to prevent destruction of equipment which could result in serious injury or to assess a potentially critical situation should not exceed 12 rem to the whole body or 60 rem to the thyroid.

- When immediate action is necessary to prevent serious injury, dose to the whole body should not exceed 25 rem and dose to the thyroid should not exceed 125 rem. Events in this category include removal of incapacitated personnel from high radiation areas, providing emergency medical treatment including first aid and decontamination of individuals.

- For lifesaving actions, an individual may receive a whole body dose of 75 rem. "No specific upper limit is given for thyroid exposure since in the extreme case complete thyroid loss might be an acceptable penalty for a life saved. However, this should not be necessary if respirators and/or thyroid protection for rescue personnel are available as the result of adequate planning."[1] Because of the health risks associated with the dose limit, lifesaving missions should be undertaken by volunteers (healthy males above the age of 45) who have an understanding of the health risks and preferentially by those whose normal duties have trained them for such missions.

d) Frequent checking of radiation survey instruments and self reading dosimeters is required during emergency operations.

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[1]EPA-520/1-75-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents."

e) Whenever it is likely that an area has the potential for airborne radioactivity greater than limits specified in plant Health Physics procedures, appropriate protection will be prescribed.

3) The radiation exposure of individuals providing ambulance service and medical treatment service will be kept as low as reasonable achievable. Proper precautions will be taken to assure that these individuals' exposure will remain within the limits of 10 CFR 20.

5.3.2 Dose Records

All emergency response personnel under the authority of FPL who will potentially be exposed to radiation in the course of their duties will be monitored by the plant radiation exposure monitoring program. Personnel in this category will be issued the appropriate personnel dosimetry devices. FPL Nuclear Energy Department procedures provide for conducting the personnel dosimetry program. The Company has the capability of determining radiation exposures on a 24 hour per day basis. Dose records for all individuals exposed to ionizing radiation at FPL's facilities are maintained.

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 onsite. 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 SFEP in the Emergency Room at Baptist Hospital or Mercy Hospital. Plant Health Physics procedures specify that decontamination of uninjured personnel must be attempted at contamination levels greater than minimum detectable activity as defined in Health Physics procedures.

Food for emergency workers would be brought in from offsite, 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 Onsite

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 Emergency Control Officer (ECO) has the responsibility for determining when it is appropriate to enter into the recovery phase. The Recovery Organization consists of an augmented Expanded 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 onsite conditions have stabilized and activities for recovering from the incident can now begin. Any de-escalation from a Site Area or General Emergency requires prior approval of the Emergency Control Officer.

Planned recovery actions which may result in radioactive release will be evaluated by the Recovery Manager and his staff in advance. Such planning and data pertaining to the possible release will be reported to the appropriate offsite 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 Teams 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 normally through the OSC Supervisor. The leaders of the Emergency Response Teams and/or the Fire Team are responsible for evaluating the existing emergency conditions and informing the Emergency Coordinator via the OSC of the advisability of re-entry. For emergencies inside the RCA, the TSC Health Physics Supervisor will be responsible for providing HP coverage to Emergency Teams.

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

5.4.2 Offsite

State and County officials would be in control of recovery and re-entry offsite. Population exposure estimates are discussed in the State plan. Annex I discusses the projected dose calculations and assessment and monitoring in the ingestion pathway EPZ. Annex M of the State Plan (Recovery and Re-entry Planning) 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 Metropolitan Dade County Emergency Management offices.

Annex G of the State Plan discusses the preparatory public information program. Section VII of Annex G describes periodic dissemination. Section VII indicates that the educational program will be conducted on an annual basis. Section VII also indicates that permanent and transient population will be provided with an opportunity to become aware of the information. This section also indicates that the program will contain information on radiation, respiratory protection, sheltering, evacuation procedures, warning and notification systems, and who to contact for additional information.

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 corporate officer or senior manager experienced in media relations and having knowledge of nuclear plant operations. He will be responsible for coordinating dissemination of information to the public via the news media. Insofar as practical, he will work with the NRC, state, and local news media representatives to effect joint releases and public appearances. He 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. He 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 Emergency News 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) Accredit 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.

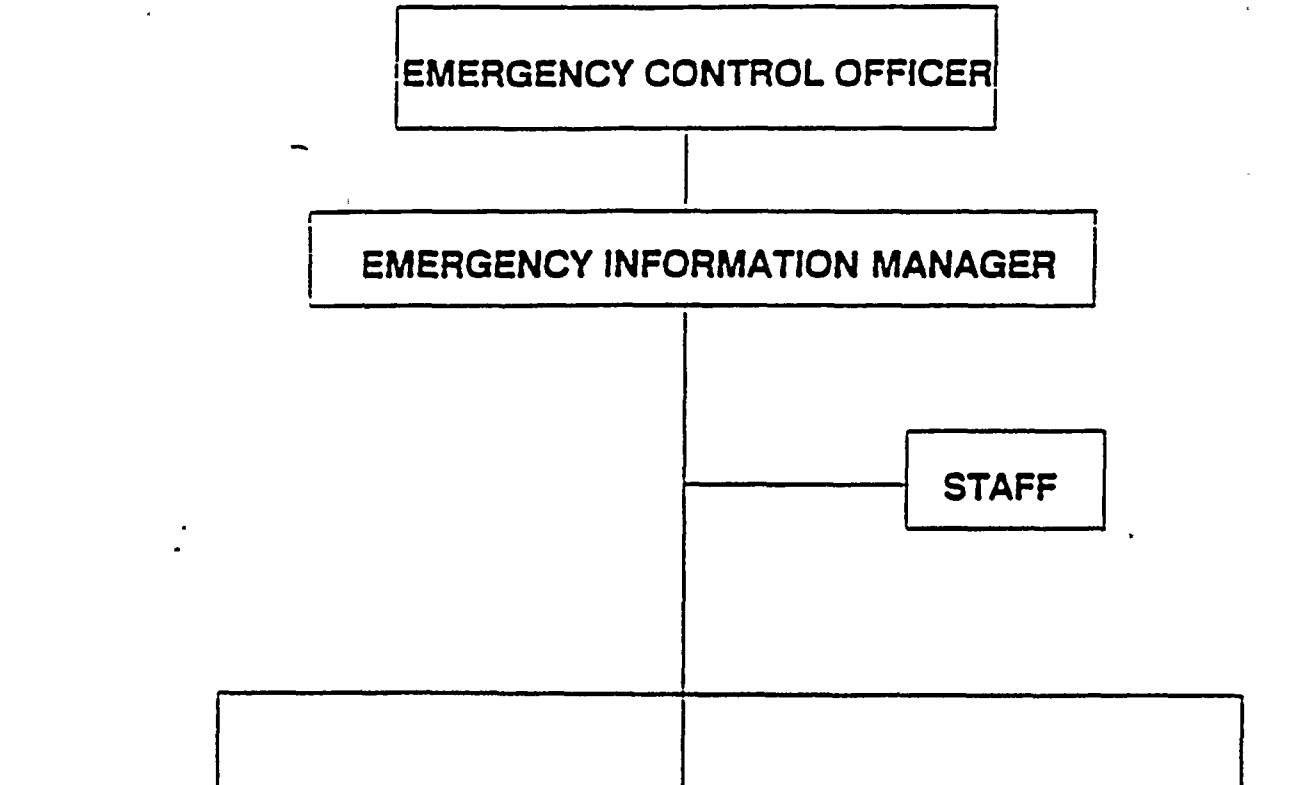
The staff of the Florida Power & Light Company Corporate Communications Department may be augmented by personnel from other utilities, consultants, or universities.

6.2.2 Emergency News Center (ENC)

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

FIGURE 6-1

PUBLIC INFORMATION INTERFACES



The National Guard Armory in Homestead may be used as the Near-Site Information Center. The facility is located at 807 N. E. 6th Avenue (just south of Campbell Drive) approximately 9 miles WNW of the Plant. The EIM will designate a staff to man the Near-Site Information Center when appropriate.

6.2.3 News Media Provisions

Florida Power & Light Company 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 Emergency News 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 officials at the EOF and County officials at the EOC. 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. Section VI to Annex G of the State Plan also discusses Rumor Control. Additionally, Dade County Office of Emergency Management maintains telephones designated for rumor control.

TABLE 6-1

INITIAL FPL STATEMENT (sample)

Number:_____.

Date:_____

Time:_____

Florida Power & Light Company
Emergency News Center
P.O. Box 029100/Miami,FL 33102
Phone:

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 immediately be brought off-line and orderly shutdown procedures will be initiated.

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:_____

Date:_____

Time:_____

Florida Power & Light Company
Emergency News Center
P.O. Box 029100/Miami,FL 33102
Phone:

NEWS RELEASE

ALERT

MIAMI -- Turkey Point Nuclear Power Plant has been placed on an alert status, based on problems at Unit #___, Florida Power & Light Company has announced.

The unit had been (is 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.

Option 1 (radiation release)

Plant operators have detected small amounts of radiation being released to the atmosphere as a result of the problem. The minor releases are confined to the plant site and pose no health or safety hazard to FPL employees or the general public. Radiation monitoring teams have been deployed as the routine precaution.

Option 2 (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.

# # #

TABLE 6-3

INITIAL FPL STATEMENT (sample)

Number:_____

Date:_____

Time:_____

Florida Power & Light Company
Emergency News Center
P.O. Box 029100/Miami,FL 33102
Phone:

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 ___(time)___(am/pm) all non-essential personnel were ordered to evacuate the plant site.

Option 1 (radiation release)

Monitoring equipment at the plant has detected small (additional) amounts of radiation being released to the atmosphere as a result of the present situation at Unit #___. The radiation that has been measured does not significantly increase the 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.

Option 2 (no radiation release)

Officials called for the evacuation of employees as a precautionary measure due to (A -- give plant specific data, if known) OR (B -- some equipment problems at the plant)___. The cause and nature of the problems are being investigated and further details are not available at this time. No radiation releases have been detected as a result of the situation at Unit #___.

The plant is continuing shutdown procedures and cooling of the reactor core. 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 (simple)

Number:_____

Date:_____

Time:_____

Florida Power & Light Company
Emergency News Center
P.O. Box 029100/Miami,FL 33102
Phone:

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 #___.

It has been advised that persons within a 10-mile radius of the plant 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) releases of radiation to the environment.

Plant operators report that (include available plant status info including status of site personnel, monitoring teams, etc).

# # #

TABLE 6-5

FOLLOW-UP FPL STATEMENT (sample)

Number:_____

Date:_____

Time:_____

Florida Power & Light Company
Emergency News Center
P.O. Box 029100/Miami,FL 33102
Phone:

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:_____

Date:_____

Time:_____

Florida Power & Light Company
Emergency News Center
P.O. Box 029100/Miami,FL 33102
Phone:

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:_____

Date:_____

Time:_____

Florida Power & Light Company
Emergency News Center
P.O. Box 029100/Miami,FL 33102
Phone:

NEWS RELEASE

EMERGENCY NEWS CENTER ACTIVATED

MIAMI -- The Turkey Point Emergency News 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 Emergency News Center to provide information about the emergency.

The Emergency News Center can be contacted by calling 305-552-4506. (IMPORTANT: That telephone number is for news media only and should NOT be announced to the general public.)

Rumor control numbers for the general public are 1-800-342-3557 for the State Division of Emergency Management and 596-8735 for the Metro-Dade County Office of Emergency Management.

# # #

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 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 communication 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 Manager, Nuclear Emergency Preparedness will be responsible for the planning, scheduling, and coordinating of all emergency drills or exercises involving offsite agencies. The Emergency Preparedness Supervisor will have the same responsibility for all onsite emergency drills except fire drills which are coordinated through the Fire Protection Department. 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 the Plant General Manager-Nuclear.

When a major exercise is to be conducted, the Manager, Nuclear Emergency Preparedness will:

1) Schedule a date for the exercise in coordination with the Emergency Preparedness Supervisor and the primary state and county emergency response agencies. Obtain the approval of the Plant General Manager-Nuclear.

2) Request that the Plant General Manager-Nuclear assign personnel to assist the Emergency Preparedness Supervisor to prepare a scenario.

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.

When an exercise or a major drill is to be conducted, the Plant Services Manager-Nuclear (or Fire Protection Department for fire drills) will assure that the following is accomplished:

1) Assign personnel to prepare a scenario.

2) Coordinate through the Manager, Nuclear Emergency Preparedness all drill activities which involve offsite personnel, organizations, or agencies.

3) Schedule a date for the activity in coordination with the Manager, Nuclear Emergency Preparedness and assign controllers, evaluators, and observers.

4) Discuss and evaluate the exercise with observers and principal participants.

5) Review evaluations of the exercise or drill with the Plant Nuclear Safety Committee.

6) Ensure that deficiencies which are identified are addressed with corrective measures.

7) Submit scenario and critique summary with corrective actions to the Manager, Nuclear Emergency Preparedness.

8) Retain corrective actions and their resolutions for record keeping.

The Plant Services Manager-Nuclear may delegate any of these responsibilities to the Emergency Preparedness Supervisor as deemed necessary.

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

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 Offsite firefighting 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 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 calendar year to demonstrate the effectiveness of the Emergency Plan. Any exercise that will provide for the coordination with and participation of offsite emergency response personnel, organizations, and agencies including those of federal, state, and local governments should escalate to a General Emergency. The emergency scenario will be varied from year to year such that all major elements of the Plan are tested within a five year period. Provisions will be made to start at least one exercise between 6:00 P.M. and 4:00 A.M. every 5 years.

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 offsite monitoring team(s) and the TSC Offsite Team Leader in the TSC will be tested. The Health Physics Department will conduct health physics drills semi-annually and one of the semi-annual drills may be incorporated into the radiological monitoring drill.

As indicated in Section III of Annex N of the State Plan, offsite radiological monitoring drills will be conducted annually, and these drills will involve the collection of all 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 offsite medical treatment facility), will be conducted at least once every calendar year.

7.1.4.4 Fire Emergency Drill

Fire drills are conducted in accordance with Technical Specifications 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 onsite personnel and participating offsite agencies to varying fire situations. The communication links and notification procedures are tested at least semi-annually 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, 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.

Quarterly communications tests will be conducted with the FPL Corporate Emergency Organization. This test may be performed as part of an annual exercise or associated with an actual declared emergency.

As indicated in Section III of Annex N of the State Plan, the State conducts communication drills at least annually. These drills include "communications between the nuclear facility, state, and local emergency operation centers and field assessment teams..." Annex F of the State Plan indicates the equipment tested during drills.

Augumentation Drills are held once per calendar year to test response capabilities of the onsite emergency response organization.

7.1.4.6 Unannounced Drills

At least one communications drill per year will be unannounced. This unannounced drill will include notification to primary offsite response agencies (i.e., DEM, DHRS, County Disaster Preparedness agencies) and those FPL emergency response personnel required to be notified based upon the drill scenario.

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

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 Manager, Nuclear Emergency Preparedness, Emergency Preparedness Supervisor, 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 Supervisor will be responsible for any necessary changes in the Plant Emergency Procedures and for recommending changes in the Emergency Plan to the Manager, Nuclear 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 implementing procedures.

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 Onsite Emergency Organization Personnel

Training programs have been established for personnel working at the plant site. The programs include initial indoctrination (General Employee Training) and subsequent retraining.

The training program for members of the onsite emergency organization will include practical drills in which each individual demonstrates an ability to perform assigned emergency functions.

The Turkey Point Plant Training Manager is responsible for conducting and documentating the initial training and annual retraining programs for onsite FPL emergency organization personnel, including Emergency Teams. The Emergency Preparedness Supervisor 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 Procedures.

For employees not assigned specific responsibility under the Emergency Preparedness Program, initial orientation training shall, at a minimum, provide 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 EPIP 20201, "Radiological Emergency Plan Training."

7.2.3 Training of FPL Corporate Emergency Organization Personnel

The Manager-Nuclear Emergency Preparedness is responsible for the conduct and documentation of initial training and annual retraining for FPL Corporate Emergency Organization personnel.

7.2.3.1 Emergency Control Officer and Recovery Manager

a) Prompt and effective notification methods, including the types of communication systems.

b) Method of activating the Florida Power & Light Company Emergency Organization.

c) The methods used for estimating radiation doses and recommending offsite protective actions.

d) Emergency Plan familiarization.

e) Emergency procedures familiarization.

f) Familiarization with the Emergency Operations Facility and the Technical Support Center.

7.2.3.2 Emergency Information Manager, Governmental Affairs Manager, Emergency Security Manager, Emergency Technical Manager

a) Emergency Plan familiarization.

b) Emergency procedures familiarization.

7.2.4 Training of Non-FPL Offsite Emergency Response Personnel

Offsite agencies which may be called upon to provide assistance in the event of an emergency will be offered briefings annually. These briefings will discuss basic concepts in radiation protection, plant operations, security, and emergency classification and response. The following groups will be offered these sessions:

1) Fire and rescue

2) Police

3) Local disaster preparedness officials

4) Medical support

7.2.4.1 State and Local Support

Annex O of the State Plan discusses State standards for training and retraining of offsite (state and local) emergency response personnel.

7.3 Planning Effort Development

Overall authority and responsibility for radiological emergency preparedness and planning lies with the President, Nuclear Division. As described below, through his staff (at the plant and Juno Beach), the FPL Emergency Preparedness program is implemented. Major responsibility in this area has been described through this plan. I

7.3.1 Review Procedure

The Emergency Plan and Emergency Plan Implementing Procedures will be under continuing review by the Florida Power & Light Company Manager, Nuclear Emergency Preparedness and Emergency Preparedness Supervisor. Notification lists and rosters will be updated at least quarterly. The Emergency Plan and letters of support will be reviewed annually. Changes to the plan and updated letters of support and agreement will be I

incorporated as required. When substantial changes affecting emergency response are identified; these changes will be made when needed. If during this annual review of the Plan and letters no changes are needed, this should be documented. Responsibility for the day-to-day emergency planning coordination at the plant lies with the Emergency Preparedness Supervisor.

The Plant Nuclear Safety Committee will conduct periodic reviews of Emergency Plan Implementing Procedures, in accordance with Technical Specifications and update the procedures as necessary to incorporate the results of exercises and drills and to account for other site-related changes. Recommended changes to the Emergency Plan will be submitted, in writing, to the Manager, Nuclear Emergency Preparedness. Changes in the Emergency Plan that are approved by the President, Nuclear Divison will be incorporated into the Emergency Plan under the direction of the Manager, Nuclear Emergency Preparedness.

Document holders (e.g., FPL, state, local, and federal agencies, etc.) will receive revisions to the Emergency Plan as they are issued. The Manager, Nuclear Emergency Preparedness is responsible for coordinating the periodic reviews of the Emergency Plan. In addition, the Manager, Nuclear Emergency Preparedness, will ensure that elements of the emergency organization (e.g., FPL, state, federal, local, etc.) are informed of amendments and revisions to the Emergency Plan.

7.3.2 Review of Changes by Onsite Personnel

Emergency Preparedness Supervisor will inform department training instructors of relevant changes in the Emergency Plan and Emergency Plan Implementing Procedures.

7.3.3 Review of Changes by Corporate Personnel

Periodic correspondence and/or meetings will be held to inform Corporate FPL emergency support personnel of changes in the Emergency Plans and Emergency Procedures.

7.3.4 Audits

An independent audit of emergency preparedness will be performed by the FPL Quality Assurance Department at least annually. Audits will verify compliance with federal regulations and Technical Specifications provisions.

Plant management, the Manager, Nuclear Emergency Preparedness, and the President, Nuclear Division will receive audit reports. Corrective actions, as delineated in the Quality Assurance Manual, will be assigned.

The audit findings will be retained for a minimum of five years.

7.3.5 Document Distribution

The Plant Site Services Manager is responsible for distribution of the Emergency Plan to onsite personnel. The Manager, Nuclear Emergency Preparedness is responsible for Emergency Plan distributions to offsite agencies and organizations. Appendix A (Florida Radiological Emergency Management Plan for Nuclear Power Plants) will be distributed to the TSC, EOF, Plant Document Control Center, and Manager, Nuclear 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.

7.3.6 Emergency Planner Training

Most training of FPL emergency planners is through on-the-job training related to plan preparation, periodic revisions, drills and exercises for two nuclear facilities. Other training is received through seminars, meetings, and discussions with industry groups. FPL is a member of and participates in emergency planning programs sponsored by NUMARC, the Edison Electric Institute, and KMC, Inc.

7.4 Emergency Equipment/Maintenance

All emergency equipment/instrumentation that is maintained in the Control Room, TSC, OSC, and the field monitoring equipment located in the Florida City Substation will be inventoried, operationally checked, and inspected at least once each calendar quarter and following each use.

APPENDIX A

FLORIDA RADIOLOGICAL EMERGENCY MANAGEMENT PLAN FOR NUCLEAR POWER PLANTS

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) Manager-Nuclear Emergency Preparedness (at Juno Beach)

5) Emergency Preparedness Supervisor (at Turkey Point)

APPENDIX B

TECHNICAL SUPPORT AGREEMENT

Bechtel Power Corporation

Institute for Nuclear Power Operations

U. S. Coast Guard

Florida Highway Patrol

Monroe County Sheriff's Department

Metro-Dade County Fire Department

U. S. Department of Energy (Savannah River Operations)

Baptist Hospital of Miami, Florida

Emergency Room Medical Associates, PA

U. S. Department of Energy (Oakridge Operations, REAC/TS)

B&W Nuclear Technologies

Bechtel

NorthCorp Center, Suite 5001
3950 RCA Boulevard
Palm Beach Gardens, Florida 33410
(407) 694-8400

May 27, 1992

Mr. G. A. Casto
Nuclear Emergency Preparedness
Nuclear Division
Florida Power & Light Company
Post Office Box 14000
Juno Beach, FL 33408

Emergency Response Assistance Agreement
Letter No. M-92-0032 Job No. 15841 Files: 0110, 15841

Reference: FPL letter JNO-EP-92-083, dated May 18, 1992

Dear Mr. Casto:

This letter summarizes Bechtel's commitments to provide assistance to Florida Power & Light Company in the event of a nuclear emergency at the Turkey Point or St. Lucie nuclear plants. Bechtel will provide services to FPL in accordance with the Emergency Response Assistance Agreement between FPL and Bechtel originally effective January 1, 1984 and subsequently amended June 19, 1987.

Upon notification from FPL's predesignated officials of an emergency, during or immediately after a nuclear incident, Bechtel will provide loaned employee assistance to FPL as expeditiously as practicable to supplement FPL's effort to manage and control the emergency. The loaned employee will be under the complete supervision, direction, and control of FPL.

Upon notification from FPL for Home Office emergency assistance in addition to the loaned employees, Bechtel will mobilize its home office facilities, including the Palm Beach Gardens office, and make available resources to provide engineering, procurement, construction and related technical services as requested by FPL.

Bechtel will respond to requests from FPL officials designated in Exhibit A-2 of the referenced agreement, or any FPL employee designated in writing by such officials. The administrative point of contact for any requests from FPL in this regard should be directed to my attention at the Palm Beach Gardens Office.

Enclosed is an update of Exhibit A-3 to the Emergency Response Assistance Agreement which identifies the names and home telephone numbers of the key response team members. Should you have any questions, please contact me at 407-694-8408.

Sincerely,

R E Gallagher

R. E. Gallagher
Project Manager

GSO:mtm

Enclosure: Exhibit A-3, Revised 5/92

cc: J. B. Hosmer w/1
T. G. Kreinberg w/1
R. Sipos w/1

INPO

Institute of
Nuclear Power
Operations

Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339-3064
Telephone 404 953-3600
Telefax 404 953-7549

RECEIVED
JUL 13 1992
Nuclear Licensing

July 7, 1992

Mr. Philip K. Green
Nuclear Licensing Department
Florida Power & Light Company
P. O. Box 14000
Juno Beach, FL 33408

Dear Mr. Green:

In support of your utility's emergency plan, this letter provides the annual certification of the assistance agreement between INPO and its member utilities. In the event of an emergency at your utility, INPO will assist in acquiring the help of other organizations in the industry, as described in Section 1 of INPO's 86-032, *Emergency Resources Manual*. In addition, INPO will provide assistance by utilizing its own resources, as requested and as appropriate.

This agreement will remain in effect until terminated in writing. Please forward a copy of this letter to your emergency preparedness department for use in updating your emergency plan.

Should you have any questions, please contact me at (404) 951-4742 or Sam Newton, manager, Emergency Preparedness Department, at (404) 953-7646.

Sincerely,

John F. Groth
Vice President and Director
Analysis Division

JFG:jej

cc: Mr. Kenneth A. Strahm

that is activated when the INPO duty officer cannot immediately respond to telephone calls. If a message is left on the answering service and a timely response is not forthcoming, the INPO switchboard should be contacted at (404) 953-3600.

INPO will provide the following types of assistance upon request:

- o locating personnel with technical expertise at utilities
- o obtaining industry experience information on plant equipment through NPRDS
- o facilitating the flow of technical information from the affected utility to the nuclear industry

To support these functions, INPO maintains the following Emergency support capabilities:

- o a dedicated emergency notification system capable of reaching appropriate INPO staff members and responding to requests for assistance at any time
- o designated INPO representatives who can be dispatched to the utility to facilitate INPO assistance and information flow between the affected utility, INPO, and other utilities
- o a dedicated Emergency Response Center available to support INPO's emergency response organization at any time

During a Site Area or General Emergency, and after communication with the affected utility, INPO will determine whether an INPO liaison and other suitably qualified members of the INPO staff should be dispatched to the utility. INPO liaison and assistance personnel can be dispatched on approximately four hours notice. The liaison will report to one of the affected utility's emergency response facilities and serve as the communication link to INPO. The liaison will assist in coordinating INPO's response to the emergency as follows:

- staffing a position responsible to the appropriate utility manager as liaison for all INPO matters

- working with INPO personnel in Atlanta to coordinate responses to requests for assistance from INPO and other industry resources

- assisting in responding to industry inquiries

- facilitating transmittal of approved information to the industry via NUCLEAR NETWORK. INPO and the INPO on-site liaison will not release any information to others until it has been approved for release by an appropriate utility person in authority.

To facilitate assistance to the utilities, INPO has requested that all member utilities provide INPO with a controlled copy of their emergency plan.

U.S. Department of Transportation
United States Coast Guard

Commander
Seventh Coast Guard District

Brickell Plaza
Federal Building
909 SE 1st Avenue
Miami, FL 33131-3050
Staff Symbol: (re)
Ph: (305) 536-5638

3000
Ser: 209
29 Jul 92

Mr. G.A. Casto, Nuclear Emergency Preparedness
Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

Dear Mr. Casto:

In response to your letter of 18 May 1992, the following updated information is provided. This update reflects no significant change from the information provided in our previous letter to FPL.

In a natural disaster, or whenever life, limb, or property is in danger or deemed to be in danger in the immediate future, under authority of Section 88 and 141, Title 14 U.S. Code, the U.S. Coast Guard will provide to any person or governmental authority any assistance that constitutes the rescue, aid or evacuation of persons in danger, and the protection of property threatened by any type of disaster. Among other things, this includes the transportation of personnel and materials to assist a disaster stricken area, and the search for and rescue of persons or vessels lost at sea during an emergency situation.

Our Disaster Preparedness Officer and administrative point of contact is Lieutenant (Junior Grade) Yamil Perez. He may be reached at (305) 536-5619.

The nearest Coast Guard facility to your St. Lucie plant is Coast Guard Station Ft. Pierce. Providing it is not engaged in some other life threatening emergency, its normal response time to the vicinity of the St. Lucie plant is between 30 and 45 minutes.

A normal response time for helicopters based at the Coast Guard Air Stations Miami and St. Petersburg, Florida, to the area in the vicinity of your St. Lucie plant is approximately 75 minutes.

The nearest Coast Guard facility to your Turkey Point plant site is Coast Guard Base Miami Beach. Its normal response time to the Turkey Point area is approximately 2 hours.

A normal response time for helicopters based at Coast Guard Air Station Miami, Florida, to the area in the vicinity of the Turkey Point plant is approximately 35 minutes.

3000
Ser: 209
29 Jul 92

If the need arises to obtain these support services, your first point of contact should be our district operations center at (305) 536-5611 or 6841. This 24 hour manned response center has been provided a copy of this letter of support.

Depending upon the seriousness of the emergency and the actions required, the Coast Guard could respond with a variety of additional assets. The type, quantity and arrival time of these assets would vary. Coast Guard response to any given emergency must be based on the operational priorities existing at that particular time.

Should you desire specific details of other Coast Guard forces in these areas that might be available to assist you, please contact Commander Rodney B. Bowles, my point of contact for this matter, at (305) 536-5639.

Sincerely,

T. J. MCCARTHY
Captain, U.S. Coast Guard
Chief, Readiness and Reserve Division
By direction of the District Commander

Copy: (1) Deputy, Chief of Staff
(2) Operations Center

Greg A. Casto
Nuclear Emergency Preparedness
Nuclear Division JNO/JB
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408

Dear Mr. Casto;

I have reviewed the letter of agreement between Department of Highway Safety & Motor Vehicles and Florida Power & Light Company and confirm that the current letter of agreement, dated July 9, 1991 still applies as written.

Signature

6-12-92
Date

The letter dated July 9, 1991, the contact is Capt. Morris Leggett at (904) 487-2714. All other material/procedures remain the same.

State of Florida
DEPARTMENT OF
HIGHWAY SAFETY AND MOTOR VEHICLES

LEONARD R. MELLON
Executive Director
Neil Kirkman Building, Tallahassee, Florida 32399-0500

LAWTON CHILES
Governor
JIM SMITH
Secretary of State
BOB BUTTERWORTH
Attorney General
GERALD LEWIS
Comptroller
TOM GALLAGHER
Treasurer
BOB CRAWFORD
Commissioner of Agriculture
BETTY CASTOR
Commissioner of Education

July 9, 1991

Mr. G. A. Casto
Nuclear Emergency Preparedness
Nuclear Division
FLORIDA POWER & LIGHT COMPANY
P. O. Box 14000
Juno Beach, Florida 33408-0420

Dear Mr. Casto:

In response to your letter dated 06/19/91, enclosed are the following:

(1) Policy #'s 16.09.00, 16.09.01 and 16.09.02 of the Florida Highway Patrol Manual will apply in cases of accidents or emergencies at the nuclear power plant.

(2) Page 23 and 24 of the Florida Department of Law Enforcement's Florida Mutual Aid Plan is also applicable.

If you have any questions concerning these procedures, please contact Major Morris Leggett at (904) 488-5370.

If I can be of any further assistance, please advise me at (904) 488-4656.

Sincerely,

Nelda Parker

Nelda Parker
Contract Administrator

NP:
Attachment
cc: Major Leggett

16.06.09 Special Response Team Manual

Members assigned to the Special Response Team shall be issued a Special Response Team Manual and shall be thoroughly knowledgeable of its contents.

16.06.10 Confidentiality of Special Response Team Activities

All Special Response Team activities, equipment, member rosters, training, Manual, and other related items are confidential and shall not be released without specific authority from the Director.

16.07.00 Emergency Roadblock Procedure

Members shall be thoroughly familiar with the Florida Highway Patrol roadblock procedure as outlined in the Division Forms and Procedures Manual, including implementation procedures and individual member responsibility. Members will follow those procedures to help ensure a coordinated, well disciplined effort to contain and apprehend dangerous felons.

16.08.00 Disasters and Plane Crashes

Any member gaining knowledge of a plane crash, disaster, or catastrophe in the area to which the member is assigned, shall take appropriate action to aid in handling the emergency and notify the immediate supervisor. In the case of a plane crash, Federal Aviation Authorities shall be notified via the Patrol duty officer or supervisor.

16.09.00 Hazardous Material Emergencies

Members may at any time be called upon to respond to an emergency involving hazardous materials. Members have the responsibility of responding in a prompt and efficient manner and doing so to ensure the safety of the public and themselves.

16.09.01 Hazardous Materials Procedures

A booklet titled Hazardous Materials (DOT P 5800.2), published by the United States Department of Transportation, has been issued to all members and is available in each radio room. It is the responsibility of each member to be familiar with this book as it is their guidebook for handling emergencies involving any incident involving hazardous materials.

16.09.02 Radioactive or Nuclear Materials Accident

The following notification procedure in this Chapter shall be followed in the event of a radiological accident within or affecting the state of Florida:

A. In the event of an incident wherein the accidental release or spill, of radioactive material occurs, the responsible person or any other person aware of the

incident will notify by National Attack Warning System (NAWAS), telephone or other available means:

Duty Warning Officer
State Warning Point Tallahassee
Division of Disaster Preparedness
Interim State Emergency Operating Center
1720 South Gadsden Street
Tallahassee, Florida 32301

NAWAS: "STATE WARNING POINT TALLAHASSEE"

Telephone:

OR

Duty Communications/Teletype Operator
ALTERNATE STATE WARNING POINT TALLAHASSEE
Division of Marine Resources
Communications center
202 West Blount Street
Tallahassee, Florida 32301

NAWAS: "ALTERNATE STATE WARNING POINT TALLAHASSEE"

Telephone:

B. In the event the STATE WARNING POINT TALLAHASSEE or the ALTERNATE STATE WARNING POINT TALLAHASSEE cannot be contacted by NAWAS or by telephone, the reporting individual will call:

The nearest Florida Highway Patrol Station, Sheriff's Office, County Civil Defense Office or Division of Disaster Preparedness Area Office, providing such information concerning the event for delivery by the most expeditious means to the Division of Disaster Preparedness.

16.10.00 Requests for Nonemergency Special Operations With Other Law Enforcement Agencies

All requests for joint FHP/law enforcement agency operations will be submitted in writing to the appropriate Chief of Field Operations and will include a specific operational plan including staffing, potential for violence, background histories and any other information that is deemed appropriate. Routine requests for assistance not requiring significant manpower shall be approved by the Chief of Field Operations. Special operations requiring significant use of manpower, for example an SRT commitment, shall require the approval of the Director.

Management. The Department of Highway Safety and Motor Vehicles, Division of Florida Highway Patrol will provide resources to assist local governments according to the functional responsibilities outlined below. For each disaster function, one state agency will have primary responsibility and will provide both resources and leadership relating to that function.

Other agencies will be assigned supporting roles and will provide resources as required by the agency with the primary responsibility.

Functions ascribed to the Department of Highway Safety and Motor Vehicles and their corresponding assignments are as follows:

FUNCTION	ASSIGNMENT
Public Safety	Primary
Evacuation	Support
Hazard Litigation	Support

(NOTE: The Troop Commander shall ensure that each member is conversant with not only the directive concerning Hazardous Materials in the State Emergency Plan, but also the information contained in the DOT Publication 5800.3, entitled 1984 Emergency Response Guidebook, a Guidebook for Hazardous Materials Incidents.)

Search and Rescue	Support
Temporary Housing	Support
Training & Education	Support
(Public Information)	
Transportation	Support
Warning	Support

It shall be the responsibility of the Troop Commander to outline his responses to each of the aforementioned categories and maintain an up-to-date contingency plan for implementation. A copy will be maintained at the Troop level and the original filed with the respective Chief of Field Operations. The Troop Commander, or his designee, will man the Local Emergency Operations Center. Information gathered and Division services requested and rendered will be forwarded through channels to the Division Director.

The State Emergency Operations Center in Tallahassee will be manned by the Chief of Field Operations and Communications, or his designee(s), and it shall be his responsibility to serve as liaison between the Division of Florida Highway Patrol and the Division of Emergency Management. The Chief of Field Operations and Communications will continually apprise, via channels, the Division of current Division activities under way.

In the event additional manpower is needed from beyond Troop boundaries, the same procedures previously outlined for deployment of SRT's shall be initiated. Those policies that, by their very nature, are not applicable or impractical or cross-function shall be deleted.

It is the specific intent of this policy to utilize the SRT's throughout the state as the Division's primary front line response personnel to be mobilized and activated upon direction.

NUCLEAR POWER PLANT EMERGENCIES

Troop Commanders shall thoroughly familiarize themselves with selective excerpts from the Florida Radiological Emergency Management Plan for Nuclear Power Plants, provided by the Division of Emergency Management that are outlined below. Even though there may be no nuclear power facility in the

assigned troop, mobilization of the troop's SRT and deployment to an affected area is possible. Therefore, it is incumbent upon each Troop Commander not only to have a contingency support plan for deployment of their respective SRT, but more importantly to ensure that adequate information and education is given to personnel responding to such an emergency.

The Division's major responsibilities, as outlined in the aforementioned manual under "State Government Organizations and Responsibilities," are as follows:

J. Department of Highway Safety and Motor Vehicles
   1. Director - Division of Highway Patrol
      a. Assist other law enforcement agencies in the movement of traffic during a radiological emergency as required.
      b. Assist other law enforcement agencies in policing disaster areas.
      c. Provide security and assist in staffing roadblocks to support county personnel who are involved in radiological emergency response operations.
      d. Provide communications assistance as required.

Each troop shall have a minimum of two personnel trained in radiological monitoring and be adequately equipped for immediate mobilization. These personnel shall consist of one supervisor and one trooper.

The procedures utilized, including activation, reporting, and chain of command notification in SRT responses shall apply to nuclear power plant emergencies, except those policies which, by their very nature, are not applicable or appropriate.

Each Troop Commander shall document their individual Troop's response, either primary or support, to the nuclear power plant emergency and shall maintain a copy of such contingency plan at Troop headquarters, with the original maintained by the Chief of Field Operations for the respective region.

It is imperative that a working knowledge be acquired and maintained concerning overall governmental responsibility to this type of emergency, an understanding of the diversity of governmental functions and where the Florida Highway Patrol, as a Division, fits into the overall scheme of events. With this concerted effort coupled with well-thought-out and maintained response plan, the Division's goals of professional deployment, stabilization and execution of assigned tasks and successful completion of assigned duties can be achieved.

CROWD CONTROL - FLORIDA STATE PRISON AT RAIFORD

The Division's concern is to provide services commensurate with statutory authority to assist in quelling any disturbances generated by a state-ordered execution.

It is imperative that each Troop Commander be thoroughly conversant with the current Department of Corrections memorandum concerning crowd control at executions.

The expressed intent of this policy is to establish our Division's SRT responsibilities when deployed to the Florida State Prison at Raiford pending a scheduled execution. Even though this is the only facility in the state that carries out executions, each Troop's SRT personnel should be apprised of and familiar with operational procedures established by the Department of Corrections.

Sheriff

RICHARD D. ROTH • SHERIFF OF MONROE COUNTY
530 WHITEHEAD STREET • KEY WEST, FLORIDA 33040
(305) 296-2424 • FAX (305) 292-7070 • 1-800-273-COPS

MEMORANDUM

TO: G. A. Casto
Nuclear Emergency Preparedness
Florida Power & Light Company

FROM: Mark L. Willis, General Counsel

RE: Letter of Support

DATE: December 17, 1992

This memorandum will serve to confirm the understanding that the Sheriff of Monroe County stands ready to assist the Florida Power & Light Company in the event of an emergency at the Turkey Point Plant. The terms of our agreement are substantially the same as those contained in the letter of August 21, 1990, from Major Joseph Leiter to you. Please note that the Sheriff now has 186 sworn deputies and 99 reservists.

Feel free to contact me or anyone at this agency if we may be of any assistance to you in your plans.

MLW/jm

Freeman Station
101 1st Ave. W., Cudjoe Key, Florida 33042
(305) 745-3184 FAX (305) 745-3761

Marathon Station
3103 Overseas Hwy., Marathon, Florida 33050
(305) 743-9066 FAX (305) 743-6992

Spottswood Station
88770 Overseas Hwy., Tavernier, Florida 33070
(305) 852-3211 FAX (305) 852-6281

Greg A. Casto
Nuclear Emergency Preparedness
Nuclear Division JNO/JB
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408

Dear Mr. Casto;

I have reviewed the letter of agreement between Metro-Dade Fire Department and Florida Power & Light Company and confirm that the current letter of agreement, dated January 22, 1991 still applies as written.

M Perry
Signature

5-25-92
Date

Metropolitan Dade County, Florida
Fire Department
Office of the Fire Chief
6000 S.W. 87th Avenue
Miami, Florida 33173-1698
(305) 596-8593

January 22, 1991

Mr. Jay J. Maisler, Emergency Planning Manager
Florida Power & Light Company
P. O. Box 140000
Juno Beach, Florida 33048-0420

Dear Mr. Maisler:

Upon notification through emergency operators (911) of an incident at Florida Power & Light's Turkey Point Plant, The Metro-Dade Fire Department will respond with dispatch of appropriate fire and rescue units. A typical assignment would include 6 suppression vehicles (2 aerials and 4 pumpers), 2 rescue vehicles and supervisory units. The normal complement of personnel assigned to these units is 32. Additionally, we will dispatch our Hazardous Materials unit which specializes in incidents concerning hazardous materials and is equipped with sophisticated informational systems and equipment.

If conditions warrant, additional units would be dispatched including support units. The fire department emergency services include fire suppression, basic and advanced life support and related assistance. Personnel and equipment are obligated to implement provisions of the Turkey Point Radiological Emergency Plan to the extent of available resources.

If any further information is necessary please contact Chief Robert D. Paulison at (305) 596-8585.

Sincerely,

M. E. Perry, Fire Chief
Metro-Dade Fire Department

Department of Energy
Field Office, Savannah River
P.O. Box A
Aiken, South Carolina 29802

JUN 08 1992

Mr. Greg A. Casto
Nuclear Emergency Preparedness
Nuclear Division JNO/JB
Florida Power and Light Company
P. O. Box 14000
Juno Beach, FL 33403

Dear Mr. Casto:

DEPARTMENT OF ENERGY (DOE) AGREEMENT FOR EMERGENCY SUPPORT, 8-23-91

This letter provides assurance that the subject agreement between DOE and Florida Power and Light Company remains in effect.

We understand your emergency preparedness plan requires formal agreements to be reviewed and updated on a periodic basis. The subject letter remains current; however, it should be noted that emergency management responsibilities have been transferred to the Radiation Protection and Emergency Management Division.

Request for DOE emergency radiological assistance may be directed to the Savannah River Site Operations Center at (803) 725-3333. This is our 24-hour emergency assistance telephone number.

Routine program questions may be directed to R. K. Roemmich of Westinghouse Savannah River Company at (803) 725-9105. Questions regarding DOE policy may be directed to Sherry L. Southern at (803) 725-4723.

Sincerely,

Randall J. Clendenning, Director
Radiation Protection and Emergency
Management Division

EMB:JLM:plw

Enclosure

cc: R. K. Roemmich, WSRC-EMD, 703-73A

Greg A. Casto
Nuclear Emergency Preparedness
Nuclear Division JNO/JB
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408

Dear Mr. Casto;

I have reviewed the letter of agreement between Baptist Hospital of Miami and Florida Power & Light Company and confirm that the current letter of agreement, dated November 16, 1989 still applies as written.

Signature

5-29-92
Date

BAPTIST HOSPITAL
OF MIAMI

November 16, 1989

Jay J. Maisler
Emergency Planning Manager
Nuclear Energy Services
Florida Power and Light
P.O. Box 14000
Juno Beach, Florida 33408-0420

Dear Mr. Maisler:

As requested in your letter of October 20, 1989, the following is information stating our support, capabilities and resources available to you in the event of an emergency at one of your nuclear plants:

1. Administrative point of contact:

H. Richard Nateman, M.D., Medical Director
Baptist Hospital of Miami Emergency Department
8900 N. Kendall Drive
Miami, Florida 33176
Business hours: (305) 596-6589
24 hours-seven days a week (305) 596-6558

2. Descriptions of resources and support which can be provided:

a. The following is contained in the "Scope of Services" portion of the Medical Support Agreement between Florida Power and Light and South Florida Emergency Physicians, P.A. (Physicians):

"Physicians shall provide the Facility (Baptist Hospital of Miami) such that it can perform as a principal radiological emergency medical facility for FPL's Turkey Point Plant for the diagnosis and treatment of injury accompanied by radiological contamination, or actual or alleged injury due to radiation exposure. Such facility shall also serve as a contingent radiological emergency facility for FPL's St. Lucie Plant.

8900 North Kendall Drive
Miami, FL 33176-2197

Physicians shall have available at all times a minimum of one physician who has attended appropriate training courses for physicians conducted at the Oak Ridge Associated Universities' Radiation Emergency Assistance Center/Training Site (REAC/TS) in Oak Ridge, Tennessee or at an equivalent facility, subject to FPL approval.

Physicians shall maintain plans, procedures and staff training programs for radiation casualty reception, diagnosis and treatment, and shall revise such plans and procedures as may be necessary to reflect changes in personnel and facilities and to conform to generally accepted modern standards. Plans, procedures, and training programs shall be reviewed and revised as significant changes occur but not less than annually and reviewed with FPL to assure a mutual understanding and accomplishment of emergency actions and objectives, and to assure coordination with the plans, procedures, and training programs of other medical facilities used by FPL. Copies of all plans and procedures, revisions thereto, and training attendance and critiquies shall be furnished to FPL.

Physicians shall maintain their emergency plans, medical staff, and obligate the Facility to meet all applicable regulatory guidelines of the NRC and other governmental agencies having jurisdiction.

Physicians, at the request of FPL, shall provide a representative to attend meetings sponsored by the NRC or other agencies with regulatory or public responsibilities so as to obtain and describe to FPL the latest information available with regard to nuclear medical and health matters directly related to FPL medical plans for operation of its nuclear facilities. Reasonable and moderate travel and lodging expenses will be reimbursed by FPL.

FPL shall have the right to retain outside consultants (physicians or otherwise) to provide their services at the Physician's Facility, including evaluation and assistance with patient care to persons FPL has referred to Physicians for diagnosis and treatment. However, Physicians shall retain decision authority regarding the care and treatment of such patients, until such time as they are transported to another medical facility. Physicians shall cooperate and assist in the transport of patients.

Physicians shall conduct an emergency drill annually, or as requested by FPL, to assure proficiency of their personnel and adequacy of the Facility with regard to plans, procedures and equipment necessary to provide medical support as may be required, and shall permit FPL to observe such drill. FPL shall use reasonable efforts to have such drill held at times mutually convenient to the Physicians and FPL. Such drill will be coordinated with drills conducted by FPL. If a drill is deemed

unsatisfactory by FPL, the NRC or other governmental agencies having jurisdiction over FPL's plans, subsequent drills will be conducted until a satisfactory outcome is achieved as deemed by FPL, the NRC or other governmental agencies having such jurisdiction. Physicians shall, after each drill, prepare a critique and a written evaluation, and take corrective action, if necessary. However, it is understood that Physicians and Facility are engaged in the practice and provisions of emergency care, and any and all such drills shall be conducted in a manner not to interfere with rendering of care to its patients.

At the request of FPL, Physicians shall assist in FPL's First-Aid Training Course to include the treatment of traumatic injury accompanied by radionuclide contamination, and will observe and comment on the first-aid facilities at the Turkey Point Plant and the St. Lucie Plant including the proficiency of FPL's first-aid teams in the on-site treatment of contaminated casualties to off-site medical facilities.

Physicians shall provide a dedicated telephone at the Facility for FPL's use, assure that it is continuously monitored by a Facility staff member, and maintain the ability to report complete messages for emergency medical support personnel.

Physicians shall maintain a twenty-four hour per day duty roster of qualified physicians who shall be on-call and available in the event of an emergency.

At the request of FPL, Physicians shall provide consultation and testimony on nuclear medical matters related to the scope of this Agreement. Reasonable and moderate travel and lodging expenses, if any will be reimbursed by FPL.

At the request of FPL, Physicians shall admit FPL's personnel, such as health physicists, into the treatment rooms to assist and to provide information relevant to treatment and decontamination of patients. Physicians shall retain decision authority regarding the care and treatment of such patients.

Physicians shall provide emergency treatment and services without delay at the Facility or at the plants on a twenty-four hour per day, seven day per week basis, for FPL employees and any other person designated by FPL who may have been involved in a radiation incident.

In the event a situation occurs where the Facility is considered inadequate by Physicians because of the numbers, nature or severity of injuries sustained, injured persons may be referred, at FPL's expenses, to the Oak Ridge Associated Universities' Radiation Emergency

Assistance Center-Training Site (REAC/TS) in Oak Ridge, Tennessee, or upon FPL's approval, to other medical facilities for medical care.

Physicians shall perform special medical examinations and laboratory services related to the diagnosis and treatment of radiation injury and personnel contamination".

b. In the event that FPL requests treatment of an individual or individuals who are or may be contaminated with radioactive materials, as well as injured or who have been or may have been acutely overexposed to external radiations, Baptist Hospital of Miami will receive such individuals for treatment.

Relevant Baptist Hospital of Miami personnel will participate in annual training and exercises provided by and performed for FPL in conjunction with radiological emergency planning.

Physicians from South Florida Emergency Physicians, P.A. or from other prearranged, specified groups with an agreement for emergency services, be accorded roles by Baptist Hospital of Miami during radiological emergencies and exercises which are mutually consistent with Baptist Hosptial of Miami's Major Disaster Plan and the agreement between said physicians and FPL.

Baptist Hospital of Miami will provide FPL's Corporate Radiation Emergency Planning with current updates of the Major Disaster Plan as they become available.

If either the Emergency Coordinator, or his designate notifies Baptist Hospital of an emergency at FPL's Turkey Point Plant, response will be as rapidly as reasonably possible. The following resources will be available as required by the situation:

Personnel - Emergency Department physicians and nursing personnel trained in Nuclear disasters, and hospital trained technicians from Nuclear Medicine.

Facilities - All facilities required to treat the radiation exposed or radioactive contaminated patient. (See Attachment #1).

Vehicles - The hospital has no vehicular facilties but can be in constant contact with Dade County Fire Rescue and emergency ambulance services.

Equipment - All equipment to treat regular and acute trauma. Also, specialized equipment furnished by FPL to treat the Radiological Emergency.

Communications - Telemetry with Dade County Fire Rescue, ambulance radio, and land phone. Also, availability of a ham operator in case of extreme emergency.

Also provided is hospital security and traffic control.

3. The process and procedure used to obtain support are contained in Baptist Hospital's Emergency Department Policy and Procedure Manual - Policy number 337.162 "Radiation Emergency Medical Plan". (See Attachment #2).

4.. Descriptions of the authorities, responsibilities, and limits of our actions are more fully described in the Medical Support Agreement between FPL and South Florida Emergency Physicians. P.A.

We will continue to cooperate in every way possible in the radiological emergency preparedness program. I believe the above explains our organization's capabilities in the event of an emergency, however, if there is anything further you require or if I can be of assistance in any way, please do not hesitate to contact me.

Sincerely,

H. Richard Nateman, M.D.
President
South Florida Emergency Physicians, P.A.

Medical Director
Emergency Department
Baptist Hospital of Miami

Brian E. Keeley, FACHE
President
Chief Executive Officer
Baptist Hospital of Miami

EMERGENCY ROOM MEDICAL ASSOCIATES

providing professional services at

MERCY HOSPITAL EMERGENCY ROOM

3663 South Miami Avenue
Miami, Florida 33133

Phone: 854-4400 ext 2171
285-2174

Alfred Damus, M.D.
Steven Ecker, M.D.
Kenneth Rosenthal, M.D.
John Marshall, M.D.

Ralph Stegemoller, M.D.
Ivan Montoya, M.D.
Jorge Amaya, M.D.
Javier Anton, M.D.

July 20, 1992

Greg A. Casto
Nuclear Emergency Preparedness
Nuclear Division JNO/JB
Florida Power and Light
P.O. Box 14000
Juno Beach, FL 33408

Dear Mr. Casto:

As requested in your letter of May 18, 1992, the following is information stating our support, capabilities and resources available to you in the event of an emergency at one of your nuclear plants:

1. Administrative point of contact:

   Alfred Damus, M.D., Medical Director
   Mercy Hospital Emergency Department
   3663 South Miami Avenue
   Miami, FL 33133
   Business hours: (305) 285-2174
   24 hours-seven days a week (305) 285-2171
   Beeper (305) 352-7133

2. Scope of Services:

   a) Physicians and Mercy Hospital shall perform radiological emergency medical services ("Services") for FPL's Turkey Point Nuclear Plant for the diagnosis and treatment of injury accompanied by radiological contamination, or actual or alleged injury due to radiation exposure.

   b) Physicians and Mercy Hospital shall maintain a twenty-four hour per day duty roster of qualified physicians who shall be on call and available in the event of an emergency.

c) Physicians and Mercy Hospital shall provide emergency treatment and Services without delay at the Facility on a twenty-four hour per day, seven day per week basis, for FPL employees and any other person designated by FPL who may have been involved in radiation incident.

We will continue to cooperate in every way possible in the radiological emergency preparedness program. If there is anything further you require or if we can be of assistance in any way, please to not hesitate to contact us.

Sincerely,

Carter Jarrell
Vice President, Patient Services
Mercy Hospital

Alfred Damus, M.D., FACEP
E.D. Medical Director
Emergency Room Medical Associates

AD/disc 4

Department of Energy
Field Office, Oak Ridge
P.O. Box 2001
Oak Ridge, Tennessee 37831—8610

June 5, 1992

Mr. G. A. Casto
Nuclear Emergency Preparedness
Nuclear Division
Florida Power and Light Company
Post Office Box 14000
Juno Beach, Florida 33408

Dear Mr. Casto:

RADIATION EMERGENCY ASSISTANCE CENTER/TRAINING SITE (REAC/TS)

Please reference your letter of May 18, 1992, requesting that the Department of Energy (DOE) REAC/TS facility and team be available to provide back-up capability and assistance to the Florida Power and Light Company in the event of a radiological emergency. This response constitutes our agreement to provide this service upon your request.

We wish to remind you that our REAC/TS facilities are government controlled and operated by the Oak Ridge Associated Universities (ORAU) under contract with DOE. Therefore, REAC/TS is prohibited from competing with commercial firms which can provide radiological emergency services. Only if the magnitude or uniqueness of a radiological emergency exceeds your in-house and commercially available capabilities would REAC/TS be authorized to provide back-up services.

Since these facilities are government controlled, no fee or retainer is required to assure the availability of back-up services by REAC/TS. However, if you utilize the services of REAC/TS, we would expect to recover those costs which could reasonably be related to handling such an incident, including all charges billed to DOE or ORAU by hospitals and physicians. Information concerning the REAC/TS facilities, staff, services available, and procedures for seeking REAC/TS assistance can be obtained by direct contact with the REAC/TS Director, Dr. Robert C. Ricks, Oak Ridge Associated Universities, Post Office Box 117, Oak Ridge, Tennessee 37831, or telephone number (615) 576-3130.

When referencing this document, please refer to document number 92-6555.

Sincerely,

Thomas M. Jelinek, Director
Energy Programs Division

ER-113:Cunningham

cc:
Robert C. Ricks, ORAU

B&W NUCLEAR TECHNOLOGIES

3315 Old Forest Rd
P.O. Box 109
Lynchburg, VA 24506-09
Telephone: 804-385-20
Telecopy: 804-385-36

June 8, 1992
FPL-92-019

Mr. G.A. Casto
Nuclear Emergency Preparedness
Nuclear Division
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Subject: Emergency Response Support

Reference: Master Services Agreement between Florida Power & Light and Babcock & Wilcox, B&W Contract 582-7455, dated March 13, 1985.

Dear Mr. Casto:

This letter is in response to your letter JNO-EP-92-083, dated May 18, 1992 and summarizes the B&W Nuclear Technologies' (BWNT) commitments to provide assistance to Florida Power and Light in the event of an emergency at your Turkey Point or St. Lucie Nuclear Plants. Services will be provided by BWNT to FP&L upon request and authorization by an official representative of FP&L in accordance with the above referenced Master Services Agreement.

The designated point of contact at the B&W Nuclear Service Company (BWNS) is W.F. Jones, the first alternate is D.C. Winterich, and second alternate is G.B. Beam, all located in the BWNS Lynchburg, Virginia office. The business and home phone numbers for these individuals are as follows:

		Office	Home
Primary Contact	William F. Jones	(804) 385-3720	(804) 384-9364
First Alternate	Donald C. Winterich	(804) 385-3519	(804) 385-9020
Second Alternate	George B. Beam	(804) 385-3434	(804) 525-3127

BWNT can provide engineering, technical support, and field services to assist FP&L in the management and control of an emergency.

Any requests to the BWNS point of contact from designated FP&L officials will be responded to as expeditiously as practical to support the FP&L needs.

Should you require any further clarification, please contact me at (804) 385-3259 in Lynchburg.

Sincerely,

Charles W Pryor Jr.

C.W. Pryor
President & CEO
B&W Nuclear Technologies

CWP/lab

cc: GW Christman
LH Bohn
JR Bohart

APPENDIX C

LISTING OF EMERGENCY PLAN IMPLEMENTING PROCEDURES (EPIPs)

PTN

EPIP-20101,	Duties of Emergency Coordinator
EPIP-20104,	Duty Call Notifications/Staff Augmentation
EPIP-20106,	Natural Emergencies
EPIP-20107,	Fire/Explosion Emergencies
EPIP-20110,	Criteria For, and Conduct of Owner Controlled Area Evacuation
EPIP-20111,	Re-entry
EPIP-20112,	Communications Network
EPIP-20126,	Offsite Dose Calculations
EPIP-20127,	Duties of the Assembly Area Supervisor
EPIP-20129,	Emergency Radiation Team Response - Offsite
EPIP-20130,	Emergency Radiation Team Response - Onsite
EPIP-20131,	Transfer of Contaminated, Injured Personnel Offsite
EPIP-20132,	Technical Support Center (TSC), Activation and Operation
EPIP-20133,	Operational Support Center (OSC), Activation and Operation
EPIP-20201,	Maintaining Emergency Preparedness Training - Radiological Emergency Plan Training

OFFSITE EMERGENCY ORGANIZATION

EPIP-1101,	Duties of the Emergency Control Officer
EPIP-1102,	Duties of the Recovery Manager
EPIP-1104,	Duties of the Emergency Security Manager
EPIP-1105,	Duties of the Emergency Technical Manager
EPIP-1106,	Duties of the Governmental Affairs Manager
EPIP-1107,	Duties and Responsibilities of the Emergency Planning Manager
EPIP-1108,	Duties of the Nuclear Division Duty Officer
EPIP-1211,	Duties of the Corporate Communications Emergency Response Organization (Turkey Point)
EPIP-1212,	Activation and Use of the Emergency Operations Facility (Turkey Point)
EPIP-1301,	Notification of Corporate Emergency Response Organization
EPIP-1302,	PTN/PSL Core Damage Assessment

LISTING OF EMERGENCY PLAN IMPLEMENTING PROCEDURES

OTHER PROCEDURES REFERENCED IN THE EMERGENCY PLAN

O-NCZP-094.1, Obtaining a PASS Sample During Emergency Conditions

O-NCZP-051.1, Obtaining a Containment Air Sample During Emergency Conditions

Superseded Pages Per Revision 1 to 830408 Fire Protection Report. (Docket 50-250) Turkey Point Plant Ltr. dtd. 6/6/83 Revised 6/20/83 q.h.

TABLE I.B-1
SAFE SHUTDOWN RELATED EQUIPMENT

COMPONENT	EQUIPMENT NUMBERS	COMPONENT FIRE ZONE
AUXILIARY FEEDWATER PUMP STEAM SUPPLY VALVES		
S/G 3A	MOV-3-1403	89.
S/G 3B	MOV-3-1404	89
S/G 3C	MOV-3-1405	89
S/G 4A	MOV-4-1403	79
S/G 4B	MOV-4-1404	79
S/G 4C	MOV-4-1405	79
BORIC ACID INJECTION STOP VALVES		
	MOV-3-350	55
	MOV-4-350	45
AUXILIARY FEEDWATER PUMPS AUTO-START CIRCUIT		
Unit 3		106
Unit 3 Backup		106
Unit 4		106
Unit 4 Backup		106
CHARGING CONTROL VALVES		
	HCV-3-121	40
	HCV-4-121	30
CHARGING LINE ISOLATION VALVES		
	AOV-3-310A	60
	AOV-3-310B	60
	AOV-4-310A	59
	AOV-4-310B	59
REFUELING WATER STORAGE TANK SUPPLY TO CHARGING HEADER VALVES		
	LCV-3-15B	55
	LCV-4-115B	45

TABLE I.B-1
SAFE SHUTDOWN RELATED EQUIPMENT

COMPONENT	EQUIPMENT NUMBERS	COMPONENT FIRE ZONE
COMPONENT COOLING WATER SUPPLY AND RETURN VALVES FOR CONTAINMENT COOLERS		
Emer. 3A Supply	AOV-3-2903	40
Emer. 3B Supply	AOV-3-2904	40
Emer. 3C Supply	AOV-3-2905	40
Emer. 3A Return	AOV-3-2906	40
Emer. 3B Return	AOV-3-2907	40
Emer. 3C Return	AOV-3-2908	40
Emer. Supply All	MOV-3-1417	40
Norm. Return All	MOV-3-1418	40
Emer. 4A Supply	AOV-4-2903	30
Emer. 4B Supply	AOV-4-2904	30
Emer. 4C Supply	AOV-4-2905	30
Emer. 4A Return	AOV-42906	30
Emer. 4B Return	AOV-4-2907	30
Emer. 4C Return	AOV-4-2908	30
Norm. Supply All	MOV-4-1417	30
Norm. Return All	MOV-4-1418	30
AUXILIARY FEEDWATER TO S/G CONTROL VALVES		
S/G 3A	SV-3-2816	116
S/G 3A Backup	SV-3-2831	116
S/G 3B	SV-3-2817	116
S/G 3B Backup	SV-3-2832	116
S/G 3C	SV-3-2818	116
S/G 3C Backup	SV-3-2833	116
S/G 4A	SV-4-2816	113
S/G 4A Backup	SV-4-2831	113
S/G 4B	SV-4-287	113
S/G 4B Backup	SV-4-2832	113
S/G 4C	SV-4-2818	113
S/G 4C Backup	SV-4-2833	113
BORIC ACID TRANSFER PUMP RECIRCULATION VALVES		
	HCV-105	41
	HCV-104	41
PRESSURIZER HEATER CONTROL GROUPS		
	3A	60
	4A	59

TABLE I.B-1
SAFE SHUTDOWN RELATED EQUIPMENT

COMPONENT	EQUIPMENT NUMBERS	COMPONENT FIRE ZONE
S/G 4A	PT/PI-4-474	117/106
	PT/PI-4-475	117/106
	PT/PI-4-476	117/106
	PT/PI-4-1606	77/106
S/G 4B	PT/PI-4-484	117/106
	PT/PI-4-485	117/106
	PT/PI-4-486	117/106
	PT/PI-4-1607	77/106
S/G 4C	PT/PI-4-494	117/106
	PT/PI-4-495	117/106
	PT/PI-4-496	117/106
	PT/PI-4-1608	77/106
STEAM GENERATOR LEVEL		
S/G 3A	LT/LI-3-474	60/106
	LT/LI-3-475	60/106
	LT/LI-3-476	60/106
	LT/LI-3-477	60/106
S/G 3B	LT/LI-3-484	60/106
	LT/LI-3-495	60/106
	LT/LI-3-496	60/106
	LT/LI-3-497	60/106
S/G 3C	LT/LI-3-494	60/106
	LT/LI-3-495	60/106
	LT/LI-3-496	60/106
	LT/LI-3-497	60/106
S/G 4A	LT/LI-4-474	59/106
	LT/LI-4-475	59/106
	LT/LI-4-476	59/106
	LT/LI-4-477	59/106
S/G 4B	LT/LI-4-484	59/106
	LT/LI-4-485	59/106
	LT/LI-4-486	59/106
	LT/LI-4-487	59/106
S/G 4C	LT/LI-4-494	59/106
	LT/LI-4-495	59/106
	LT/LI-4-496	59/106
	LT/LI-497	59/106

SECTION II

OUTDOOR FIRE ZONE REQUIRING EXEMPTIONS.

FIRE ZONE	PAGES
47	1-6
54	1-4
79	1-15
82	1-5
84	1-18
87	1-5
89	1-7
91	1-5
92	1-5
113	1-6
114	1-5
115	1-5
116	1-6
119	1-3
120	1-3
131	1-4

FIRE ZONE 47

UNIT 4 COMPONENT COOLING WATER AREA (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION.

Fire Zone 47 is the component cooling water area for Unit 4. This is an outdoor area, located at the southeast corner of the Auxiliary Building at elevation 18'-0". The component cooling water area is accessible via the east end of the main Auxiliary Building east-west hallway, the Safety Injection Pump Room, the Laundry Room, and outside from Fire Zone 123. The component cooling water area contains the pumps, heat exchangers, piping, valves and instrumentation associated with the Component Cooling Water System. The area is bounded by concrete walls and floor. The ceiling of this area is open to the atmosphere and contains a walking surface constructed of steel grating. Safe shutdown equipment in the area consists of the Component Cooling Water Pumps 4A, 4B, and 4C, which are separated by approximately 12'-0" center-to-center, and their local control stations. Safe shutdown-related cables are routed through this area at tray elevations of 26'-6" and 27'-6". These trays then enter manholes MH408 and MH410 respectively which are also located in Fire Zone 47. Cables in these trays are coated with Flamastic 71A or 77. A detailed cable protection analysis is provided as a portion of the Safety Analysis for this fire zone. Pertinent fire zone details are provided below.

Floor Surface Area	3000 ft^2
Wall and Ceiling Surface Area	6800 ft^2
Free Volume Excluding Components	48,000 ft^3
Ceiling Height	16' (open grating)
Floor Composition	Concrete
Floor Thickness	(ground level)

Basis: One Component Cooling Water Pump is required for safe shutdown. CCW Pumps 4A, 4B and 4C are separated by 12' on center. Power cable is routed to the pump in embedded conduit with the exception of a short length from the embedded conduit to the motor terminal box which is in flexible steel conduit. Control cables are routed to a common local control enclosure in embedded conduit except for a short length from the embedded conduit to the control box, which is exposed steel conduit. The combustables in this area consist of approximately one gallon of oil in each pump and two cable trays located 17' from Pump 4B. Cable trays are coated with Flamastic 71A or 77. Lubricating oil systems are of the non-pressurized type. General area details are shown on Figure 47-1 provided at the end of this section.

A water suppression system will be provided covering the portion of Zone 47 as indicated on Figure 47-1. The local control station for CCW Pump 4B will be relocated a minimum of 20' from the local control stations for Pumps 4A and 4C. Fire detection will be provided throughout the zone.

6. Cable: Intake Cooling Water Pump 4C, control
   Protection Required: No
   Basis: See 5 above.

7. Cable: Intake Cooling Water Pump 4A, control
   Protection Required: Yes, as defined below.
   Basis: ICW pump control cables are routed through embedded conduit to manholes in Fire Area 47. The A and C pump control cables enter manhole MH 408 and exit MH 408 in embedded conduit, passing through the manhole. The B pump control cables enter manhole MH 410 and exit MH 410 in embedded conduit, passing through the manhole. There is no communication between manholes. Each manhole is provided with a steel cover plate. To preclude spilled liquids from entering these manholes, each manhole will be provided with a 2" high concrete curb, and the zone will be provided with detection and a water suppression system.

8. Cable: Intake Cooling Water Pump 4B, control
   Protection Required: Yes
   Basis: See 7 above.

9. Cable: Emergency Containment Cooler 4C, control
   Protection Required: No
   Basis: Normal Containment Coolers 3B and 3D will be available (See 12 below).

10. Cable: Emergency Containment Cooler 3C, control
    Protection Required: No
    Basis: See 9 above.

11. Cable: Normal Containment Cooler 3A, control
    Protection Required: No
    Basis: See 12 below.

C. PROPOSED MODIFICATIONS

1. Reroute Charging Pump 3B control cable out of this fire zone or provide a one-hour protection and suppression.

2. Provide a water suppression system in Fire Zone 47 giving area coverage as shown on Figure 47-1.

3. Provide fire detection throughout Zone 47.

4. Provide 2" high curbs around manholes MH 408 and MH 410.

5. Relocate local control station for CCW Pump 4B a minimum of 20' from local control stations for CCW pumps 4A and 4C.

6. Reroute Normal Containment Cooler 3B and 3D control cables outside of this fire zone or provide one-hour rated protection.

D. EXEMPTION REQUEST

1. Request exemption from providing a complete one-hour enclosure around Component Cooling Water Pump 4B. The addition of a one-hour enclosure around Component Cooling Water Pump 4B will not significantly enhance the fire protection features existing and proposed for this fire zone. Fire loading in this outdoor area is light. Cable trays are situated well away from the pump and motor and are coated with a fire propagation retardant to insure that propagation through combustibles in the area will not occur or will be delayed sufficiently to ensure adequate time for detection and suppression.

C. PROPOSED MODIFICATIONS

1. Provide a water suppression system in Fire Zone 54 giving coverage as shown on Figure 47-1.

2. Relocate local control station for Component Cooling Water Pump 3B a minimum of 20' from local control stations for Pumps 3A and 3C.

3. Provide fire detection throughout Zone 54.

D. EXEMPTION REQUEST

1. Request exemption from providing a complete one-hour enclosure around CCW Pump 3B. The addition of a one-hour enclosure around CCW Pump 3B will not significantly enhance the fire protection features existing and proposed for this fire zone. Existing fire loading in this outdoor zone, which contains no cable trays, is light.

FIRE ZONE 79

GROUND FLOOR VESTIBULE UNIT 4 CONTAINMENT AREA (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Zone 79 is the outdoor grade elevation area west of the Unit 4 containment, between the Containment and the Turbine Building and extending to the Control Building. The zone is partially covered by the Unit 4 Main Steam Platform approximately 35' above grade. The insitu combustible loading of the zone is light, consisting of two cable tray runs routed through the zone from 18' to 20' above grade. All cable trays are coated with Flamastic 71A or 77. Pertinent fire details are listed below:

Floor Surface Area	5600 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Excluding Components	N/A
Ceiling Height	N/A
Floor Composition Floor Thickness	Concrete Typically 8"
Wall Composition Wall Thickness	N/A N/A
Ceiling Composition Ceiling Thickness	N/A N/A
Fire Detectors in Area Detectors - No./Type	No N/A
Automatic Suppression Type of Automatic Suppression	No N/A

Steam Generator Level S/G 4A LT/LI-4-475	C
Steam Generator Level S/G 4A LT/LI-4-476	C
Steam Generator Level S/G 4A LT/LI-4-477	C
Steam Generator Level S/G 4B LT/LI-4-485	C
Steam Generator Level S/G 4B LT/LI-4-486	C
Steam Generator Level S/G 4B LT/LI-4-487	C
Steam Generator Level S/G 4C LT/LI-4-495	C
Steam Generator Level S/G 4C LT/LI-4-496	C
Steam Generator Level S/G 4C LT/LI-4-497	C
Diesel Generator 3 Breaker to Bus 4A	P, C
Diesel Generator 4 Breaker to Bus 4B	P, C
Normal Containment Cooler 4C	P, C
Emergency Containment Cooler 4A	C
Emergency Containment Cooler 4B	P, C
Emergency Containment Cooler 4C	P, C
Pressurizer Level LT/LI-4-462	C
Pressurizer Level LT/LI-4-460	C
Pressurizer Level LT/LI-4-461	C
RCS/Pressurizer Pressure PT/PI-4-444	C
RCS/Pressurizer Pressure PT/PI-4-445	C
RCS/Pressurizer Pressure PT/PI-4-456	C
RCS/Pressurizer Pressure PT/PI-4-455	C
RCS/Pressurizer Pressure PT/PI-4-458	C
RCS/Pressurizer Pressure PT/PI-4-457	C
RCS/Pressurizer Pressure PT/PI-4-402	C
RCS/Pressurizer Pressure PT/PI-4-403	C
Auxiliary Feedwater to S/G 4A Control Valve SV-4-2816	C
Auxiliary Feedwater to S/G 4A Backup Valve SV-4-2831	C
Auxiliary Feedwater to S/G 4B Control Valve SV-4-2817	C
Auxiliary Feedwater to S/G 4B Backup Valve SV-4-2832	C
Auxiliary Feedwater to S/G 4C Control Valve SV-4-2818	C
Auxiliary Feedwater to S/G 4C Backup Valve SV-4-2833	C

12. Cable: Pressurizer Heater Control Group 4A, power
Protection Required: No
Basis: Cables are routed entirely underground in this fire zone.

13. Cable: Pressurizer Heater Backup Group 4B, power
Protection Required: No
Basis: See 12 above.

14. Cable: Pressurizer Heater Backup Group 4A, power
Protection Required: No
Basis: See 12 above.

15. Equipment: Auxiliary Feedwater Turbine Steam Supply Valve Steam Generator 4A MOV-4-1403, power and control
Protection Required: No
Basis: One of the three steam supply valves is required for AFW turbine operation. Cables for MOV-4-1403, 1404, and 1405 are routed in tray and conduit in Fire Zone 79. Cables for MOV-4-1403 are more than 20' from cables for MOV-4-1405 and follow separate routings out of the fire zone. All cable trays are coated with Flamastic 71A or 77. Trays carrying cables for MOV-4-1403 and 1404 are over 19' above grade. Trays carrying cables for MOV-4-1405 are 20' above grade, except where the tray run drops to enter manhole MH404 which is over 90' horizontally from trays containing cables for MOV-4-1403. In addition, when Unit 3 is operating, steam can be supplied from MOV-3-1403, 1404, and 1405 which have no cables located in this fire zone and the addition of two new Standby Steam Generator Feedwater Pumps completely remote from this zone provides substantial backup.

16. Equipment: Auxiliary Feedwater Turbine Steam Supply Valve Steam Generator 4B MOV-4-1401, power and control
Protection Required: No
Basis: See 15 above.

17. Equipment: Auxiliary Feedwater Turbine Steam Supply Valve Steam Generator 4C MOV-4-1405, power and control
Protection Required: No
Basis: See 15 above.

44. Cable: Pressurizer Level LT/LI-4-460, control
Protection Required: No
Basis: See 42 above

45. Cable: Pressurizer/RCS Pressure PT/PI-4-444, control
Protection Required: No
Basis: One channel of pressurizer/Reactor Coolant System pressure is required for safe shutdown. Redundant pressurizer/Reactor Coolant System pressure indication is provided by pressure transmitter PT/PI-4-455 which has no cables routed in this fire zone.

46. Cable: RCS/Pressurizer Pressure PT/PI-445, control
Protection Required: No
Basis: See 45 above

47. Cable: RCS/Pressurizer Pressure PT/PI-456, control
Protection Required: No
Basis: See 45 above

48. Cable: RCS/Pressurizer Pressure PT/PI-458, control
Protection Required: No
Basis: See 45 above

49. Cable: RCS/Pressurizer Pressure PT/PI-457, control
Protection Required: No
Basis: See 45 above

50. Cable: RCS/Pressurizer Pressure PT/PI-402, control
Protection Required: No
Basis: See 45 above

51. Cable: RCS/Pressurizer Pressure PT/PI-403, control
Protection Required: No
Basis: See 45 above

52. Cable: Auxiliary Feedwater to S/G 4A SV-4-2816, control
Protection Required: No
Basis: Each steam generator is provided with two 100 percent redundant Auxiliary Feedwater supply valves. One valve for each S/G is located above the feedwater platform (SV-4-2816, 2817 and 2818), the redundant valve for each steam generator is located below the feedwater platform (SV-4-2831, 2832 and 2833). Conduits for control cables associated with valves SV-4-2831, 2832 and 2833 will, be rerouted to obtain a minimum horizontal separation of 20

from the cables for the redundant valves (SV-4-2816, 2817, 2818). Where separation is less than 20' one-hour rated conduit protection will be provided for conduits associated with valves SV-2831, 2832 and 2833 until 20' separation is attained.

53. Cable: Auxiliary Feedwater to S/G 4B SV-4-2817, control
Protection Required: No
Basis: See 52 above

54. Cable: Auxiliary Feedwater to S/G 4C SV-4-2818, control
Protection Required: No
Basis: See 52 above.

55. Cable: Auxiliary Feedwater Supply Valve S/G 4A SV-4-2831 control
Protection Required: Yes
Basis: See 52 above.

56. Cable: Auxiliary Feedwater Supply Valve S/G 4B SV-4-2832, control
Protection Required: Yes
Basis: See 52 above.

57. Cable Auxiliary Feedwater Supply Valve S/G 4C, SV-4-2833, control
Protection Required: Yes
Basis: See 52 above

58. Equipment: Steam Generator 4A Pressure PT/PI-4-1606
Protection Required: No
Basis: This is a pneumatic instrument having no cable.
Also, redundant instruments are available for this function (See 23 above).

59. Equipment: Steam Generator 4B Pressure PT/PI-4-1607
Protection Required: No
Basis: See 58 above

60. Equipment: Steam Generator 4C Pressure PT/PI-4-1608
Protection Required: No
Basis: See 58 above

C. PROPOSED MODIFICAITONS

1. Main Steam Isolation Valves, reroute all Train B closing solenoid cables maintaining a minimum separation of 20' from the Train A closing, solenoid cables. Where separation between Train A and B is less than 20' horizontally, provide one-hour rated protection for one train until 20' horizontal separation is achieved.

2. Protect conduits carrying cables for steam generator pressure transmitters PT/PI-4-476, 486, 496, throughout this fire zone with one-hour rated conduit protection.

3. Reroute control cable for Diesel-Generator 4 Breaker to Bus 4B to obtain a minimum horizontal separation of 20' from the redundant train control cable. Where separation cannot be achieved provide one-hour rated protection for one train until 20'horizontal separation is achieved.

4. Reroute the control cables for Auxiliary Feedwater Supply Valves SV-4-2831, 2832, 2833 to obtain a minimum horizontal separation of 20'. Where separation cannot be maintained protect cables for SV-4-2831, 2832 and 2833 with one-hour rated protection until 20' separation is achieved.

D. EXEMPTION REQUEST

Request exemption from providing a fixed suppression system in this outdoor zone where separation between redundant trains is 20' or greater or where one-hour rated enclosures are provided to protect one redundant train when separation is less than 20' horizontal.

This is an outdoor zone at grade elevation, partially covered by platforms 35' above grade. Cable trays routed through this zone are generally 18' to 20' above grade and are provided with Flamastic 71A or 77. The combustible loading of the zone is light and well distributed consisiting primarily of the two cable tray runs.

The addition of a fixed suppression system would not significantly enhance the fire protection capabilities inherent in the existing design with incorporation of the proposed modifications.

FIRE ZONE 82

UNIT 4 AUXILIARY TRANSFORMER AREA (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Zone 82 is the Auxiliary Transformer area for Unit 4. This zone contains the turbine-generator auxiliaries at the 18' elevation and the MCC 4A but does not contain safe shutdown related mechanical components. Safe shutdown related cables are routed through this area in cable trays at elevations 31'-6" and 30'-6". Cables in these trays are sprayed with Flamastic 71A or 77. Hydrogen seal oil units are located in the southwest corner circumscribed by a 6" high concrete curb. The Auxiliary Transformer located in this zone is in a closed bottom concrete basin approximately 2' below the 18' floor elevation. This area is bounded on the north by the 4160 V Switchgear Rooms and on the south by the condenser. Additionally, this area is bounded on the west by the main transformer separated from the Auxiliary Transformer by a concrete wall approximately 2' high. On the east side of the zone are the three condensate pumps. All transformers are provided withfire detection and automatic deluge water suppression systems.

In addition, Fire Zone 82 houses the turbine generator hydrogen monitoring systems for Units 4, located in the southwest corner of the fire zone. The turbine-generator hydrogen monitoring system includes valving and piping associated with the filling and venting of the turbine-generator hydrogen cooling system, a hydrogen dryer, a hydrogen purity monitor, and a hydrogen control panel. Pertinent fire zone details are listed below:

Floor Surface Area	2600 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Excluding Components	N/A
Ceiling Height	22'-6"

Floor Composition	Concrete
Floor Thickness	Typically 8"
Wall Composition	N/A
Wall Thickness	N/A
Ceiling Composition	Concrete
Ceiling Thickness	18"
Fire Detectors in Area	Yes
Detectors-No./Type	14-1/Thermal
Automatic Suppression	Yes
Type of Automatic Suppression	Automatic Deluge
Installed Communications Near Fire Area	Telephone Handset T405 PAX M405
Hose Station Available to Area	#13, #5
Fire Extinguishers Immediately Available to Area	4.1.1, 4.1.2, 4.1.4 4.1.3, 4.1.5, 3.1.5
Number of Floor Drains	1
Drain(s) Size	3"
Drains(s) Flow To	Oily Waste
Normal Forced Draft Ventilation	None
Normal Ventilation Flow Rate	N/A

SAFE SHUTDOWN EQUIPMENT

480V Motor Control Center 4A

B. SAFETY ANALYSIS

1. Hot Shutdown Cables

	Function
AFW Pump Steam Supply Valve MOV-4-1404	P, C
Normal Containment Cooler 4A	C
Normal Containment Cooler 4B	C
Normal Containment Cooler 4C	P, C
Normal Containment Cooler 4D	C
Emergency Containment Cooler 4A	C
Emergency Containment Cooler 4B	P, C
MCC 4A	P, C

Analysis:

1. Cable: AFW Pump Steam Supply Valve MOV-4-1404, power and control
   Protection Required: No
   Basis: Redundant function is performed by MOV-4-1403 and MOV-4-1405, cables for which are not located in this fire area.

2. Cable: Normal Containment Cooler 4A, control
   Protection Required: No
   Basis: See 3 below.

3. Cable: Normal Containment Cooler 4B, control
   Protection Required: Yes, as defined below.
   Basis: Control cables for Normal Containment Coolers 4B and 4D will be rerouted to obtain a minimum separation of 20' from redundant cables for Coolers 4A and 4C. Where 20' minimum separation cannot be achieved, one-hour rated protection will be provided until separation of 20' is attained. Control station for Normal Containment Coolers 4B and 4D will be relocated a minimum of 20' from local control station for Coolers 4A and 4C. Two normal containment coolers are required for safe shutdown.

4. Cable: Normal Containment Cooler 4C, power and control
   Protection Required: No
   Basis: See 3 above.

5. Cable: Normal Containment Cooler 4D, control
   Protection Required: Yes
   Basis: See 3 above.

6. Cable: Emergency Containment Cooler 4A, control
   Protection Required: No
   Basis: See 3 above.

7. Cable: Emergency Containment Cooler 4B, power and control
   Protection Required: No
   Basis: See 3 above.

8. Equipment: Motor Control Center 4A, power and control
   Protection Required: No
   Basis: Hot and Cold Shutdown can be achieved independent of this MCC. Fire damage will have no effect on safe shutdown.

2. Cold Shutdown Cables — Function

Accumulator Stop Valve MOV-4-865B	P, C

Analysis:

1. Cable Accumulator Stop Valve MOV-4-865B, power and control
   Protection Required: No
   Basis: This valve is used during cooldown to prevent discharge of the safety injection accumulators into the Reactor Coolant System. Local manual operation of this valve may be required prior to achieving cold shutdown.

3. Fire Consequence Mitigation Cable — Function

Blowdown Isolation Valve S/G 4C SV-4-6275V	C

Analysis:

1. Cable: Blowdown Isolation Valve SV-4-6275C control
   Protection Required: No
   Basis: Inadvertent opening of SV-4-6275C, will impact only one steam generator and, therefore, will not affect safe shutdown. Redundant isolation capability is provided by flow control valve FCV-4-6278C.

C. PROPOSED MODIFICATIONS

1. Reroute control cables for Normal Containment Coolers 4B and 4D to obtain a minimum horizontal separation of 20' from redundant control cables for Normal Containment Coolers 4A and 4C. Where minimum separation cannot be achieved provide one-hour rated protection for the Normal Containment Coolers 4B and 4D until separation of 20' is attained.

2. Relocate local control stations for Normal Containment Coolers 4B and 4D a minimum of 20' from local control stations for Normal Containment Coolers 4A and 4C.

D. EXEMPTION REQUEST

1. Request exemption from providing fire detection and fixed automatic suppression in this outdoor open area where separation between required redundant cables is in excess of 20' and where one hour rated enclosures are provided when separation is less than 20'. The addition of detection and automatic suppression in this outdoor area will not significantly enhance the existing and proposed fire protection features.

FIRE ZONE 84

AUXILIARY FEEDWATER PUMP AREA (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Zone 84 is an outdoor area containing the turbine-driven Auxiliary Feedwater Pumps A, B and C. The zone is bounded on the east by the Unit 3 containment and bounded on the remaining sides by missile grating and chain link fencing. The floor is a concrete slab with pump-turbine assemblies A and B separated by 8'-6", and the B and C assemblies separated by 10', as shown in Figure D-2. Two cable trays pass through the zone east of the pumps at approximately 13' above grade. Two cable trays pass through the zone above the pumps at approximately 21' above grade. All cable trays are coated with Flamastic 71A or 77. Various metal wireways and steel conduits pass through the zone. Pertinent fire details are listed below:

Floor Surface Area	10,000 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Excluding Components	N/A
Ceiling Height	N/A
Floor Composition	Concrete
Floor Thickness	Typically 8"
Wall Composition	N/A
Wall Thickness	N/A
Ceiling Composition	N/A
Ceiling Thickness	

B. SAFETY ANALYSIS

1. Hot Shutdown Cables	Function
Charging Pump 3B	C
Charging Pump 3C	C
Component Cooling Water Pump 3B	C
Intake Cooling Water Pump 3B	C
Intake Cooling Water Pump 3C	C
Boric Acid Transfer Pump 3B	C
Blowdown Isolation Valve S/G 3A AOV-3-6275A	C
Blowdown Isolation Valve S/G 3B AOV-3-6275B	C
Blowdown Isolation Valve S/G 3C AOV-3-6275C	C
Auxiliary Feedwater Pump Steam Supply Valve S/G 3A MOV-3-1403	P, C
Auxiliary Feedwater Pump Steam Supply Valve S/G 3B MOV-3-1404	C
Auxiliary Feedwater Pump Steam Supply Valve S/G 3C MOV-3-1405	P, C
Normal Containment Cooler 3A	C
Normal Containment Cooler 3B	C
Normal Containment Cooler 3C	C
Normal Containment Cooler 3D	C
Emergency Containment Cooler 3B	C
Emergency Containment Cooler 3C	C
Pressurizer Heater Control Group 3A	C
Pressurizer Heater Backup Group 3B	P, C
Main Steam Isolation Valve S/G 3A POV-3-2604	C
Main Steam Isolation Valve S/G 3B POV-3-2605	C
Main Steam Isolation Valve S/G 3C POV-3-2606	C
Auxiliary Feedwater Pump Auto Start Circuit Unit 3 Backup	C
Auxiliary Feedwater to S/G 3A Control Valve SV-3-2816	C
Auxiliary Feedwater to S/G 3B Control Valve SV-3-2817	C
Auxiliary Feedwater to S/G 3C Control Valve SV-3-2818	C
Auxiliary Feedwater to S/G 3A Backup Control Valve SV-3-2831	C
Auxiliary Feedwater to S/G 3B Backup Control Valve SV-3-2832	C
Auxiliary Feedwater to S/G 3C Backup Control Valve SV-3-2833	C

59. Cable: Auxiliary Feedwater to Steam Generator 3A Control Valve SV-3-2816, control
Protection Required: Yes, as defined below
Basis: Auxiliary Feedwater is supplied to Steam Generators 3A, 3B and 3C through control valve pairs SV-3-2816, 2831 for Steam Generator 3A, valve pairs SV-3-2817, 2832, for Steam Generator 3B and valve pairs SV-3-2818, 2833 for Steam Generator 3C. Each valve in the redundant pair can supply 100 percent of the needed flow to its associated steam generator. Cables for valves SV-3-2831, 2832 and 2833 will be rerouted such that horizontal separation in this fire zone will be in excess of 20'. Should these cables come within 20' of their redundant counterpart, they will be protected with enclosures fabricated from material having one-hour fire rating.

60. Cable: Auxiliary Feedwater to Steam Generator 3B Control Valve SV-3-2817, control
Protection Required: Yes
Basis: See 59 above.

61. Cable: Auxiliary Feedwater to Steam Generator 3C Control Valve SV-3-2818, control
Protection Required: Yes
Basis: See 59 above.

62. Cable: Auxiliary Feedwater to Steam Generator 3A Backup Control Valve SV-3-2831, control
Protection Required: Yes
Basis: See 59 above.

63. Cable: Auxiliary Feedwater to Steam Generator 3B Backup Control Valve SV-3-2832, control
Protection Required: Yes
Basis: See 59 above.

64. Cable: Auxiliary Feedwater to Steam Generator 3C Backup Control Valve SV-3-2833, control
Protection Required: Yes
Basis: See 59 above.

65. Cable: Auxiliary Feedwater Pump Auto Start Circuit Unit 3 Backup, control
Protection Required: No
Basis: Cables are routed entirely underground in this fire zone.

66. Cable: Main Steam Isolation Valve Steam Generator 3A POV-3-2604 Control
Protection Required: Yes, as defined below.
Basis: Each Main Steam Isolation Valve has a Train A and Train B air solenoid associated with valve closure. The control cables

C. PROPOSED MODIFICATIONS

1. Install two Standby Steam Generator Feed Pumps remote from this zone, capable of operation upon a loss of offsite power.

2. Provide one-hour rated protection for wireways and pull boxes routing cables for level transmitters LT-3-475, 485, 495 or LT-3-474, 484, or 494 wherever these raceways are separated horizontally by less than 20'.

3. Provide one-hour rated protection for wireways and pull boxes routing cables for pressure transmitters PT-3-474, 484, 494 or PT-3-476, 486 or 496 wherever these raceways are separated horizontally by less than 20'.

4. Provide one-hour rated protection fro wireways and pull boxes routing cables for pressure transmitters PT-3-455 or PT-3-456 wherever these raceways are separated horizontally by less than 20'.

5. Provide one-hour rated protection for wireways and pull boxes routing cables for level transmitters LT/LI-3-459, LT/LI-3-460 wherever these raceways are separated horizontally by less than 20'.

6. Provide one channel of Reactor Coolant System hot leg and cold leg temperature routed outside of this fire zone or protect with one-hour rated enclosures if routed within this fire zone and within 20' horizontally of raceways routing the redundant channel of loop temperature indication.

7. Reroute outside this fire zone or protect with one-hour rated enclosure the control cable for the Diesel Generator 3 Breaker to Bus 3B.

8. Provide one-hour rated protection for conduits routing control cables associated with Auxiliary Feedwater Supply Valves SV-3-2831, 2832, and 2833 wherever these raceways are separated horizontally be less than 20' from raceways routing cables for redundant feedwater supply valves SV-3-2816, 2817 and 2818.

9. Reroute in steel conduit the cables for Train B closing solenoid valves associated with Main Steam Isolation Valve POV-3-2604, 2605 and 2606 and protect with one-hour wrap wherever these new raceways are separated horizontally by less than 20' from the raceways routing cables for the Train A Main Steam Isolation Valve closing solenoids.

D. EXEMPTION REQUEST

1. Request exemption from providing fire detection and automatic suppression in this outdoor fire zone for required redundant safe shutdown related raceways having 20' or greater horizontal separation and for redundant safe shutdown raceways provided with one-hour rated protection.

   The addition of detection and fixed automatic suppression in this outdoor zone would not significantly enhance the fire protection safety provided by the existing design and proposed modifications. The distance above a floor-level exposure fire combined with the existing horizontal separation and proposed one-hour rated barriers assures that redundant cable systems will not simultaneously be subjected to unacceptable temperature or heat flux.

FIRE ZONE 87

UNIT 3 AUXILIARY TRANSFORMER AREA (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Zone 87 is the Auxiliary Transformer area for Unit 3. This area contains the turbine-generator auxiliaries at the 18' elevation. Fire Zone 87 contains Motor Control Center 3A, but does not contain safe shutdown related mechanical components. Safe shutdown related cables are routed through this area in cable trays at elevations 31'-6" and 30'-6". Cables in these trays are sprayed with Flamastic 71A or 77. Hydrogen seal oil units are located in the southwest corner circumscribed by a 6" high concrete curb. The auxiliary transformer located in the zone is in closed-bottom concrete basin approximately 2' below the 18' elevation. This area is bounded on the north by 4160 V switchgear rooms and on the south by the condenser. Additionally, this area is bounded on the west by the main transformer separated from the Auxiliary Transformer by a concrete wall approximately 2' high. On the east side of the area are the three condensate pumps. All transformers are provided with automatic deluge systems and fire detection.

In addition, Fire Zone 87 houses the turbine-generator hydrogen monitoring systems for Unit 3 located in the southwest corner of the Fire Zone. The turbine-generator hydrogen monitoring system includes valving and piping associated with the filling and venting of the turbine-generator hydrogen cooling system, a hydrogen dryer, a hydrogen purity monitor, and a hydrogen control panel. Pertinent fire details are listed below.

Floor Surface Area	2600 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Exluding Components	N/A
Ceiling Height	22'-6"

Floor Composition	Concrete
Floor Thickness	Typically 8"
Wall Composition	N/A
Wall Thickness	N/A
Ceiling Composition	Concrete
Ceiling Thickness	18"
Fire Detectors in Area	Yes
Detectors-No./Type	13-1/Thermal
Automatic Suppression	Yes
Type of Automatic Suppression	Automatic Deluge
Installed Comm. Near Fire Area	Telephone Handset T305 PAX M305
Hose Station Available to Area	#7, #4
Fire Extinguishers Immediately Available to Area	3.1.2, 3.1.3, 3.1.4, 3.1.1, 3.1.5, 3.1.9
Number of Floor Drains	1
Drain(s) Size	3"
Drain(s) Flow To	Oily Waste
Normal Forced Draft Ventilation	None
Normal Ventilation Flow Rate	N/A

SAFE SHUTDOWN EQUIPMENT

480 V MCC	3A

B. SAFETY ANALYSIS

1. Hot Shutdown Cables

Hot Shutdown Cables	Function
Auxiliary Feedwater Pump Steam Supply Valve S/G 3B MOV-3-1404	P, C
Normal Containment Cooler 3A	C
Normal Containment Cooler 3B	C
Normal Containment Cooler 3C	C
Normal Containment Cooler 3D	C
Charging Pump 3C	P, C
MCC 3A	

Analysis:

1. Cable: Auxiliary Feedwater Pump Supply Valve MOV-3-1404, power and control
   Protection Required: No
   Basis: Redundant function is provided by MOV-3-1403 and MOV-3-1405, cables for which are not routed in this fire zone.

2. Cable: Normal Containment Cooler 3A, power and control
   Protection Required: No
   Basis: See 3 below.

3. Cable: Normal Containment Cooler 3B, control
   Protection Required: Yes, as defined below.
   Basis: Control cables for Normal Containment Coolers 3B and 3D will be rerouted to obtain a minimum separation of 20' from redundant cables for Coolers 3A and 3C. Where 20' minimum separation cannot be achieved one-hour rated protection will be provided until separation of 20' is attained. Control station for Normal Containment Coolers 3B and 3D will be relocated a minimum of 20' from local control station for Coolers 3A and 3C.

4. Cable: Normal Containment Cooler 3C, control
   Protection Required: No
   Basis: See 3 above.

5. Cable: Normal Containment Cooler 3D, control
   Protection Required: No
   Basis: See 3 above.

6. Cable: Charging Pump 3C, control
   Protection Required: No
   Basis: Redundant function is provided by Charging Pumps 3A and 3B, cables for which are not routed in this fire zone.

7. Equipment: Motor Control Center 3A, power and control
   Protection Required: No
   Basis: Hot and Cold Shutdown can be achieved independent of this motor control center, fire damage will have no effect on safe shutdown.

2. Cold Shutdown Cable — Function

Accumulator Stop Valve MOV-3-865A — P, C

Analysis:

1. Cable: Accumulator Stop Valve MOV-3-865A, power and control
   Protection Required: No
   Basis: This valve is used during cooldown to prevent discharge of the safety injection accumulator into the Reactor Coolant System. Local manual operation of this valve may be required prior to achieving cold shutdown.

3. Fire Consequence Mitigation Cables — Function

Blowdown Isolation Valve S/G 3C AOV-3-6275C — C

Analysis:

1. Cable: Blowdown Isolation Valve AOV-3-6275C, control
   Protection Required: No
   Basis: Inadvertent opening of AOV-3-6275C will effect only one steam generator and will therefore not impact safe shutdown. Redundant isolation capability is provided by flow control valve AOV-3-6278C.

C. PROPOSED MODIFICATIONS

1. Reroute control cables for Normal Containment Coolers 3B and 3D to obtain a minimum horizontal separation of 20' from redundant control cables for Normal Containment Coolers 3A, and 3C. Where minimum separation cannot be achieved, provide one-hour rated protection for the Normal Containment Coolers 3B and 3D control cable until the separation of 20' is attained.

2. Relocate the local control station for Normal Containment Coolers 3B and 3D a minimum of 20' from the local control station for Normal Containment Coolers 3A and 3C.

D. EXEMPTION REQUEST

1. Request exemption from providing fire detection and fixed automatic suppression in this outdoor open area where separation between required redundant cables and equipment is in excess of 20' and where one-hour rated enclosures are provided where separation is less than 20'.

FIRE ZONE 89

UNIT 3 CONDENSATE STORAGE AREA (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Zone 89 is the Unit 3 Condensate Storage Tank area, which is located at the 18' elevation. Safe shutdown related equipment located within this area consists of the Unit 3 steam supply valves for the Auxiliary Feedwater Pumps, the Unit 3 pneumatic steam generator pressure transmitters and the Unit 3 steam generator blowdown isolation valves. Safe shutdown related cables are also routed through this area and are all coated with Flamastic 71A or 77. In addition the Unit 3 Condensate Recovery Tank and Pump are located in this area. Pertinent fire details are provided below:

Floor Surface Area	7450 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Exluding Components	N/A
Ceiling Height	N/A
Floor Composition Floor Thickness	Concrete Typcially 8" Partial Gravel
Wall Composition Wall Thickness	N/A N/A
Ceiling Composition Ceiling Thickness	N/A N/A
Fire Detectors in Area	No
Detectors-No./Type	N/A

4. Cable: Auxiliary Feedwater Turbine Steam Supply Valve S/G 3B MOV-3-1404, power and control
   Protection Required: No
   Basis: Redundant Auxiliary Feedwater Turbine steam supply valves, MOV-3-1403 and 1405 are available and have no cables routed in this fire zone.

5. Cable: Auxiliary Feedwater Supply Control Valve S/G 3A SV-3-2816, control
   Protection Required: No
   Basis: See 8 below

6. Cable: Auxiliary Feedwater Supply Control Valve S/G 3B SV-3-2817, control
   Protection Required: No
   Basis: See 8 below

7. Cable: Auxiliary Feedwater Supply Control Valve S/G 3C SV-3-2818, control
   Protection Required: No
   Basis: See 8 below

8. Cable: Auxiliary Feedwater Supply Backup Control Valve S/G 3A, SV-3-2831, control
   Protection Required: Yes, as defined below
   Basis: Auxiliary feedwater supply to two Steam Generators is required for safe shutdown. Each Steam Generator is provided with two 100 percent capacity AFW control valves. AFW Control Valves SV-3-2816, 2817 and 2818 are redundant to AFW Backup Control Valves SV-3-2831, 2832 and 2833, respectively. The control cables for AFW Backup Control Valves SV-3-2831, 2832 and 2833 will be routed in rigid steel conduit throughout this fire zone and separated from cables for AFW control valves SV-3-2816, 2817 and 2818 by a minimum horizontal distance of 20' where possible. Where 20' cannot be achieved, the conduits for Valves SV-3-2831, 2832 and 2833 will be provided with one-hour rated conduit protection until a horizontal separation of 20' is achieved.

9. Cable: AFW Supply Backup Control Valve S/G 3B, SV-3-2832, control
   Protection Required: Yes
   Basis: See 8 above

10. Cable: Auxiliary Feedwater Supply Backup Control Valve S/G 3C, SV-3-2833, control
    Protection Required: Yes
    Basis: See 8 above

11. Cable: Diesel-Generator 4 Breaker to Bus 3B, control
    Protection Required: Yes, as defined below
    Basis: One Emergency Diesel-Generator and associated safety bus must be available for safe shutdown. Reroute the control cable for Diesel-Generator 4 Breaker to Bus 3B to provide a minimum 20' separation from the redundant control cable for Diesel-Generator 3 Breaker to Bus 3A. Where 20' separation cannot be obtained, provide a one-hour rated wrap for Diesel-Generator 4 Breaker to Bus 3B control cable until 20' horizontal separation is achieved.

12. Cable: Diesel-Generator 3 Breaker to Bus 3A, control
    Protection Required: No
    Basis: See 11 above

13. Cable: Emergency Containment Cooler 3A, control
    Protection Required: No
    Basis: Redundant containment cooling function is provided by Normal Containment Coolers 3B, 3C and 3D which have no cables routed in this fire zone.

14. Cable: Emergency Containment Cooler 3B, control
    Protection Required: No
    Basis: See 13 above

15. Cable: Emergency Containment Cooler 3C, control
    Protection Required: No
    Basis: See 13 above

16. Cable: Normal Containment Cooler 3A, power and control
    Protection Required: No
    Basis: See 13 above

2. Cold Shutdown Cables — Function

None — N/A

C. PROPOSED MODIFICATIONS

1. Reroute control cables for Auxiliary Feedwater Supply Backup Control Valves SV-3-2831, 2832 and 2833 to achieve a minimum 20' separation from control cables for SV-3-2816, 2817 and 2818. Where 20' minimum separation cannot be achieved, provide one-hour rated conduit protection on conduits for SV-3-2831, 2832 and 2833 until 20' separation is attained.

2. Reroute control cable for Diesel-Generator 3 Breaker to Bus 3B to achieve minimum 20' separation from control cables for Diesel-Generator 4 Breaker to Bus 3A. Where 20' minimum separation cannot be achieved provide one-hour rated conduit wrap on conduit for Diesel-Generator 3 Breaker to Bus 3B cable until 20' separation is attained.

D. EXEMPTION REQUEST

1. Request exemption from providing a fixed automatic fire suppression system for redundant cables having a minimum 20' separation and cables having less than 20' separation but provided with rated one-hour protection in this outdoor fire zone. The addition of a fixed automatic suppression system in this outdoor fire zone would not significantly enhance the existing fire protection safety and that provided by the proposed modifications. One-hour rated protection or separation by 20' or more between redundant trains of essential cables provides reasonable assurance that a single fire in this zone would not impact both safe shutdown trains.

FIRE ZONE 91

UNIT 4 CONDENSATE PUMP AREA (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Zone 91 contains the Unit 4 Condensate Pumps. Safe shutdown related cables are routed through this zone in cable trays located at elevations of 27'-2" and 28'-2". The Condensate Pumps are located in areas below the surrounding floor at elevation 2'-8". This zone has no ceiling and is accessible from the 18' elevation via stairways on the west side. All cables in trays are sprayed with Flamastic 71A or 77. Pertinent fire details are listed below:

Floor Surface Area	960 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Excluding Components	N/A
Ceiling Height	N/A
Floor Composition Floor Thickness	Concrete 3 ft
Wall Composition Wall Thicknes	Concrete 18"
Ceiling Composition Ceiling Thicknes	N/A N/A
Fire Detectors in Area Detectors-No./Type	No N/A
Automatic Suppression Type of Automatic Suppression	No N/A
Installed Communications Near Fire Zone	Telephone Handset T405 PAX M405

Hose Station Available to Area	#13, #8
Fire Extinguishers Immediately Available to Area	4.1.3, 4.1.1, 4.1.2, 4.1.4, 4.1.5
Number of Floor Drains	Sump Pumps
Drain(s) Size	N/A
Drain(s) Flow To	Oily Waste Drain
Normal Forced Draft Ventilation	None
Normal Ventilation Flow Rate	N/A

SAFE SHUTDOWN EQUIPMENT

None

B. SAFETY ANALYSIS

1. Hot Shutdown Cables

Hot Shutdown Cables	Function
Auxiliary Feedwater Pump Steam Supply Valve MOV-4-1404	P, C
Normal Containment Cooler 4A	C
Normal Containment Cooler 4B	C
Normal Containment Cooler 4C	P, C
Normal Contianment Cooler 4D	C
Emergency Containment Cooler 4A	C
Emergency Contianment Cooler 4B	P, C

Analysis:

1. Cable: Auxiliary Feedwater Pump Steam Supply Valve MOV-4-1404, power and control
   Protection Required: No
   Basis: Redundant function is performed by MOV-4-1403 and MOV-4-1405, cables for which are not located in this fire area.

2. Cable: Normal Containment Cooler 4A, control
   Protection Required: No
   Basis: See 3 below

3. Cable: Normal Containment Cooler 4B, control
   Protection Required: Yes, as defined below
   Basis: Control cables for Normal Containment Coolers 4B and 4D will be rerouted to obtain a minimum separation of 20' from redundant cables for Coolers 4A and 4C. Where 20' minimum separation cannot be achieved, one-hour rated protection will be provided until separation of 20 feet is attained. Local control station for Normal Containment Coolers 4B and 4D will be relocated a minimum of 20' from local control station for Coolers 4A and 4C.

4. Cable: Normal Containment Cooler 4C, power and control
   Protection Required: No
   Basis: See 3 above

5. Cable: Normal Containment Cooler 4D, control
   Protection Required: Yes
   Basis: See 3 above

6. Cable: Emergency Containment Cooler 4A, control
   Protection Required: No
   Basis: See 3 above

7. Cable: Emergency Containment Cooler 4B, power and control
   Protection Required: No
   Basis: See 3 above.

2. Cold Shutdown Cables — Function

Accumulator Stop Valve MOV-4-865B	P, C

Analysis:

1. Cable: Accumulator Stop Valve MOV-4-865B, power and control
   Protection Required: No
   Basis: This valve is used during cooldown to prevent discharge of the safety injection accumulators into the Reactor Coolant System. Local manual operation of this valve may be required prior to achieving cold shutdown.

3. Fire Consequence Mitigation Cables — Function

Blowdown Isolation Valve S/G 4C SV-4-6275C	C

Analysis:

1. Cable: Blowdown Isolation Valve SV-4-6275C, control
   Protection Required: No
   Basis: Inadvertent opening of SV-4-6275C will affect only one steam generator and will therefore not impact safe shutdown. Redundant isolation capability is provided by flow control valve FCV-4-6278C.

C. PROPOSED MODIFICATIONS

1. Reroute control cables for Normal Containment Coolers 4B and 4D to obtain a minimum horizontal separation of 20' from redundant control cables for Normal Containment Coolers 4A and 4C. Where minimum separation cannot be achieved, provide one-hour rated protection for the Normal Containment Coolers 4B and 4D until separation of 20' is attained.

D. EXEMPTION REQUEST

1. Request exemption from providing fire detection and fixed automatic suppression in this outdoor open zone where separation between required redundant cables is in excess of 20' and where one-hour rated enclosures are provided when separation is less than 20'. The addition of a fixed automatic fire suppression system and detection system in this outdoor zone would not significantly enhance the fire protection provided by the existing design and proposed modifications.

FIRE ZONE 92

UNIT 3 CONDENSATE PUMP AREA (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Zone 92 contains the Unit 3 Condensate Pumps. Safe shutdown related cables are routed through the areas in cable trays located at elevations of 27'-2" and 28'-2". The condensate pumps are located in areas below the surrounding floor at elevation 2'-8". This area has no ceiling and is accessible from the 18' elevation via stairways on the west side. All cables in trays are sprayed with Flamastic 71A or 77. Pertinent fire details are listed below:

Floor Surface Area	960 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Excluding Components	N/A
Ceiling Height	N/A
Floor Composition	Concrete
Floor Thickness	3'
Wall Composition	Concrete
Wall Thickness	18"
Ceiling Composition	N/A
Ceiling Thickness	N/A
Fire Detectors in Area	No
Detectors-No./Type	N/A

Automatic Suppression	No
Type of Automatic Suppression	N/A
Installed Communications Near Fire Area	Telephone Handset T305 PAX M305
Hose Station Available to Area	#6, #7
Fire Extinguishers Immediately Available to Area	3.1.2, 3.1.1, 3.1.4, 3.1.3
Number of Floor Drains	Sump Dumps
Drain(s) Size	N/A
Drain(s) Flow To	Oily Waste Drain
Normal Forced Draft Ventilation	None
Normal Ventilation Flow Rate	N/A

SAFE SHUTDOWN EQUIPMENT

None

B. SAFETY ANALYSIS

1. Hot Shutdown Cables

Hot Shutdown Cables	Function
AFW Pump Steam Supply Valve S/G 3B MOV-3-1404	P, C
Normal Containment Cooler 3A	P, C
Normal Containment Cooler 3B	C
Normal Containment Cooler 3C	C
Normal Containment Cooler 3D	C
Charging Pump 3C	C

Analysis:

1. Cable: AFW Pump Steam Supply Valve MOV-3-1404, power and control
   Protection Required: No
   Basis: Redundant function is provided by MOV-3-1403 and MOV-3-1405, cables for which are not routed in this fire zone.

2. Cable: Normal Containment Cooler 3A, power and control
   Protection Required: No
   Basis: See 3 below

3. Cable: Normal Containment Cooler 3B, control
   Protection Required: Yes, as defined below
   Basis: Control cables for Normal Containment Coolers 3B and 3D will be rerouted to obtain a minimum separation of 20' from redundant cables for Coolers 3A and 3C. Where 20' minimum separation cannot be achieved one-hour rated protection will be provided until separation of 20' is attained. Control station for Normal Containment Coolers 3B and 3D will be relocated a minimum of 20' from local control station for Coolers 3A and 3C.

4. Cable: Normal Containent Cooler 3C, control
   Protection Required: No
   Basis: See 3 above

5. Cable: Normal Containment Cooler 3D, control
   Protection Required: No
   Basis: Redundant function is provided by Charging Pumps 3A and 3B, cables for which are not routed in this fire zone.

2. Cold Shutdown Cables — Function

Accumulator Stop Valve MOV-3-865A — P, C

Analysis:

1. Cable: Accumulator Stop Valve MOV-3-865A, power and control
   Protection Required: No
   Basis: This valve is used during cooldown to prevent discharge of the safety injection accumulator into the Reactor Coolant System. Local manual operation of this valve may be required prior to achieving cold shutdown.

3. Fire Consequence Mitigation Cables — Function

Blowdown Isolation Valve S/G SV-3-6275C — C

Analysis:

1. Cable: Blowdown Isolation Valve SV-3-6275C, control
   Protection Required: No
   Basis: In advertent opening of SV-3-6275C will effect only one Steam Generator and will therfore not impact safe shutdown. Redundant isolation capability is provided by flow control valve FCV-3-6278C.

C. PROPOSED MODIFICATIONS

1. Reroute control cables for the Normal Containment Coolers 3B and 3D to obtain a minimum horizontal separation of 20' from redundant control cables for Normal Containment Coolers 3A, and 3C. Where minimum separation cannot be achieved provide one-hour protection for the Normal Containment Coolers 3B and 3D until separation of 20' is attained.

D. EXEMPTION REQUEST

1. Request exemption from providing fire detection and fixed automatic suppression in this outdoor open area where separation between required redundant cables is in excess of 20' and where one-hour rated enclosures are provided where separtion is less than 20'. The addition of automatic suppression and detection shall not significantly enhance the fire protection features provided by the existing design and proposed modifications.

Detectors - No./Type	N/A
Automatic Suppression	No
Type of Automatic Suppression	N/A
Installed Communication Near Fire Area	Telephone Handset T-426, PAX M-426
Hose Station Available to Area	#18, #19
Fire Extinguishers Immediately Available to Area	4.3.1, 4.3.2, 4.3.3, 4.3.4
Number of Floor Drains	None
Drain(s) Size	N/A
Drain(s) Flow To	N/A
Normal Forced Draft Ventilation	None
Normal Ventilation Flow Rate	N/A

SAFE SHUTDOWN EQUIPMENT

Auxiliary Feedwater to S/G 4A Control Valve
SV-4-2816

Auxiliary Feedwater to S/G 4A Backup Control Valve
SV-4-2831

Auxiliary Feedwater to S/G 4B Control Valve
SV-4-2817

Auxiliary Feedwater to S/G 4B Backup Control Valve
SV-4-2832

Auxiliary Feedwater to S/G 4C Control Valve
SV-4-2818

Auxiliary Feedwater to S/G 4C Backup Control Valve
SV-4-2833

B. SAFETY ANALYSIS

1. Hot Shutdown Cables	Function
Auxiliary Feedwater to S/G 4A Control Valve SV-4-2816	C
Auxiliary Feedwater to S/G 4B Control Valve SV-4-2817	C
Auxiliary Feedwater to S/G 4C Control Valve SV-4-2818	C
Auxiliary Feedwater to S/G 4A Backup Control Valve SV-4-2831	C
Auxiliary Feedwater to S/G 4B Backup Control Valve SV-4-2832	C
Auxiliary Feedwater to S/G 4C Backup Control Valve SV-4-2833	C
Steam Generator Level S/G 4A LT/LI-4-477	C
Steam Generator Level S/G 4B LT/LI-4-487	C
Steam Generator Level S/G 4C LT/LI-4-497	C

Analysis:

1. Equipment: Auxiliary Feedwater to S/G 4A Control Valve SV-4-2816, control cable

   Protection Required: No

   Basis: Auxiliary Feedwater to S/G Control Valves SV-4-2816, 2817, and 2818 are provided with 100 percent redundant backup valves, SV-4-2831, 2832, and 2833. The control valves SV-4-2816, 2817, and 2818 are located above the feedwater platform at elevation 38'-0" whereas backup control valves SV-4-4831, 2832 and 2833, are located below the platform at elevation 30'-7", separated by the 1/2" steel platform. Plan and isometric diagrams detailing the physical separation of these valves are provided at the end of this section in Figures 113-1, 113-2 and 113-3. The platform provides an effective, substantial barrier between the redundant valve operators, although it has no defined fire rating. Control cables associated with the valves are routed through rigid steel conduits in this fire zone. The conduits containing cables for valves SV-4-2831, 2832, and 2833 will be rerouted to maintain a minimum 20'-0" separation from the conduits of the corresponding redundant valves. Where the 20'-0" separation can not be achieved, the conduits for valves SV-4-2831, 2832,

and 2833 will be provided with one-hour rated conduit wrap. This area does not have any cable running through cable tray. Insitu combustible material consists of grease in the motor operated valves, in steel enclosures, and would not be expected to contribute to fire propagation.

2. Equipment: Auxiliary Feedwater to S/G 4B Control Valve SV-4-2817, control
   Protection Required: No
   Basis: See 1 above.

3. Equipment: Auxiliary Feedwater to S/G 4C Control Valve SV-4-2818, control
   Protection Required: No
   Basis: See 1 above.

4. Equipment: Auxiliary Feedwater to S/G 4A Backup Control Valve SV-4-2831, control
   Protection Required: Yes
   Basis: As explained in 1 above, the conduit containing cables for valves SV-4-2831, 2832, and 2833 will be rerouted to achieve 20'-0" separation from the conduits for corresponding redundant valves as far as practicable. Where the 20'-0" separation can not be achieved, the conduits will be wrapped with one-hour rated wrap. This will ensure the availability of one set of redundant valves in the event of fire in this zone.

5. Equipment: Auxiliary Feedwater to S/G 4B Backup Control Valve SV-4-2832, control
   Protection Required: Yes
   Basis: See 4 above.

6. Equipment: Auxiliary Feedwater to S/G 4C Backup Control Valve SV-4-2833, control
   Protection Required: Yes
   Basis: See 4 above.

7. Equipment: Steam Generator Level S/G 4A LT/LI-4-477, control
   Protection Required: No
   Basis: Redundant Steam Generator S/G 4A Level Transmitters/Indicators LT/LI-4-474, 475, and 476 are located in zones independent of this zone. Therefore, loss of LT/LI-4-477 will not impair the capability to achieve and maintain hot and cold shutdown conditions.

8. Equipment: Steam Generator Level S/G 4B LT/LI-4-487, control
   Protection Required: No
   Basis: Redundant Steam Generator S/G 4B Level Transmitters/Indicators LT/LI-4-484, 485, and 486 are located in zones independent of this zone. Therefore, loss of LT/LI-4-487 will not impair the capability to achieve and maintain hot and cold shutdown conditions.

C. PROPOSED MODIFICATIONS

1. Reroute the conduits for valves SV-4-2831, 2832, and 2833 to achieve 20'-0" separation from the conduits for corresponding redundant valves, as far as practicable. Provide one-hour wrap on the conduits for valves SV-4-2831, 2832 and 2833 where the 20'-0" separation from the conduits for corresponding redundant valves can not be achieved. Wrap will continue until 20' separation is attained.

D. EXEMPTION REQUEST

1. Request exemption from providing a three-hour rated barrier between redundant Auxiliary Feedwater Supply Valves. The low insitu combustible loading in this outdoor zone combined with the significant barrier presented by the steel platform located between the redundant valves, more than 20' above grade, provides assurance that both trains of redundant equipment would not be impacted by a single credible fire in this zone.

2. Request exemption from providing detection and a fixed automatic suppression system in this outdoor zone for conduits carrying redundant cables, associated with the Auxiliary Feedwater Supply Valves, that are separated by 20' or greater or provided with a one-hour rated conduit wrap with separation less than 20'. The low insitu combustible loading in this outdoor area combined with the proposed modifications provides assurance that both trains of redundant cable would not be impacted by a single credible fire in this zone. The addition of a suppression system would not significantly enhance the fire protection safety provided by the proposed modifications and existing features.

C. PROPOSED MODIFICATIONS

None

D. EXEMPTION REQUEST

1. Request exemption from providing fire detection and fixed automatic suppression systems in this outdoor zone for the main steam isolation valves and for the atmospheric dump valves that are separated by 28' and for conduits carrying cables associated with main steam isolation valves, that are separated by more than 20'. The low insitu combustible loading in this completely open outdoor area provides assurance that at least two valves will be available in the event of any credible fire in this zone. The addition of fire detection and fixed automatic suppression systems will not enhance the fire protection safety significantly.

C. PROPOSED MODIFICATIONS

None

D. EXEMPTION REQUEST

1. Request exemption from providing fire detection and fixed automatic suppression systems in this outdoor zone for conduits carrying cables associated with main steam isolation valves for the main steam isolation valves and atmospheric dump valves, that are separated by more than 20'. The low insitu combustible loading in this completely open outdoor area provides assurance that at least two valves will be available in the event of any credible fire in this zone. The addition of fire detection and fixed automatic suppression system will not enhance the fire protection safety significantly.

Automatic Suppression in Area	None
Type of Automatic Suppression	N/A
Installed Communication Near Fire Area	Telephone Handset T326, PAX M326
Hose Station(s) Available to Area	#11, #12
Fire Extinguishers Immediately Available to Area	3.3.1, 3.3.2, 4.3.6
Number of Floor Drains	None
Drain(s) Size	N/A
Drains(s) Flow To	N/A
Normal Forced Draft Ventilation	None
Normal Ventilation Flow Rate	N/A

SAFE SHUTDOWN EQUIPMENT

Auxiliary Feedwater to S/G 3A Control Valve	SV-3-2816
Auxiliary Feedwater to S/G 3A Backup Control Valve	SV-3-2831
Auxiliary Feedwater to S/G 3B Control Valve	SV-3-2817
Auxiliary Feedwater to S/G 3B Backup Control Valve	SV-3-2832
Auxiliary Feedwater to S/G 3C Control Valve	SV-3-2818
Auxiliary Feedwater to S/G 3C Backup Control Valve	SV-3-2833
Steam Generator Level S/G 3A	LT/LI-3-477
Steam Generator Level S/G 3B	LT/Li-3-487
Steam Generator Level S/G 3C	LT/LI-3-497

B. SAFETY ANALYSIS

1. Hot Shutdown Cables

Cables	Function
Auxiliary Feedwater to S/G 3A Control Valve SV-3-2816	C
Auxiliary Feedwater to S/G 3B Control Valve SV-3-2817	C
Auxiliary Feedwater to S/G 3C Control Valve SV-3-2818	C
Auxiliary Feedwater to S/G 3A Backup Control Valve SV-3-2831	C
Auxiliary Feedwater to S/G 3B Backup Control Valve SV-3-2832	C
Auxiliary Feedwater to S/G 3C Backup Control Valve SV-3-2833	C
Steam Generator Level S/G 3A LT/LI-3-477	C
Steam Generator Level S/G 3B LT/LI-3-487	C
Steam Generator Level S/G 3C LT/LI-3-497	C

Analysis:

1. Equipment: Auxiliary Feedwater to S/G 3A Control Valve SV-3-2816, control cable.
   Protection Required: No
   Basis: Auxiliary Feedwater to S/G Control valves SV-3-2816, 2817, and 2818 are provided with 100 percent redundant backup valves SV-3-2831, 2832, and 2833. The control valves SV-3-2816, 2817, and 2818 are located above the feedwater platform at elevation 39'-6" whereas backup control valves SV-3-2831, 2832, and 2833 are located below the platform at elevation 33'-6", separated by the 1/4" steel plate. Plan and isometric diagrams detailing the physical separation of these valves are provided at the end of this section in Figures 113-1, 113-2 and 113-3. The platform provides an effective barrier between the redundant valve operators, although it has no defined fire rating. Control cables associated with the valves are routed through rigid steel conduits in this fire zone. The conduits containing cables for valves SV-3-2831, 2832, and 2833

will be routed to maintain a minimum of 20' separation from the conduits of the corresponding redundant valves. Where the 20' separation cannot be achieved, the conduits for valves SV-3-2831, 2832, and 2833 will be provided with one-hour rated conduit protection. This zone does not contain any cable tray. Insitu combustible material consists of grease in the motor-operated valves, in steel enclosures, and would not be expected to contribute to fire initition.

2. Equipment: Auxiliary Feedwater to S/G 3B Control Valve SV-3-2817, control cable
   Protection Required: No
   Basis: See 1 above

3. Equipment: Auxiliary Feedwater to S/G 3C Control Valve SV-3-2818, control cable
   Protection Required: No
   Basis: See 1 above

4. Equipment: Auxiliary Feedwater to S/G 3A Backup Control Valve SV-3-2831, control cable
   Protection Required: Yes, as defined below
   Basis: As explained in 1 above the conduit containing cables for valves SV-3-2831, 2832, and 2833 will be routed to achieve 20' separation from the conduits for corresponding redundant valves as far as practicable. Where the 20'-0" separation cannot be achieved the conduits will be wrapped with one-hour rated wrap. This will ensure the availability of one set of redundant valves in the event of fire in this zone.

5. Equipment: Auxiliary Feedwater to S/G 3B Backup Control Valve SV-3-2832, control cable
   Protection Required: Yes
   Basis: See 4 above

6. Equipment: Auxiliary Feedwater to S/G 3C Backup Control Valve SV-3-2833, control cable
   Protection Required: Yes
   Basis: See 4 above

7. Equipment: Steam Generator 3A Level LT/LI-3-477, control cable
   Protection Required: No
   Basis: Redundant Steam Generator 3A Level Transmitters/Indicators LT/LI-3-474, 475 and 476 are located in zones independent of this zone. One steam generator level indicator is required for safe shutdown. Therefore, loss of LT/LI-3-477 will not impair the capability to achieve and maintain hot and cold shutdown conditions.

C. PROPOSED MODIFICATIONS

1. Route the conduits for valves SV-3-2831, 3823 and 2833 to achieve 20' separation from the conduits for corresponding redundant valves as far as practicable.

2. Provide one-hour protection for the conduit for valves SV-2831, 2832 and 2833 where the 20' separation from the conduits for corresponding redundant valves cannot be achieved. Protection shall be continued until 20' seperation is attained.

D. EXEMPTION REQUEST

1. Request exemption from providing a three-hour rated barrier between redundant Auxiliary Feedwater Supply Valves. The low insitu combustible loading in this outdoor zone, combined with the significant barrier presented by the steel platform located between the redundant valves, more than 20' above grade, provides assurance that both trains of redundant equipment would not be impacted by a single credible fire in this zone.

2. Request exemption from providing a fixed automatic suppression system in this outdoor zone for conduits carrying redundant cables associated with the Auxiliary Feedwater Supply Valves, that are separated by 20' or greater or provided with a one-hour rated conduit Protection with separation less than 20'. The low insitu combustible loading in this outdoor area combined with the proposed modification provides assurance that both trains of redundant cable would not be impacted by a single credible fire in this zone. The addition of a suppression system would not significantly enhance the fire protection safety provided by the proposed modifications and existing features.

C. PROPOSED MODIFICATIONS

1. Provide one-hour rated wrap around the exposed conduits for power and control cables for Pump 4B.

2. Provide an enclosure around the local control station for Pumps 4B and 4C built with one-hour fire rated materials.

D. EXEMPTION REQUEST

1. Request exemption from providing one-hour barrier between Intake Cooling Water Pumps 4A, 4B and 4C. This is an open outside area with no walls or ceiling. The pump motors are 14'-0" apart and mounted 6'-0" above the floor. All exposed conduits for Pump 4B will be protected with one-hour rated wrap. Separation of the pumps by 14'-0" in an open area in conjunction with the proposed modification will reasonably assure the availability of at least one Intake Cooling Water Pump.

2. Request exemption from providing fixed automatic suppression system and fire detection system in this zone. As described above, the addition of fire detection and suppression systems will not enhance safety of the pumps significantly against any single credible fire in this fire zone.

C. PROPOSED MODIFICATIONS

1. Provide one-hour protection wrap around the exposed conduits for power and control cables for Intake Cooling Water Pump 3B.

2. Provide an enclosure around the local control station for Intake Cooling Water Pumps 3B and 3C built with one-hour fire rated material.

D. EXEMPTION REQUEST

1. Request exemption from providing one-hour barrier between the Intake Cooling Water Pumps. This is an open outdoor area with no walls or ceiling. The pump motors are 14'-0" apart and mounted 6'-0" above the floor. All exposed conduits for Pump 3B will be protected with one-hour rated wrap. Separation of pumps by 14'-0" in an open area in conjunction with proposed modifications will reasonably assure the availability of at least one Intake Cooling Water Pump.

2. Request exemption from providing fixed automatic suppression system and fire detection system in this zone. As described above, the addition of fire detection and suppression systems will not enhance the safety of the pumps significantly against any single credible fire in this fire zone.

C. PROPOSED MODIFICATIONS

1. Install a three-hour rated partial height fire barrier 10'high between the radiators for both Diesel-Generators.

2. Provide curbing 2" high directly against the west side of the diesel generator radiator room.

3. Reroute or protect the control cable for Diesel-Generator 3 Breaker to Bus 4A with three-hour rated protection.

D. EXEMPTION REQUEST

Request exemption from the total enclosure of one Diesel-Generator Radiator Room by three-hour rated fire barriers. The insitu combustible loading is insignificant in this zone. The existing fire protection features and proposed modifications provide reasonable assurance that one train of safe shutdown components would remain free of fire damage following any single credible fire in this zone.

SECTION III

OUTDOOR FIRE ZONE NOT REQUIRING EXEMPTIONS.

FIRE ZONE	PAGES
77	1
78	1-3
80	1
81	1
83	1
85	1
86	1
88	1-8
90	1
105	1-5
117	1-7
118	1-3
121	1-3
122	1-3
123	1-3
124	1-4
125	1
127	1
128	1

FIRE ZONE 88

GROUND FLOOR VESTIBULE AREA FOR UNIT 3 CONTAINMENT (OUTDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUESTED: No

A. AREA DESCRIPTION

This area is the ground floor vestibule at the 18'-0" elevation of the Unit 3 Turbine Building. Zone 88 contains no safety related equipment; however, safe shutdown related cables are routed through this area. The area is outside with no walls, and part of the area has an open roof. All cable trays located in the area are sprayed with Flamastic 71A or 77. Pertinent fire details are listed below:

Floor Surface Area	5600 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Excluding Components	N/A
Ceiling Height	10'-6"
Floor Composition Floor Thickess	Concrete Typcially 8"
Wall Composition	N/A
Wall Thickness	N/A
Ceiling Composition	Partial Concrete, Partial Open
Ceiling Thickness	18"
Fire Detectors in Area	No
Detectors-No./Type	N/A

FIRE ZONE 105

TURBINE GENERATOR MEZZANINE DECK (OUTDOOR)

DRAWING REFERENCE: Figure D3

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: No

A. AREA DESCRIPTION

Fire Zone 105 is the Turbine Building Mezzanine deck at elevation 30'-0". There are no safe shutdown related components in this area but, there are safe shutdown cables. Cable trays are located in the area at elevations 37'-2" and 38'-2" lowering to 36'-6" and 37'-6", respectively. All cables in trays are sprayed with Flamastic 71A or 77. Pertinent fire details are listed below.

Floor Surface Area	42,000 ft^2
Wall and Ceiling Surface Area	N/A
Free Volume Excluding Components	N/A
Ceiling Height	10'-6"
Floor Composition	Concrete
Floor Thickness	18"
Wall Composition	N/A
Wall Thickness	N/A
Ceiling Composition	Concrete
Ceiling Thickness	18"
Fire Detectors in Area	No
Detectors - No./Type	N/A
Automatic Suppression	No

10. Equipment: Steam Generator Pressure Steam Generator 4A PT-4-474, control cable.
    Protection Required: No
    Basis: Each steam generator is provided with three electronic pressure transmitters, Channel I, II and III, and one pneumatic pressure transmitter which is redundant to the electronic transmitters. The pneumatic transmitters are not located in this fire zone. The electronic transmitters are physically grouped by Channel such that Channel I transmitters (PT-474, 484 and 494 for Steam Generators A, B and C respectively) are separated horizontally by more than 50' from the Channel III transmitters (PT-475, 485 and 495 for Steam Generators, A, B and, respectively). This physical grouping precludes any credible fire from damaging both Channel I and III transmitters simultaneously thereby assuring at least one electronic transmitter for each steam generator will be available in addition to the pneumatic transmitters.

11. Equipment: Steam Generator 4A Pressure Transmitter PT-4-475, control cable.
    Protection Required: No
    Basis: See 10 above.

12. Equipment: Steam Generator 4A Pressure Transmitter PT-4-476, control cable.
    Protection Required: No
    Basis: See 10 above.

13. Equipment: Steam Generator 4B Pressure Transmitter PT-4-484, control cable.
    Protection Required: No
    Basis: See 10 above.

14. Equipment: Steam Generator 4B Pressure Transmitter PT-4-485, control cable.
    Protection Required: No
    Basis: See 10 above.

15. Equipment: Steam Generator 4B Pressure Transmitter PT-4-486, control cable.
    Protection Required: No
    Basis: See 10 above.

16. Equipment: Steam Generator 4C Pressure Transmitter PT-4-494, control cable.
    Protection Required: No
    Basis: See 10 above.

SECTION IV

INDOOR FIRE AREAS REQUIRING EXEMPTIONS.

FIRE AREA	PAGES
B	1-10
C	1-8
D	1-7
E	1-8
N	1-4
O	1-4
P	1-13
Q	1-11
MM	1-3

C. PROPOSED MODIFICATIONS

1. Upgrade perimeter walls and ceilings of Fire Area B to a three hour barrier by sealing all piping and other penetrations and by installing three-hour rated fire doors and dampers in all doorways and ventilation duct penetrations.

2. Upgrade the partial height wall between Zones 12 and 13 by sealing all penetrations to a three-hour rating.

3. Upgrade the wall between Zone 11 and Zones 12 and 13 by sealing all penetrations to a three-hour rating with the exceptions of the 5' X 8' access way to Zone 13.

4. Provide fire detection in Zones 11, 12, and 13.

5. Provide a one-hour rated protection for RHR Pump 3A power and control cables routed through Zone 13.

D. EXEMPTION REQUEST

1. Request exemption from providing a full three-hour rated barrier between Zones 12 and 13 and between the Residual Heat Removal Exchangers in Zone 11.

   Request exemption from providing supression for conduits provided with a one-hour protection in Zone 13.

   Request exemption from providing a fire rated door in the 5' x 8' access way to Zone 13.

   The combustible loading in this area is limited to the lubricating oil contained in the steel motor housings and grease in the motor operated valves. There are no cable trays routed in this fire area. The low combustible loading combined with the substantial barrier provided by the 16' part height wall and the proposed modifications provide assurance that the redundant systems will not be simultaneously subjected to an unacceptable temperature or heat flux should a transient fire occur.

C. PROPOSED MODIFICATIONS

1. Upgrade perimeter walls and ceiling of Fire Area C to three-hour barriers by sealing all piping and other penetrations and by installing three-hour rated fire doors and dampers in all doorways and ventilation duct penetrations, respectively.

2. Upgrade partial height wall between Fire Zones 15 and 16 by sealing all penetrations in the partial height wall to a three-hour rating.

3. Upgrade the wall between Zone 14 and Zones 15 and 16 by sealing all penetrations to a three-hour rating with the exception of 5' x 8' way to Zone 16.

4. Provide fire detection in Fire Zones 14, 15, and 16.

D. EXEMPTION REQUESTS

1. Request exemption from providing a full three-hour rated barrier between Fire Zones 15 and 16 and between the Residual Heat Removal Heat Exchangers in Fire Zone 14.

2. Request exemption from providing a fire rated door in the 5' x 8' access way to Zone 16.

3. The combustible loading in this area is limited to the lubricating oil contained in the steel motor housings and grease in the motor operated valves. There are no cable trays routed in this fire area. The low combustible loading combined with the substantial barrier provided by the 16' part height wall and the proposed modifications provide assurance that the redundant systems will not be simultaneously subjected to an unacceptable temperature or heat flux should a transient fire occur.

FIRE AREA D

UNIT 4 PIPE AND VALVE ROOM (INDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUESTED: Yes

A. AREA DESCRIPTION

Fire Area D is comprised of Fire Zone 30. Fire Area D is the Pipe and Valve Room for Unit 4. This area is located at the southwest end of the Auxiliary Building at elevation 18'-0" and is immediately adjacent to the Unit 4 Containment Building. The Pipe and Valve Room is accessible from the north-south hallway of the Auxiliary Building via an 8' x 3' doorway.

The Pipe and Valve Room contains the piping and associated valves for numerous systems that penetrate the Containment Building. This area is bounded by concrete walls, floor and ceiling. The north wall has an 18" x 12" ventilation register, and the east wall has an 8' x 3' doorway which opens into the main Auxiliary Building north-south hallway at the 18' elevation. The floor has approximately 50 piping penetrations and a 2' x 5' stairway opening. The west wall is the Unit 4 Containment Building with 45 sealed piping penetrations.

Safe shutdown equipment in the area consists of the charging supply control valve, HCV-4-121 the component cooling water supply and discharge valves for the Normal and Emergency Containment Coolers, AOV-4-2903 through AOV-4-2905, AOV-4-2906 through AOV-4-2908, and MOV-4-1417 and MOV-4-1418; the Residual Heat Exchanger cooling water isolation valves, MOV-4-749A and B (separated by a distance of 5'-5"); and the letdown isolation valve, AOV-4-204. Safe shutdown related cables are routed through this area at a tray elevation of approximately 27'. Cables in this tray are sprayed with Flamastic 71A or 77. Pertinent fire area details are provided below:

Floor Surface Area	800 ft^2
Wall and Ceiling Surface Area	2650 ft^2
Free Volume Excluding Components	11,680 ft^2
Ceiling Height	14'-6"
Ceiling Composition	Concrete
Ceiling Thickness	1'-6"
Floor Composition	Concrete
Floor Thickness	1'/1'-9"

Wall Composition	Concrete
Wall Thickness	South: 1', West:3'-9" North & East: 2'
Fire detector(s) in Area	None
Detector No./Type	N/A
Automatic Supression in Area	No
Type of Automatic Suppression	N/A
Installed Communications Near Fire Area	T-417, PA M-417
Hose Station(s) Available To Area	FH #2
Fire Extinguisher(s) Immediately Available to Area	3.4.7, 3.4.8, 3.4.10
Number of Floor Drains	1
Drain(s) Size/Capacity	3"/160 gpm
Drain(s) Flow To	Waste Holdup Tank
Normal Forced Draft/Type Ventialation	Yes/Fan
Normal Ventilation Flow Rate	960
Fire Area Penetrations:	
Floor	Piping sleeves openings not sealed Stairway opening 1 drain
North Wall	Exhaust vent duct 18" x 12" 12" piping penetration
East Wall	Supply vent 14"x24" doorway 3'x 8'

SAFE SHUTDOWN EQUIPMENT

Charging Control Valve	HCV-4-121
Component Cooling Water Supply Valve for Emergency Containment Cooler 4A	AOV-4-2903
Component Cooling Water Supply Valve for Emergency Containment Cooler 4B	AOV-4-2904

Component Cooling Water Supply Valve for Emergency Containment Cooler 4C	AOV-4-2905
Component Cooling Water Return Valve for Emergency Containment Cooler 4A	AOV-4-2906
Component Cooling Water Return Valve for Emergency Containment Cooler 4B	AOV-4-2907
Component Cooling Water Return Valve for Emergency Containment Cooler 4C	AOV-4-2908
Component Cooling Water Supply Valve for Normal Containment Cooling	MOV-4-1417
Component Cooling Water Return Valve for Normal Containment Cooling	MOV-4-1418
Residual Heat Removal Heat Exchanger Cooling Water Isolation Valves	Loop A MOV-4-749A Loop B MOV-4-749B

B. SAFETY ANALYSIS

Hot Shutdown Cables	Function
Component Cooling Water Supply Valves for Normal Containment Cooling MOV-4-1417	P,C
Component Cooling Water Return Valves for Normal Containment Cooling MOV-4-1418	P,C
Component Cooling Water Supply Valves for Emergency Containment Cooling AOV-4-2903	C
Component Cooling Water Supply Valves for Emergency Containment Cooling AOV-4-2904	C
Component Cooling Water Supply Valves for Emergency Containment Cooling AOV-4-2905	C
Component Cooling Water Return Valves for Emergency Containment Cooling AOV-4-2906	C
Component Cooling Water Return Valves for Emergency Containment Cooling AOV-4-2907	C
Component Cooling Water Return Valves for Emergency Containment Cooling AOV-4-2908	C
Charging Control Valve HCV-4-121	C

Analysis

1. Equipment: Component Cooling Water Supply Valve for Normal Containment Cooling MOV-4-1417, power and control
   Protection Required: No
   Basis: This is a motor operated valve which is normally open during all modes of plant operation. Control and power cables for this valve are routed in steel conduit throughout this fire area. It can be demonstrated that regardless of the failure modes identified for the power and control cables supplying this valve in this fire area, the valve will remain open. This valve does not play any active role (i.e., change position) to perform its hot or cold shutdown function. It only has to remain in its normal position.

2. Equipment: Component Cooling Water Return Valve for Normal Containment Cooling MOV-4-1418, power and control
   Protection Required: No
   Basis: See 1 above

3. Equipment: Component Cooling Water Supply Valve for Emergency Containment Cooler 4A AOV-4-2903, control
Protection Required: No
Basis: The Normal Containment Cooling System provides a redundant function, control

4. Equipment: Component Cooling Water Supply Valve for Emergency Containment Cooler 4B AOV-4-2904, control
Protection Required: No
Basis: See 3 above

5. Equipment: Component Cooling Water Supply Valve for Emergency Containment Cooler 4C AOV-4-2905, control
Protection Required: No
Basis: See 3 above

6. Equipment: Component Cooling Water Return Valve for Emergency Containment Cooler 4A AOV-4-2906, control
Protection Required: No
Basis: See 3 above

7. Equipment: Component Cooling Water Return Valve for Emergency Containment Cooler 4B AOV-4-2907, control
Protection Required: No
Basis: See 3 above

8. Equipment: Component Cooling Water Return Valve for Emergency Containment Cooler 4C AOV-4-2908, control
Protection Required: No
Basis Required: No
Basis: See 3 above

9. Equipment: Charging Supply Control Valve HCV-4-121, control
Protection Required: No
Basis: HCV04-121 is the charging system control valve for Unit 4. This valve fails in an open position, so the failure would not affect hot shutdown operations. If this valve is assumed to spuriously close, sufficient makeup to the Reactor Coolant System via the seal injection piping is available for maintaining hot shutdown conditions without operator action. If boration to cold shutdown conditions and cooldown is desired, the operator would detect spurious closure of this valve by observing pressurizer level. HCV-4-121 would then be opened by opening the breaker on Panel 4P09 in the Cable Spreading Room.

2. Cold Shutdown Cables Function

Residual Heat Removal Cooling Water
Isolation Valve MOV-4-749A P,C
Residual Heat Removal Cooling Water
Isolation Valve MOV-4-749B P,C

Analysis:

One train of Residual Heat Removal is required to achieve cold shutdown. The valves which may become inoperative from the Control Room are listed below by the train of Residual Heat Removal with which they are associated. Only the valve in one train need be operated.

UNIT 4

Train A	Train B
MOV-4-749A	MOV-4-749B

Alignment of the Train A or B Residual Heat Removal valves affected by a fire in this area would consist on one valve being manually repositioned at the valve.

Plant procedures will indicate valves which may require manual operation following a fire in this area.

3. Fire Consequence Mitigation Cables — Function

Letdown Isolation Valve AOV-4-204 — C

Analysis:

1. Equipment: Letdown Isolation Valve AOV-4-204
   Protection Required: No
   Basis: Redundant isolation capability exists by using isolation valves AOV-4-200A, AOV-4-200B, AOV-4-200C and LCV-4-460 cables for which are not located in this fire area.

C. PROPOSED MODIFICATIONS

1. Upgrade perimeter walls by sealing piping and other penetrations to a three- hour rating.

2. Upgrade floor by sealing all penetrations and providing a three-hour rated door to the Residual Heat Removal Pump area below.

3. Provide a three-hour rated fire door to the Auxiliary Building hallway.

4. Provide a three-hour rated ventilation dampers in all ducts penetrating this fire area.

5. Provide fire detection.

D. EXEMPTION REQUEST

1. Request exemption from providing a three hour rated enclosure around MOV-3-1417 and MOV-3-1418 and associated power and control conduits in this fire area. The basis for this request is that this modification would not enhance fire protection safety above that already provided inherent in the equipment design.

FIRE AREA E

UNIT 3 PIPE AND VALVE ROOM (INDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUESTED: Yes

A. AREA DESCRIPTION

Fire Area E is comprised of Fire Zone 40. Fire Area E is the Pipe and Valve Room for Unit 3. This area is located at the southeast end of the Auxiliary Building at elevation 18'-0" and is immediately adjacent to the Unit 3 Containment Building. The Pipe and Valve Room is accessible from the north-south hallway of the Auxiliary Building via an 8' x 3' doorway.

The Pipe and Valve Room contains the piping and associated valves for numerous systems that penetrate into the Containment Building. This area is bounded by concrete walls, floor, and ceiling. The south wall has an 18" x 12" ventilation register and the east wall has an 8' x 3' doorway, which opens into the Auxiliary Building hallway at the 18' elevation. The floor has approximately 50 piping penetrations and a 2' x 5' stairway opening. The west wall is the Unit 3 Containment Building with 45 sealed piping penetrations.

Safe shutdown equipment in the area consists of the charging supply control valve, HCV-3-121 the Component Cooling Water supply and discharge valves for the Normal and Emergency Containment Coolers, AOV-3-2903 through AOV-3-2905, AOV-3-2906 through AOV-3-2908 and MOV-3-1417 and MOV-3-1418 the Residual Heat Exchanger cooling water isolation valves, MOV-3-749A and B (separated by a distance of 5'-5"); and the letdown isolation valve, AOV-3-204. Safe shutdown related cables are routed through this area at a tray elevation of approximately 27'-0". Cables in this tray are sprayed with Flamastic 71A or Flamastic 77. Pertinent fire area details are provided below;

Floor Surface Area	800 ft^2	
Wall and Ceiling Surface Area		2650 ft^2
Free Volume Excluding Components		11,680 ft^2
Ceiling Height	14'-6"	
Ceiling Composition	Concrete	
Ceiling Thickness	1'-6"	
Floor Composition	Concrete	
Floor Thickness	1'	

Wall Composition	Concrete
Wall Thickness	North: 1' West: 3'-9" South & East: 2'
Fire detector(s) in Area	None
Detector No./Type	N/A
Automatic Suppression in Area	None
Type of Automatic Suppression	N/A
Installed Communications Near Fire Area	T-317 PA M-317
Hose Station(s) Available to Area	FH #3
Fire Extinguisher(s) Immediately Available to Area	3.4.7, 3.4.8, 3.4.10
Number of Floor Drains	1
Drain(s) Size/Capacity	3"/140 gpm
Drain(s) Flow to	Waste Holdup Tank
Normal Forced Draft/ Type Ventilation	Yes/Fan
Normal Ventilation Flow Rate	960

SAFE SHUTDOWN EQUIPMENT

Charging Control Valve	HCV-3-121
Component Cooling Water Supply Valve for Emergency Containment Cooler 3A	AOV-3-2903
Component Cooling Water Sup. Valve for Emergency Containment Cooler 3B	AOV-3-2904
Component Cooling Water Sup. Valve for Emergency Containment Cooler 3C	AOV-3-2905
Component Cooling Water Return Valve for Emergency Containment Cooler 3A	AOV-3-2906
Component Cooling Water Return Valve for Emergency Containment Cooler 3B	AOV-3-2907
Component Cooling Water Return Valve for Emergency Containment Cooler 3C	AOV-3-2908

B. SAFETY ANALYSIS

1. Hot Shutdown Cables

	Function
Component Cooling Water Supply Valve for Normal Containment Cooler MOV-4-1417	P,C
Component Cooling Water Return Valve for Normal Containment Cooler MOV-4-1418	P,C
Component Cooling Water Supply Valve for Emergency Containment Cooler 3A AOV-3-2903	P,C
Component Cooling Water Supply Valve for Emergency Containment Cooler 3B AOV-3-2904	C
Component Cooling Water Supply Valve for Emergency Containment Cooler 3C AOV-3-2905	C
Component Cooling Water Return Valve for Emergency Containment Cooler 3A AOV-3-2906	C
Component Cooling Water Return Valve for Emergency Containment Cooler 3B AOV-3-2907	C
Component Cooling Water Return Valve for Emergency Containment Cooler 3C AOV-3-2908	C
Charging Control Valve HCV-3-121	

Analysis

1. Equipment: Component Cooling Water Supply Valve for Normal Containment Cooling MOV-3-1417, power and control

   Protection Required: No

   Basis: This is a motor operated valve which is normally open during all modes of plant operation. Control and power cables for this valve are routed in steel conduit throughout this fire area. It can be demonstrated that regardless of the failure modes identified for the power and control cables supplying this valve in this fire area, the valve will remain open. This valve does not play any active role (i.e. change position) to perform its hot or cold shutdown function, it only has to remain in its normal position.

2. Equipment: Component Cooling Water Return Valve for Normal Containment Cooling MOV-3-1418, power and control
   Protection Required: No
   Basis: See 1 above

3. Equipment: Component Cooling Water Supply Valve for Emergency Containment Cooler 3A, AOV-3-2903, power and control
   Protection Required: No
   Basis: The Normal Containment Cooling system provides a redundant function.

4. Equipment: Component Cooling Water Supply Valve for Emergency Containment Cooler 3B, AOV-3-2904, control
   Protection Required: No
   Basis: See 3 above

5. Equipment: Component Cooling Water Supply Valve for Emergency Containment Cooler 3C, AOV-3-2905, control
   Protection Required: No
   Basis: See 3 above

6. Equipment: Component Cooling Water Return Valve for Emergency Containment Cooler 3A, AOV-3-2906, control
   Protection Required: No
   Basis: See 3 above

7. Equipment: Component Cooling Water Return Valve for Emergency Containment Cooler 3B, AOV-3-2907, control
   Protection Required: No
   Basis: See 3 above

8. Equipment: Component Cooling Water Supply Valve for Emergency Containment Cooler 3B, AOV-3-2904, control
   Protection Required: No
   Basis: See 3 above

9. Equipment: Charging Supply Control Valve HCV-3-121, control
Protection Required: No
Basis: HCV-3-121 is the charging system control valve for Unit 3. This valve fails in an open position, so most likely the failure would not affect hot shutdown operations. If this valve is assumed to spuriously close, sufficient makeup to unit's, Reactor Coolant System via the seal injection piping is available for maintaining hot shutdown conditions without operator action. If boration to cold shutdown conditions and cooldown is desired, the operator would detect spurious closure of this valve by observing Pressurizer level. HCV-3-121 would then be opened by opening breaker on Panel 3P09 in the Cable Spreading Room.

2. Cold Shutdown Cables Function

Residual Heat Removal Cooling Water Isolation Valve MOV-3-749A	P,C
Residual Heat Removal Cooling Water Isolation Valve MOV-3-749B	P,C

Analysis

One train of Residual Heat Removal is required to achieve cold shutdown. The valves which may become inoperative from the control room are listed below by the train of Residual Heat Removal they are associated with. Only the valve in one train need be operated.

Unit 3

Train A	Train B
MOV-3-749A	MOV-3-749B

Alignment of the Train A or B Residual Heat Removal valves affected by a fire in this area would consist of one valve being manually repositioned at the valve.

Plant procedures will indicate valves which may require manual operation following a fire in this area.

3. Fire Consequence Mitigation Cables — Function

Letdown Isolation Valve AOV-3-204	C
Boric Acid Transfer Pump Recirculation Valve HCV-3-105	C

Analysis

1. Equipment: Letdown Isolation Valve AOV-3-204
   Protection Required: No
   Basis: Redundant isolation capability exists by using isolation valves AOV-4-200A, 4-200B and 4-200C and LCV-4-460 cable which are not located in this fire area.

2. Cable: Boric Acid Transfer Pump Recirculation Valve HCV-3-105, control
   Protection Required: No
   Basis: HCV-3-105 is the air operated valve associated with Boric Acid Tank B. Boric acid can be supplied from tanks A or C through their associated valves HCV-3-110 and HCV-3-104 neither of which have cables routed in this area. HCV-3-105 fails closed on loss of power, failure in the open position can only result from a hot short and would not impact the operation of the remaining Boric Acid tanks.

C. PROPOSED MODIFICATIONS

1. Upgrade perimeter walls by sealing piping and other penetrations to a three-hour rating.

2. Upgrade floor by sealing all penetrations and providing a three-hour rated fire door to the Residual Heat Removal pump area below.

3. Provide a three-hour rated fire door to the Auxiliary Building Hallway.

4. Provide three-hour rated ventilation dampers in all ducts penetrating this fire area.

5. Provide fire detection.

D. EXEMPTION REQUEST

1. Request exemption from providing a three-hour rated enclosure around MOV-3-1417 and MOV-3-1418 and associated power and control conduits in this fire area. The basis for this request is that this modification would not enhance fire protection safety above that already provided inherent in the equipment design.

FIRE AREA N

UNIT 4 CHARGING PUMP ROOM (INDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Area N is the Unit 4 Charging Pump Room and is comprised of Fire Zone 45. It houses Charging Pumps 4A, 4B, and 4C and their associated valving and instrumentation. Safe shutdown cable functions are routed through this area. This fire area is bounded by concrete walls, floor, and ceiling having NFPA fire ratings of three hours. The west wall of the area has electrical conduit penetrations and a 5' X 8' doorway to the Auxiliary Building hallway. There is a 2' X 3' ventilation duct penetrating the west wall and a 12" diameter curbed pipe sleeve in the floor.

The combustable loading in the area is light, consisting of two cable trays which are provided with a fire propagation retardant coating lubricating oil contained within the steel pump casing, and grease contained in motor operated valves.

SAFE SHUTDOWN EQUIPMENT

Charging Pump	4A
Charging Pump	4B
Charging Pump	4C
Boric Acid Injection Tank Stop Valve	MOV-4-350
Refueling Water Storage Tank Supply Valve to Charging Header	LCV-4-115B
Volume Control Tank to Low-Level Isolation Valve	LCV-4-115C

C. PROPOSED MODIFICATIONS

1. Upgrade perimeter walls to three-hour rated barriers by sealing all piping and other penetrations and by installing three-hour rated doors and dampers in all doorways and ventilation penetrations.

2. Protect conduits and reroute or protect control cables for Charging Pump 4B with one-hour rated protection.

3. Protect local control station for Charging Pump 4B by providing an enclosure fabricated from one-hour rated materials, or relocate outside of this fire area.

4. Reroute in conduit and protect with a one-hour rated materials, the cables for LCV-4-115B, wherever the separation from cables for MOV-4-350 is less than 20'.

5. Provide a water suppression system in Fire Area N with coverage as shown on Figure N-1.

D. EXEMPTION REQUEST

Request exemption from providing a one-hour rated enclosure around the Charging Pump 4B. Charging Pump 4B is separated by approximately 10' on center from Charging Pumps 4A and 4C. The low insitu combustable loading in this area and existing automatic fire detection combined with the proposed addition of a fixed automatic water suppression system, one-hour protection of essential cables and rerouting to obtain 20' horizontal separation provides reasonable assurance that a fire in this area would be quickly detected and suppressed, and that at least one train of safe shutdown equipment would remain free of fire damage.

FIRE AREA O

UNIT 3 CHARGING PUMP ROOM (INDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Area O is the Unit 3 Charging Pump Room, and is comprised of Fire Zone 55. It houses Unit 3 Charging Pumps 3A, 3B and 3C and associated valving and instrumentation. The area is bounded by concrete walls, floor and ceiling having NFPA fire ratings of three hours. The west wall of the area has cable tray penetrations and a 5' x 8' doorway to the Auxiliary Building hallway. Opening to the Boric Acid Storage Tank (BAST) area is a 3' x 8' doorway and a 2' x 2' trench at floor level. There is a 2' x 3' ventilation duct penetrating the south wall and a 12" diameter curbed pipe sleeve in the floor. The combustible loading in the area is light, consisting of two cable trays which are provided with a Flamastic 71A or 77 coating, the lubricating oil contained in the steel pump casing, and grease contained in motor operated valves.

SAFE SHUTDOWN EQUIPMENT

Charging Pump	3A
Charging Pump	3B
Charging Pump	3C
Boric Acid Injection Tank Stop Valve	MOV-3-350
Refueling Water Storage Tank Supply Valve to Charging Header	LCV-3-115B
Volume Control Tank to Low-Level Isolation Valve	LCV-3-115C

B. SAFETY ANALYSIS

1. Hot Shutdown Cables

Hot Shutdown Cables	Function
Charging Pump 3A	P, C
Charging Pump 3B	P, C
Charging Pump 3C	P, C
Boric Acid Transfer Pump 4A	P, C
Boric Acid Injection Tank Stop Valve MOV-3-350	P, C
Volume Control Tank Low-Level Isolation Valve LCV-3-115C	C
Refueling Water Storage Tank Supply Valve to Charging Header LCV-3-115B	C
Pressurizer Level LT/LI-3-460	C
Pressurizer Level LT/LI-3-459	C

Analysis

1. Equipment: Charging Pump 3A, power and control
   Protection Required: No
   Basis: See 2 below.

2. Equipment: Charging Pump 3B, power and control
   Protection Required: Yes
   Basis: Reroute local Control Station Cable in rigid steel conduit and provide an one-hour rated protection (for the Pump 3B only). Relocate the Pump 3B control station in an enclosure fabricated from one-hour rated materials outside of this fire area. Relocate the Pump 3B low oil pressure switch cable in a separate rigid steel conduit and provide one-hour rated protection. Provide a fire suppression system (by water) in this fire area with coverage as shown on Figure 0-1. Provide one-hour rated protection on the Charging Pump 3B power cable conduit from the motor terminal box to floor entry.

   One Charging Pump is required for hot and cold shutdown. The above modifications will ensure the availability of either Charging Pump 3A, 3B or 3C, in the event of fire in this area.

3. Equipment: Charging Pump 3C, power and control
   Protection Required: No
   Basis: See 2 above.

C. PROPOSED MODIFICATION

1. Upgrade perimeter walls to three-hour rated barriers by sealing all piping and other penetrations and by installing three-hour rated doors and fire dampers in all doorways and ventilation duct penetrations, respectively.

2. Reroute the control cable for Charging Pump 3B through rigid steel conduit and provide one-hour rated protection.

3. Protect local control station for Charging Pump 3B by providing an enclosure fabricated from one-hour rated materials or relocate outside of this fire area.

4. Reroute the cables for LCV-3-115B in conduit and provide one-hour rated protection where the separation from cables for MOV-3-350 is less than 20'-0".

5. Provide a fire suppression system (by water) in this area with coverage as shown on Figure 0-1.

D. EXEMPTION REQUEST

Request exemption from providing a one-hour rated enclosure around Charging Pump 3B.

The low insitu combustible loading in this area and existing automatic fire detection system combined with the proposed addition of a fixed automatic fire suppression system, one-hour protection of essential cables and re-routing to obtain 20' horizontal separation, provides reasonable assurance that a fire in this area would be quickly detected and suppressed, and that at least one train of safe shutdown equipment would remain free of fire damage.

C. PROPOSED MODIFICATIONS

1. Reroute the control cables for valve AOV-4-460 through West Penetration Area and maintain the separation in excess of 20' from the cables for valves AOV-4-200A, B and C as far as physically possible.

2. Reroute the control cables for valve AOV-4-387 through West Penetration Area and maintain the separation in excess of 20' from the cables for valve HCV-4-137 as far as physically possible.

3. Reroute the control cables for AOV-4-310A through West Penetration Area and maintain the separation in excess of 20' from the cables for valve AOV-4-310B as far as physically possible.

4. Provide a minimum of 20' of separation for cables between two trains of Reactor Coolant System hot and cold leg temperature instrumentation, wherever physically possible. Route the two trains, when provided, through separate penetration areas.

5. Provide one-hour rated protection to the conduit for LT-4-460 to the maximum extent possible in the pressurizer missile shield wall area, where separation from conduits for LT-4-459 is less than 20'.

6. Provide dedicated portable emergency lighting outside containment units for Containment entry to facilitate manual operation of the valves.

D. EXEMPTION REQUEST

1. Requests exemption from the provision which requires the installation of a non-conbustible radiant energy shield between redundant safe shutdown equipment separated by distance of less than 20'-0".

   The potential combustible sources in Containment are localized, generally well separated, and confined within the steel structure of the specific equipment. Cable routing to redundant equipment is protected with radiant energy shields in the form of fire propagation retardants and steel conduits, and is generally separated in excess of 20'. The presence of transient combustibles are limited by administrative control of trafficing such materials during power operation. The inherent design features associated within this area coupled with proposed modifications highly controlled access and combustible control programs ensure that the safe shutdown capability of the plant is maintained.

2. Request exemption from those provisions of Section III.J that would require the installation of emergency lighting units in containment to facilitate the manual operaiton of Accumulator Stop Valves MOV-4-865A, B and C and RHR inlet isolation valves MOV-4-750 and 751. Due

to the harsh environmental conditions (i.e. temperature, humidity, etc.) existing in containment and their detrimental effect on battery power supplies, FPL contends that the existing lighting system inside containment supplemented by the dedicated portable emergency lighting units proposed herein, would exceed, in usefulness and reliability, that of installed self-contained emergency lighting units. The use of portable lighting is consistent with present day practice for fire fighting. Therefore, it is FPL's position that no additional fire safety will be gained by the implementation of the particular requirements of Section III.J in question.

Fire Extinguisher(s) Immediately Available to Area	3.5.1, 3.5.2, 3.5.3, 3.5.4
Number of Floor Drains	(Numerous)
Drain(s) Size/Capacity	Total Capacity = 330 gpm
Drain(s) Flow To	Waste Holdup Tank/CVCS Holdup Tank
Normal Forced Draft/Type Ventilation	None
Normal Ventilation Flow Rate	N/A

FIRE AREA COMBUSTIBLES

Liquid Combustibles

Lubricating oil is contained within the following equipment:

Reactor Coolant Pumps (3)
Manipulator Crane Trolley
DRDM Coolers (2)
Normal Containment Coolers (4)
Emergency Containment Coolers (3)
Hydraulic Snubbers
Sump Pumps (2)
Containment Polar Crane
Reactor Coolant Drain Tank Pumps (2)

The lubricating oil associated with the equipment listed above can only be considered a combustible if sprayed onto a hot surface which raises its temperature to above its oil flash point; i.e., above approximately 450°F. The only major ignition source of concern in Containment is the RCS piping, which is lagged, thus significantly reducing the probability of a lubricating oil fire.

The largest potential combustible source in Containment is the lube oil associated with the Reactor Coolant Pumps. This consists of approximately 200 gallons per pump. The Reactor Coolant Pumps have an oil collection system meeting the requirements of Section III.0 of Appendix R, thus precluding this potential combustible source from initiating a fire in Containment. The second largest combustible source in Containment is the lubricating oil associated with the Containment Polar Crane and the Manipulator Crane trollies. Since the Manipulator Crane and Containment Polar Crane are parked during normal plant operation the potential for oil spillage is considered extremely unlikely and does not warrant further evaluation. The remaining liquid combustibles in Containment consist of the small amounts of lubricating oil associated with the specific equipment identified in the above list. These potential combustible sources are localized, generally well separated and confined within the steel structure of the specific equipment. The lubricating oil systems associated with this equipment are not pressurized and, therefore, the potential for oil spray is unlikely. In addition, the lack of ignition sources in these areas further

C. PROPOSED MODIFICATIONS

1. Reroute the control cables for valve AOV-3-460 through the West Penetration Area and maintain the separation in excess of 20' from the cables for valves AOV-3-200A, B and C, as far as physically possible.

2. Reroute the control cables for AOV-3-310A through West Penetration Area and maintain the separation in excess of 20' from the cables for valve AOV-3-310B, as far as physically possible.

3. Provide a minimum of 20' of separation for cables between two trains of Reactor Coolant System hot and cold leg temperature instrumentation, where physically possible. Route the two trains, when provided, through separate penetration areas.

4. Provide one-hour rated protection on the conduit for LT-3-460 to the maximum extent possible in the pressurizer missile shield wall area where separation from conduits for LT-3-459 is less than 20'.

5. Provide dedicated portable emergency lighting units outside Containment for Containment entry to facilitate manual operation of valves.

D. EXEMPTION REQUEST

1. Request exemption from the provision which requires the installation of a non-combustible radiant energy shield between redundant safe shutdown equipment separated by a distance of less than 20'.

   The potential combustible sources in Containment are localized, generally well separated, and confined within the steel structure of the specific equipment. Cable routing to redundant equipment is protected with radiant energy shields in the form of fire propagation retardants and steel conduits and is generally separated in excess of 20'. The presence of transient combustibles are limited by strict administrative control of trafficing such materials during power operation. The inherent design features associated with this area coupled with proposed modifications, highly controlled access and combustible control program ensures that the safe shutdown capability of the plant is maintained.

2. Request exemption from those provisions of Section III.J that would require the installation of emergency lighting units in containment to facilitate the manual operation of Accumulator Stop Valves MOV-3-865A, B and C and RHR inlet isolation valves MOV-3-750 and 751. Due to the harsh environmental conditions, (i.e., temperature, humidity, etc.) existing in Containment and their detrimental effect on battery power supplies, FPL contends that the existing lighting system inside Containment supplemented by the dedicated portable emergency lighting units proposed herein, would exceed, in usefulness and reliability, that of installed self-contained emergency lighting units. The use of portable lighting is consistent with present day practice for fire fighting. Therefore, it is FPL's position that no additional fire safety will be gained by the implementation of the particular requirements of Section III.J in question.

B. PROPOSED MODIFICATIONS

1. A single train alternate shutdown system will be provided for each unit independent of this fire area. Details of the alternate shutdown system will be submitted in accordance with existing schedules.

C. EXEMPTION REQUEST

1. Request exemption from installation of a fixed automatic supression system in Fire Area MM. This area is required to be continuously manned by the provisions in existing Technical Specification. Smoke detectors and fire extinguishers are provided in the area and hose stations are readily accessible. The addition of a fixed automatic supression system would not significally enhance the fire protection safety inherent in the existing design.

SECTION V

INDOOR FIRE AREAS NOT REQUIRING EXEMPTIONS.

FIRE AREA	PAGES	FIRE AREA	PAGES
A	1-8	AA	1-3
F	1-16	BB	1-3
G	1-6	CC	1-2
H	1-10	DD	1-3
I	1-9	EE	1-4
J	1-8	FF	1-3
K	1-7	GG	1-4
L	1-3	HH	1-2
M	1-3	II	1-6
R	1-7	JJ	1-3
S	1-3	KK	1-3
T	1-6	LL	1-4
U	1-6	NN/OO	1-4
V	1-6	PP	1-3
W	1-5	QQ	1-3
X	1-6		
Y	1-3		
Z	1-3		

6. Cable: Normal Containment Cooler 3B, control
   Protection Required: Yes, as defined below
   Basis: Reroute outside this fire area the control cable for Normal Containment Cooler 3B or provide three-hour rated protection, thereby assuring that Normal Containment Coolers 3A and 3B are available for safe shutdown.

7. Cable: Normal Containment Cooler 3C, control
   Protection Required: No
   Basis: See 3 above

8. Cable: Normal Containment Cooler 3D, power and control
   Protection Required: No
   Basis: See 3 above

9. Cable: Normal Containment Cooler 4A, power and control
   Protection Required: No
   Basis: Two Normal Containment Coolers are required for safe shutdown. Coolers 4C and 4D will be available, because no cables for these coolers are routed through this fire area.

10. Cable: Normal Containment Cooler 4B, control
    Protection Required: No
    Basis: See 9 above

11. Cable: Auxiliary Feedwater Pump Steam Supply Valve S/G 4C MOV-4-14054, power and control
    Protection Required: No
    Basis: See 2 above

2. Cold Shutdown Cables

Cold Shutdown Cables	Function
Refueling Water Storage Tank Isolation Valve from Residual Heat Removal Header MOV-4-863A	P
Refueling Water Storage Tank Isolation Valve from Residual Heat Removal Header MOV-4-863B	P,C
Refueling Water Storage Tank Isolation Valve from Residual Heat Removal Header MOV-4-862A	P,C
Refueling Water Storage Tank Isolation Valve from Residual Heat Removal Header MOV-4-862B	P,C
Refueling Water Storage Tank Isolation Valve from Residual Heat Removal Header MOV-3-862A	P,C

C. PROPOSED MODIFICATIONS

1. Upgrade perimeter walls for this fire area to three-hour barriers by sealing all piping and other penetrations and by installing three-hour rated fire doors and dampers on all doorways and ventilation duct penetrations in the perimeter walls, respectively.

2. Seal all floor penetrations to a three-hour rating.

3. Reroute control cables for LCV-3-115B and LCV-4-115B out of Fire Area F, or protect with three-hour rated protection.

4. Reroute power and control cables for one Auxiliary Building Exhaust Fan out of Fire Area F and provide power from a motor control center outside Fire Area F.

5. Reroute control cables for Normal Containment Coolers 3A, 3B, 4C and 4D out of Fire Area F, or protect with a three-hour rated protection.

6. Reroute power and control cables for MOV-3-1417 and MOV-4-1417 Fire Area F and repower from motor control centers outside Fire Area F.

7. Relocate local control station for Residual Heat Removal Pumps 3A and 4A outside Fire Area F.

8. Reroute control cable for Charging Pump 3B outside of this fire area, or provide three-hour rated protection.

D. EXEMPTION REQUEST

None

FIRE AREA CC

AUXILIARY BUILDING NORTH-SOUTH BREEZEWAY AND CABLE RISER AREA

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLE: Yes

EXEMPTION REQUEST: Yes

A. AREA DESCRIPTION

Fire Area CC is comprised of Fire Zone 79A. Fire Area CC is the North-South Breezeway at the east end of the 18' elevation main Auxiliary Building Corridor. The breezeway is open on both the north and south ends, having no walls or doors.

The breezeway acts as a cable tray riser area, wherein cables entering the Cable Spreading Room at elevation 30'-0" are routed from Manholes 406, 418, 318 and 323 located in this fire area. The Cable Spreading Room floor forms the ceiling of this fire area. There is no safe shutdown equipment located in this fire area. All cable trays are coated with fire propagation retardant Flamastic 71A or 77 and fire detection is provided.

The ends of the breezeway are open to the outside preventing smoke and heat buildup, should a fire occur in the breezeway. The proposed modifications, including the provision of alternate shutdown capability independent of this fire area and the additon of an automatic fire suppression system (by water), provide reasonable assurance that a fire in this area would not jeopardize the safe shutdown of the units.

B. SAFETY ANALYSIS

A safety analysis will be provided as part of the alternate shutdown submittal.

FIRE AREA FF

UNIT 3 480V LOAD CENTER 3A AND 3B ROOM (INDOOR)

DRAWING REFERENCE: Figure D2

SAFE SHUTDOWN EQUIPMENT OR CABLES: Yes

EXEMPTION REQUEST: No

A. AREA DESCRIPTION

Fire Area FF is comprised of Fire Zone 95. The fire area is the 480V Load Center 3A and 3B Room. It houses the load center along with associated power and control cables. Safe shutdown related cables are routed through the area. The area is bounded by walls, floor and ceiling having NFPA fire rating of greater than four hours. There is a 7' x 9' passageway in the east wall to Zone 96, a 5' x 5' exhaust fan opening in the west wall and a 3' x 9' opening in the south wall.

SAFE SHUTDOWN EQUIPMENT

480V Load Center	3A
480V Load Center	3B

B. SAFETY ANALYSIS

1. Hot Shutdown Cables

	Function
Charging Pump 3A	C
Charging Pump 3B	P, C
Pressurizer Backup Heater Group 3A	

Analysis

1. Cable: Charging Pump 3A, control
   Protection Required: No
   Basis: One Charging Pump is required for safe shutdown. Charging Pump 3C is available and has no cables routed through this Fire Area.

2. Cable: Charging Pump 3B, power and control
   Protection Required: No
   Basis: See 1 above.

3. Cable: Pressurizer Backup Heater Group 3A, power and control
   Protection Required: No
   Basis: One set of pressurizer heaters is required for safe shutdown. Redundant Pressurizer Backup Heater Group 3V is available and has no cables routed through this fire area.

2. Cold Shutdown Cables

	Function
None	N/A

3. Fire Consequence Mitigation Cables

	Function
None	N/A

B. SAFETY ANALYSIS

1. Hot Shutdown Cables	Function
Station Battery 3A Feed to DC Bus 3A	P

Analysis

1. Cable: Station Battery 3A Feed to DC Bus 3A, power
   Protection Required: No
   Basis: DC Bus 3A supplies Inverters 3A and 4A. Redundant counterparts are Inverters 3B and 4B which are supplied from station battery 4B, which has no cables routed in this fire area.

2. Equipment: Station Battery 3A
   Protection Required: No
   Basis: Redundant Station Batteries 4A and 3B are available.

2. Cold Shutdown Cables	Function
None	N/A

3. Fire Consequence Mitigation Cables	Function
None	N/A

FIRE AREA LL

UNIT 3 MOTOR-GENERATOR SET ROOM

DRAWING REFERENCE: Figure D3

SAFE SHUTDOWN EQUIPMENT OR CABLES: Yes

EXEMPTION REQUEST: No

A. AREA DESCRIPTION

Fire Area LL is comprised of Fire Zone 104. This area is the Unit 3 Motor-Generator Set Room. It houses safety related power supplies, DC Motor Control Center 3A, and Battery Charger 3A and associated cables. The area is bounded by walls, floor and ceiling having NFPA fire ratings of greater than four hours. There are 30" x 6'-8" doorways in the south, east and west walls, and 30" x 6'-8" doorways to the 3A and 3B Battery Rooms.

SAFE SHUTDOWN EQUIPMENT

DC Motor Control Center	3A
Battery Charger	3A

FIRE AREA PP

UNITS 3 AND 4 BATTERY RACK 4A ROOM

DRAWING REFERENCE: Figure D-4

SAFE SHUTDOWN EQUIPMENT OR CABLES: Yes

EXEMPTION REQUEST: No

A. AREA DESCRIPTION

Fire Area PP is comprised of Fire Zone 109. This fire area is the 4A Battery Room, which houses the 4A Batteries. The walls and floor of this area have NFPA fire ratings of greater than four hours. There is a 6'-8" x 30" doorway and a 12" x 12" ventilation register in the east wall. The ceiling contains a 10" x 10" vent.

SAFE SHUTDOWN EQUIPMENT

Station Battery Rack 4A

B. SAFETY ANALYSIS

1. Hot Shutdown Cables	Function
Station Battery 4A Feed to DC Bus 4A	P

Analysis:

1. Cable: Station Battery 4A Feed to DC Bus 4A, power
   Protection Required: No
   Basis: DC Bus 4A supplies Inverters 3D and 4D. Redundant counterparts are Inverters 3C and 4C, which are supplied from Station Battery 3B, which has no cables routed in this fire area.

2. Equipment: Station Battery 4A
   Protection Required: No
   Basis: Redundant Station Batteries 4A and 4B are available.

2. Cold Shutdown Cables	Function
None	N/A

3. Fire Consequence Mitigation Cables	Function
None	N/A

FIRE AREA QQ

UNITS 3 AND 4 BATTERY RACK 3B ROOM

DRAWING REFERENCE: Figure D4

SAFE SHUTDOWN EQUIPMENT OR CABLES: Yes

EXEMPTION REQUEST: No

A. AREA DESCRIPTION

Fire Area QQ is comprised of Fire Zone 110. This fire area is the 3B Battery Room, which houses the 3B Batteries. The walls and floor of this area have NFPA fire ratings of greater than four hours. There is a 6'-8" x 30" doorway and a 12" x 12" ventilation register in the east wall. The ceiling contains a 10" x 10" vent.

SAFE SHUTDOWN EQUIPMENT

Station Battery Rack 4B

Superseded per Rev 1 to Steam Generator Rpt dtd 12-20-77

SGRR 50-250

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STEAM GENERATOR REPAIR REPORT

TURKEY POINT UNITS 3 AND 4

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STEAM GENERATOR REPAIR REPORT
TURKEY POINT UNITS 3 AND 4

1.0 INTRODUCTION, SUMMARY AND CONCLUSIONS

The steam generators at Turkey Point Units 3 and 4 have experienced corrosion related phenomena that require periodic inspection and plugging of steam generator tubes to ensure their continued safe operation. It is conceivable that continuation of the corrosion mechanism, referred to as denting, could eventually result in unacceptable inspection intervals and reductions in unit power. Thus, primarily economic considerations may require repair of the steam generators.

This report discusses the safety-related aspects associated with repair of the steam generators via replacement of the lower portion of the in situ units with shop fabricated replacement lower assemblies. It does not address the in situ retubing alternate.

1.1 SUMMARY OF STEAM GENERATOR REPAIR EVALUATION PROGRAM

1.1.1 Containment Entry and Exit of Steam Generator Lower Assemblies

A 1/2" - 1'0" scale model of the Unit 4 containment and internals and the Unit 3 containment in the area of the equipment hatch has been constructed to evaluate the feasibility of various pathways for removal of lower assemblies from containment and return of the shop fabricated lower assemblies to containment. Three pathways were evaluated in detail, viz., removal and entry via:

a. the equipment hatch,

b. an opening in the containment dome and

c. an opening in the containment wall.

Schedule, economic and safety evaluations indicated that use of the equipment hatch is the optimum pathway. Therefore, construction-related evaluations addressed in this report are for the equipment hatch pathway only.

1.1.2 Steam Generator Lower Assembly Characteristics

The existing steam generators will be parted in the upper section of the shell. The steam dome assemblies (upper portion of steam generator) will be removed and stored within containment. Subsequent to completion of the installation of the new lower assemblies, the original steam dome assemblies will be welded to the new lower assemblies to complete the repair.

The shop-fabricated lower assemblies (see Figure 2.2-1) will be equivalent to the lower assemblies they replace. They will be designed to meet existing plant mechanical and performance characteristics, and safety-related parameters will remain consistent with those utilized in the FSAR analyses.

Features to mitigate the effects of corrosion-related phenomena will be incorporated in the design. These features will not adversely alter mechanical, performance or FSAR-related characteristics. In addition, the shop-fabricated lower assemblies will be designed and manufactured to current codes and manufacturing techniques. Thus, the replacement assemblies will reflect current technology. They will satisfy the legal requirement of being equivalent to the units they replace (which were manufactured to the 1965 edition of Section III, ASME Boiler and Pressure Vessel Code).

1.1.3 Safety-Related Considerations

The potential impact of the repaired units on each appropriate accident analyzed in the FSAR has been evaluated. Because of the essential duplication of safety-related parameters, qualitative discussion is sufficient to demonstrate the appropriateness of the repaired steam generators to accommodate FSAR accidents.

Onsite transportation and handling of lower assemblies have been evaluated. Even though administrative procedures and temporary protection to buried pipes and conduits are considered sufficient to preclude occurrence of these types of mishaps, construction incidents are postulated to occur. The ability of the plant to accommodate these events is demonstrated.

The units will be repaired in series, i.e., one unit will be conducting normal power operations while the second is undergoing steam generator repair. To obviate the need to evaluate construction incidents within the containment undergoing repair, the reactor core will be off-loaded and transferred to the fuel storage building prior to commencement of repair activities within containment.

1.1.4 ALARA Considerations

Estimates have been made of the exposure to personnel involved in the repair activity. This evaluation indicates that the reduction in man-rem exposures currently being incurred during tube inspection and plugging operations will offset, in a reasonable time period, the man-rem exposure incurred during the steam generator repair.

1.1.5 Offsite Radiological Considerations

Radiological evaluations of the gaseous and liquid releases attributable to the steam generator repair have been conducted. The resulting releases are a small fraction of the total releases in 1976, i.e., those associated with normal operation of the facility.

The existing access ramp to the equipment hatch will be removed as necessary to enlarge the access area and to facilitate access by trucks and mobile cranes. A platform approximately 30' x 30' will likely be installed at the equipment hatch elevation.

Removal of the existing ramp and grading of the general area will provide additional flexibility in selection of cranes for the heavy lifts during steam generator movement.

No permanent modifications to existing structures will be made.

3.1 PATHWAYS AND CONSTRUCTION RESTRICTIONS

3.1.1 Site Preparation

3.1.1.1 Foundations

All heavy hoisting equipment will be located so that foundations will not interfere with permanent plant installations, either above or below grade. The steam generator removal platform will require the placement of foundations as shown in Figure 3.1-1. Below grade emplacements may be removed after completion of the repair work.

3.1.1.2 Roadways, Ramps, and Platforms

The existing access ramps to the equipment hatch of each containment will be removed as necessary. A service platform (Figure 3.1-1) may be installed to facilitate access into the containment. The platform will be designed to support the weight of the lower assemblies and a manually powered materials cart of approximately 20-ton capacity. It will also serve as a loading dock for the loading/unloading of a number of trucks or mobile cranes simultaneously. The platform will be equipped with jib cranes of 2 to 5 ton capacity for this purpose.

Onsite steam generator haul routes from the Unit 3 & 4 barge slip, i.e., the slip used during construction of the facility, are shown in Figure 3.1-2. Actual haul rates may vary during detailed engineering depending on method of receipt of lower assemblies and location of temporary onsite disposal area. This notwithstanding, all haul routes for transportation of heavy loads (other than normal axle loads for highway equipment) will be evaluated and upgraded where necessary utilizing standard construction practices (see Subsection 3.1.1.3).

An additional ramp will be required to gain access to plant grade from the barge unloading area. The ramp will be designed for the maximum wheel loads of anticipated transportation equipment.

3.1.1.3 Protection of Buried Facilities

Analyses have been performed for the following safety-related Units 3 and 4 buried facilities to ascertain in situ capability to accommodate transport loads (refer to Figure 3.1-2 for locations):

a. Electrical duct banks beneath the onsite steam generator haul route to Unit 3

b. Intake cooling water piping beneath the onsite steam generator haul route to Unit 3

c. Electrical duct banks beneath the equipment hatch construction area for Unit 3

d. Intake cooling water piping beneath the equipment hatch construction area for Unit 4

The following handling and transporter equipment was assumed for these analyses:

a. A multi-axle trailer/dolly system would be used to transport the lower steam generator assembly along the onsite haul routes. The total transporter load assumed was 275 tons.

b. One 300-ton capacity crawler crane weighing approximately 245 tons, including crane, a 70-foot crane boom, and counterweight, would most likely be used in the equipment hatch construction area.

The actual external earth pressure due to earth cover and equipment surcharge was determined for comparison with the original Turkey Point design allowables. The results for buried piping, presented in Table 3.1-1, do not include the use of methods such as additional structural fill, timber matting or structural bridging to distribute surcharge loads. Based upon the results of these analyses, additional protection will not be required for the safety-related intake cooling water pipe.

All buried concrete electrical duct banks were analyzed as infinite unreinforced concrete beams on an elastic foundation. These analyses indicate that uniform distribution of the equipment surcharge loads by the use of timber matting or structural fill will be required to maintain concrete tensile stresses within allowable limits. Therefore, the results of the analysis for buried duct banks, presented in Table 3.1-2, are based upon the use of timber matting. The duct banks under the haul route are actually reinforced and will have a higher factor of safety than that presented in Table 3.1-2.

3.1.1.4 Steam Generator Receipt on Site

The method of transportation to the site will be either by ocean barge or overland from the nearest railhead.

such as Hillman roller units and structural members, will be required to permit the assembly to move from the vertical to the horizontal position. Transfer of the lower assemblies through the equipment hatch will require the connection of additional roller assemblies as each lower assembly travels beyond the reach of the polar crane hoist.

3.1.4.2 Outside Containment

The lower assembly will exit the containment approximately 14 feet above grade, on the access platform previously described in Subsection 3.1.1.2. Transfer to a trailer/dolly system will be accomplished by a suitable lifting device.

Shipping saddles and tie downs will be provided for secure attachment while the transport device is in transit to the storage/laydown area.

3.1.5 Rigging and Handling Controls

All lift cranes and transport devices will be located so that postulated boom pendant failure will result in a path of travel that does not adversely impact the ability to achieve and maintain safe-shutdown conditions and provide adequate cooling for stored spent fuel. In order to develop the required rigging and handling controls, it is postulated that a crane boom failure will occur in the plane of normal travel of the boom, i.e., either forward, or as a reaction rearward over the cab of the crane. Administrative controls will limit lift heights so that loads will be raised only to a height sufficient to provide clearance for horizontal movement.

Subsection 5.2.1.2 discusses the analyses of postulated crane failures. Based on this evaluation, physical rather than administrative measures will be utilized to preclude the boom from unacceptably damaging the roof of the spent fuel portion of the auxiliary building.

Travel speed and travel routes for cranes and transport devices will be controlled to minimize their influence on vital structures in the immediate area. Lower assembly haul routes are shown in Figure 3.1-2. Controls on the rotation of the polar crane when loaded are discussed in Subsection 3.1.4.1.

3.2 EQUIPMENT AND CONCRETE REMOVAL AND REPLACEMENT

Engineering evaluations, including model sequence studies, have been conducted to determine the impact of repair activities on equipment and structures in containment. This evaluation demonstrates that the repair activity will not result in any safety considerations due to equipment removal or interruption of function. It also demonstrates that there will not be any major impact on structures and equipment (non-steam generator related).

Detailed engineering studies are in progress to precisely define the components, pipes, cables, instruments, etc. within the containment affected by the repair activity. The discussion below provides the results of the study to date. It is provided to illustrate the minimal impact on non-steam generator related equipment within containment.

3.3.3 Control of Airborne Radioactivity and Surface Contamination

Radioactivity generated during the cutting of the reactor coolant pipes will be contained within specially designed contamination control envelopes, which will provide local high efficiency filtration. Personnel working inside these control envelopes will wear respiratory protection equipment, as required, described and implemented by FPL procedures HP-60 through HP-69, in accordance with plant Technical Specifications and 10 CFR 20.103.

No special provisions are required for other cutting operations inside containment.

Section 3.3.1 describes the method of controlling the spread of surface contamination by personnel removing their outer set of protective clothing when leaving the control envelope.

The radioactive release and dose assessment associated with cutting the reactor coolant loop is provided in Subsections 5.2.2.1 and 5.2.2.2.

3.3.4 Supplemental Personnel Monitoring Requirements

3.3.4.1 Monitoring of Airborne Radioactivity

Mobile air monitors will be used, as required, to monitor the airborne radioactivity inside the control envelopes and in other work areas inside containment. Airborne radioactivity samplers coupled with laboratory analyses will also be employed.

3.3.4.2 Monitoring of Workers for Ingested Radioactivity

All workers who are planned to enter a high radiation area will be given an initial whole body count or bioassay at the start of their employment. Subsequently, workers will be given whole body counts or bioassays, as necessary, to comply with requirements set forth in the FPL Health Physics Manual and FPL procedure HP-31.

3.3.4.3 Personnel Monitoring

All personnel entering the radiation controlled area will be provided with personnel dosimetry TLDs in accordance with the FPL Health Physics Manual and FPL procedure HP-30.

3.3.4.4 Radiation and Contamination Surveys

Detailed surveys which provide proper control of radiation and contamination will be performed, as required, throughout the repair effort. These surveys will be performed in accordance with FPL procedures HP-20, HP-21, and HP-22.

3.3.6 Miscellaneous Waste Disposal

3.3.6.1 Concrete Disposal

Approximately 60 cubic yards of concrete per unit will be removed from the containment internal walls and floors and will be disposed of. The majority of this concrete has an insignificant amount of transferable contamination (transferable contamination is considered insignificant if it is less than 2200 dpm/100 cm^2 per 49 CFR 173.397) without surface decontamination. The concrete which is considered contaminated, (i) may be decontaminated prior to cutting by vacuuming and/or scrubbing with detergent and water to reduce the amount of transferable contamination to as low as is reasonably achievable or, (ii) appropriately packaged for shipment. Following removal from the containment, the concrete will be shipped as "low specific activity" (LSA) material to a licensed land burial site.

3.3.6.2 Miscellaneous Dry Waste Disposal

Metal shavings from the various cutting operations and miscellaneous dry waste, such as paper, rags, etc., will be put in standard shipping containers and shipped as LSA material to a licensed land burial site.

3.3.6.3 Liquid Radwaste Disposal

There are three potential sources of radioactive liquid to be disposed of. These sources are:

a. Water drained from the reactor coolant system

b. Laundry waste water

c. Local decontamination waste fluids

The radioactive releases associated with these sources are discussed in Subsection 5.2.2.4

The reactor coolant will be processed by the chemical and volume control system, as described in Section 9.2 of the Turkey Point FSAR.

The laundry waste water may be discharged without processing due to the low activity level as indicated by the estimated laundry waste water specific activities given in Table 5.2-5. If sampling indicates processing is required, the laundry waste water will be treated as part of the normal liquid radwaste processing scheme.

The small amount of liquid waste generated as a result of local decontamination will be treated as part of the normal liquid radwaste processing scheme.

3.3.7 Man-Rem Assessment

3.3.7.1 Man-Rem Assessment for Continuing Operation

A considerable amount of radiation exposure to personnel is associated with plugging steam generator tubes. The exposure to personnel over the

remaining operating lifetime of the plants can be reduced by the repair effort. This reduction is consistent with the guidance provided by Regulatory Guide 8.8 and ALARA.

The amount of radiation exposure at Turkey Point Units 3 and 4 for 1976 was 1408 man-rem of which approximately 50 percent or 700 man-rem was attributable to steam generator tube plugging and eddy current testing. Assuming that the replacement steam generator tubes maintain their integrity during the remaining operating lifetime of the plants, radiation exposure attributed to steam generator work will be reduced. It is not expected to exceed approximately 200 man-rem per year for a tube inspection and plugging operation in accordance with Regulatory Guide 1.83. (This is considered to be a conservative estimate, since it is expected that these inspections will not necessitate tube plugging.) Therefore, approximately 500 man-rem will be saved each year following steam generator repair.

3.3.7.2 Man-Rem Assessment for the Repair Effort

In order to assess the man-rem associated with the repair, detailed surveys were made of the radiation levels at the exterior of the steam generators and surrounding areas with the reactor shut down, and the reactor coolant system drained. The surveys were taken one month after shutdown, which is a conservative estimate for the repair operation since most of the high radiation work will be done more than one month after reactor shutdown. Typical radiation survey results for both Units 3 and 4 are presented in Figures 3.3-1 through 3.3-7.

The tasks involved in the removal and installation of the lower assemblies were considered in the man-rem assessments presented below, including:

a. Installation of scaffolding

b. Removal and replacement of insulation

c. Local decontamination

d. Installation of temporary supports/rigging for upper and lower assemblies

e. Preparation and cutting of steam generator transition pieces

f. Preparation and cutting of reactor coolant piping

g. Removal and storage of the steam dome assemblies

h. Sealing openings in the lower assemblies

i. Removal of portions of the steam generator shield wall adjacent to the equipment hatch

j. Removal of the lower assemblies to the temporary storage facility

k. Installation of the new steam generator lower assemblies

Based on the information presented above, it is estimated that approximately 300 to 700 man-rem per unit could be incurred during the removal of the steam generator lower assemblies and approximately 350 to 750 man-rem per unit during the installation of the new lower assemblies.

3.3.7.3 Conclusions

The man-rem assessments presented in Subsections 3.3.7.1 and 3.3.7.2 were evaluated in order to determine whether or not the radiation received by personnel during the repair is ALARA. Although the man-rem associated with the repair effort is greater than the man-rem associated with the 1976 tube plugging and eddy current testing at Turkey Point, it has been determined that approximately 14,000 man-rem may be saved over the lifetime of the plants by implementing the repair. Therefore implementation of the repair effort is ALARA. [Man-rem doses associated with disposal are not appreciable (see Section 3.4.4). Thus, disposal considerations do not alter this conclusion.]

3.4 DISPOSITION OF STEAM GENERATOR LOWER ASSEMBLIES

The lower assemblies to be removed from Units 3 and 4 represent the single largest source of solid radioactive waste to be disposed of during the repair effort. The disposal effort is independent of the repair and is evaluated on that basis.

The primary side surfaces of the steam generators are contaminated by a tenacious film of deposited radioactive corrosion products made up primarily of iron, cobalt and manganese isotopes. Based on actual Turkey Point data provided in Section 5.2.2, it is estimated that at the time the lower assemblies are removed, each will contain approximately 1000 curies of this deposited activity.

3.4.1 Objectives of Handling/Disposal Operations

The objectives of handling/disposal operations are as follows:

a. To dispose of the lower assemblies safely and economically

b. To provide means to handle/dispose of the steam generator lower assemblies so that radiation exposures to plant and contract personnel are as low as is reasonably achievable

c. To minimize the release of radioactivity to the environment so as to keep radiation exposure to the public as low as is reasonably achievable and within the limitations of 10 CFR 20

d. To package and ship the lower assemblies to a licensed land burial site in accordance with applicable state and federal regulations, including 10 CFR 71 and 49 CFR 170-178

3.4.2 Onsite Storage

A temporary onsite storage area will be provided for the storage of the lower assemblies. The lower assemblies will be stored in this area until they can be shipped offsite to a licensed land burial site. Prior to removal from the containment, the openings in the lower assemblies will be sealed to prevent the release of radioactivity during transfer and subsequent onsite storage.

The storage area design will comply with existing plant requirements for the storage of radioactive materials. During the lower assembly packaging operations, filtered ventilation systems and enclosure envelopes will be provided, as required, to control airborne radioactivity which may be generated.

3.4.3 Offsite Disposal

Disposal of the steam generator lower assemblies at a licensed land burial site was investigated. Rail, truck and barge were considered viable alternatives for shipment of the lower assemblies offsite.

3.4.3.1 Preparation for Shipment by Truck and/or Rail

In preparation for shipment of the lower assemblies to a licensed land burial site, they will be cut into sections suitably sized for shipment by rail and/or truck. Based on the expected curie content of the lower assemblies, the cut-up sections will then be packaged in strong, tight packages and shipped as "low specific activity" (LSA) material in accordance with applicable state and federal regulations.

Cutting operations on the lower assemblies will be performed in enclosure envelopes, as required, to minimize the spread of airborne activity. The enclosure envelopes will be provided with a HEPA filtration system to reduce the potential release of radioactivity to the environment and will be designed to allow the use of remote cutting techniques to reduce personnel exposure to radiation during cutting. Temporary shielding will also be provided, as required, to further reduce personnel radiation exposure. Radiation detection and measurement during cutting operations will be in accordance with the FPL Health Physics Manual.

Although it is expected that radiation exposure to personnel will be relatively low during the cutting operations because of remote cutting techniques and temporary shielding, additional man-rem reduction techniques have also been investigated. These techniques, which could be implemented in the temporary storage facility, include: a) decontaminating the primary side surfaces or b) filling the primary side with a solidification agent.

Both decontamination and solidification agent injection are viable methods for reducing radiation exposure to personnel during cutting of the lower assemblies. Decontamination may be mechanical or chemical, although chemical decontamination appears to be more favorable in reducing radiation

Regardless of the transportation method used, applicable requirements of 10 CFR 71 and 49 CFR 170-178 will be met and the lower assemblies will ultimately be disposed of by burial in a licensed land burial site.

3.4.4 Man-Rem Assessments

If the steam generator lower assemblies are shipped by rail and/or truck, they must be cut into suitably sized sections prior to shipment. Based on the radiation survey results given in Figure 3.3-7, it is estimated that the following man-rem doses per unit will be received during the preparation and shipment of the lower assemblies for each of the given alternatives:

a.	Cutting up and packaging of the lower assemblies, assuming no decontamination and no solidification agent injection	750-1500 (man-rem)
b.	Cutting up and packaging of the lower assemblies, assuming solidification agent injection of the primary side surfaces prior to cutting	400-800 (man-rem)
c.	Cutting up and packaging of the lower assemblies, assuming decontamination of primary side surfaces prior to cutting and a DF of 10 is achieved	125-550 (man-rem)

If barge transport is employed, handling of the lower assemblies would be minimized and the resulting radiation exposure would be a small fraction of the man-rem doses associated with the alternatives given above.

It should be recognized that although the alternative which includes decontamination of the lower assemblies appears attractive from a man-rem savings standpoint, there is a significant cost penalty associated with it. Thus, the optimum cost/man-rem disposal alternative may not incorporate decontamination.

The man-rem dose associated with disposal of the steam generators is considered acceptable since a considerable man-rem savings is achieved by the repair effort (see Section 3.3.7.3).

3.4.5 Radioactive Releases and Dose Assessment

Radioactive airborne and liquid releases have been evaluated for the disposal effort using conservative, bounding parameters and assumptions. The total calculated release per unit for the disposal effort was found to be a small fraction of the 1976 radioactive releases per unit at Turkey Point and, therefore, is considered acceptable.

3.4.5.1 Airborne Releases

Radioactive airborne effluent releases to the environment resulting from the disposal effort have been estimated using the following assumptions and parameters:

a. Airborne releases are assumed to occur during the cutting operations, i.e., the cutting of the tubesheets, channel heads and tube bundles.

b. The primary side surfaces of the lower assemblies are expected to be contaminated primarily by deposited corrosion products. Typical corrosion product activities expected on the primary side surfaces after seven years of commercial operation are given in Table 5.2-1. (Seven years is based on the projected operation of Unit 3 prior to the repair effort. For Unit 4, the deposited corrosion product activity will be less since Unit 4 will have less operating time, a projection of five years.)

c. It is conservatively assumed that all the activity present in the vicinity of the cut will become airborne and be available for release to the environment.

d. Ninety days of radioisotope decay were assumed prior to cutting operations. No credit was taken for radioisotope decay during cutting operations or for usage of water sprays.

e. The lower assemblies are assumed to be cut up in a facility which will be provided with HEPA filters in the exhaust line. The HEPA filters are conservatively assumed to be 99 percent efficient for capturing particulates.

Radioactive airborne effluent release to the environment based on the above assumptions is approximately 2.91×10^{-1} Ci for Unit 3. For Unit 4, this release is approximately 82 percent of the release for Unit 3. Details of the airborne effluent release by isotopes are given in Table 3.4-1.

3.4.5.2 Environmental Consequences of Airborne Releases

The critical organ and whole body doses for an adult at the worst site boundary location resulting from the estimated airborne effluent releases during the disposal effort were evaluated in the same manner as the repair effort described in Subsection 5.2.2.2. The critical organ (lung) and the whole body doses for an adult at the site boundary are estimated to be 3.13×10^{-2} mrem and 1.01×10^{-4} mrem, respectively during the disposal effort for Unit 3. The corresponding doses for Unit 4 would be 2.33×10^{-2} mrem and 7.82×10^{-5} mrem.

3.4.5.3 Comparison with Observed Gaseous Releases and Estimated Doses During Normal Operation

The estimated releases of radioactive airborne effluents per unit during the disposal effort are found to be much smaller than the observed gaseous effluent releases per unit for the Turkey Point Plant during 1976. Observed airborne effluent releases during 1976 are compared with estimated releases during the disposal effort in Table 3.4-2.

The critical organ (thyroid) and whole body doses to an adult at the worst site boundary location due to the release of gaseous effluents for the year 1976 were calculated to be 0.07 and 0.09 mrem/unit, respectively. The

estimated critical organ dose (lung) for the disposal effort is less than 46 percent of the calculated critical organ dose during 1976. The estimated whole body dose for the repair effort is less than 0.11 percent of the calculated whole body dose during 1976.

3.4.5.4 Liquid Effluent Releases

The only liquids associated with the disposal of the lower assemblies are those associated with decontamination. If the lower assembly primary side surfaces are decontaminated prior to cutting and the liquid wastes resulting from the decontamination operation are processed through a radwaste evaporator and subsequently discharged, the total radioactive liquid effluent release would be approximately 0.38 Ci/unit or about 9 percent of the observed total radioactive liquid release per unit during 1976. (Note that other methods of decontamination waste processing may be used which may slightly alter these results. These methods include solidification of the chemical solvents, filter/demineralization of the rinses, etc.)

3.4.6 Conclusions

The steam generator lower assemblies will ultimately be disposed of in a licensed land burial site. Radiological considerations associated with each disposal alternative are acceptable. Thus, the final decision on the alternatives to be employed for handling, packaging and shipping of the lower assemblies will be based on economics.

3.5 PLANT SECURITY

Specific plans for the physical protection of the Turkey Point Nuclear Units during the steam generator repair will be addressed in a separate submittal withheld from public disclosure pursuant to paragraph 2.790 (d), 10 CFR Part 2, Rules of Practice.

3.6 QUALITY ASSURANCE

The Quality Assurance Programs for FPL, Bechtel Power Corporation and Westinghouse Electric Corporation are described in this section.

3.6.1 FPL Quality Assurance Program

The generic elements of the FPL Quality Assurance Program are described in "FPL Company Topical Quality Assurance Report," (FPLTQAR 1-76A) Revision 1, September 15, 1976. The Topical QA Report defines departmental responsibilities by which FPL implements the corporate QA Program and is an integral part of the corporate Quality Assurance Manual (FPL-NQA-100). Additionally, the FPL Topical Quality Assurance Report defines the guidance documents the QA Program follows.

3.6.2 Bechtel Power Corporation Quality Assurance Program

The quality assurance program used by Bechtel for the Turkey Point Plant Project is in accordance with "Bechtel Quality Assurance Program for

Nuclear Power Plants," Topical Report BQ-TOP-1, Revision 2A, August 15, 1977. Responsibility for the Turkey Point Plant Project has been assigned to the Gaithersburg Power Division of the Bechtel Power Corporation.

3.6.3 Westinghouse Nuclear Energy Systems Divisions Quality Assurance Plan

The quality assurance program used by Westinghouse during the design and fabrication of the steam generator lower assemblies is in accordance with "Westinghouse Nuclear Energy Systems Divisions Quality Assurance Plan," WCAP-8370, Rev. 7A, February 1975.

3.7 REGULATORY GUIDE APPLICABILITY TO REPAIR PROGRAM

Section 2.1.4 discusses Regulatory Guide compliance during manufacture of the lower assemblies. Regulatory Guide applicability to repair program activities other than manufacture and other than those addressed in the FPL and Bechtel QA programs are discussed below.

1.31 Control of Stainless Steel Welding (Rev. 1, June 1973).

Control of stainless steel welding complies with the Interim Position on Regulatory Guide 1.31 (Branch Technical Position MTEB 5-1, dated 11/24/75) except as discussed below:

1. Reference: Paragraph B.1.b of Interim Position. Austenitic stainless steel welding filler materials used in the fabrication and installation of ASME Section III, Class 1, 2 and 3 components are controlled to deposit from 8 to 25 percent delta ferrite, except for 309 and 309L welding filler materials which are controlled to deposit from 5 to 15 percent delta ferrite and are used only for welding carbon or low alloy steel to austenitic stainless steel. Use of 309L welding filler material is further limited to the overlay deposit on the carbon or low alloy steel component nozzles or connecting pipe when postweld heat treatment is required.

   These limits for delta ferrite in austenitic stainless steel welding materials comply with Interim Regulatory Guide 1.31 since the upper limit of 20 percent delta ferrite does not apply for welds that are not heat treated after welding (Paragraph 3b), except for solution heat treatment. Solution heat treatment, although not required after welding, is permitted in order to avoid sensitization.

   Determination of delta ferrite is in accordance with ASME Section III, Division 1, 1977 edition, Paragraph NB-2433, except that an undiluted weld deposit is required for each heat of bare wire used with the Gas Metal-Arc (GMA) process.

2. Reference: Paragraph B.2 of the Interim Position. This paragraph is complied with for all tests and examinations required by ASME Section III, Division 1, 1977 edition.

e. No additional protection, such as timber matting, structural bridging or added fill, is considered in the analyses for buried structures.

Results of these conservative analyses indicate that the auxiliary building roof over the spent fuel pool is the only structure that cannot withstand the impact of the freefalling crane boom. In order to preclude failure of the auxiliary building roof over the spent fuel pool several alternatives are available, viz., (i) a physical barrier can be provided to restrict the movement of the crane, (ii) physical protection of the roof can be provided, or (iii) lifting device(s) that cannot impact the roof upon failure can be utilized. Each alternative will be evaluated and the optimum alternative or combination of alternatives selected. The potential for failure of the roof will be precluded by physical, rather than administrative, construction measures.

For the following reasons, it is concluded that the effects of an incident involving a freefalling boom require no further consideration:

a. The likelihood that a crane operator orients the plane of boom motion at 90° to building structures at the same time the crane boom system fails is remote.

b. The likelihood that the crane boom will be in an initial vertical position and strike the structures at an angle of 90° at the same time the events in a. above are occurring is remote.

c. The likelihood that the crane will be situated such that impact occurs directly over buried structures at the same time the crane boom support system fails is remote.

d. Even discounting the considerations in a., b., and c., results of these analyses indicate that, with the physical barrier provided to prevent impact to the auxiliary building roof over the spent fuel pool, impacted safety-related structures will maintain structural integrity.

Postulated Steam Generator Lower Assembly Drop

Analyses were performed to determine the ability of the following safety-related buried structures to withstand the impact of a steam generator lower assembly dropped during the transfer from the service platform to a transporter (see Figure 5.2-1 for locations):

LOCATION B - Unit 4 buried ICW piping under Unit 4 equipment hatch construction area

LOCATION H - Unit 3 buried duct bank under Unit 3 equipment hatch construction area

The following assumptions were made for the purposes of these analyses:

a. The trailer transporter is not in position under the load at the time of rigging failure.

b. The 205-ton steam generator lower assembly drops 13 feet to the ground directly over the buried structure.

c. No additional protection, such as timber matting, structural bridging or added fill, is considered in the analyses.

Results of the analyses indicate that additional protection would be required for both the electrical duct banks and ICW piping. Therefore, protection will be provided over the buried structures to maintain structural integrity. This notwithstanding, the ability to accommodate failures of functions potentially impacted by steam generator drop is the same as discussed in Section 5.2.1.4 for transportation incidents.

It should be noted that the steam generator lower assembly will at all times be over either the service platform or the transporter. Therefore, in the event of a rigging failure, considerable energy will be dissipated prior to impact with the ground. Credit for this energy absorption was not assumed.

Other structures which could be impacted by a rigging incident have not been evaluated further because they do not perform safety-related functions during steam generator repair on that unit. These structures are as follows:

Containment	- During the repair, fuel is removed from the affected containment.
Condensate Storage Tank	- Since fuel cooling is accomplished entirely by the spent fuel pool cooling system, there is no need to maintain a supply of water for the auxiliary feedwater pumps.
Diesel Oil Storage Tank	- More than 8000 gallons of fuel are stored within the diesel generator building. This can provide over 75 hours of diesel generator operation and allow time to obtain additional fuel from local suppliers if the need arises.

5.2.1.3 Postulated Transportation Incidents Involving Safety-Related Plant Functions

Although the precautionary measures described previously will preclude loss of function of safety-related equipment due to postulated transportation and

rigging incidents, an evaluation was performed conservatively assuming that loss of function would occur. Locations for postulated transportation incidents are provided below (see Figure 5.2-1). The accident locations evaluated are based upon haul routes associated with barge receipt of the lower assembly at the existing slip. Actual haul routes may vary, but the conclusions resulting from the accident evaluation are not expected to be altered by a change in route. It must be noted, however, that these evaluations are provided to illustrate capability only; actual construction practice will preclude occurrence of these accidents.

LOCATION B - Unit 4 buried intake cooling water (ICW) piping under Unit 4 equipment hatch construction area

LOCATION C - Unit 4 buried ICW piping and duct bank under steam generator haul route

LOCATION D - Unit 4 buried duct bank under steam generator haul route

LOCATION E - Unit 3 buried ICW piping under steam generator haul route

LOCATION F - Unit 3 buried duct bank under steam generator haul route

LOCATION G - Unit 3 buried ICW piping under Unit 3 equipment hatch access road

LOCATION H - Unit 3 buried duct bank under Unit 3 equipment hatch construction area

Other plant equipment adjacent to the transportation haul routes was evaluated and determined to be either not required for safe shutdown or far enough from the haul route to preclude the potential for damage.

5.2.1.4 Evaluation of Postulated Transportation Incidents

The safety analysis for each location provided in this Subsection includes the analysis of the assumed loss of all safety-related functions at each location.

Unit 4 Shutdown/Under Repair - Unit 3 Operating

LOCATION B - Unit 4 Buried ICW Piping Under Unit 4 Equipment Hatch Construction Area

It was conservatively assumed that all Unit 4 ICW piping in this location was damaged, such that total cooling function to the Unit 4 component cooling water (CCW) heat exchangers was lost. Since, under these conditions, Unit 4 is shutdown, the only potential safety-related consequence is loss of cooling to the Unit 4 spent fuel pool.

Should this postulated incident occur, the Unit 3 CCW system would be aligned through presently installed permanent crossover piping to the Unit 4 CCW system thus reestablishing spent fuel pool cooling. The CCW system intertie capability has been evaluated and the CCW system of one unit is capable of removing the heat load of the operating unit and the additional heat load of the other's spent fuel pool. Availability of the crosstie is not affected by a loss of offsite power.

It has been determined that a postulated incident in this area will not impact the operating unit.

Unit 3 Shutdown/Under Repair - Unit 4 Operating

LOCATION C - Unit 4 Buried ICW piping and Duct Bank Under Steam Generator Haul Route

It was conservatively assumed that all Unit 4 ICW piping and power cable to the Unit 4 ICW pumps were damaged such that total cooling function to the Unit 4 CCW heat exchangers was lost. This would result in loss of all normal CCW functions for Unit 4.

Following reactor trip, the unit would be maintained in the hot shutdown condition with secondary heat removal via the auxiliary feedwater system. The Unit 3 and Unit 4 CCW intertie would be utilized as discussed above to reestablish component cooling to equipment as required. Under these conditions the unit can be maintained at hot shutdown condition indefinitely using the auxiliary feedwater system with condensate storage tank makeup supplied by the water treatment plant. In the event that offsite power were unavailable, the water treatment plant would be loaded on a vital bus. In addition, available inventory in the Unit 3 condensate storage tank, the Unit 3 primary water tank and the Unit 4 primary water tank can be made available for secondary heat removal.

This long term hot shutdown capability will allow sufficient time to affect necessary repairs.

LOCATION D - Unit 4 Buried Duct Bank Under Steam Generator Haul Route

It was conservatively assumed that all the Unit 4 ICW local control cables were damaged. Following this failure it is expected that the ICW pumps will continue to operate. However, in the event that a pump trips and cannot be restarted from the control room, it would be restarted at its associated 4.16 kV switchgear.

It was conservatively assumed that all power and control cables to the Unit 3 ICW pumps, spent fuel pool cooling (SFPC) pumps and CCW pumps were lost. This would result in loss of cooling of the Unit 3 spent fuel pool.

Should this postulated incident occur, the Unit 4 CCW system would be crosstied with the Unit 3 CCW system as discussed above (LOCATION B). A temporary power supply can be connected to the Unit 3 SFPC pumps to reestablish spent fuel pool cooling. It must be noted, however, that reliance on the availability of the temporary power supply is not necessary. If it were not provided, fuel pool boiling, with establishment of a makeup source to accommodate boiloff, would constitute an acceptable temporary operating mode.

This long term ability to cool the spent fuel pool will allow sufficient time to affect necessary repairs.

The potential consequences of damaging the cables to Unit 4 are discussed above (LOCATION F).

5.2.2 Radioactive Releases and Dose Assessment

Radioactive airborne and liquid releases have been evaluated for the repair effort using conservative, bounding parameters and assumptions. In order to assess the significance of these releases, they were compared with the radioactive releases at Turkey Point in the year 1976. The total calculated release per unit for the repair effort was found to be a small fraction of the 1976 radioactive releases per unit and, therefore, is considered acceptable.

5.2.2.1 Airborne Releases

Airborne effluent releases to the environment resulting from the repair effort have been estimated using the following assumptions and parameters:

a. Airborne releases are assumed to occur during the cutting operations, i.e., the cutting of the reactor coolant pipes. Cutting and removal of concrete necessary for this operation are expected to result in insignificant releases of radioactivity.

b. The repair effort is assumed to start after approximately five and seven years of commercial operation for Units 4 and 3, respectively.

c. The steam generators and the reactor coolant pipes are expected to be contaminated primarily by deposited corrosion products. Typical corrosion product activities expected on the steam generator primary side surfaces after seven years of commercial operation are given in Table 5.2-1. (Seven years is based on the projected operation of Unit 3 prior to the repair effort. For Unit 4, the deposited corrosion product activity will be less, since Unit 4 will have less operating time, a projection of five years.)

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STEAM GENERATOR REPAIR REPORT

TURKEY POINT UNITS 3 AND 4

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1

and surrounding areas with the reactor shut down, and the reactor coolant system drained. The surveys were taken one month after shutdown, which is a conservative estimate for the repair operation since most of the high radiation work will be done more than one month after reactor shutdown. Typical radiation survey results for both Units 3 and 4 are presented in Figures 3.3-1 through 3.3-7. Radiation surveys were taken with a teletector in June 1977 with the steam generators drained. These surveys were then compared with previous area surveys, taken approximately 1 month after shutdown in accordance with the FPL Health Physics Manual and FPL procedures HP-20, HP-21 and HP-22. It was determined that plant survey data is representative of conditions expected during the repair activity. This data was used for the man-rem assessment presented below. 1

The tasks involved in the removal and installation of the lower assemblies were considered in the man-rem assessments presented below, including:

a. Installation of scaffolding

b. Removal and replacement of insulation

c. Local decontamination

d. Installation of temporary supports/rigging for upper and lower assemblies

e. Preparation and cutting of steam generator transition pieces

f. Preparation and cutting of reactor coolant piping

g. Removal and storage of the steam dome assemblies

h. Sealing openings in the lower assemblies

i. Removal of portions of the steam generator shield wall adjacent to the equipment hatch

j. Removal of the lower assemblies to the temporary storage facility

k. Installation of the new steam generator lower assemblies

Based on the information presented above, it is estimated that approximately 300 to 700 man-rem per unit could be incurred during the removal of the steam generator lower assemblies and approximately 350 to 750 man-rem per unit during the installation of the new lower assemblies.

3.3.7.3 Conclusions

In addition to meeting the quarterly, annual and cumulative occupational doses specified in 10 CFR 20.101 for any individual associated with the repair, the man-rem assessments presented in Subsections 3.3.7.1 and 3.3.7.2 were evaluated in order to determine whether or not the radiation received by personnel during the repair is ALARA. Although the man-rem associated with the repair effort are greater than the man-rem associated with the 1976 tube plugging, eddy current testing and other inspection-related activities at Turkey Point, it has been determined that approximately 14,000 man-rem may be saved over the lifetime of the plants by implementing the repair on both units. Therefore, implementation of the repair effort is in accordance with Regulatory Guide 8.8 (ALARA) guidelines. [Man-rem doses associated with the optimum disposal alternative are not appreciable (see Section 3.4.4). Thus, disposal considerations do not alter this conclusion.] The primary basis of Regulatory Guide 8.8 is the conservative assumption that a non-threshold linear relationship exists between dose and biological effects, independent of the dose rate. On this basis, the projected long term man-rem savings gained from the repair effort will result in a linear reduction in any biological risk that is assumed to be proportional to the dose. 1

3.4 DISPOSITION OF STEAM GENERATOR LOWER ASSEMBLIES

The lower assemblies to be removed from Units 3 and 4 represent the single largest source of solid radioactive waste to be disposed of during the repair effort. The disposal effort is independent of the repair and is evaluated on that basis.

The primary side surfaces of the steam generators are contaminated by a tenacious film of deposited radioactive corrosion products made up primarily of iron, cobalt and manganese isotopes. Based on actual Turkey Point data provided in Section 5.2.2, it is estimated that at the time the lower assemblies are removed, each will contain approximately 1000 curies of this deposited activity.

3.4.1 Objectives of Handling/Disposal Operations

The objectives of handling/disposal operations are as follows:

a. To dispose of the lower assemblies safely and economically

b. To provide means to handle/dispose of the steam generator lower assemblies so that radiation exposures to plant and contract personnel are as low as is reasonably achievable

c. To minimize the release of radioactivity to the environment so as to keep radiation exposure to the public as low as is reasonably achievable and within the limitations of 10 CFR 20

d. To package and ship the lower assemblies to a licensed land burial site in accordance with applicable state and federal regulations, including 10 CFR 71 and 49 CFR 170-178, or to store the lower assemblies onsite for decommissioning with the plant. 1

Regardless of the transportation method used, applicable requirements of 10 CFR 71 and 49 CFR 170-178 will be met. 1

3.4.4 Man-Rem Assessments

If the steam generator lower assemblies are shipped by rail and/or truck, they must be cut into suitably sized sections prior to shipment. Based on the radiation survey results given in Figure 3.3-7, it is estimated that the following man-rem doses per unit will be received during the preparation and shipment of a unit's lower assemblies for each of the given alternatives: 1

a.	Cutting up and packaging of the lower assemblies, assuming no decontamination and no solidification agent injection	750-1500 (man-rem)
b.	Cutting up and packaging of the lower assemblies, assuming solidification agent injection of the primary side surfaces prior to cutting	400-800 (man-rem)
c.	Cutting up and packaging of the lower assemblies, assuming decontamination of primary side surfaces prior to cutting and a DF of 10 is achieved	125-550 (man-rem)
d.	Cutting up and packaging of the lower assemblies, assuming 35 years storage prior to cutting	10-20 (man-rem)
e.	Onsite surveillance and decommissioning of the steam generator lower assemblies	0.5-1.5 (man-rem)

1

If barge transport is employed, handling of the lower assemblies would be minimized and the resulting radiation exposure would be a small fraction of the man-rem doses associated with the alternatives given above.

It should be recognized that although the alternative which includes decontamination of the lower assemblies appears attractive from a man-rem savings standpoint, there is a significant cost penalty associated with it. Thus, the optimum cost/man-rem disposal alternative may not incorporate decontamination.

The man-rem dose associated with disposal of the steam generators is considered acceptable since a considerable man-rem savings is achieved by the repair effort (see Section 3.3.7.3).

3.4.5 Radioactive Releases and Dose Assessment Associated With Offsite Disposal 1

Radioactive airborne and liquid releases have been evaluated for the disposal effort using conservative, bounding parameters and assumptions. The total calculated release per unit for the disposal effort was found to be a small fraction of the 1976 radioactive releases per unit at Turkey Point and, therefore, is considered acceptable.

3.4.5.1 Airborne Releases

Radioactive airborne effluent releases to the environment resulting from the disposal effort have been estimated using the following assumptions and parameters:

a. Airborne releases are assumed to occur during the cutting operations, i.e., the cutting of the tubesheets, channel heads and tube bundles.

3.4.8 Conclusions

The steam generator lower assemblies will ultimately be disposed of in a licensed land burial site or decommissioned with the plant. Radiological considerations associated with each disposal alternative are acceptable. Thus, the final decision on the alternatives to be employed for storage, handling, packaging and shipping of the lower assemblies will be based on economics. 1

3.4.9 References

1. "Decontamination of a PWR Primary System, SENA Plant," Volume 33, Proceedings of the American Power Conference, 1971.

3.5 PLANT SECURITY

Specific plans for the physical protection of the Turkey Point Nuclear Units during the steam generator repair will be addressed as required, in a separate submittal withheld from public disclosure pursuant to paragraph 2.790(d), 10 CFR Part 2, Rules of Practice. 1

3.6 QUALITY ASSURANCE

The Quality Assurance Programs for FPL, Bechtel Power Corporation, and Westinghouse Electric Corporation are described in this section.

3.6.1 FPL Quality Assurance Program

The FPL Quality Assurance Program is described in "FPL Company Topical Quality Assurance Report," (FPLTQAR 1-76A), Revision 1, September 15, 1976. The Topical Quality Assurance Report is an integral part of the corporate Quality Assurance Manual (FPL-NQA-100).

The following amplifications of FPLTQAR 1-76A are applicable for the Turkey Point Project.

FPL currently contemplates assuming responsibility for conducting the following on-site construction activities: 1

a. Field Procurement Functions

b. Field Quality Control Functions

c. Field Test Control Program

d. Field Special Processes

e. Field Quality Assurance Functions

7.0 EVALUATION OF ALTERNATIVES

7.1 INTRODUCTION

Repair, the replacement of the steam generator lower assemblies with new shop-fabricated lower assemblies, has been selected as the optimum solution at hand to correct denting. The discussion that follows demonstrates this. It also vividly indicates that the cost associated with the outage is the overriding consideration that governs any cost benefit evaluation.

The discussion that follows is based on the current state-of-the-art. It assumes that either one or both nuclear units must be shut down or that corrective action is required to ensure an acceptable level of system reliability. It must be noted that the technology as it relates to steam generator corrosion, electrical system requirements and economics are dynamic factors that directly impact the analyses provided below. At the shutdown of Unit 3 and/or Unit 4, evaluations will be updated as required to ensure that FPL embarks on the optimum approach to accommodate outage of the unit(s).

Loss of capacity from one or both Turkey Point units would require the addition of replacement capacity from new generating facilities and/or the purchase of firm power. The cost of new facilities can be compared with the cost of repair. However, the availability of firm power for purchase must be periodically re-evaluated to reflect current conditions.

Derating of one or both Turkey Point units is an alternative to the repair that cannot be addressed quantitatively at this time. Parametric studies can be performed assuming various derating conditions to determine the economics of repair versus derating. However, at this time corrosion rates and the likelihood of achieving a corrosion plateau cannot be quantified with precision. Accordingly, economic evaluations of derating do not presently provide a sufficiently reliable prediction of real world events. Should the evolving technology yield suitable corrosion models, further evaluation of derating would be warranted. 1

Potentially, there are several alternatives to the repair that could accommodate denting, viz., (1) arresting the corrosion phenomenon, (2) in-place restoration of dented tube areas (sleeving), and (3) in-place steam generator refurbishment (retubing). As discussed infra, the ability to sleeve is moot unless tube support plate (TSP) corrosion can be arrested. The ability to arrest TSP corrosion to ensure long term (30 to 40 year) operation without repair is not at hand.

In addition there are several potential means to accomplish the repair activity, viz:, steam generator removal from and entry to containment via (1) the equipment hatch, or (2) the containment wall, or (3) the containment dome.

The viability of each alternative to repair must be determined primarily by its present state of development. Alternatives that require research and development (R&D) to demonstrate feasibility are incompatible with the earliest potential shutdown date for initiation of repair activities, which is October-December 1978.

7.4 IN-PLACE STEAM GENERATOR REFURBISHMENT

In principle, the methodology exists to refurbish the steam generators in-place. Although much of the technology exists, a comprehensive program of development and testing would be required to provide a basis for cost, time and personnel exposure comparisons.

To refurbish a steam generator, the upper or dome portion of the steam generator would be removed; the lower assembly internals and tubes would be removed and replaced with state-of-the-art internals and tubes; then the dome would be welded back in place. The in-place refurbished steam generator would be equivalent to the new shop-fabricated lower assemblies utilized in the repair effort.

Since both in-place refurbishment and repair result in equivalent steam generators, the viability of refurbishment must be based on economics, the availability of required tooling, and man-rem considerations. Refurbishment requires an R&D effort to develop (1) tools for retubing activities with a high enough production rate to reduce the unit outage to an economically acceptable level and (2) means to reduce personnel exposure to tolerable levels. This R&D effort is not compatible with the earliest potential outage date.

A comparative evaluation has been conducted to determine whether or not retubing could reduce the unit outage time to a point where it would be desirable to pursue the requisite R&D activities. This evaluation was based on the current state-of-the-art and assumed production rates for retubing activities believed to be achievable via a relatively short term R&D effort. The outage for refurbishment was estimated to be longer than the time required for replacement. 1

In-place refurbishment would require work within the steam generators to remove and replace tubing, etc. Shielding techniques and/or decontamination would be required to reduce radiation exposure to personnel. An R&D effort would be required to develop the means to reduce radiation fields to levels compatible with project man-loading requirements. Even if exposure mitigating techniques are successfully developed, man-rem exposures associated with refurbishment are expected to exceed those associated with repair.

In summary, retubing does not currently offer an economic alternative to repair. If tooling that could appreciably reduce unit outage time were to become available, further consideration of this alternative would be warranted for efforts initiated sufficiently beyond the current October-December 1978 earliest potential start date to allow for completion of requisite R&D activities.

7.5 ALTERNATIVE REPAIR METHODS

Removal of the steam generators from containment and entry of the shop-fabricated units into containment can be accomplished in one of three ways, viz.,

Scheme I

In this scheme, the steam generator lower assemblies would be removed and replaced through the existing equipment hatch. The upper assemblies (steam dome) remain inside the containment. Following installation of the new lower assemblies, the original upper assemblies will be welded to the new lower assemblies to complete the repair.

Scheme II

In this scheme, entire steam generators would be removed and replaced through a construction opening in the containment wall located above the equipment hatch, between elevations +58' and +98'. The opening would be about 20 feet wide and 40 feet high.

Scheme III

In this scheme, entire steam generators would be removed and replaced through a construction opening in the containment dome. The opening would be located above the steam generator closest to the equipment hatch. The opening would be about 20 feet in diameter.

Scheme III requires the use of an elevated rolling gantry on top of the containment. The gantry would move on two track beams (50 tons each). Depending on the orientation of the rolling gantry, a postulated, though unlikely, collapse of the gantry and/or its rigging could impact safety-related plant functions. Thus, this scheme should appropriately be eliminated based on nuclear safety considerations. Schemes I and II do not result in any potentially unacceptable construction-related nuclear safety considerations. 1

Cost for repairing units 3 and 4, as well as a single unit's outage time (from shutdown to commencement of power operation) are as follows:

Alternative	Cost (10^6)	Outage Duration (days)
Scheme I	102	207
Scheme II	116	340
Scheme III	107	300

Replacement power costs during the repair based on fuel cost differential are expected to be about $300,000/day/unit. The precise figure is not critical since it is obvious that a significant cost penalty is associated with each day of outage.

Based on the above, it is clear that Scheme I is the obvious repair alternative. Since there are no nuclear safety issues associated with Scheme I and other non-economic considerations, i.e., man-rem exposures are comparable for Schemes II and III, the unit down-time cost consideration dramatically favors this alternative.

FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT UNITS 3 AND 4
EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101
April 13, 1993

1.0 Title:

DUTIES OF EMERGENCY COORDINATOR

2.0 Approval and List of Effective Pages:

2.1 Approval:

Change dated: 4/13/93 Reviewed by Plant Nuclear Safety Committee: 93-062

and Approved by Plant General Manager 4/13/93

Period Review Due: 3/31/95 Implementation Date: 5/17/93

2.2 List of Effective Pages:

Page	Date	Page	Date	Page	Date	Page	Date
1	04/13/93	26	04/13/93	51	04/13/93	76	04/13/93
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10	04/13/93	35	04/13/93	60	04/13/93	85	04/13/93
11	04/13/93	36	04/13/93	61	04/13/93	86	04/13/93
12	04/13/93	37	04/13/93	62	04/13/93	87	04/13/93
13	04/13/93	38	04/13/93	63	04/13/93	88	04/13/93
14	04/13/93	39	04/13/93	64	04/13/93	89	04/13/93
15	04/13/93	40	04/13/93	65	04/13/93	90	04/13/93
16	04/13/93	41	04/13/93	66	04/13/93	91	04/13/93
17	04/13/93	42	04/13/93	67	04/13/93	92	04/13/93
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20	04/13/93	45	04/13/93	70	04/13/93	95	04/13/93
21	04/13/93	46	04/13/93	71	04/13/93	96	04/13/93
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This procedure may be affected by an OTSC. (On The Spot Change) verify information prior to use
Date verified _____ *Initials* _____

Superseded pages per SPOT 93077-0047 5/21/93

RTSs 86-1584, 87-0332,87-1665, 87-2051, 88-0761, 89-0622, 89-1733, 89-1793, 89-3433
RTSs 90-0402, 90-2294, 90-2941, 90-2952, 91-0483, 91-1226, 91-2427, 91-2117, 92-0109
RTSs 91-3106, 93-0501
OTSC 4660

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3.0 Scope:

3.1 Purpose:

3.1.1 This procedure provides the guidelines to be followed by the Emergency Coordinator when an emergency occurs that requires initiation of the Emergency Plans.

3.2 Discussion:

3.2.1 This procedure provides guidance for actions that the Emergency Coordinator will take in a plant emergency.

3.2.2 For planned evolutions such as safeguards, this procedure does not apply. However, if a deviation from the planned evolution (i.e., any unplanned evolution) occurs, this procedure should be consulted.

3.2.3 The Nuclear Plant Supervisor becomes the Emergency Coordinator upon declaration of an emergency and, as such, directs the On Site Emergency Organization actions to bring the emergency under control. A member of the plant management staff may later assume the role of Emergency Coordinator when he/she reaches the Control Room or TSC and becomes familiar with the emergency. The Nuclear Plant Supervisor will then concentrate on control of the units.

3.2.4 During an emergency of Alert or higher, the Emergency Coordinator should confer with the TSC Security Supervisor concerning the impact of the emergency on plant security. During an emergency of Site Area Emergency or higher, and dependent on the degree of airborne release, the TSC Security Supervisor may recommend a complete or partial suspension of safeguards which may include (but is not limited to) any of the following:

NOTE: Vital area doors unlocked by the computer will relock automatically after they are closed.

1. Unlocking vital area doors through the security computer.
2. Suspension of designated security patrols or activities.
3. Maintenance of Protected Area access control only (suspension of all field patrols).
4. A partial evacuation of on-duty Security personnel.
5. Closing one or both Alarm/Communications Stations (CAS/SAS).
6. Complete suspension of site security safeguards.

3.2.5 The titles Nuclear Energy Duty Officer, and Nuclear Division Duty Officer are used interchangeably.

3.2.6 Classifying Simultaneous Emergencies: Emergency classifications based on simultaneously occurring events affecting each unit independently (e.g., LOCA on Unit 3 and Tube Rupture on Unit 4) shall be made based on the most severe event, and reported as the classification for the site. With multiple events occurring, only one emergency classification shall be made.

One of the primary reasons for the declaration and notification process is to prompt local, state, and federal government agencies to initiate actions to assure the health and safety of the public. The government agency response is based on an event affecting either unit at a multiple unit site, such as PTN. Therefore, the government agency's actions will address the most severe classification issued by the site, and having multiple classifications would only confuse the response. Examples regarding this issue are provided below.

1. If Unit 3 is in a classified event (an Alert for example), and another event of the same of lesser classification (e.g., an Unusual Event or Alert) occurs on Unit 3 or Unit 4, then a new event classification should NOT be made, and the event notification should be issued as an update at the earliest practical time. No regulatory time limits apply to this update.

2. If Unit 3 is in a classified event (an Alert for example), and another event of higher classification (Site Area or General Emergency) occurs on either Unit 3 or Unit 4, then the new classification should be promptly issued to the State and NRC within the regulatory time requirements.

3. The State of Florida Notification Message Form should indicate the unit for which the event is declared. If the event is common to both units, Unit 3 should be marked as the affected unit.

3.3 Authority:

3.3.1 Turkey Point Plant Radiological Emergency Plan

3.4 Definitions - for Emergency Action Level Classification and Radiological Emergency Planning, the following definitions apply:

3.4.1 Hot Ring Down Telephone (HRD) - the dedicated link between State/Local agencies and Turkey Point.

3.4.2 Emergency Notification System (ENS) - the circuit tying the NRC and Turkey Point.

3.4.3 Local Government Radio (LGR) - the communications network used as a backup to the HRD.

3.4.4 State of Florida Notification Message Form - the form used to initiate, update, and terminate emergency notifications to State/Local agencies.

3.4.5 National Warning System (NAWAS) - the communications network used as a backup when the HRD, and commercial phones are not available.

3.4.6 Power Block - structures comprising all permanent nuclear, power generation, and cooling structures, systems, and components within the Protected Area; and permanent Safety Related or Quality Related utilities (e.g. air, water, and and electric) both inside and outside the Protected Area.

3.4.7 Emergency - Any off-normal event or condition which is classified into one of the four event categories in Table 1 of this procedure.

3.4.8 Onsite - within the Protected Area.

3.4.9 Offsite Power - power supplied from the grid through the Startup or Auxiliary Transformers (backfeed), or power supplied by the Auxiliary Transformer during normal operation.

3.4.10 Unrestricted Area - as defined in Technical Specifications.

3.4.11 Onsite Power - Power supplied by any of the four emergency diesel generators.

3.4.12 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.

3.4.13 Release - During any declared emergency any effluent monitor increase of approximately 10 times/one decade above pre-transient values, or Health Physics detected airborne radioactivity levels in excess of 25 percent MPC outside of plant buildings due to failure of equipment directly associated with the declared plant emergency.

3.4.14 Site Boundary - land areas within a one mile radius of the affected unit.

3.4.15 Emergency Response Directory (ERD) - the directory containing names and phone numbers of Emergency Response Organization personnel.

4.0 Precautions:

4.1 The Emergency Coordinator (EC) can delegate his responsibilities to his subordinates with the exception of classification, the decision to notify state and local authorities and the issuing of Protective Action Recommendations. The actual notification can be done by the ECs designee. Notification to offsite agencies and PARs become the responsibility of the Recovery Manager when the EOF is manned and operational. The EC documents his decision to notify state and local authorities and his concurrence with PARs by initialing the State of Florida Notification Message Form.

4.2 During exercises, drills or tests, ALL MESSAGES shall begin and end with "THIS IS A DRILL".

4.3 In any case where a GENERAL EMERGENCY has been declared, the minimum protective action recommendation shall be: "Shelter all people within a 2 mile radius from the plant and 5 miles in the downwind sectors" (except as delineated in Section 4.4).

4.4 If the GENERAL EMERGENCY has been declared due to loss of physical control of the plant to intruders, including the Control Room or any other area(s) vital to the operation of the reactor system (as defined in the Security Plan), the minimum Protective Action Recommendation (PAR) shall be: "Evacuate all people within a 2 mile radius from the plant", and determine 2-5 and 5-10 mile PARs on other existing General Emergency Conditions (there may be no 2-5 and 5-10 mile PARs based on conditions).

4.5 Plant conditions, plume dose projection calculations, (from EPIP-20126, Offsite Dose Calculations), and offsite monitoring results should be evaluated when making Protective Action Recommendations. If significant discrepancies exist between field monitoring results and plume dose projection calculations, an evaluation should be made, and the most conservative approach used in the determination of Protective Action Recommendations.

4.6 Protective Action Recommendations for a child (most conservative considerations) have been incorporated into Table 2, "Protective Action Recommendations Based on Plant Conditions and Offsite Dose Estimates."

4.7 If a condition which meets the Unusual Event or Alert criteria of the Emergency Classification Tables is identified and subsequently rapidly resolved, the emergency classification shall be declared and immediately terminated. All required notifications shall be completed. Activation of the Onsite Emergency Response Facilities is not required.

4.8 If a condition which meets the Site Area Emergency or General Emergency criteria of the Emergency Classification Tables is identified and subsequently rapidly resolved, the emergency shall be declared and all notifications completed. De-escalation from the Site Area Emergency and General Emergency classifications may only be authorized by the Emergency Control Officer.

4.9 Protective Action Recommendations based upon offsite dose calculations shall be determined by comparing projected offsite doses to the action levels in Table 2. If the period of exposure is expected to be less than two hours the doses should be projected for the expected duration of the exposure. For longer duration exposures, the offsite doses should be projected for two hours and PARs should be based upon the two hour projections. Protective Actions for the child are incorporated into PARs listed in this procedure.

4.10 The Emergency Coordinator responsibilities shall reside with the E.C. in the Control Room until they have been formally transferred to the E.C. in the TSC.

4.11 Emergency notification to State/Local agencies is required within 15 minutes of declaring an emergency.

4.12 Emergency notification to the NRC is required immediately following notification of State/Local agencies, but not later than 1 hour from the declaration of an emergency.

4.13 If, during the notification process, it becomes necessary to upgrade the emergency classification, stop the current notification process, and proceed to make notification of the new classification.

4.14 Plant Page Announcements

4.14.1 PA messages to site personnel do not have to be made verbatim; they are "example" messages only.

4.14.2 Announcements may NOT be made or may be modified as directed by the Emergency Coordinator, or his designee, if it is determined that such announcements may cause intruders to panic or make them aware of plant/security personnel responses in regard to security related events.

4.14.3 Important plant page announcements (such as changes in classification or plant status) should be made firmly, clearly, and distinctly so that the message can be heard throughout the plant.

4.15 The Emergency Coordinator has the authority to waive individuals emergency response training requirements, as needed.

4.16 Procedural notification steps may be performed out of sequence in order to meet State of Florida and/or NRC notification time requirements.

4.17 Alternate commercial telephone numbers for State of Florida and NRC notification are listed in the Emergency Response Directory (ERD).

4.18 Collection of Release Rate Data shall not delay State of Florida and NRC notifications. If the data is not available, notification shall be made and followed up as soon as the information is available.

4.19 Evacuations and Emergency Response Facility (ERF) Activation

4.19.1 The Emergency Coordinator shall consider plant and radiological conditions as they relate to the emergency prior to ordering an evacuation or activation of ERF. As conditions warrant, the Emergency Coordinator may delay, postpone or make special requirements on the evacuation and/or ERF activation. Some examples of special circumstances are as follows:

1. Radiological conditions (puff releases) when large doses may be received during an evacuation.

2. Security events when unknown hazards or dangers (i.e., armed intruders, bomb threats, etc.) are perceived.

3. Plant conditions where additional personnel are necessary to put the plant in a safer configuration (i.e., equipment hatch open, primary system open for repair, etc.)

4. Onsite hazards such as toxic gas, fires, or explosions where the movement of personnel would be placing them in additional risk.

5. Risks to plant personnel due to the inability to use the evacuation route (construction, traffic accidents, etc.).

6. Other similar events.

4.19.2 The Emergency Coordinator should consider the emergency event prior to determining if special instructions for evacuation and/or ERF activation should be given.

1. If the emergency involves a radiological release or potential release, special instructions should consider:

   a. duration of the release,

   b. plant conditions,

   c. meteorological conditions,

   d. evacuation route availability, and

   e. other information pertinent to the release.

2. If the emergency involves a security event which may threaten plant/emergency response personnel, special instructions should consider:

   a. location of intruders,

   b. bomb threat location, and

   c. other information pertinent to the security threat.

3. If the emergency involves both radiological and security events, a combination of the above considerations should be used when developing special instructions.

4. Special instructions regarding evacuation and/or ERF activation should consider:

   a. retention of additional essential repair personnel,

   b. alternate evacuation/ERF activation routes/facilities,

   c. in-place/onsite sheltering of non-essential personnel, and

   d. use of security force personnel in directing evacuees/emergency response personnel to the appropriate routes and locations.

5.0 Responsibilities:

5.1 The Nuclear Plant Supervisor (NPS) assumes the responsibilities of the Emergency Coordinator in the initial phases of a plant emergency. If the Nuclear Plant Supervisor (NPS) is incapacitated, the Emergency Coordinator shall be (in order of succession):

5.1.1 Assistant Nuclear Plant Supervisor

5.1.2 Nuclear Watch Engineer

5.1.3 Any other member of the plant staff with an active Senior Reactor Operator license.

5.1.4 One of the Reactor Control Operators on shift.

5.2 A member of the Plant Management staff may later assume Emergency Coordinator (EC) duties when he/she reaches the Control Room or TSC and becomes familiar with the emergency. The NPS will at that time return to the normal responsibility of control of the units. Turnover between ECs should be performed in the Control Room if possible, with the new EC taking the Emergency Log Book to continue records of the event.

5.3 The Emergency Coordinator shall only grant permission for watch relief, including his own, when a proper turnover has been given and in his judgment, it is safe to do so.

5.4 The Emergency Coordinator shall authorize any radiation exposures in excess of regulatory limits. This authorization should be in accordance with EPIP-20111, Reentry. Authorization should be given only after consultation with the TSC Health Physics Supervisor and the Recovery Manager, if time permits. Previous written authorization is not required for rescue of personnel.

5.5 The Emergency Coordinator shall authorize personnel exposures in excess of regulatory limits only for volunteers who are familiar with the risks involved and the tasks to be performed. Women capable of reproduction shall not take part in these actions.

6.0 References:

6.1 O-ADM-048, Work Controls During Power Operations

6.2 O-ONOP-016.10, Pre-Fire Plan Guidelines and Safety Shutdown Manual Actions

6.3 AP-0103.12, Notification of Events to the NRC

6.4 AP-0103.43, Duty Call Responsibilities

6.5 EPIP-20104, Notification/Staff Augmentation

6.6 EPIP-20106, Natural Emergencies

6.7 EPIP-20107, Fire/Explosion Emergencies

6.8 EPIP-20110, Criteria for and Conduct of Owner Controlled Area Evacuation

6.9 EPIP-20111, Reentry

6.10 EPIP-20126, Offsite Dose Calculations

6.11 EPIP-20131, Transfer of Contaminated Injured Personnel Offsite

6.12 Turkey Point Plant Radiological Emergency Plan

6.13 Emergency Response Directory

6.14 10 CFR 50.47, Emergency Plans

6.15 10 CFR 50, App. E, Emergency Planning and Preparedness for Production and Utilization Facilities

6.16 NUREG-0654

6.17 Security Force Instruction 6307, Emergency Evacuation

7.0 Records and Notifications:

7.1 The following documents are generated as a result of this procedure:

7.1.1 Completed checklists and worksheets on forms similar to the forms in this procedure from this procedure utilized by the Emergency Coordinator during the implementation of the Emergency Plan.

7.1.2 The Emergency Log Book

7.2 Copies of the records of 7.1.1 and 7.1.2 shall be transmitted to the Emergency Preparedness Supervisor. Originals shall be submitted as QA records to be retained in accordance with Quality Assurance Program requirements.

8.0 Instructions:

8.1 Fire/explosion emergency? Yes/No

8.1.1 If NO, proceed to Step 8.2.

Time

_____ 8.1.2 Fire/explosion reported

Location _____

Class (if known) A / B / C / D (see note below)

Injured personnel should be handled in accordance with Section 8.2.

Extent of damage to plant components _____

_____

NOTE: Fire Classes:
A - wood, paper, cloth, rubber
B - combustible liquids, gases, greases
C - electrical related (involving energized equipment)
D - combustible metals

_____ 8.1.3 Cross connect page and make the following announcement:

"Attention all personnel. There is a reported class (if known) ___ fire/explosion in Unit (3 or 4) _____ (location) ___ _____.All personnel in the fire/explosion location withdraw to a safe area. All Fire Brigade members report to (location of fire/explosion) _____."

_____ 8.1.4 Sound fire alarm.

Time

_____ 8.1.5 Follow alarm with page announcement:

"Attention all personnel. There is a reported class (if known) _____ fire/explosion in Unit (3 or 4) _____ (location) _____. All personnel in the fire/explosion location withdraw to a safe area. All Fire Brigade members report to (location of fire/explosion) _____."

CAUTIONS:

- Alarming dosimetry is available for Fire Brigade members to monitor direct radiological exposure. The air sampler located in the Fire Locker in the Auxiliary Building hallway is also available to assess airborne activity.
- It may be necessary to relieve the Health Physics Fire Team members with other qualified Fire Brigade members in order to ensure additional Health Physics support.

_____ 8.1.6 Reference O-ONOP-016.10, Pre-Fire Plans Guidelines and Safe Shutdown Manual Actions, as time permits and as necessary to aid Fire Brigade with area characteristics and aid Operations with safe shutdown actions.

_____ 8.1.7 Verify accountability with Security, if applicable. Direct Fire Brigade Leader to search for missing, if necessary.

CAUTION: Due to minimal Contract Medical Response Staff of one (1) individual on back shifts and weekends, manpower requirements should be monitored by the Control Room.

_____ 8.1.8 Verify Contract Medical personnel dispatched to the vicinity of the fire scene.

_____ 8.1.9 Contact additional fire support if needed. See phone numbers listed in the Emergency Response Directory.

_____ 8.1.10 Inform Security of the pending arrival of offsite assistance if requested.

_____ 8.1.11 Classify fire/explosion per Table 1, and perform Section 8.2 if injuries occur or have occurred.

DUTIES OF EMERGENCY COORDINATOR

Time

8.2 Medical Emergency? Yes/No

8.2.1 If NO, proceed to Step 8.3.

_____ 8.2.2 Medical Emergency reported

Name of victim _____
Employer _____
Location of victim _____
Nature/extent of injuries _____
Fractures? _____
Burns? _____
Hemorrhages? _____
Is victim potentially contaminated? _____

_____ 8.2.3 Activate First Aid Team by contacting Chemistry personnel and Contract Medical Response Personnel. Provide Operations Department assistance as needed.

1. Cross connect page and make the following announcement twice:

   "Attention all personnel. There is a reported medical emergency in Unit (3 or 4) _____ (location) _____. All personnel in the immediate area stand clear. All First Aid Team members report to (location) _____."

2. Contact Security for contract medical assistance entry to the Protected Area.

_____ 8.2.4 Notify Health Physics if injury is inside the RCA.

1. If the injured is also contaminated or potentially contaminated, ensure EPIP-20131, Transfer of Contaminated Injured Personnel Offsite is performed.

_____ 8.2.5 Request offsite medical assistance if needed. See phone numbers listed in the Emergency Response Directory.

NOTE: Randal Eastern Ambulance Service will be requested by Metro Dade Fire/Rescue dispatchers, if necessary.

1. Dade Co. Fire/Rescue

2. U.S. Coast Guard

_____ 8.2.6 Inform Security of the pending arrival of offsite assistance.

_____ 8.2.7 Transport victim to hospital if necessary.

Time

8.2.8 If POTENTIALLY CONTAMINATED, notify receiving hospital. See phone numbers listed in the Emergency Response Directory.

_____ 1. Notify Baptist Hospital
or
_____ 2. Notify Mercy Hospital
or

CAUTION: REAC/TS should only be utilized if Baptist Hospital and/or Mercy Hospital requires additional assistance or cannot support the treatment of the patient. The patient should be stabilized by Baptist or Mercy and arrangements should be made with REAC/TS prior to transport.

_____ 3. Notify REAC/TS, Oak Ridge, TN for additional assistance, if necessary, or if Baptist Hospital and/or Mercy Hospital cannot support injury.

8.2.9 Relay information above of potentially contaminated injury (Step 8.2.2) to hospital notified in 8.2.7 and report:

Contamination Levels and Body areas affected _____
_____
Radioisotopes involved _____
Type of transport vehicle _____
Departure time from plant _____

8.2.10 IF NOT CONTAMINATED:

_____ Notify receiving hospital. See phone numbers listed in the Emergency Response Directory.

1. South Miami Homestead Hospital
2. Deering Hospital
3. Jackson Memorial Hospital

and report:

Injury information in Step 8.2.2 and:
Type of transport vehicle _____
Departure time from plant _____

_____ 8.2.11 If contaminated and transported offsite, classify Medical Emergency per Table 1.

8.2.12 Obtain status of victim after transport, as required.

Time

8.3 Mitigating Actions and Classification of Off-Normal Event

_____ 8.3.1 Direct initial investigative and mitigating actions to correct Off-Normal event.

NOTE: Prescribed emergency announcements may be omitted or modified as directed by the Emergency Coordinator, or his designee, to prevent alarming intruders if security events warrant.

_____ 8.3.2 Direct Chemistry Personnel to implement EPIP-20126, Offsite Dose Calculations if a Release (see definitions) is in progress.

NOTES:
- For planned evolutions such as safeguards testing, this procedure does not apply with regard to the actuation of safeguards equipment. However, if a deviation from the planned evolution occurs, this procedure should be consulted for event classification.
- If simultaneous emergencies occur at the site, the Emergency Classification shall be made based on the most severe condition at the site. Refer to the Discussion, Section 3.0 for further guidance regarding classification of simultaneous emergencies.
- If conditions meeting the Emergency Classification criteria are known to have existed but have been terminated, proceed with required classification and notification activities. An Unusual Event or Alert may be terminated by the Emergency Coordinator. A Site Area Emergency or General Emergency may only be de-escalated by the Emergency Control Officer. Activation of the Onsite Emergency Response Facilities is not required for events that have been terminated by the responsible official.
- If the event does not qualify as an Emergency per Table 1, proceed to AP-0103.12 "Notification to NRC of Significant Events" Appendix A and Appendix C for further classification of event.

_____ 8.3.3 Classify Off-Normal event using present available information. Declare most conservative emergency class using Table 1 and proceed to step number and page listed on bottom of Table 1.

TABLE 1

EMERGENCY CLASSIFICATION TABLE

1. Primary Depressurization - ECCS Initiated Manually or Automatically			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Safety Injection initiated AND High-head SI pump flow to the core			
Possible Control Room Indicators			
FI-943			

ACTION

Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

TABLE 1

EMERGENCY CLASSIFICATION TABLE

2. Primary Leakage/LOCA

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Plant in Mode 1-2-3-4 AND Either A or B: A. RCS Leakage in excess of Technical Specifications 3.4.6.2, Reactor Coolant System Operational Leakage as indicated by either: 1) Unidentified RCS Leakage >1 gpm, OR 2) Identified RCS Leakage greater than ten (10) gpm, or 3) RCS Pressure Isolation Valve Leakage greater than allowable, or 4) Any Pressure Boundary Leakage --- B. Failure of any primary system safety or relief valve to close resulting in an uncontrolled RCS depressurization.	Plant in Mode 1-2-3-4 AND RCS leakage >50 gpm AND RCS leakage within available charging pump capacity CAUTION: This section should not be used for events involving a steam generator tube leak/rupture or faulted/ruptured steam generator	Plant in Mode 1-2-3-4 AND RCS leakage > 50gpm AND RCS leakage greater than available charging pump capacity CAUTION: This section should not be used for events involving a steam generator tube leak/rupture or faulted/ruptured steam generator.	Either A or B: --- A. RCS leakage > 50gpm AND RCS leakage greater than available charging pump capacity AND Containment pressure > 20 psig CAUTION: This section should not be used for events involving a steam generator tube leak/rupture or faulted/ ruptured steam generator --- B. Plant in Mode 1, 2, 3, 4, AND RCS leakage > 50 gpm AND RCS leakage greater than available charging pump capacity AND Loss of containment integrity which provides a flowpath to the environment. CAUTION: This section should not be used for events involving a steam generator tube leak/rupture or faulted/ ruptured steam generator --- CAUTION: Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
TI-465, 467, 469 TEC Flow Indicators	Charging/Letdown Flow Mismatch	RCS pressure Containment Pressure ARM's Charging/Letdown Flow Mismatch	RCS pressure Containment Pressure PRMS R-14
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

TABLE 1

EMERGENCY CLASSIFICATION TABLE

3. Steam Generator Tube Leak/Rupture

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Either A or B: A. Greater than 500 gpd steam generator tube leakage to any one steam generator per Technical Specification 3.4.6.2, Reactor Coolant System --- B. Greater than 1 gpm total steam generator tube leakage per Technical Specification 3.4.6.2, Reactor Coolant System	Either A or B: A. Confirmed steam generator tube leakage >50 gpm AND Steam generator tube leakage within available charging pump capacity AND Loss of offsite power --- B. Steam generator tube leakage greater than available charging pump capacity.	Steam generator tube leakage greater than available charging pump capacity AND Loss of offsite power CAUTION: Consult Table 2, Page 36 for possible protective action recommendations	
Possible Control Room Indicators			
PRMS R-15 PRMS R-19	PRMS R-15 PRMS R-19 Charging/Letdown Flow Mismatch	PRMS R-15 PRMS R-19 Charging/Letdown Flow Mismatch	
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

TABLE 1

EMERGENCY CLASSIFICATION TABLE

4. Loss of Secondary Coolant			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Either A or B: A. Steamline or feedline break which results in Safety Injection actuation. --- B. Failure of a steam generator safety or steam dump to atmosphere valve to close resulting in uncontrolled secondary depressurization.	Steamline or feedline break which results in Safety Injection actuation AND Evidence of significant (>10 gpm) steam generator tube leakage in the affected steam generator.	Steamline or feedline break which results in Safety Injection actuation AND Confirmed RCS DEQ I-131 activity ≥ 300 µCi/gm AND Confirmed steam generator tube leakage >50 gpm in the affected steam generator **CAUTION:** Consult Table 2, Page 36 for possible protective action recommendations	
Possible Control Room Indicators			
	PRMS R-15 PRMS R-19 Charging/Letdown Flow Mismatch	PRMS R-15 PRMS R-19 Charging/Letdown Flow Mismatch	
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

TABLE 1

EMERGENCY CLASSIFICATION TABLE

5. Abnormal RCS Temperature and/or Pressure			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Plant in Mode 1 - 2 - 3 - 4: AND Either A, B, or C A. RCS saturated or superheated B. RCS pressure >2510 psig C. RCS pressure and /or temperature above Technical Specification 3.4.9, Pressure/ Temperature Limits			
Possible Control Room Indicators			
Subcooling Margin Monitor			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

6. Fuel Handling Accident

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
	A spent fuel element has been dropped or damaged AND Release of radioactivity from the damaged spent fuel element has been detected.	Either A, B or C: A. Major damage to one or more spent fuel elements has occurred AND Affected area radiation monitors are $>10^3$ mR/hr. --- B. Major damage to one or more spent fuel elements has occurred AND Containment radiation levels >1.3 E4 Rem/hr --- C. Major damage to one or more spent fuel elements due to water level being below top of spent fuel.	
Possible Control Room Indicators			
	ARMS R-2, 5, 7, 8, 19, 21, 22 PRMS R-12, 14	ARMS R-2, 5, 7, 8, 19, 21, 22 PRMS R-12, 14 SFP Level Indication RI-6311A RI-6311B	
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

7. Loss of Safe Shutdown Functions/ATWS

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
	Either A, B, C or D: A. Reactor critical AND Failure of the Reactor Protection System to initiate a trip signal when a trip setpoint has been exceeded. B. Reactor critical AND Reactor fails to trip on automatic signal C. Reactor critical AND Reactor fails to trip on manual signal D. RCS temperature increasing due to loss of decay heat removal capability from all of the following: 1) RHR system AND 2) Forced RCS circulation AND 3) Natural RCS circulation	Either A, B, C or D: A. Inability to bring the reactor subcritical with control rods B. Plant in Mode 1-2-3 AND Loss of steam release capability from all of the following: 1) Condenser steam dumps AND 2) Atmospheric steam dumps AND 3) All steam generator safeties C. Plant in Mode 1-2-3 AND Loss of secondary heat sink has occurred AND RCS bleed and feed is required. D. Plant in Mode 1-2-3 AND RCS injection capability has been lost from: 1) Charging pumps AND 2) High-head SI pumps	Either A or B: A. Inability to bring the reactor subcritical AND RCS pressure > 2485 psig. B. Inability to bring the reactor subcritical AND Containment pressure ≥ 4 psig. CAUTION: Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			

ACTION

Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

8. Fuel Element Failure

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
RCS activity is greater than Technical Specification 3.4.8, Figure 3.4-1, limit for maximum RCS activity.	Either A, B or C: A. Confirmed RCS DEQ I-131 activity ≥ 300 µCi/gm. --- B. An increase of > 1% fuel failure in 30 minutes. --- C. Total fuel failure of 5%.	Fuel element failure as indicated by A, B, or C: A. Confirmed RCS DEQ I-131 activity ≥ 300 µCi/gm. AND RCS T_{hot} >620°F. --- B. Confirmed RCS DEQ I-131 activity ≥ 300 µCi/gm. AND Core exit thermocouples >700°F. --- C. Containment high range radiation monitor reading >1.3 E4 Rem/hr.	Fuel element failure as defined in Site Area Emergency of this section AND Any of the following is imminent or in progress: a) LOCA with loss of containment cooling OR b) LOCA with loss of containment integrity which provides a flowpath to the environment OR c) Steam generator tube rupture with unisolable flowpath from the ruptured steam generator to the environment. CAUTION: Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
	PRMS R-20 ARMS R-1 through R-6	Core Exit Thermocouples RI-6311A RI-6311B	
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

TABLE 1

EMERGENCY CLASSIFICATION TABLE

9. Uncontrolled Effluent Release

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
A release to the Unrestricted Area has occurred or is in progress which exceeds either A or B: A. Technical Specification 3.11 limits for gaseous release per 3/4-ONOP-067, Inadvertent Release of Radioactive Gas. NOTE: Direct Chemistry to perform offsite dose estimates per EPIP-20126, Offsite Dose Calculations. --- B. Technical Specification 3.11 limits for liquid release. NOTE: Direct Chemistry to perform release calculation in accordance with Offsite Dose Calculation Manual.	A release to the Unrestricted Area has occurred or is in progress which exceeds either A or B: A. Ten times Technical Specification 3.11 limits for gaseous release per 3/4-ONOP-067, Inadvertent Release of Radioactive Gas. NOTE: Direct Chemistry to perform offsite dose estimates per EPIP-20126, Offsite Dose Calculations. --- B. Ten times Technical Specification 3.11 limits for liquid release. NOTE: Direct Chemistry to perform release calculation in accordance with Offsite Dose Calculation Manual.	Performance of EPIP-20126, Offsite Dose Calculation or offsite surveys indicate site boundary exposure levels have been exceeded as indicated by either A, B, C, or D: A. ≥ 50 mRem/hr whole body for 1/2 hour --- B. ≥ 250 mRem/hr thyroid for 1/2 hour --- C. ≥ 500 mRem/hr whole body for 2 minutes --- D. ≥ 2500 mRem/hr thyroid for 2 minutes NOTE: Site boundary equals 1 mile radius from affected unit. CAUTION: Consult Table 2, Page 36 for possible protective action recommendations.	Performance of EPIP-20126, Offsite Dose Calculation or offsite surveys indicate site boundary exposure levels have been exceeded as indicated by either A, B, C or D: A. ≥ 1 Rem/hr whole body --- B. ≥ 1 Rem integrated whole body dose --- C. ≥ 5 Rem/hr thyroid --- D. ≥ 5 Rem integrated thyroid dose NOTE: Site boundary equals 1 mile radius from affected unit. CAUTION: Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

10. High Radiation Levels In Plant

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
	Either A, B or C: A. Any valid area monitor alarm from an undeterminable source with meter greater than 10^3 mR/hr. --- B. Unexpected plant iodine or particulate airborne concentration > 1000 MPC as per 10 CFR 20 Appendix B, Table 1. --- C. Unexpected direct radiation dose rate reading or unexpected airborne radioactivity concentration from an undetermined source in excess of 1000 times normal levels.	Containment High Range Radiation Monitor reading > 1.3 E4 Rem/hr. **NOTE:** Direct Chemistry to perform offsite dose estimates per EPIP-20126, Off-Site Dose Calculations. (See Section 9, Uncontrolled Effluent Release) **CAUTION:** Consult Table 2, Page 36 for possible protective action recommendations.	Containment High Range Radiation Monitor reading > 1.3 E5 Rem/hr. **NOTE:** Direct Chemistry to perform offsite dose estimates per EPIP- 20126, Off-Site Dose Calculations. (See Section 9, Uncontrolled Effluent Release) **CAUTION:** Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
	Area Radiation Monitors	RI-6311A RI-6311B	RI-6311A RI-6311B
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

11. Other Plant Conditions That Could Lead To Substantial Core Damage

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
			Either A or B: A. Potential core damage indicated by all of the following: 1) Known LOCA greater than available charging pump capacity AND 2) Failure of ECCS to deliver flow to the core AND 3) Containment High Range Radiation Monitor reading > 1.3 E4 Rem/hr. B. Potential core damage indicated by all of the following: 1) Loss of secondary heat sink AND 2) RCS bleed and feed required AND 3) No high-head SI flow available AND 4) No RHR flow for greater than 30 minutes AND 5) No AFW flow for greater than 30 minutes CAUTION: Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

12. Loss Of Power Conditions

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Either A or B: A. Loss of offsite power to the: 1) A 4KV bus AND 2) B 4KV bus --- B. Loss of onsite power capability as indicated by: 1) Loss of capability to power at least one vital 4KV bus from any of the four available emergency diesel generator.	Either A or B: A. Loss of all vital onsite DC power. --- B. Loss of offsite power AND Both associated emergency diesel generators fail to energize their associated 4KV buses. NOTE: Refer to Section 7, Loss of Safe Shutdown Function	Either A, B or C with fuel in the Reactor Vessel A. Loss of all A/C power for > 15 minutes. --- B. Loss of all vital onsite DC power for > 15 minutes. --- C. Emergency Coordinator leaves Control Room within the first 15 minutes of a loss of all A/C power.	The following situation exists for > 1 hr with fuel in the Reactor Vessel. a) Loss of all A/C power AND b) Loss of all feedwater capability. CAUTION: Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
4Kv Bus Voltage 4Kv Bus Amps			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

13. Contaminated Personnel			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Transportation of confirmed externally contaminated injured individual(s) from the site to a medical facility.			
Possible Control Room Indicators			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

14. Loss Of Assessment Functions

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Either A, B, or C: A. Loss of primary communications with offsite locations AND Loss of all backup communications with offsite locations --- B. Loss of primary onsite meteorological instrumentation AND Loss of all backup onsite meteorological instrumentation AND Loss of all communication with Homestead Air Force Base --- C. Loss of effluent or radiological monitoring capability requiring plant shutdown.	Plant in Mode 1-2-3-4: AND Most or all Control Room annunciator alarms lost for > 5 minutes	A plant transient is in progress AND All Control Room annunciator alarms lost for > 15 minutes	
Possible Control Room Indicators			

ACTION

Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

15. Natural Phenomena

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Plant in Mode 1-2-3-4 AND either A, B, C or D: A. Confirmed hurricane warning OR B. Confirmed tornado in owner controlled area OR C. Any earthquake detected onsite OR D. Hurricane/flood surge that prevents land access to the site	Plant in any mode including defueled. AND either A, B, C or D: A. Confirmed hurricane warning with maximum wind speeds in excess of 200 mph OR B. Tornado striking any power block structure OR C. Earthquake that could cause or has caused trip of the turbine generator or reactor OR D. Hurricane/flood surge that raises water level >18 feet above MLW	Plant in Mode 1-2-3-4 AND either A, B or C: A. Confirmed hurricane warning with maximum wind speeds in excess of 225 mph. OR B. Earthquake has caused loss of any safety system function OR C. Hurricane/flood surge that raises water level > 18 feet above MLW and results in shutdown of turbine generator or reactor.	A major natural event (e.g., high winds, earthquake, flooding) has occurred, which could cause massive damage to plant systems resulting in any of the other General Emergency initiating conditions. **CAUTION:** Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

TABLE 1

EMERGENCY CLASSIFICATION TABLE

16. Hazards To Station Personnel And Equipment

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Safety of nuclear plant or personnel threatened by either A, B, C, D, or E: A. Aircraft crash onsite --- B. Unusual aircraft activity over facility --- C. Toxic or flammable gas release --- D. Turbine generator rotating component failure requiring rapid turbine shutdown --- E. Onsite explosion **NOTE:** Explosion is defined as a rapid chemical reaction resulting in noise, heat, and the rapid expansion of gas.	Either A, B or C: A. A reduction in the level of safety of plant structures or components within the protected area due to damage caused by either 1), 2), or 3): 1) Aircraft crash **OR** 2) Missile impact **OR** 3) Explosion **NOTE:** Explosion is defined as a rapid chemical reaction resulting in noise, heat, and the rapid expansion of gas. --- B. Toxic or flammable gas release which threatens plant operation. --- C. Turbine generator failure resulting in casing penetration.	Either A or B: A. Plant in Mode 1-2-3-4 **AND** Safety systems have failed or damage to vital structure has been caused by either 1), 2), or 3): 1) Aircraft crash **OR** 2) Missile impact **OR** 3) Explosion **NOTE:** Explosion is defined as a rapid chemical reaction resulting in noise, heat, and the rapid expansion of gas. --- B. Toxic or flammable gas release into control or vital areas which renders one train of safety related systems inoperable.	
Possible Control Room Indicators			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

17. Security Threat

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Declaration of a "Security Alert" due to either A, B, C,D , E, F, G, H A. Bomb Threat B. Attack threat C. Civil disturbance D. Protected area intrusion E. Sabotage attempt F. Internal disturbance G. Vital area intrusion H. Security Force strike	Declaration of a "Security Emergency"	Declaration of a "Security Emergency" involving imminent occupancy of the Control Room or other vital areas by intruders.	Physical attack on the plant resulting in occupation of the Control Room or other vital areas by intruders. **CAUTION:** Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

18. Control Room Evacuation			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
	Control Room evacuation anticipated or required	Control Room has been evacuated **AND** Local control of shutdown systems has **NOT** been established from local stations within 15 minutes.	
Possible Control Room Indicators			

19. Fire			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Uncontrolled fire within the power block lasting longer than 10 minutes	Uncontrolled fire potentially affecting safety systems **AND** Offsite support required.	Fire which prevents a safety system from performing its design function.	A major fire has occurred which could cause massive damage to plant systems resulting in any of the other General Emergency initiating conditions. **CAUTION:** Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			

ACTION

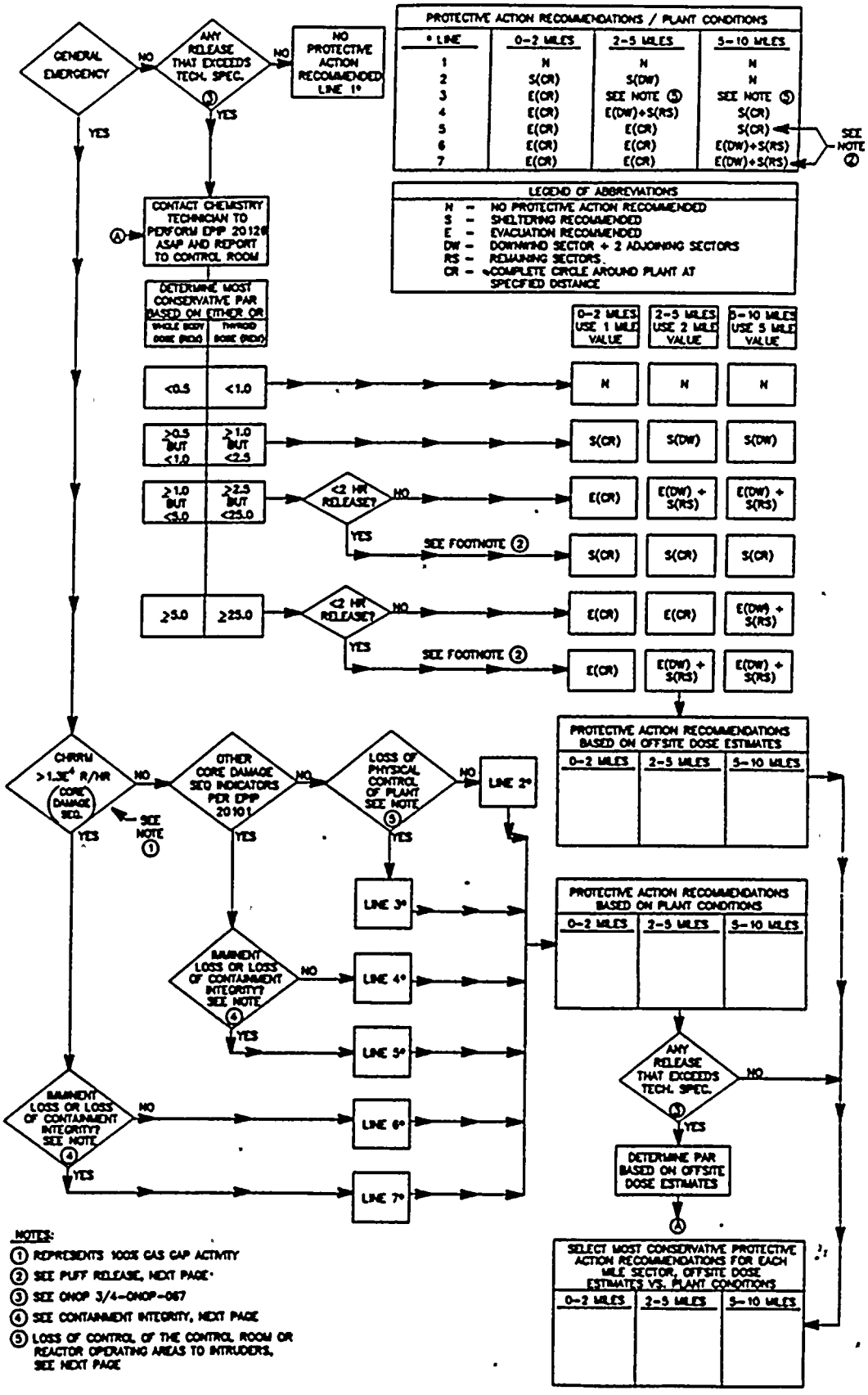
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

20. Loss of Engineered Safety Features/Fire Protection

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
Power reduction started in accordance with Technical Specifications due to either: A) TS 3.3.1, Reactor Trip System Instrumentation, or B) TS 3.3.2, Engineered Safety Features Actuation System Instrumentation, or C) TS 3.5, Emergency Core Cooling Systems, or D) TS 3.6, Containment Systems, or E) TS 3.7.2, Component Cooling Water, or F) TS 3.7.3, Intake Cooling Water, or G) 3.7.5, Control Room Emergency Ventilation System H) T.S. 3.7.8, Fire Suppression Systems. NOTE: Notify Fire Protection Department to consult FSAR Section 9.6, for further guidance on fire protection system requirements			
Possible Control Room Indicators			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

21. Other Plant Conditions Requiring Increased Awareness (Emergency Coordinator's Judgment)			
UNUSUAL EVENT	**ALERT**	**SITE AREA EMERGENCY**	**GENERAL EMERGENCY**
Emergency Coordinator's judgment that other plant conditions exist which warrant increased awareness on the part of the operating staff and/or local offsite authorities. **NOTE:** Activation of the Emergency Response Facilities does not require declaration of an emergency or entry into a specific emergency classification.	Emergency Coordinator's judgment that other plant conditions exist which warrant the increased awareness and activation of emergency response personnel.	Emergency Coordinator's judgment that other plant conditions exist which warrant the precautionary notification to the public near the site and the activation of FPL and offsite agency emergency response personnel. (Reflects conditions where some significant releases are likely or are occurring but where a core melt situation is not indicated based on current information)	Emergency Coordinator's judgment that other plant conditions exist which make release of large amounts of radioactivity, in a short period of time, possible (Loss of two fission product barriers with potential for loss of the third, such as, actual or imminent substantial core degradation or melting with the potential for loss of containment.) **CAUTION:** Consult Table 2, Page 36 for required protective action recommendations.
Possible Control Room Indicators			
ACTION			
Complete actions listed in Step 8.4, Page 40.	Complete actions listed in Step 8.5, Page 53.	Complete actions listed in Step 8.6, Page 67.	Complete actions listed in Step 8.7, Page 83.

TABLE 2
PROTECTIVE ACTION RECOMMENDATIONS BASED ON PLANT CONDITIONS AND OFF-SITE DOSE ESTIMATES



NOTES:

① REPRESENTS 100% GAS GAP ACTIVITY

② SEE PUFF RELEASE, NEXT PAGE

③ SEE ONOP 3/4-ONOP-067

④ SEE CONTAINMENT INTEGRITY, NEXT PAGE

⑤ LOSS OF CONTROL OF THE CONTROL ROOM OR REACTOR OPERATING AREAS TO INTRUDERS, SEE NEXT PAGE

TABLE 2

PROTECTIVE ACTION RECOMMENDATIONS BASED ON PLANT CONDITIONS

NOTE: 2

PUFF RELEASES

If a "PUFF" type release is imminent or in progress as indicated by the following conditions:

(1) Containment failure has occurred or is imminent,
AND
(2) Rate of release is much greater than designed leak rate,
AND
(3) Either the total or major portion of radioactivity is projected to be released within 2 hours or less.

If 1 through 3 apply, in addition to the appropriate protective action recommendations the following statement and information should be given:

"Florida Power & Light Company recommends sheltering those areas that can't be evacuated before plume arrival."

NOTE: 4 CONTAINMENT INTEGRITY

If loss of containment integrity is suspected, the following actions should be taken. If containment pressure is greater than 4 psig - verify PHASE A containment isolation and containment ventilation isolation valves are properly closed, as required. At containment pressure greater than or equal to 20 psig verify isolation valves for both PHASE A and B and containment isolation valves are properly closed. If possible, and accessible, secure identified leak path(s).

If loss of containment integrity is still suspected (e.g. unmonitored leakage through electrical penetration room, equipment, personnel or emergency hatch, etc.) instruct Health Physics personnel to survey for leakage in specified area(s) by external gamma survey and/or charcoal air sample and analysis.

NOTE: 5 LOSS OF PHYSICAL CONTROL TO INTRUDERS

For loss of physical control of the plant or vital reactor operating areas to intruders, determine 2-5 mile and 5-10 mile PARs on other existing General Emergency conditions. If no other conditions exist, (intruder only), No protective actions for 2-5 miles or 5-10 mile sectors.

TABLE 2

ADDITIONAL GUIDANCE ON DETERMINING PROTECTIVE ACTION RECOMMENDATIONS

Beginning at the top left side, answer the "General Emergency" question. If "Yes", continue on, following the arrows down the side of the page, and answer the other question blocks. Once answering all questions, you will end at a line Number box, which corresponds with the "Protection Action Recommendations/Plant Conditions" Table at the top right side. The corresponding line applies to 0-2, 2-5, and 5-10 mile PARs. The actions for the applicable line is to be written in the block "Protective Actions Based On Plant Conditions".

From the PAR based on Plant Conditions Block, continue following arrow to next question "Any release that exceeds Tech Specs". In determining PARs, both plant conditions AND off-site doses must be considered for all PARs. If a release has not occurred, then proceed with issuance of PARs from the plant condition determination.

If a release that exceeds Tech Specs has occurred, then the

(A) connector sends you to "Contact Chemistry Technician to perform EPIP 20126 as soon as possible and report to Control Room". If Plant Condition PARs have already been determined, or if not in a General Emergency, "YES" is answered for "Any release that exceeds Tech Specs". Chemistry will complete dose estimates and give to the EC. Also, HP Field Teams may have dose rates and thyroid doses determined from actual measurement. If both are available and significant discrepancies exist between the two, then an evaluation should be made, and the appropriate information be used in PAR determination. Doses are 2 hour projections or duration of the release, if the release is expected to be less than 2 hours.

To determine PARs from off-site doses, find the block that corresponds with the dose and follow arrow across to the column that indicates the distance where that dose was found. The corresponding PAR is assigned to that mile block under "Protective Action Recommendations Based on Off-Site Dose Estimates". Once PARs are determined for all mile sectors, then a comparison with the Plant Condition PARs is performed, and the most conservative PARs for each mile sector is selected for issue to off-site agencies.

TABLE 2

The following example is provided:

Example: A release has occurred at the Turkey Point Plant with a projected duration of 2 hours. The wind direction is from the NNE and the projected off-site accumulated thyroid dose (i.e., accumulated over a 2 hour duration) is 10 Rem at 1 mile, and less than 1 Rem at 5 and 10 miles. Whole body doses are 0.8 Rem at 1 mile, 0.6 Rem at 2 miles, and less than 0.5 Rem at 5 miles. The plant is in a General Emergency with CHRRM at 100 R/hr, no core damage, and no loss of physical control of the plant.

Referring to Table 2, the following recommendation should be made:

"Based on our current assessment of all the information now available to us, Florida Power & Light Company recommends that you consider taking the following protective actions.

A. EVACUATE all people between 0 and 2 miles from the plant.

B. SHELTER all people between a 2 and 5 mile radius from the plant who are in Sectors J, K, and L (refer to State of Florida Notification Message Form).

C. No protective action is recommended between a 5 and 10 mile radius from the plant.

This recommendation may change in the future, but we cannot now say when it may change or what it may change to.

Time

_____ 8.4 If an Unusual Event has been declared complete the following steps:

NOTE: Notification steps may be performed out of sequence in order to meet State of Florida and/or NRC notification time requirements.

8.4.1 The Emergency Log Book should be used for documenting sequence of events.

NOTE: Prescribed emergency announcements may be omitted or modified as directed by the Emergency Coordinator, or his designee, to prevent alarming intruders if security events warrant.

8.4.2 Inform or have Control Room personnel inform site personnel of the emergency via cross connected Plant Page system and make one of the following announcements twice. [Either (1) or (2)]

_____ 1. If entering into an Unusual Event:

"Attention all personnel, attention all personnel: An Unusual Event has been declared on Unit (#) due to (provide a brief description of initiating event) All Emergency Response Organization members remain on standby. All other personnel continue with present duties unless further instruction is given."

_____ 2. If downgrading to an Unusual Event:

"Attention all personnel; attention all personnel: the Emergency has been downgraded to an Unusual Event."

_____ 8.4.3 If there is a localized emergency (fire, high radiation, toxic gas):

_____ 1. Determine assembly area for personnel evacuated from the affected area.

_____ 2. Announce type and location, instruct personnel to stand clear, and report to the assembly area.

_____ 3. Sound applicable alarm, if not previously done.

_____ 4. Announce type and location, instruct personnel to stand clear, and report to the assembly area.

_____ 5. Initiate Search and Rescue as required.

Time

NOTE: If plant events (radiological or security threat considerations) warrant, alternate facilities and/or routes to these facilites may be necessary. Refer to Precautions, Section 4.0.

_____ 8.4.4 If significant public interest is expected or significant technical support is required, direct the Control Room Shift Technician and the STA to initiate a partial activation of the Emergency Response Organization. Indicate those positions requiring activation and the desired reporting location.

CAUTIONS:
- Notification to the State Warning Point is required within 15 minutes of emergency classification.
- Notification to the NRCOC is required to immediately follow the State notification and no later than one (1) hour.
- Collection of Release Rate Data shall not delay State of Florida or NRC notification.
- If a transitory event has occurred, notifications are still required using this procedure.
- If a during the notification process it becomes necessary to upgrade the emergency classification, stop the current notification process and proceed to the steps corresponding to the new emergency classification.

8.4.5 If offsite (State/County) notification responsibilities ARE with the Emergency Coordinator onsite, complete the following steps:

_____ 1. Complete the State of Florida Notification Message Form.

_____ 2. The Emergency Coordinator shall initial the form prior to transmitting the information to verify Emergency Coordinator approval.

Time

NOTE: State Warning Point may request verification call back. If requested, they will call in on the black bell phone (ringmaster) or cellular phone in the Control Room.

3. Within 15 minutes of classifying the Unusual Event notify the State Warning Point in Tallahassee and relay information from the State of Florida Notification Message Form just completed via one of the following:

   _____ a. Hot Ring Down Telephone (22)

   _____ b. NAWAS

   _____ c. Commercial Telephone (refer to ERD)

   _____ d. Cellular Phone (refer to ERD)

   _____ e. Local Government Radio

   _____ 4. Complete an Event Notification Worksheet Form.

5. Immediately after the notification to State/County agencies of the Unusual Event, contact the NRCOC in Bethesda and relay the information from the Event Notification Worksheet just completed via one of the following:

   _____ a. ENS

   _____ b. Commercial Telephone (refer to ERD)

   _____ c. Cellular Telephone (refer to ERD)

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 43
DUTIES OF EMERGENCY COORDINATOR

STATE OF FLORIDA NOTIFICATION MESSAGE FORM FOR NUCLEAR POWER PLANTS

1. A. TIME/DATE_____ B. REPORTED BY (NAME/TITLE)_____
2. SITE
   - A. CRYSTAL RIVER UNIT 3
   - B. ST. LUCIE UNIT 1
   - C. ST. LUCIE UNIT 2
   - D. TURKEY POINT UNIT 3
   - E. TURKEY POINT UNIT 4
3. ACCIDENT CLASSIFICATION
   - A. NOTIFICATION OF UNUSUAL EVENT
   - B. ALERT
   - C. SITE AREA EMERGENCY
   - D. GENERAL EMERGENCY
4. EMERGENCY DECLARATION TIME: _____ DATE: _____
5. INCIDENT DESCRIPTION or UPDATE _____
6. INJURIES A. CONTAMINATED/NUMBER_____ B. NON-CONTAMINATED/NUMBER_____
7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11. OTHERWISE CONTINUE WITH REST OF FORM.)
   - A. NO RELEASE
   - B. POTENTIAL (POSSIBLE) RELEASE
   - C. A RELEASE IS OCCURRING--EXPECTED DURATION___
   - D. A RELEASE OCCURRED, BUT STOPPED--DURATION___
8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CS-137)
   - A. RADIOACTIVE GASES_____
   - B. RADIOACTIVE AIRBORNE PARTICULATES_____
   - C. RADIOACTIVE LIQUIDS_____
   - D. RADIOACTIVE SOLIDS_____
   - E. NON-RADIOACTIVE GASES_____
   - F. OTHER_____
9. RELEASE RATE:

	NOBLE GASES		IODINES
DEFAULT (A) _____	CURIES PER SECOND	(C) _____	CURIES PER SECOND
MEASURED (B) _____	CURIES PER SECOND	(D) _____	CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY)		
2 MILES		
5 MILES		
10 MILES		

11. METEOROLOGICAL DATA (AT 10 METERS):
    - A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
    - B. SECTORS AFFECTED_____
    - C. WIND SPEED_____MPH
    - D. STABILITY CLASS_____
12. RECOMMENDED PROTECTIVE ACTIONS:
    - A. NO RECOMMENDATIONS AT THIS TIME.
    - B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS:
      (NOTE: IF MESSAGE REFERS TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0--2			
2--5			
5--10			
10-- ___			

13. EVENT TERMINATED: A. NO:_____ B. YES: TIME_____DATE_____
14. MESSAGE RECEIVED BY: NAME _____TIME_____DATE_____

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the control room.

Sector Information:

WIND SECTOR	WIND FROM	DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348.5-11.5	S	H J K
[B]	NNE	11.5-33.5	SSW	J K L
[C]	NE	33.5-56.5	SW	K L M
[D]	ENE	56.5-78.5	WSW	L M N
[E]	E	78.5-101.5	W	M N P
[F]	ESE	101.5-123.5	WNW	N P Q
[G]	SE	123.5-146.5	NW	P Q R
[H]	SSE	146.5-168.5	NNW	Q R A
[J]	S	168.5-191.5	N	R A B
[K]	SSW	191.5-213.5	NNE	A B C
[L]	SW	213.5-236.5	NE	B C D
[M]	WSW	236.5-258.5	ENE	C D E
[N]	W	258.5-281.5	E	D E F
[P]	WNW	281.5-303.5	ESE	E F G
[Q]	NW	303.5-326.5	SE	F G H
[R]	NNW	326.5-348.5	SSE	G H J

STABILITY CLASSIFICATION REFERENCE:

The below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from Homestead Air Force Base (See EPIP-20126, Off-Site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	22.5 or more
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	17.5 to 22.4
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	12.5 to 17.4
Neutral	D	$-1.4 < \Delta T \leq -0.5$	7.5 to 12.4
Slightly stable	E	$-0.5 < \Delta T \leq 1.4$	3.8 to 7.4
Moderately stable	F	$1.4 < \Delta T \leq 3.6$	2.1 to 3.7
Extremely stable	G	$3.6 < \Delta T$	2.0 or less

When available, all meteorological information needed to fill out Section II on the Notification Message Form is available from the Emergency Coordinators Summary Sheet (EPIP-20126). The Summary sheet shall be filled out by Chemistry and given to the Emergency Coordinator.

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 45
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 — US NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EVENT NOTIFICATION WORKSHEET

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLERS NAME	CALL BACK: ENS_____ OR ( ) _____ - _____

EVENT TIME & ZONE	EVENT DATE / /	POWER MODE BEFORE	POWER MODE AFTER

Event Classifications

- [ ] GENERAL EMERGENCY
- [ ] SITE AREA EMERGENCY
- [ ] ALERT
- [ ] UNUSUAL EVENT
- [ ] 50.72 NON-EMERGENCY
- [ ] PHYSICAL SECURITY (73.71)
- [ ] TRANSPORTATION
- [ ] 20.403 MATERIAL/EXPOSURE
- [ ] OTHER
- [ ]

1-Hr Non-Emergency
10 CFR 50.72 (b) (1)

- [ ] (i) (A) TS Required S/D
- [ ] (i) (B) TS Deviation
- [ ] (iii) Degraded Condition
- [ ] (ii) (A) Unanalyzed Condition
- [ ] (ii) (B) Outside Design Basis
- [ ] (ii) (C) Not Covered by OPs/EOPs
- [ ] (iii) Earthquake
- [ ] (iii) Flood
- [ ] (iii) Hurricane
- [ ] (iii) Ice/Hail
- [ ] (iii) Lighting
- [ ] (iii) Tornado
- [ ] (iii) Other Natural Phenomenon
- [ ] (iv) ECCS Discharge to RCS
- [ ] (v) Lost ENS
- [ ] (v) Lost Emerg. Assessment
- [ ] (v) Lost Offsite Comms
- [ ] (vi) Fire
- [ ] (vi) Toxic Gas
- [ ] (vi) Rad Release
- [ ] (vi) Oth Hampering Safe Op

4-Hr Non-Emergency
10 CFR 50.72 (b) (2)

- [ ] (i) Degrade While S/D
- [ ] (ii) RPS Actuation (Scram)
- [ ] (ii) ESF Actuation
- [ ] (iii) (A) Safe S/D Capability
- [ ] (iii) (B) Rhr Capability
- [ ] (iii) (C) Control of Rad Release
- [ ] (iii) (D) Accident Mitigation
- [ ] (iv) (A) Air Release >2X App B
- [ ] (iv) (B) Liq Release >2X App B
- [ ] (v) Offsite Medical
- [ ] (vi) Offsite Notification

DESCRIPTION

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE					
NRC RESIDENT				ANYTHING UNUSUAL OR NOT UNDERSTOOD?		YES (Explain above)		NO
STATE(s)				DID ALL SYSTEMS FUNCTION AS REQUIRED?		YES		NO (Explain above)
LOCAL								
OTHER GOV AGENCIES				MODE OF OPERATION UNTIL CORRECTED	ESTIMATE FOR RESTART DATE:			ADDITION INFO ON BACK?

★/4:6/tf/bsm/lr

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 46
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 ADDITIONAL INFORMATION USNRC OPERATIONS CENTER

RADIOLOGICAL RELEASES CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

	LIQUID RELEASE		GASEOUS RELEASE		UNPLANNED RELEASE		PLANNED RELEASE		ONGOING		TERMINATED
	MONITORED		UNMONITORED		OFFSITE RELEASE		T.S. EXCEEDED		RM ALARMS		AREAS EVACUATED
	PERSONNEL EXPOSED OR CONTAMINATED				OFFSITE PROTECTIVE ACTIONS RECOMMENDED				*State release path in description		

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gears)			10 uCi/min			0.1Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS:					
ALARM SETPOINTS:					
% T.S. LIMIT (If applicable)					

RCS OR SG TUBE LEAKS CHECK OR FILL IN APPLICABLE ITEMS: *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc)*:

LEAK RATE:	UNITS: gpm/gpd	T.S. Limits:	SUDDEN OR LONG TERM DEVELOPMENT:
LEAK START DATE: TIME:		COOLANT ACTIVITY & UNITS: PRIMARY -	SECONDARY -

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION *(Continued from front)*

DUTIES OF EMERGENCY COORDINATOR

Time

_____ 8.4.6 Notify the Nuclear Division Duty Officer (NDDO). If on duty NDDO cannot be reached, notify any NDDO, ECO or System Operations Power Coordinator (last alternate). See the NDDO schedule or the Emergency Response Directory for telephone numbers. If a partial activation of the Corporate Emergency Response Organization is desired, indicate this at this time, and relay applicable information from the State of Florida Notification Message Form.

_____ 8.4.7 If continued direction of the emergency response activities adversely affects Control Room activities, consider turnover of EC duties to a designated member of the Plant Management staff.

_____ 8.4.8 If EC duties have been assumed by a designated member of the Plant Management staff, contact affected NRC, State and Local authorities to establish communication links and determine off-site support requirements.

_____ 8.4.9 Reassess plant conditions using Table 1 periodically.

8.4.10 If upgrading Emergency Class, proceed to the applicable section of this procedure per Table 1.

8.4.11 Every hour (unless state and local agencies agree less frequent updates are required), upon termination, or as conditions change, provide notifications to the following if notification responsibilities are with the Emergency Coordinator Onsite:

_____ 1. Complete a State of Florida Notification Message Form.

_____ 2. The Emergency Coordinator shall initial form prior to transmitting information to verify Emergency Coordinator approval.

3. Notify the following of the new information.

_____ a. State Warning Point

_____ b. NDDO

_____ c. Duty Call Supervisor

_____ 4. Complete an Event Notification Worksheet Form

5. Notify the NRCOC of the new information.

_____ a. ENS

_____ b. Commercial telephone (alternate) (see Emergency Response Directory)

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 48
DUTIES OF EMERGENCY COORDINATOR

STATE OF FLORIDA NOTIFICATION MESSAGE FORM FOR NUCLEAR POWER PLANTS

1. A. TIME/DATE_____ B. REPORTED BY (NAME/TITLE)_____
2. SITE
   - A. CRYSTAL RIVER UNIT 3
   - B. ST. LUCIE UNIT 1
   - C. ST. LUCIE UNIT 2
   - D. TURKEY POINT UNIT 3
   - E. TURKEY POINT UNIT 4
3. ACCIDENT CLASSIFICATION
   - A. NOTIFICATION OF UNUSUAL EVENT
   - B. ALERT
   - C. SITE AREA EMERGENCY
   - D. GENERAL EMERGENCY
4. EMERGENCY DECLARATION TIME: _____ DATE: _____
5. INCIDENT DESCRIPTION or UPDATE _____
6. INJURIES A. CONTAMINATED/NUMBER_____ B. NON-CONTAMINATED/NUMBER_____
7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11. OTHERWISE CONTINUE WITH REST OF FORM.)
   - A. NO RELEASE
   - B. POTENTIAL (POSSIBLE) RELEASE
   - C. A RELEASE IS OCCURRING--EXPECTED DURATION___
   - D. A RELEASE OCCURRED, BUT STOPPED--DURATION___
8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CS-137)
   - A. RADIOACTIVE GASES_____
   - B. RADIOACTIVE AIRBORNE PARTICULATES_____
   - C. RADIOACTIVE LIQUIDS_____
   - D. RADIOACTIVE SOLIDS_____
   - E. NON-RADIOACTIVE GASES_____
   - F. OTHER_____
9. RELEASE RATE:

	NOBLE GASES		IODINES
DEFAULT (A)	_____ CURIES PER SECOND	(C)	_____ CURIES PER SECOND
MEASURED (B)	_____ CURIES PER SECOND	(D)	_____ CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY)		
2 MILES		
5 MILES		
10 MILES		

11. METEOROLOGICAL DATA (AT 10 METERS):
    - A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
    - B. SECTORS AFFECTED_____
    - C. WIND SPEED_____MPH
    - D. STABILITY CLASS_____
12. RECOMMENDED PROTECTIVE ACTIONS:
    - A. NO RECOMMENDATIONS AT THIS TIME.
    - B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS:
      (NOTE: IF MESSAGE REFERS TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0--2			
2--5			
5--10			
10-- ___			

13. EVENT TERMINATED: A. NO:_____ B. YES: TIME_____DATE_____
14. MESSAGE RECEIVED BY: NAME _____TIME_____DATE_____

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the control room.

Sector Information:

WIND SECTOR	WIND FROM	DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348.5-11.5	S	H J K
[B]	NNE	11.5-33.5	SSW	J K L
[C]	NE	33.5-56.5	SW	K L M
[D]	ENE	56.5-78.5	WSW	L M N
[E]	E	78.5-101.5	W	M N P
[F]	ESE	101.5-123.5	WNW	N P Q
[G]	SE	123.5-146.5	NW	P Q R
[H]	SSE	146.5-168.5	NNW	Q R A
[J]	S	168.5-191.5	N	R A B
[K]	SSW	191.5-213.5	NNE	A B C
[L]	SW	213.5-236.5	NE	B C D
[M]	WSW	236.5-258.5	ENE	C D E
[N]	W	258.5-281.5	E	D E F
[P]	WNW	281.5-303.5	ESE	E F G
[Q]	NW	303.5-326.5	SE	F G H
[R]	NNW	326.5-348.5	SSE	G H J

STABILITY CLASSIFICATION REFERENCE:

The below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from Homestead Air Force Base (See EPIP-20126, Off-Site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	22.5 or more
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	17.5 to 22.4
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	12.5 to 17.4
Neutral	D	$-1.4 < \Delta T \leq -0.5$	7.5 to 12.4
Slightly stable	E	$-0.5 < \Delta T \leq 1.4$	3.8 to 7.4
Moderately stable	F	$1.4 < \Delta T \leq 3.6$	2.1 to 3.7
Extremely stable	G	$3.6 < \Delta T$	2.0 or less

When available, all meteorological information needed to fill out Section II on the Notification Message Form is available from the Emergency Coordinators Summary Sheet (EPIP-20126). The Summary sheet shall be filled out by Chemistry and given to the Emergency Coordinator.

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 50
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 — US NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EVENT NOTIFICATION WORKSHEET

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLERS NAME	CALL BACK: ENS_____ OR ( ) _____ - _____

EVENT TIME & ZONE	EVENT DATE / /
POWER MODE BEFORE	POWER MODE AFTER

Event Classifications

	GENERAL EMERGENCY
	SITE AREA EMERGENCY
	ALERT
	UNUSUAL EVENT
	50.72 NON-EMERGENCY
	PHYSICAL SECURITY (73.71)
	TRANSPORTATION
	20.403 MATERIAL/EXPOSURE
	OTHER

1-Hr Non-Emergency 10 CFR 50.72 (b) (1)

	(i) (A) TS Required S/D
	(i) (B) TS Deviation
	(iii) Degraded Condition
	(ii) (A) Unanalyzed Condition
	(ii) (B) Outside Design Basis
	(ii) (C) Not Covered by OPs/EOPs
	(iii) Earthquake
	(iii) Flood
	(iii) Hurricane
	(iii) Ice/Hail
	(iii) Lighting
	(iii) Tornado
	(iii) Other Natural Phenomenon
	(iv) ECCS Discharge to RCS
	(v) Lost ENS
	(v) Lost Emerg. Assessment
	(v) Lost Offsite Comms
	(vi) Fire
	(vi) Toxic Gas
	(vi) Rad Release
	(vi) Oth Hampering Safe Op

4-Hr Non-Emergency 10 CFR 50.72 (b) (2)

	(i) Degrade While S/D
	(ii) RPS Actuation (Scram)
	(ii) ESF Actuation
	(iii) (A) Safe S/D Capability
	(iii) (B) Rhr Capability
	(iii) (C) Control of Rad Release
	(iii) (D) Accident Mitigation
	(iv) (A) Air Release > 2X App B
	(iv) (B) Liq Release > 2X App B
	(v) Offsite Medical
	(vi) Offsite Notification

DESCRIPTION

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE				
NRC RESIDENT				ANYTHING UNUSUAL OR NOT UNDERSTOOD?		YES (Explain above)	NO
STATE(s)				DID ALL SYSTEMS FUNCTION AS REQUIRED?		YES	NO (Explain above)
LOCAL							
OTHER GOV AGENCIES				MODE OF OPERATION UNTIL CORRECTED	ESTIMATE FOR RESTART DATE:		ADDITION INFO ON BACK?

★/4:6/tf/bsm/lr

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 51
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 | ADDITIONAL INFORMATION | USNRC OPERATIONS CENTER

RADIOLOGICAL RELEASES CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

	LIQUID RELEASE		GASEOUS RELEASE		UNPLANNED RELEASE		PLANNED RELEASE		ONGOING		TERMINATED
	MONITORED		UNMONITORED		OFFSITE RELEASE		T.S. EXCEEDED		RM ALARMS		AREAS EVACUATED
	PERSONNEL EXPOSED OR CONTAMINATED				OFFSITE PROTECTIVE ACTIONS RECOMMENDED				*State release path in description		

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gears)			10 uCi/min			0.1Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS:					
ALARM SETPOINTS:					
% T.S. LIMIT (If applicable)					

RCS OR SG TUBE LEAKS CHECK OR FILL IN APPLICABLE ITEMS: *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc)*:

LEAK RATE:	UNITS: gpm/gpd	T.S. Limits:	SUDDEN OR LONG TERM DEVELOPMENT:
LEAK START DATE: TIME:		COOLANT ACTIVITY & UNITS: PRIMARY -	SECONDARY -

LIST OF SAFETY-RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION *(Continued from front)*

Time

_____ 8.4.12 Using Attachment 1, De-Escalation Guidelines, determine if the emergency can be terminated.

_____ 8.4.13 Upon termination notify, or have the Control Room notify, plant personnel via cross connected Plant Page system by making the following announcement:

"Attention all personnel; attention all personnel:The emergency situation has been terminated. I repeat, the emergency situation has been terminated."

Time

_____ 8.5 If an Alert has been declared perform the following steps

NOTE: Notification steps may be performed out of sequence in order to meet State of Florida and/or NRC notification time requirements.

8.5.1 The Emergency Log Book should be used to document the sequence of events.

CAUTION: The Emergency Coordinator shall use good judgment prior to releasing contractors from the site and clearing those owner controlled areas outside the protected area. Such conditions as security events, release status, release duration, plant conditions, and meteorological conditions should be evaluated prior to moving personnel.

_____ 8.5.2 Determine the need to dismiss non-essential contract personnel from the site and clear those areas outside the Protected area.

_____ 8.5.3 If a precautionary clearing of personnel outside of the Protected Area is required

1. Inform Security to clear personnel from the following areas and implement applicable sections of Security Force Instruction (SFI) 6307.

   a. Girl Scout Camp

   b. Red Barn Area

   c. Beach/Boat Ramp Area

   d. Wellness Center

   e. Switchyard

   f. Barge Canal

   g. Air Force Sea Survival School area

   h. Trailer Areas and other work areas

   i. Land Utilization

2. Contact the Watch Engineer of Units 1 and 2 and inform them of the precautionary clearing of personnel.

Time

NOTE: Prescribed emergency announcements may be omitted or modified as directed by the Emergency Coordinator, or his designee, to prevent alarming intruders if security events warrant.

_____ 8.5.4 Inform, or have Control Room personnel inform site personnel of the emergency via cross connected Plant Page system by making one of the following announcements twice [Either (1) or (2)]:

1. If ENTERING into an Alert:

   "Attention all personnel; attention all personnel: An Alert has been declared on Unit (#) due to (provide a brief description of initiating event). All Emergency Response Organization members report to your designated Emergency Response Facility. All other personnel report to your normal work location."

   [The following announcement is OPTIONAL per 8.5.2]

   "All non-essential contract personnel are dismissed for the day."

CAUTION: ECO approval is required prior to downgrading from a Site Area Emergency or General Emergency.

2. If DOWNGRADING to an Alert:

   "Attention all personnel; attention all personnel: The Emergency has been downgraded to an Alert."

8.5.5 If there is a localized emergency (fire, high radiation, toxic gas):

_____ 1. Determine an assembly area for personnel evacuated from the affected area.

_____ 2. Announce type and location, instruct personnel to stand clear, and report to the assembly area.

_____ 3. Sound applicable alarm, if not previously done.

_____ 4. Announce type and location, instruct personnel to stand clear, and report to the assembly area.

_____ 5. Initiate Search and Rescue as required.

Time

CAUTION: If a significant release (process monitors off scale, or other indications) and/or security related events are in progress (intruders, bomb threat etc.) inform emergency responders AND site evacuees of best access and egress routes to take onsite to minimize hazards. During off-hours, dispatch Security to route incoming emergency responders away from the hazardous routes.

NOTE: If plant events (radiological or security threat considerations) warrant, alternate facilities and/or routes to these facilities may be necessary. Refer to Precautions, Section 4.0.

_____ 8.5.6 Direct STA to initiate activation of on site Emergency Response Facilities (ERF) per EPIP-20104.

CAUTIONS:
- Notification to the State Warning Point is required within 15 minutes of emergency classification.
- Notification to the NRCOC is required to immediately follow the State notification and no later than one (1) hour.
- Collection of Release Rate Data shall not delay State of Florida or NRC notification.
- If a transitory event has occurred, notifications are still required using this procedure.
- If during the notification process it becomes necessary to upgrade the emergency classification, stop the current notification process and proceed to the steps corresponding to the new emergency classification.

8.5.7 If offsite (State/County) notification responsibilities ARE with the Emergency Coordinator onsite, complete the following steps:

_____ 1. Complete the State of Florida Notification Message Form.

_____ 2. The Emergency Coordinator shall initial the form prior to transmitting the information to verify Emergency Coordinator approval.

Time

NOTE: State Warning Point may request verification call back. If requested, they will call in on the black bell phone (ringmaster) or cellular phone in the Control Room.

3. Within 15 minutes of classifying the Alert notify the State Warning Point in Tallahassee and relay information from the State of Florida Notification Message Form just completed via one of the following:

_____ a. Hot Ring Down Telephone (22)

_____ b. NAWAS

_____ c. Commercial Telephone (refer to ERD)

_____ d. Cellular Phone (refer to ERD)

_____ e. Local Government Radio

_____ 4. Complete an Event Notification Worksheet Form.

5. Immediately after the notification to State/County agencies of the Alert, contact the NRCOC in Bethesda and relay the information from the Event Notification Worksheet just completed via one of the following:

_____ a. ENS

_____ b. Commercial Telephone (refer to ERD)

_____ c. Cellular Telephone (refer to ERD)

STATE OF FLORIDA NOTIFICATION MESSAGE FORM FOR NUCLEAR POWER PLANTS

1. A. TIME/DATE_____ B. REPORTED BY (NAME/TITLE)_____
2. SITE
   - A. CRYSTAL RIVER UNIT 3
   - B. ST. LUCIE UNIT 1
   - C. ST. LUCIE UNIT 2
   - D. TURKEY POINT UNIT 3
   - E. TURKEY POINT UNIT 4
3. ACCIDENT CLASSIFICATION
   - A. NOTIFICATION OF UNUSUAL EVENT
   - B. ALERT
   - C. SITE AREA EMERGENCY
   - D. GENERAL EMERGENCY
4. EMERGENCY DECLARATION TIME: _____ DATE: _____
5. INCIDENT DESCRIPTION or UPDATE _____
6. INJURIES A. CONTAMINATED/NUMBER_____ B. NON-CONTAMINATED/NUMBER_____
7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11. OTHERWISE CONTINUE WITH REST OF FORM.)
   - A. NO RELEASE
   - B. POTENTIAL (POSSIBLE) RELEASE
   - C. A RELEASE IS OCCURRING--EXPECTED DURATION___
   - D. A RELEASE OCCURRED, BUT STOPPED--DURATION___
8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CS-137)
   - A. RADIOACTIVE GASES_____
   - B. RADIOACTIVE AIRBORNE PARTICULATES_____
   - C. RADIOACTIVE LIQUIDS_____
   - D. RADIOACTIVE SOLIDS_____
   - E. NON-RADIOACTIVE GASES_____
   - F. OTHER_____
9. RELEASE RATE:

		NOBLE GASES			IODINES
DEFAULT	(A) _____	CURIES PER SECOND	(C)	_____	CURIES PER SECOND
MEASURED	(B) _____	CURIES PER SECOND	(D)	_____	CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY)		
2 MILES		
5 MILES		
10 MILES		

11. METEOROLOGICAL DATA (AT 10 METERS):
    - A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
    - B. SECTORS AFFECTED_____
    - C. WIND SPEED_____MPH
    - D. STABILITY CLASS_____
12. RECOMMENDED PROTECTIVE ACTIONS:
    - A. NO RECOMMENDATIONS AT THIS TIME.
    - B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS: (NOTE: IF MESSAGE REFERS TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0--2			
2--5			
5--10			
10-- ___			

13. EVENT TERMINATED: A. NO:_____ B. YES: TIME_____DATE_____
14. MESSAGE RECEIVED BY: NAME _____TIME_____DATE_____

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the control room.

Sector Information:

WIND SECTOR	WIND FROM	DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348.5-11.5	S	H J K
[B]	NNE	11.5-33.5	SSW	J K L
[C]	NE	33.5-56.5	SW	K L M
[D]	ENE	56.5-78.5	WSW	L M N
[E]	E	78.5-101.5	W	M N P
[F]	ESE	101.5-123.5	WNW	N P Q
[G]	SE	123.5-146.5	NW	P Q R
[H]	SSE	146.5-168.5	NNW	Q R A
[J]	S	168.5-191.5	N	R A B
[K]	SSW	191.5-213.5	NNE	A B C
[L]	SW	213.5-236.5	NE	B C D
[M]	WSW	236.5-258.5	ENE	C D E
[N]	W	258.5-281.5	E	D E F
[P]	WNW	281.5-303.5	ESE	E F G
[Q]	NW	303.5-326.5	SE	F G H
[R]	NNW	326.5-348.5	SSE	G H J

STABILITY CLASSIFICATION REFERENCE:

The below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from Homestead Air Force Base (See EPIP-20126, Off-Site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	22.5 or more
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	17.5 to 22.4
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	12.5 to 17.4
Neutral	D	$-1.4 < \Delta T \leq -0.5$	7.5 to 12.4
Slightly stable	E	$-0.5 < \Delta T \leq 1.4$	3.8 to 7.4
Moderately stable	F	$1.4 < \Delta T \leq 3.6$	2.1 to 3.7
Extremely stable	G	$3.6 < \Delta T$	2.0 or less

When available, all meteorological information needed to fill out Section II on the Notification Message Form is available from the Emergency Coordinators Summary Sheet (EPIP-20126). The Summary sheet shall be filled out by Chemistry and given to the Emergency Coordinator.

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 59
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 — US NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EVENT NOTIFICATION WORKSHEET

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLERS NAME	CALL BACK: ENS_____ OR ( ) _____ - _____

EVENT TIME & ZONE	EVENT DATE / /
POWER MODE BEFORE	POWER MODE AFTER

Event Classifications

- ☐ GENERAL EMERGENCY
- ☐ SITE AREA EMERGENCY
- ☐ ALERT
- ☐ UNUSUAL EVENT
- ☐ 50.72 NON-EMERGENCY
- ☐ PHYSICAL SECURITY (73.71)
- ☐ TRANSPORTATION
- ☐ 20.403 MATERIAL/EXPOSURE
- ☐ OTHER
- ☐

1-Hr Non-Emergency 10 CFR 50.72 (b) (1)

- ☐ (i) (A) TS Required S/D
- ☐ (i) (B) TS Deviation
- ☐ (iii) Degraded Condition
- ☐ (ii) (A) Unanalyzed Condition
- ☐ (ii) (B) Outside Design Basis
- ☐ (ii) (C) Not Covered by OPs/EOPs
- ☐ (iii) Earthquake
- ☐ (iii) Flood
- ☐ (iii) Hurricane
- ☐ (iii) Ice/Hail
- ☐ (iii) Lighting
- ☐ (iii) Tornado
- ☐ (iii) Other Natural Phenomenon
- ☐ (iv) ECCS Discharge to RCS
- ☐ (v) Lost ENS
- ☐ (v) Lost Emerg. Assessment
- ☐ (v) Lost Offsite Comms
- ☐ (vi) Fire
- ☐ (vi) Toxic Gas
- ☐ (vi) Rad Release
- ☐ (vi) Oth Hampering Safe Op

4-Hr Non-Emergency 10 CFR 50.72 (b) (2)

- ☐ (i) Degrade While S/D
- ☐ (ii) RPS Actuation (Scram)
- ☐ (ii) ESF Actuation
- ☐ (iii) (A) Safe S/D Capability
- ☐ (iii) (B) Rhr Capability
- ☐ (iii) (C) Control of Rad Release
- ☐ (iii) (D) Accident Mitigation
- ☐ (iv) (A) Air Release >2X App B
- ☐ (iv) (B) Liq Release >2X App B
- ☐ (v) Offsite Medical
- ☐ (vi) Offsite Notification

DESCRIPTION

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE
NRC RESIDENT			
STATE(s)			
LOCAL			
OTHER GOV AGENCIES			

ANYTHING UNUSUAL OR NOT UNDERSTOOD?	☐	YES (Explain above)	☐ NO
DID ALL SYSTEMS FUNCTION AS REQUIRED?	☐	YES	☐ NO (Explain above)
MODE OF OPERATION UNTIL CORRECTED	ESTIMATE FOR RESTART DATE:		☐ ADDITION INFO ON BACK?

★/5:6/tf/bsm/lr

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 60
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 ADDITIONAL INFORMATION USNRC OPERATIONS CENTER

RADIOLOGICAL RELEASES CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

	LIQUID RELEASE		GASEOUS RELEASE		UNPLANNED RELEASE		PLANNED RELEASE		ONGOING		TERMINATED
	MONITORED		UNMONITORED		OFFSITE RELEASE		T.S. EXCEEDED		RM ALARMS		AREAS EVACUATED
	PERSONNEL EXPOSED OR CONTAMINATED				OFFSITE PROTECTIVE ACTIONS RECOMMENDED				*State release path in description		

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gears)			10 uCi/min			0.1Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS:					
ALARM SETPOINTS:					
% T.S. LIMIT (If applicable)					

RCS OR SG TUBE LEAKS CHECK OR FILL IN APPLICABLE ITEMS: *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc)*:

LEAK RATE:	UNITS: gpm/gpd	T.S. Limits:	SUDDEN OR LONG TERM DEVELOPMENT:
LEAK START DATE: TIME:		COOLANT ACTIVITY & UNITS: PRIMARY -	SECONDARY -

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION *(Continued from front)*

Time

_____ 8.5.8 Notify the Nuclear Division Duty Officer (NDDO). If on duty NDDO cannot be reached, notify any NDDO, ECO or System Operations Power Coordinator (last alternate). See the NDDO Schedule or the Emergency Response Directory for telephone numbers, and relay applicable information from the State of Florida Notification Message Form.

_____ 8.5.9 If Emergency Response Facilities (TSC/OSC) are activated consider Emergency Coordinator transfer to TSC.

_____ 8.5.10 If the EOF is operational relinquish communication responsibilities of off-site agencies to Recovery Manager at EOF after a proper turnover/briefing.

_____ 8.5.11 Reassess plant conditions using Table 1 periodically.

CAUTION: If the EOF is operational and the emergency has been upgraded, it is imperative that the Recovery Manager be notified concurrently with the declaration. This will ensure that the 15 minute notification time limit is met.

_____ 8.5.12 If upgrading emergency classification level, proceed to applicable section of this procedure per Table 1 and if the EOF is operational, promptly notify the Recovery Manager.

8.5.13 Every hour (unless state and local agencies agree less frequent updates are required), upon termination, or as conditions change, provide notification to the following if notification responsibilities are with the Emergency Coordinator Onsite:

_____ 1. Complete a State of Florida Notification Message Form

_____ 2. The Emergency Coordinator shall initial form prior to transmitting information to verify Emergency Coordinator approval.

3. Notify the following of the updated information.

_____ a. State Warning Point

_____ b. NDDO

_____ c. Duty Call Supervisor

_____ d. Recovery Manager

_____ 4. Complete an Event Notification Worksheet Form

5. Notify the NRCOC with the updated information.

_____ a. ENS

_____ b. Commercial telephone (refer to ERD)

DUTIES OF EMERGENCY COORDINATOR

STATE OF FLORIDA NOTIFICATION MESSAGE FORM FOR NUCLEAR POWER PLANTS

1. A. TIME/DATE_____ B. REPORTED BY (NAME/TITLE)_____
2. SITE
   - A. CRYSTAL RIVER UNIT 3
   - B. ST. LUCIE UNIT 1
   - C. ST. LUCIE UNIT 2
   - D. TURKEY POINT UNIT 3
   - E. TURKEY POINT UNIT 4
3. ACCIDENT CLASSIFICATION
   - A. NOTIFICATION OF UNUSUAL EVENT
   - B. ALERT
   - C. SITE AREA EMERGENCY
   - D. GENERAL EMERGENCY
4. EMERGENCY DECLARATION TIME: _____ DATE: _____
5. INCIDENT DESCRIPTION or UPDATE _____
6. INJURIES A. CONTAMINATED/NUMBER_____ B. NON-CONTAMINATED/NUMBER_____
7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11. OTHERWISE CONTINUE WITH REST OF FORM.)
   - A. NO RELEASE
   - B. POTENTIAL (POSSIBLE) RELEASE
   - C. A RELEASE IS OCCURRING--EXPECTED DURATION___
   - D. A RELEASE OCCURRED, BUT STOPPED--DURATION___
8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CS-137)
   - A. RADIOACTIVE GASES_____
   - B. RADIOACTIVE AIRBORNE PARTICULATES_____
   - C. RADIOACTIVE LIQUIDS_____
   - D. RADIOACTIVE SOLIDS_____
   - E. NON-RADIOACTIVE GASES_____
   - F. OTHER_____
9. RELEASE RATE:

	NOBLE GASES		IODINES
DEFAULT (A)	_____ CURIES PER SECOND	(C)	_____ CURIES PER SECOND
MEASURED (B)	_____ CURIES PER SECOND	(D)	_____ CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY)		
2 MILES		
5 MILES		
10 MILES		

11. METEOROLOGICAL DATA (AT 10 METERS):
    - A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
    - B. SECTORS AFFECTED_____
    - C. WIND SPEED_____MPH
    - D. STABILITY CLASS_____
12. RECOMMENDED PROTECTIVE ACTIONS:
    - A. NO RECOMMENDATIONS AT THIS TIME.
    - B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS: (NOTE: IF MESSAGE REFERS TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0--2			
2--5			
5--10			
10-- ___			

13. EVENT TERMINATED: A. NO:_____ B. YES: TIME_____DATE_____
14. MESSAGE RECEIVED BY: NAME _____TIME_____DATE_____

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the control room.

Sector Information:

WIND SECTOR	WIND FROM	WIND TOWARD DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348.5-11.5	S	H J K
[B]	NNE	11.5-33.5	SSW	J K L
[C]	NE	33.5-56.5	SW	K L M
[D]	ENE	56.5-78.5	WSW	L M N
[E]	E	78.5-101.5	W	M N P
[F]	ESE	101.5-123.5	WNW	N P Q
[G]	SE	123.5-146.5	NW	P Q R
[H]	SSE	146.5-168.5	NNW	Q R A
[J]	S	168.5-191.5	N	R A B
[K]	SSW	191.5-213.5	NNE	A B C
[L]	SW	213.5-236.5	NE	B C D
[M]	WSW	236.5-258.5	ENE	C D E
[N]	W	258.5-281.5	E	D E F
[P]	WNW	281.5-303.5	ESE	E F G
[Q]	NW	303.5-326.5	SE	F G H
[R]	NNW	326.5-348.5	SSE	G H J

STABILITY CLASSIFICATION REFERENCE:

The below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from Homestead Air Force Base (See EPIP-20126, Off-Site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	22.5 or more
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	17.5 to 22.4
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	12.5 to 17.4
Neutral	D	$-1.4 < \Delta T \leq -0.5$	7.5 to 12.4
Slightly stable	E	$-0.5 < \Delta T \leq 1.4$	3.8 to 7.4
Moderately stable	F	$1.4 < \Delta T \leq 3.6$	2.1 to 3.7
Extremely stable	G	$3.6 < \Delta T$	2.0 or less

When available, all meteorological information needed to fill out Section II on the Notification Message Form is available from the Emergency Coordinators Summary Sheet (EPIP-20126). The Summary sheet shall be filled out by Chemistry and given to the Emergency Coordinator.

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 65
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 ADDITIONAL INFORMATION USNRC OPERATIONS CENTER

RADIOLOGICAL RELEASES CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

	LIQUID RELEASE		GASEOUS RELEASE		UNPLANNED RELEASE		PLANNED RELEASE		ONGOING		TERMINATED
	MONITORED		UNMONITORED		OFFSITE RELEASE		T.S. EXCEEDED		RM ALARMS		AREAS EVACUATED
	PERSONNEL EXPOSED OR CONTAMINATED				OFFSITE PROTECTIVE ACTIONS RECOMMENDED				*State release path in description		

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gears)			10 uCi/min			0.1Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS:					
ALARM SETPOINTS:					
% T.S. LIMIT (If applicable)					

RCS OR SG TUBE LEAKS CHECK OR FILL IN APPLICABLE ITEMS: *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc)*:

LEAK RATE:	UNITS: gpm/gpd	T.S. Limits:	SUDDEN OR LONG TERM DEVELOPMENT:
LEAK START DATE: TIME:		COOLANT ACTIVITY & UNITS: PRIMARY -	SECONDARY -

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION *(Continued from front)*

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 64
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 — US NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EVENT NOTIFICATION WORKSHEET

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLERS NAME	CALL BACK: ENS_____ OR ( )_____

EVENT TIME & ZONE	EVENT DATE / /	POWER MODE BEFORE	POWER MODE AFTER

Event Classifications		1-Hr Non-Emergency 10 CFR 50.72 (b) (1)		4-Hr Non-Emergency 10 CFR 50.72 (b) (2)	
	GENERAL EMERGENCY		(i) (A) TS Required S/D		(i) Degrade While S/D
	SITE AREA EMERGENCY		(i) (B) TS Deviation		(ii) RPS Actuation (Scram)
	ALERT		(iii) Degraded Condition		(ii) ESF Actuation
	UNUSUAL EVENT		(ii) (A) Unanalyzed Condition		(iii) (A) Safe S/D Capability
	50.72 NON-EMERGENCY		(ii) (B) Outside Design Basis		(iii) (B) Rhr Capability
	PHYSICAL SECURITY (73.71)		(ii) (C) Not Covered by OPs/EOPs		(iii) (C) Control of Rad Release
	TRANSPORTATION		(iii) Earthquake		(iii) (D) Accident Mitigation
	20.403 MATERIAL/EXPOSURE		(iii) Flood		(iv) (A) Air Release >2X App B
	OTHER		(iii) Hurricane		(iv) (B) Liq Release >2X App B
			(iii) Ice/Hail		(v) Offsite Medical
			(iii) Lighting		(vi) Offsite Notification
			(iii) Tornado		
			(iii) Other Natural Phenomenon		
			(iv) ECCS Discharge to RCS		
			(v) Lost ENS		
			(v) Lost Emerg. Assessment		
			(v) Lost Offsite Comms		
			(vi) Fire		
			(vi) Toxic Gas		
			(vi) Rad Release		
			(vi) Oth Hampering Safe Op		

DESCRIPTION

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE					
NRC RESIDENT				ANYTHING UNUSUAL OR NOT UNDERSTOOD?		YES (Explain above)		NO
STATE(s)				DID ALL SYSTEMS FUNCTION AS REQUIRED?		YES		NO (Explain above)
LOCAL								
OTHER GOV AGENCIES				MODE OF OPERATION UNTIL CORRECTED	ESTIMATE FOR RESTART DATE:			ADDITION INFO ON BACK?

★/5:6rtf/bsm/lr

DUTIES OF EMERGENCY COORDINATOR

Time

_____ 8.5.14 Using Attachment 1, De-Escalation Guidelines, determine if the emergency can be de-escalated or terminated.

_____ 8.5.15 If de-escalating Alert, return to the applicable section of this procedure per Table 1.

Time

_____ 8.6 If a Site Area Emergency has been declared perform the following steps.

CAUTION: De-escalation from Site Area Emergency must be done in concurrence with the ECO.

NOTE: Notification steps may be performed out of sequence in order to meet State of Florida and/or NRC notification time requirements.

8.6.1 The Emergency Log Book should be used to document sequence of events.

NOTE: Prescribed emergency announcements may be omitted or modified as directed by the Emergency Coordinator, or his designee, to prevent alarming intruders if security events warrant.

8.6.2 Inform, or have the Control Room inform, site personnel of the emergency via cross connected Plant Page System and make one of the following announcements twice [Either (1) or (2)]:

CAUTION: If a release is in progress, inform emergency responders of access routes to Emergency Response Facilities. During off-hours, dispatch security to route incoming emergency responders away from hazardous routes.

1. If ENTERING into a Site Area Emergency, make the following announcement twice.

   "Attention all personnel; attention all personnel: A Site Area Emergency has been declared on Unit (#) due to (provide brief description of initiating event). All Emergency Response Organization members report to your designated Emergency Response Facility."

CAUTION: ECO Approval is required prior to downgrading from a site area emergency.

2. If DOWNGRADING to a Site Area Emergency, make the following announcement twice:

   "Attention all personnel; attention all personnel: The emergency has been downgraded to Site Area Emergency"

Time

8.6.3 Consider plant and radiological conditions as they relate to the emergency regarding site evacuation:

1. Potential for release
2. Duration of release
3. Direction of release
4. Meteorological conditions
5. Plant conditions (need for supplemental emergency response personnel)
6. Security Threats to Evacuees

CAUTION: As conditions warrant, the Emergency Coordinator may delay, postpone, or make special requirements (for discussion, see Section 4.19) on the evacuation. If large doses will be received during an evacuation, it may be more effective to shelter non-essential personnel onsite.

NOTE: Prescribed emergency announcements may be omitted or modified as directed by the Emergency Coordinator, or his designee, to prevent alarming intruders if security events warrant.

8.6.4 Implement an Owner Controlled Area Evacuation if no significant hazards exist which may threaten evacuees.

____ 1. If the TSC Health Physics Supervisor is available, discuss release status, release duration, and wind direction to determine applicable evacuation rout and Offsite Assembly Area.

____ 2. Notify the Security Shift Specialist for an evacuation of the Owner Controlled Area, including non-essential personnel from the Protected Area, and instruct them to implement EPIP-20110, Criteria for and Conduct of an Owner Controlled Area Evacuation, and Security Force Instruction (SFI) 6307, Emergency Evacuation.

____ 3. Notify the Watch Engineer of Units 1 and 2 of the Site Evacuation and instruct them to initiate a roster of personnel left in the fossil units for shutdown of the fossil units.

Time

8.6.6 If there is a localized emergency (fire, high radiation, toxic gas):

_____ 1. Determine an assembly area for personnel evacuated from the affected area.

_____ 2. Announce type and location, instruct personnel to stand clear and report to the designated assembly area.

_____ 3. Sound applicable alarm, if not previously done.

_____ 4. Announce type and location, instruct personnel to stand clear and report to the designated assembly area.

_____ 5. Initiate Search and Rescue as required.

_____ 8.6.7 If the onsite Emergency Response Facilities are operational consider Emergency Coordinator transfer to TSC, if not previously done.

NOTE: If plant events (radiological or security threat considerations) warrant, alternate facilities and/or routes to these facilities may be necessary. Refer to Precations, Section 4.0.

_____ 8.6.8 If not previously done, instruct STA to initiate activation of onsite Emergency Response Facilities (ERF) per EPIP-20104.

_____ 8.6.9 Update onsite emergency responders of the emergency conditions.

_____ 8.6.10 If the EOF is operational relinquish communication responsibilities to offsite agencies to Recovery Manager at EOF.

Time

CAUTIONS:

- Notification to the State Warning Point is required within 15 minutes of emergency classification.
- Notification to the NRCOC is required to immediately follow the State notification and no later than one (1) hour.
- Collection of Release Rate Data shall not delay State of Florida or NRC notifications.
- If a transitory event has occurred, notifications are still required using this procedure.
- If during the notification process it becomes ecessary to upgrade the emergency classification, stop the current notification process and proceed to the steps corresponding to the new emergency classification.

8.6.11 If offsite (State/County) notification responsibilities ARE with the Emergency Coordinator onsite, complete the following steps:

_____ 1. Complete the State of Florida Notification Message Form.

_____ 2. The Emergency Coordinator shall initial the form prior to transmitting the information to verify Emergency Coordinator approval.

NOTE: State Warning Point may request verification call back. If requested, they will call in on the black bell phone (ringmaster) or cellular phone in the Control Room.

3. Within 15 minutes of classifying the Site Area Emergency notify the State Warning Point in Tallahassee and relay information from the State of Florida Notification Message Form just completed via one of the following:

_____ a. Hot Ring Down Telephone (22)

_____ b. NAWAS

_____ c. Commercial Telephone (refer to ERD)

_____ d. Cellular Phone (refer to ERD)

_____ e. Local Government Radio

Time

_____ 4. Inform, or have the Control Room inform, site personnel via cross connect Plant Page System and complete the following steps:

CAUTION: If a significant release (process monitors off scale or other indications) and/or security related (intruders, bomb threat, etc) events are in progress, inform emergency responders AND site evacuees of best access and egress routes to take to/from site to minimize hazards. During off-hours, dispatch Security to route incoming emergency responders away from hazardous routes.

a. Make the following announcement:

"Attention all personnel; attention all personnel: An Owner Controlled Area Evacuation has been implemented. All Emergency Response Organization members report to your designated Emergency Response Facility. All other personnel evacuate to (designated Offsite Assembly Area) by (route to Offsite Assembly Area)"

b. Sound the Site Evacuation Alarm.

c. Make the following announcement:

"Attention all personnel; attention all personnel: An Owner Controlled Area Evacuation has been implemented. All Emergency Response Organization members report to your designated Emergency Response Facility. All other personnel evacuate to (designated Offsite Assembly Area) by (route to Offsite Assembly Area)"

8.6.5 Notify the TSC Security Supervisor (Security Shift Specialist) to:

_____ 1. Djscuss the potential for the suspension of all or some safeguards. (Reference Section 3.2.4).

_____ 2. Provide accountability information as needed (names and badge numbers).

Time

4. Complete an Event Notification Worksheet Form.

5. Immediately after the notification to State/County agencies of the Site Area Emergency contact the NRCOC in Bethesda and relay the information from the Event Notification Worksheet just completed via one of the following:

   a. ENS

   b. Commercial Telephone (refer to ERD)

   c. Cellular Telephone (refer to ERD)

STATE OF FLORIDA NOTIFICATION MESSAGE FORM FOR NUCLEAR POWER PLANTS

1. A. TIME/DATE_____ B. REPORTED BY (NAME/TITLE)_____
2. SITE
   - A. CRYSTAL RIVER UNIT 3
   - B. ST. LUCIE UNIT 1
   - C. ST. LUCIE UNIT 2
   - D. TURKEY POINT UNIT 3
   - E. TURKEY POINT UNIT 4
3. ACCIDENT CLASSIFICATION
   - A. NOTIFICATION OF UNUSUAL EVENT
   - B. ALERT
   - C. SITE AREA EMERGENCY
   - D. GENERAL EMERGENCY
4. EMERGENCY DECLARATION TIME: _____ DATE: _____
5. INCIDENT DESCRIPTION or UPDATE _____
6. INJURIES A. CONTAMINATED/NUMBER_____ B. NON-CONTAMINATED/NUMBER_____
7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11. OTHERWISE CONTINUE WITH REST OF FORM.)
   - A. NO RELEASE
   - B. POTENTIAL (POSSIBLE) RELEASE
   - C. A RELEASE IS OCCURRING--EXPECTED DURATION___
   - D. A RELEASE OCCURRED, BUT STOPPED--DURATION___
8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CS-137)
   - A. RADIOACTIVE GASES_____
   - B. RADIOACTIVE AIRBORNE PARTICULATES_____
   - C. RADIOACTIVE LIQUIDS_____
   - D. RADIOACTIVE SOLIDS_____
   - E. NON-RADIOACTIVE GASES_____
   - F. OTHER_____
9. RELEASE RATE:

	NOBLE GASES		IODINES
DEFAULT	(A) _____ CURIES PER SECOND	(C) _____	CURIES PER SECOND
MEASURED	(B) _____ CURIES PER SECOND	(D) _____	CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY)		
2 MILES		
5 MILES		
10 MILES		

11. METEOROLOGICAL DATA (AT 10 METERS):
    - A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
    - B. SECTORS AFFECTED_____
    - C. WIND SPEED_____MPH
    - D. STABILITY CLASS_____
12. RECOMMENDED PROTECTIVE ACTIONS:
    - A. NO RECOMMENDATIONS AT THIS TIME.
    - B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS: (NOTE: IF MESSAGE REFERS TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0--2			
2--5			
5--10			
10-- ___			

13. EVENT TERMINATED: A. NO:_____ B. YES: TIME_____DATE_____
14. MESSAGE RECEIVED BY: NAME _____TIME_____DATE_____

Revision 12/12/88

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the control room.

Sector Information:

WIND SECTOR	WIND FROM	WIND TOWARD DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348.5-11.5	S	H J K
[B]	NNE	11.5-33.5	SSW	J K L
[C]	NE	33.5-56.5	SW	K L M
[D]	ENE	56.5-78.5	WSW	L M N
[E]	E	78.5-101.5	W	M N P
[F]	ESE	101.5-123.5	WNW	N P Q
[G]	SE	123.5-146.5	NW	P Q R
[H]	SSE	146.5-168.5	NNW	Q R A
[J]	S	168.5-191.5	N	R A B
[K]	SSW	191.5-213.5	NNE	A B C
[L]	SW	213.5-236.5	NE	B C D
[M]	WSW	236.5-258.5	ENE	C D E
[N]	W	258.5-281.5	E	D E F
[P]	WNW	281.5-303.5	ESE	E F G
[Q]	NW	303.5-326.5	SE	F G H
[R]	NNW	326.5-348.5	SSE	G H J

STABILITY CLASSIFICATION REFERENCE:

The below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from Homestead Air Force Base (See EPIP-20126, Off-Site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	22.5 or more
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	17.5 to 22.4
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	12.5 to 17.4
Neutral	D	$-1.4 < \Delta T \leq -0.5$	7.5 to 12.4
Slightly stable	E	$-0.5 < \Delta T \leq 1.4$	3.8 to 7.4
Moderately stable	F	$1.4 < \Delta T \leq 3.6$	2.1 to 3.7
Extremely stable	G	$3.6 < \Delta T$	2.0 or less

When available, all meteorological information needed to fill out Section II on the Notification Message Form is available from the Emergency Coordinators Summary Sheet (EPIP-20126). The Summary sheet shall be filled out by Chemistry and given to the Emergency Coordinator.

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NRC FORM 361 — US NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EVENT NOTIFICATION WORKSHEET

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLERS NAME	CALL BACK: ENS_____ OR( ) _____ - _____

EVENT TIME & ZONE	EVENT DATE / /
POWER MODE BEFORE	POWER MODE AFTER

Event Classifications

- ☐ GENERAL EMERGENCY
- ☐ SITE AREA EMERGENCY
- ☐ ALERT
- ☐ UNUSUAL EVENT
- ☐ 50.72 NON-EMERGENCY
- ☐ PHYSICAL SECURITY (73.71)
- ☐ TRANSPORTATION
- ☐ 20.403 MATERIAL/EXPOSURE
- ☐ OTHER
- ☐

1-Hr Non-Emergency 10 CFR 50.72 (b) (1)

- ☐ (i) (A) TS Required S/D
- ☐ (i) (B) TS Deviation
- ☐ (iii) Degraded Condition
- ☐ (ii) (A) Unanalyzed Condition
- ☐ (ii) (B) Outside Design Basis
- ☐ (ii) (C) Not Covered by OPs/EOPs
- ☐ (iii) Earthquake
- ☐ (iii) Flood
- ☐ (iii) Hurricane
- ☐ (iii) Ice/Hail
- ☐ (iii) Lighting
- ☐ (iii) Tornado
- ☐ (iii) Other Natural Phenomenon
- ☐ (iv) ECCS Discharge to RCS
- ☐ (v) Lost ENS
- ☐ (v) Lost Emerg. Assessment
- ☐ (v) Lost Offsite Comms
- ☐ (vi) Fire
- ☐ (vi) Toxic Gas
- ☐ (vi) Rad Release
- ☐ (vi) Oth Hampering Safe Op

4-Hr Non-Emergency 10 CFR 50.72 (b) (2)

- ☐ (i) Degrade While S/D
- ☐ (ii) RPS Actuation (Scram)
- ☐ (ii) ESF Actuation
- ☐ (iii) (A) Safe S/D Capability
- ☐ (iii) (B) Rhr Capability
- ☐ (iii) (C) Control of Rad Release
- ☐ (iii) (D) Accident Mitigation
- ☐ (iv) (A) Air Release >2X App B
- ☐ (iv) (B) Liq Release >2X App B
- ☐ (v) Offsite Medical
- ☐ (vi) Offsite Notification

DESCRIPTION

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE				
NRC RESIDENT				ANYTHING UNUSUAL OR NOT UNDERSTOOD?	☐	YES (Explain above)	☐ NO
STATE(s)				DID ALL SYSTEMS FUNCTION AS REQUIRED?	☐	YES	☐ NO (Explain above)
LOCAL							
OTHER GOV AGENCIES				MODE OF OPERATION UNTIL CORRECTED	ESTIMATE FOR RESTART DATE:	☐	ADDITION INFO ON BACK?

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DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 | ADDITIONAL INFORMATION | USNRC OPERATIONS CENTER

RADIOLOGICAL RELEASES CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

	LIQUID RELEASE		GASEOUS RELEASE		UNPLANNED RELEASE		PLANNED RELEASE		ONGOING		TERMINATED
	MONITORED		UNMONITORED		OFFSITE RELEASE		T.S. EXCEEDED		RM ALARMS		AREAS EVACUATED
	PERSONNEL EXPOSED OR CONTAMINATED				OFFSITE PROTECTIVE ACTIONS RECOMMENDED				*State release path in description		

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gears)			10 uCi/min			0.1Ci
Liquid (tritium)			0.2 Ci/mih			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS:					
ALARM SETPOINTS:					
% T.S. LIMIT (If applicable)					

RCS OR SG TUBE LEAKS CHECK OR FILL IN APPLICABLE ITEMS: *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc)*:

LEAK RATE:	UNITS: gpm/gpd	T.S. Limits:	SUDDEN OR LONG TERM DEVELOPMENT:
LEAK START DATE: TIME:		COOLANT ACTIVITY & UNITS: PRIMARY -	SECONDARY -

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION *(Continued from front)*

Time

8.6.12 Notify the Nuclear Division Duty Officer (NDDO). If on duty NDDO cannot be reached, notify any NDDO, ECO or System Operations Power Coordinator (last alternate). See the NDDO Schedule or the Emergency Response Directory for telephone numbers, and relay applicable information from the State of Florida Notification Message Form.

8.6.13 If the Onsite Emergency Response Facilities (TSC/OSC) operational consider Emergency Coordinator transfer to TSC.

8.6.14 If the EOF is operational relinquish communication responsibilities with offsite agencies to Recovery Manager at EOF.

8.6.15 Determine the status of the Owner Controlled Area Evacuation. Security has 30 minutes to provide a list of names of personnel not yet accounted for inside the Protected Area.

8.6.16 Reassess plant conditions using Table 1 and Table 2 periodically.

CAUTION: If the EOF is operational and the emergency has been upgraded, it is imperative that the Recovery Manager be notified concurrently with the declaration. This will ensure that the 15 minute notification time limit is not missed.

8.6.17 If upgrading Emergency Classification, proceed to applicable section of this procedure per Table 1, and if the EOF is operational, notify the Recovery Manager promptly.

8.6.18 Every hour, upon termination, or as conditions change, provide notifications to the following if notification responsibilities are with the Emergency Coordinator Onsite:

1. Complete a State of Florida Notification Message Form

2. The Emergency Coordinator shall initial form prior to transmitting information to verify Emergency Coordinator approval.

3. Notify the following of the new information:

   a. State Warning Point

   b. NDDO

   c. Duty Call Supervisor

   d. Recovery Manager

Time		
_____		4. Complete an Event Notification Worksheet Form.
_____		5. Notify the NRCOC with the new information.
_____	8.6.19	Using Attachment 1, De-Escalation Guidelines determine if the emergency can be de-escalated or terminated.
_____	8.6.20	If conditions warrant, recommend de-escalation of Site Area Emergency to RM. (Any de-escalation from Site Area Emergency shall be determined by the ECO.)

STATE OF FLORIDA NOTIFICATION MESSAGE FORM FOR NUCLEAR POWER PLANTS

1. A. TIME/DATE_____ B. REPORTED BY (NAME/TITLE)_____
2. SITE
   - A. CRYSTAL RIVER UNIT 3
   - B. ST. LUCIE UNIT 1
   - C. ST. LUCIE UNIT 2
   - D. TURKEY POINT UNIT 3
   - E. TURKEY POINT UNIT 4
3. ACCIDENT CLASSIFICATION
   - A. NOTIFICATION OF UNUSUAL EVENT
   - B. ALERT
   - C. SITE AREA EMERGENCY
   - D. GENERAL EMERGENCY
4. EMERGENCY DECLARATION TIME: _____ DATE: _____
5. INCIDENT DESCRIPTION or UPDATE _____
6. INJURIES A. CONTAMINATED/NUMBER_____ B. NON-CONTAMINATED/NUMBER_____
7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11. OTHERWISE CONTINUE WITH REST OF FORM.)
   - A. NO RELEASE
   - B. POTENTIAL (POSSIBLE) RELEASE
   - C. A RELEASE IS OCCURRING--EXPECTED DURATION___
   - D. A RELEASE OCCURRED, BUT STOPPED--DURATION___
8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CS-137)
   - A. RADIOACTIVE GASES_____
   - B. RADIOACTIVE AIRBORNE PARTICULATES_____
   - C. RADIOACTIVE LIQUIDS_____
   - D. RADIOACTIVE SOLIDS_____
   - E. NON-RADIOACTIVE GASES_____
   - F. OTHER_____
9. RELEASE RATE:

		NOBLE GASES			IODINES
DEFAULT	(A) _____	CURIES PER SECOND	(C)	_____	CURIES PER SECOND
MEASURED	(B) _____	CURIES PER SECOND	(D)	_____	CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY)		
2 MILES		
5 MILES		
10 MILES		

11. METEOROLOGICAL DATA (AT 10 METERS):
    - A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
    - B. SECTORS AFFECTED_____
    - C. WIND SPEED_____MPH
    - D. STABILITY CLASS_____
12. RECOMMENDED PROTECTIVE ACTIONS:
    - A. NO RECOMMENDATIONS AT THIS TIME.
    - B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS:
      (NOTE: IF MESSAGE REFERS TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0--2			
2--5			
5--10			
10-- ___			

13. EVENT TERMINATED: A. NO:_____ B. YES: TIME_____DATE_____
14. MESSAGE RECEIVED BY: NAME _____TIME_____DATE_____

Revision 12/12/88

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the control room.

Sector Information:

WIND SECTOR	WIND FROM	DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348.5-11.5	S	H J K
[B]	NNE	11.5-33.5	SSW	J K L
[C]	NE	33.5-56.5	SW	K L M
[D]	ENE	56.5-78.5	WSW	L M N
[E]	E	78.5-101.5	W	M N P
[F]	ESE	101.5-123.5	WNW	N P Q
[G]	SE	123.5-146.5	NW	P Q R
[H]	SSE	146.5-168.5	NNW	Q R A
[J]	S	168.5-191.5	N	R A B
[K]	SSW	191.5-213.5	NNE	A B C
[L]	SW	213.5-236.5	NE	B C D
[M]	WSW	236.5-258.5	ENE	C D E
[N]	W	258.5-281.5	E	D E F
[P]	WNW	281.5-303.5	ESE	E F G
[Q]	NW	303.5-326.5	SE	F G H
[R]	NNW	326.5-348.5	SSE	G H J

STABILITY CLASSIFICATION REFERENCE:

The below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from Homestead Air Force Base (See EPIP-20126, Off-Site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	22.5 or more
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	17.5 to 22.4
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	12.5 to 17.4
Neutral	D	$-1.4 < \Delta T \leq -0.5$	7.5 to 12.4
Slightly stable	E	$-0.5 < \Delta T \leq 1.4$	3.8 to 7.4
Moderately stable	F	$1.4 < \Delta T \leq 3.6$	2.1 to 3.7
Extremely stable	G	$3.6 < \Delta T$	2.0 or less

When available, all meteorological information needed to fill out Section II on the Notification Message Form is available from the Emergency Coordinators Summary Sheet (EPIP-20126). The Summary sheet shall be filled out by Chemistry and given to the Emergency Coordinator.

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DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 — US NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EVENT NOTIFICATION WORKSHEET

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLERS NAME	CALL BACK: ENS_____ OR ( )_____-_____

EVENT TIME & ZONE	EVENT DATE / /	POWER MODE BEFORE	POWER MODE AFTER

Event Classifications

	GENERAL EMERGENCY
	SITE AREA EMERGENCY
	ALERT
	UNUSUAL EVENT
	50.72 NON-EMERGENCY
	PHYSICAL SECURITY (73.71)
	TRANSPORTATION
	20.403 MATERIAL/EXPOSURE
	OTHER

1-Hr Non-Emergency 10 CFR 50.72 (b) (1)

	(i) (A) TS Required S/D
	(i) (B) TS Deviation
	(iii) Degraded Condition
	(ii) (A) Unanalyzed Condition
	(ii) (B) Outside Design Basis
	(ii) (C) Not Covered by OPs/EOPs
	(iii) Earthquake
	(iii) Flood
	(iii) Hurricane
	(iii) Ice/Hail
	(iii) Lighting
	(iii) Tornado
	(iii) Other Natural Phenomenon
	(iv) ECCS Discharge to RCS
	(v) Lost ENS
	(v) Lost Emerg. Assessment
	(v) Lost Offsite Comms
	(vi) Fire
	(vi) Toxic Gas
	(vi) Rad Release
	(vi) Oth Hampering Safe Op

4-Hr Non-Emergency 10 CFR 50.72 (b) (2)

	(i) Degrade While S/D
	(ii) RPS Actuation (Scram)
	(ii) ESF Actuation
	(iii) (A) Safe S/D Capability
	(iii) (B) Rhr Capability
	(iii) (C) Control of Rad Release
	(iii) (D) Accident Mitigation
	(iv) (A) Air Release >2X App B
	(iv) (B) Liq Release >2X App B
	(v) Offsite Medical
	(vi) Offsite Notification

DESCRIPTION

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE					
NRC RESIDENT				ANYTHING UNUSUAL OR NOT UNDERSTOOD?		YES (Explain above)		NO
STATE(s)				DID ALL SYSTEMS FUNCTION AS REQUIRED?		YES		NO (Explain above)
LOCAL								
OTHER GOV AGENCIES				MODE OF OPERATION UNTIL CORRECTED	ESTIMATE FOR RESTART DATE:			ADDITION INFO ON BACK?

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EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 82
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 ADDITIONAL INFORMATION USNRC OPERATIONS CENTER

RADIOLOGICAL RELEASES CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

	LIQUID RELEASE		GASEOUS RELEASE		UNPLANNED RELEASE		PLANNED RELEASE		ONGOING		TERMINATED
	MONITORED		UNMONITORED		OFFSITE RELEASE		T.S. EXCEEDED		RM ALARMS		AREAS EVACUATED
	PERSONNEL EXPOSED OR CONTAMINATED				OFFSITE PROTECTIVE ACTIONS RECOMMENDED				*State release path in description		

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gears)			10 uCi/min			0.1Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS:					
ALARM SETPOINTS:					
% T.S. LIMIT (If applicable)					

RCS OR SG TUBE LEAKS CHECK OR FILL IN APPLICABLE ITEMS: *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc)*:

LEAK RATE:	**UNITS: gpm/gpd**	**T.S. Limits:**	**SUDDEN OR LONG TERM DEVELOPMENT:**
LEAK START DATE:	**TIME:**	**COOLANT ACTIVITY & UNITS: PRIMARY -**	**SECONDARY -**

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION *(Continued from front)*

Time .

8.7 If a General Emergency has been declared complete the following steps:

CAUTION: De-escalation from a General Emergency must be done in concurrence with the ECO.

NOTE: Notification steps may be performed out of sequence in order to meet Sate of Florida and/or NRC notification time requirements.

8.7.1 The Emergency Log Book should be used to document sequence of events.

CAUTION: If a release or security events are in progress, inform emergency responders of access routes to Emergency Response Facilities. During off-hours, dispatch Security to route incoming emergency responders away from hazardous routes.

NOTE: Prescribed emergency announcements may be omitted or modified as directed by the Emergency Coordinator or his designee, to prevent alarming intruders if security events warrant.

8.7.2 Inform, or have the Control Room inform, site personnel of the emergency via cross connected Plant Page System and make following announcement twice:

"Attention all personnel; attention all personnel: A General Emergency has been declared on Unit (#) due to (provide brief description of initiating event). All Emergency Response Organization members report to your designated Emergency Response Facility."

CAUTIONS:

- ECO approval is required prior to downgrading from a General Emergency.
- Radiological, security threats and plant conditions shall also be considered when preparing to evacuate personnel. If large doses will be received during an evacuation, or if security threats jeopardize evacuation routes, it may be more effective to shelter non-essential personnel onsite. Also, take into consideration duration of release, plant conditions, potential for release, and meteorological conditions.

8.7.3 Implement an Owner Controlled Area Evacuation if no significanthazards exist which may threaten evacuees.

1. If the TSC Health Physics Supervisor is available, discuss release status, release duration, and wind direction to determine applicable evacuation route and Offsite Assembly Area.

Time

_____ 2. Notify the Security Shift Specialist for an evacuation of the Owner Controlled Area, including non-essential personnel from the Protected Area, and instruct them to implement EPIP-20110, Criteria for a conduct of an Owner Controlled Area Evacuation, and Security Force Instruction (SFI) 6307, Emergency Evacuation.

_____ 3. Notify the Watch Engineer of Units 1 and 2 of the Site Evacuation and instruct them to initiate a roster of personnel left in the fossil units for shutdown of the fossil units.

_____ 4. Inform, or have Control Room personnel inform, site personnel via cross connected Plant Page System and complete the following:

CAUTION: If significant release (process monitors offscale or other indications) and/or security related (intruders, bomb threat, etc) events are in progress, inform emergency responders AND site evacuees of best access and egress routes to take from site to minimize hazards. During off-hours, dispatch Security to route incoming emergency responders away from hazardous routes.

a. Make the following announcement:

"Attention all personnel; attention all personnel: An Owner controlled Area Evacuation has been implemented. All Emergency Response Organization members report to your designated Emergency Response Facility. All other personnel evacuate to (designated Offsite Assembly Area) by (route to Offsite Assembly Area)"

b. Sound the Site Evacuation Alarm.

c. Make the following announcement:

"Attention all personnel; attention all personnel: An Owner Controlled Area Evacuation has been implemented. All Emergency Response Organization members report to your designated Emergency Response Facility. All other personnel evacuate to (designated Offsite Assembly Area) by (route to Offsite Assembly Area)"

Time

8.7.4 Notify the TSC Security Supervisor (Security Shift Specialist)

_____ 1. To discuss the potential for the suspension of all or some safeguards (Reference Section 3.2.4).

_____ 2. Provide accountability information as needed (names and badge numbers).

8.7.5 If there is a localized emergency (fire, high radiation, toxic gas):

_____ 1. Determine an assembly area for personnel evacuated from the affected area.

_____ 2. Announce its type and location, instruct personnel to stand clear and report to the designated assembly area.

_____ 3. Sound applicable alarm, if not previously done.

4. Announce its type and location, instruct personnel to stand clear and report to the designated assembly area.

_____ 5. Initiate Search and Rescue as required.

_____ 8.7.6 If the Onsite Emergency Response Facilities are operational consider Emergency Coordinator transfer to TSC.

NOTE: If plant events (radiological or security threat considerations) warrant, alternate facilities and/or routes to these facilities may be necessary. Refer to precautions.

_____ 8.7.7 If not previously done, instruct STA to initiate activation of the Onsite Emergency Response Facilities (ERF) per EPIP-20104.

_____ 8.7.8 Update onsite emergency responders of the emergency conditions.

_____ 8.7.9 If the EOF is operational relinquish communication responsibilities to offsite agencies to Recovery Manager at EOF.

Time

CAUTIONS:

- Notification to the State Warning Point is required within 15 minutes of emergency classification.
- Notification to the NRCOC is required to immediately follow the State notification and no later than one (1) hour.
- Collection of Release Rate Data shall not delay State of Florida or NRC notifications.
- If a transitory event has occurred, notifications are still required using this procedure.
- If during the notification process it becomes necessary to upgrade the emergency classification, stop the current notification process and proceed to the steps corresponding to the new emergency classification.

8.7.10 If offsite (State/County) notification responsibilities ARE with the Emergency Coordinator onsite, complete the following steps:

_____ 1. Complete the State of Florida Notification Message Form.

_____ 2. The Emergency Coordinator shall initial the form prior to transmitting the information to verify Emergency Coordinator approval.

NOTE: State Warning Point may request verification call back. If requested, they will call in on the black bell phone (ringmaster) or cellular phone in the Control Room.

3. Within 15 minutes of classifying the General Emergency notify the State Warning Point in Tallahassee and relay information from the State of Florida Notification Message Form just completed via one of the following:

_____ a. Hot Ring Down Telephone (22)

_____ b. NAWAS

_____ c. Commercial Telephone (refer to ERD)

_____ d. Cellular Phone (refer to ERD)

_____ e. Local Government Radio

Time

_____ 4. Complete an Event Notification Worksheet Form.

5. Immediately after the notification to State/County agencies of the General Emergency contact the NRCOC in Bethesda and relay the information from the Event Notification Worksheet just completed via one of the following:

_____ a. ENS

_____ b. Commercial Telephone (refer to ERD)

_____ c. Cellular Telephone (refer to ERD)

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 88
DUTIES OF EMERGENCY COORDINATOR

STATE OF FLORIDA NOTIFICATION MESSAGE FORM FOR NUCLEAR POWER PLANTS

1. A. TIME/DATE_____ B. REPORTED BY (NAME/TITLE)_____
2. SITE
   - A. CRYSTAL RIVER UNIT 3
   - B. ST. LUCIE UNIT 1
   - C. ST. LUCIE UNIT 2
   - D. TURKEY POINT UNIT 3
   - E. TURKEY POINT UNIT 4
3. ACCIDENT CLASSIFICATION
   - A. NOTIFICATION OF UNUSUAL EVENT
   - B. ALERT
   - C. SITE AREA EMERGENCY
   - D. GENERAL EMERGENCY
4. EMERGENCY DECLARATION TIME: _____ DATE: _____
5. INCIDENT DESCRIPTION or UPDATE _____
6. INJURIES A. CONTAMINATED/NUMBER_____ B. NON-CONTAMINATED/NUMBER_____
7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11. OTHERWISE CONTINUE WITH REST OF FORM.)
   - A. NO RELEASE
   - B. POTENTIAL (POSSIBLE) RELEASE
   - C. A RELEASE IS OCCURRING--EXPECTED DURATION___
   - D. A RELEASE OCCURRED, BUT STOPPED--DURATION___
8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CS-137)
   - A. RADIOACTIVE GASES_____
   - B. RADIOACTIVE AIRBORNE PARTICULATES_____
   - C. RADIOACTIVE LIQUIDS_____
   - D. RADIOACTIVE SOLIDS_____
   - E. NON-RADIOACTIVE GASES_____
   - F. OTHER_____
9. RELEASE RATE:

	NOBLE GASES		IODINES
DEFAULT (A) _____	CURIES PER SECOND	(C) _____	CURIES PER SECOND
MEASURED (B) _____	CURIES PER SECOND	(D) _____	CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY)		
2 MILES		
5 MILES		
10 MILES		

11. METEOROLOGICAL DATA (AT 10 METERS):
    - A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
    - B. SECTORS AFFECTED_____
    - C. WIND SPEED_____MPH
    - D. STABILITY CLASS_____
12. RECOMMENDED PROTECTIVE ACTIONS:
    - A. NO RECOMMENDATIONS AT THIS TIME.
    - B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS:
      (NOTE: IF MESSAGE REFERS TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0--2			
2--5			
5--10			
10-- ___			

13. EVENT TERMINATED: A. NO:_____ B. YES: TIME_____DATE_____
14. MESSAGE RECEIVED BY: NAME _____TIME_____DATE_____

Revision 12/12/88

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the control room.

Sector Information:

WIND SECTOR	WIND FROM	DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348.5-11.5	S	H J K
[B]	NNE	11.5-33.5	SSW	J K L
[C]	NE	33.5-56.5	SW	K L M
[D]	ENE	56.5-78.5	WSW	L M N
[E]	E	78.5-101.5	W	M N P
[F]	ESE	101.5-123.5	WNW	N P Q
[G]	SE	123.5-146.5	NW	P Q R
[H]	SSE	146.5-168.5	NNW	Q R A
[J]	S	168.5-191.5	N	R A B
[K]	SSW	191.5-213.5	NNE	A B C
[L]	SW	213.5-236.5	NE	B C D
[M]	WSW	236.5-258.5	ENE	C D E
[N]	W	258.5-281.5	E	D E F
[P]	WNW	281.5-303.5	ESE	E F G
[Q]	NW	303.5-326.5	SE	F G H
[R]	NNW	326.5-348.5	SSE	G H J

STABILITY CLASSIFICATION REFERENCE:

The below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from Homestead Air Force Base (See EPIP-20126, Off-Site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	22.5 or more
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	17.5 to 22.4
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	12.5 to 17.4
Neutral	D	$-1.4 < \Delta T \leq -0.5$	7.5 to 12.4
Slightly stable	E	$-0.5 < \Delta T \leq 1.4$	3.8 to 7.4
Moderately stable	F	$1.4 < \Delta T \leq 3.6$	2.1 to 3.7
Extremely stable	G	$3.6 < \Delta T$	2.0 or less

When available, all meteorological information needed to fill out Section II on the Notification Message Form is available from the Emergency Coordinators Summary Sheet (EPIP-20126). The Summary sheet shall be filled out by Chemistry and given to the Emergency Coordinator.

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 90
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NRC FORM 361 — US NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EVENT NOTIFICATION WORKSHEET

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLERS NAME	CALL BACK: ENS_____ OR ( ) _____ - _____

EVENT TIME & ZONE	EVENT DATE / /	POWER MODE BEFORE	POWER MODE AFTER

Event Classifications		1-Hr Non-Emergency 10 CFR 50.72 (b) (1)		4-Hr Non-Emergency 10 CFR 50.72 (b) (2)	
	GENERAL EMERGENCY		(i) (A) TS Required S/D		(i) Degrade While S/D
	SITE AREA EMERGENCY		(i) (B) TS Deviation		(ii) RPS Actuation (Scram)
	ALERT		(iii) Degraded Condition		(ii) ESF Actuation
	UNUSUAL EVENT		(ii) (A) Unanalyzed Condition		(iii) (A) Safe S/D Capability
	50.72 NON-EMERGENCY		(ii) (B) Outside Design Basis		(iii) (B) Rhr Capability
	PHYSICAL SECURITY (73.71)		(ii) (C) Not Covered by OPs/EOPs		(iii) (C) Control of Rad Release
	TRANSPORTATION		(iii) Earthquake		(iii) (D) Accident Mitigation
	20.403 MATERIAL/EXPOSURE		(iii) Flood		(iv) (A) Air Release >2X App B
	OTHER		(iii) Hurricane		(iv) (B) Liq Release >2X App B
			(iii) Ice/Hail		(v) Offsite Medical
			(iii) Lighting		(vi) Offsite Notification
			(iii) Tornado		(v) Lost Offsite Comms
			(iii) Other Natural Phenomenon		(vi) Fire
			(iv) ECCS Discharge to RCS		(vi) Toxic Gas
			(v) Lost ENS		(vi) Rad Release
			(v) Lost Emerg. Assessment		(vi) Oth Hampering Safe Op

DESCRIPTION

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE					
NRC RESIDENT				ANYTHING UNUSUAL OR NOT UNDERSTOOD?		YES (Explain above)		NO
STATE(s)				DID ALL SYSTEMS FUNCTION AS REQUIRED?		YES		NO (Explain above)
LOCAL								
OTHER GOV AGENCIES				MODE OF OPERATION UNTIL CORRECTED	ESTIMATE FOR RESTART DATE:			ADDITION INFO ON BACK?

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EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 91
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NRC FORM 361 ADDITIONAL INFORMATION USNRC OPERATIONS CENTER

RADIOLOGICAL RELEASES CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

	LIQUID RELEASE		GASEOUS RELEASE		UNPLANNED RELEASE		PLANNED RELEASE		ONGOING		TERMINATED
	MONITORED		UNMONITORED		OFFSITE RELEASE		T.S. EXCEEDED		RM ALARMS		AREAS EVACUATED
	PERSONNEL EXPOSED OR CONTAMINATED				OFFSITE PROTECTIVE ACTIONS RECOMMENDED				*State release path in description		

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gears)			10 uCi/min			0.1Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS:					
ALARM SETPOINTS:					
% T.S. LIMIT (If applicable)					

RCS OR SG TUBE LEAKS CHECK OR FILL IN APPLICABLE ITEMS: *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc)*:

LEAK RATE:	UNITS: gpm/gpd	T.S. Limits:	SUDDEN OR LONG TERM DEVELOPMENT:
LEAK START DATE: TIME:		COOLANT ACTIVITY & UNITS: PRIMARY -	SECONDARY -

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION *(Continued from front)*

Time

_____ 8.7.11 Notify the Nuclear Division Duty Officer (NDDO). If NDDO cannot be reached, notify any NDDO, ECO or System Operations Power Coordinator (last alternate). See the Emergency Response Directory or NDDO schedule for telephone numbers, and relay applicable information from the State of Florida Notification Form.

_____ 8.7.12 If the Onsite Emergency Response Facilities (TSC/OSC) are operational consider Emergency Coordinator transfer to TSC.

NOTE: Any de-escalation from General Emergency shall be determined by the ECO.

_____ 8.7.13 If not previously done, determine the status of the Owner Controlled Area Evacuation. Security has 30 minutes to provide a list of names of personnel not yet accounted for inside Protected Area.

_____ 8.7.14 Reassess plant conditions against Table 1 and Table 2 periodically.

_____ 8.7.15 Every hour, upon termination, or as conditions change, provide notifications to the following if notification responsibilities are with the Emergency Coordinator onsite:

1. Complete a State of Florida Notification Message Form

_____ 2. The Emergency Coodinator shall initial form prior to transmitting information to verify Emergency Coordinator approval.

_____ 3. Notify the following of the new information.

_____ a. State Warning Point

_____ b. NDDO

_____ c. Duty Call Supervisor

_____ d. Recovery Manager

_____ 4. Complete an Event Notification Worksheet Form

_____ 5. Notify the NRCOC with the new information.

_____ 8.7.16 Using Attachment 1, De-escalation Guidelines determine if the emergency can be de-escalated or terminated.

NOTE: Any de-escalation from General Emergency shall be determined by the ECO.

_____ 8.7.17 If conditions warrant, recommend de-escalation from General Emergency to the RM.

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 93
DUTIES OF EMERGENCY COORDINATOR

STATE OF FLORIDA NOTIFICATION MESSAGE FORM FOR NUCLEAR POWER PLANTS

1. A. TIME/DATE_____ B. REPORTED BY (NAME/TITLE)_____
2. SITE
   A. CRYSTAL RIVER UNIT 3
   B. ST. LUCIE UNIT 1
   C. ST. LUCIE UNIT 2
   D. TURKEY POINT UNIT 3
   E. TURKEY POINT UNIT 4
3. ACCIDENT CLASSIFICATION
   A. NOTIFICATION OF UNUSUAL EVENT
   B. ALERT
   C. SITE AREA EMERGENCY
   D. GENERAL EMERGENCY
4. EMERGENCY DECLARATION TIME: _____ DATE: _____
5. INCIDENT DESCRIPTION or UPDATE
   _____
   _____
   _____
6. INJURIES A. CONTAMINATED/NUMBER_____ B. NON-CONTAMINATED/NUMBER_____
7. SITUATION INVOLVES: (NOTE: IF A, GO TO ITEM 11. OTHERWISE CONTINUE WITH REST OF FORM.)
   A. NO RELEASE
   B. POTENTIAL (POSSIBLE) RELEASE
   C. A RELEASE IS OCCURRING--EXPECTED DURATION___
   D. A RELEASE OCCURRED, BUT STOPPED--DURATION___
8. TYPE OF RELEASE IS: (BLANKS ARE FOR SPECIFIC NUCLIDES OR GASES, I.E., I-131, CS-137)
   A. RADIOACTIVE GASES_____
   B. RADIOACTIVE AIRBORNE PARTICULATES_____
   C. RADIOACTIVE LIQUIDS_____
   D. RADIOACTIVE SOLIDS_____
   E. NON-RADIOACTIVE GASES_____
   F. OTHER_____
9. RELEASE RATE:

	NOBLE GASES		IODINES
DEFAULT (A)	_____ CURIES PER SECOND	(C)	_____ CURIES PER SECOND
MEASURED (B)	_____ CURIES PER SECOND	(D)	_____ CURIES PER SECOND

10. ESTIMATE OF PROJECTED OFFSITE DOSE RATE:

DISTANCE	THYROID (MREM/HR)	WHOLE BODY (MREM/HR)
1 MILE (SITE BOUNDARY)		
2 MILES		
5 MILES		
10 MILES		

11. METEOROLOGICAL DATA (AT 10 METERS):
   A. WIND DIRECTION (FROM) _____ DEGREES OR COMPASS DIRECTION
   B. SECTORS AFFECTED_____
   C. WIND SPEED_____MPH
   D. STABILITY CLASS_____
12. RECOMMENDED PROTECTIVE ACTIONS:
   A. NO RECOMMENDATIONS AT THIS TIME.
   B. NOTIFY THE PUBLIC TO TAKE THE FOLLOWING PROTECTIVE ACTIONS:
   (NOTE: IF MESSAGE REFERS TO RADIUS, USE THE WORD "ALL" UNDER SECTORS.)

MILES	NO ACTION	SHELTER/SECTORS	EVACUATE/SECTORS
0--2			
2--5			
5--10			
10-- ___			

13. EVENT TERMINATED: A. NO:_____ B. YES: TIME_____DATE_____
14. MESSAGE RECEIVED BY: NAME _____TIME_____DATE_____

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the control room.

Sector Information:

WIND SECTOR	WIND FROM	DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348.5-11.5	S	H J K
[B]	NNE	11.5-33.5	SSW	J K L
[C]	NE	33.5-56.5	SW	K L M
[D]	ENE	56.5-78.5	WSW	L M N
[E]	E	78.5-101.5	W	M N P
[F]	ESE	101.5-123.5	WNW	N P Q
[G]	SE	123.5-146.5	NW	P Q R
[H]	SSE	146.5-168.5	NNW	Q R A
[J]	S	168.5-191.5	N	R A B
[K]	SSW	191.5-213.5	NNE	A B C
[L]	SW	213.5-236.5	NE	B C D
[M]	WSW	236.5-258.5	ENE	C D E
[N]	W	258.5-281.5	E	D E F
[P]	WNW	281.5-303.5	ESE	E F G
[Q]	NW	303.5-326.5	SE	F G H
[R]	NNW	326.5-348.5	SSE	G H J

STABILITY CLASSIFICATION REFERENCE:

The below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from Homestead Air Force Base (See EPIP-20126, Off-Site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	22.5 or more
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	17.5 to 22.4
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	12.5 to 17.4
Neutral	D	$-1.4 < \Delta T \leq -0.5$	7.5 to 12.4
Slightly stable	E	$-0.5 < \Delta T \leq 1.4$	3.8 to 7.4
Moderately stable	F	$1.4 < \Delta T \leq 3.6$	2.1 to 3.7
Extremely stable	G	$3.6 < \Delta T$	2.0 or less

When available, all meteorological information needed to fill out Section II on the Notification Message Form is available from the Emergency Coordinators Summary Sheet (EPIP-20126). The Summary sheet shall be filled out by Chemistry and given to the Emergency Coordinator.

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DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 — US NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EVENT NOTIFICATION WORKSHEET

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	CALLERS NAME	CALL BACK: ENS_____ OR ( ) _____ - _____

EVENT TIME & ZONE	EVENT DATE / /	POWER MODE BEFORE	POWER MODE AFTER

Event Classifications		1-Hr Non-Emergency 10 CFR 50.72 (b) (1)		4-Hr Non-Emergency 10 CFR 50.72 (b) (2)	
	GENERAL EMERGENCY		(i) (A) TS Required S/D		(i) Degrade While S/D
	SITE AREA EMERGENCY		(i) (B) TS Deviation		(ii) RPS Actuation (Scram)
	ALERT		(iii) Degraded Condition		(ii) ESF Actuation
	UNUSUAL EVENT		(ii) (A) Unanalyzed Condition		(iii) (A) Safe S/D Capability
	50.72 NON-EMERGENCY		(ii) (B) Outside Design Basis		(iii) (B) Rhr Capability
	PHYSICAL SECURITY (73.71)		(ii) (C) Not Covered by OPs/EOPs		(iii) (C) Control of Rad Release
	TRANSPORTATION		(iii) Earthquake		(iii) (D) Accident Mitigation
	20.403 MATERIAL/EXPOSURE		(iii) Flood		(iv) (A) Air Release >2X App B
	OTHER		(iii) Hurricane		(iv) (B) Liq Release >2X App B
			(iii) Ice/Hail		(v) Offsite Medical
			(iii) Lighting		(vi) Offsite Notification
			(iii) Tornado		
			(iii) Other Natural Phenomenon		
			(iv) ECCS Discharge to RCS		
			(v) Lost ENS		
			(v) Lost Emerg. Assessment		
			(v) Lost Offsite Comms		
			(vi) Fire		
			(vi) Toxic Gas		
			(vi) Rad Release		
			(vi) Oth Hampering Safe Op		

DESCRIPTION

Include: Systems affected, actuations & their initiating signals, causes, effect of event on plant, actions taken or planned, etc.

NOTIFICATIONS	YES	NO	WILL BE				
NRC RESIDENT				ANYTHING UNUSUAL OR NOT UNDERSTOOD?		YES (Explain above)	NO
STATE(s)				DID ALL SYSTEMS FUNCTION AS REQUIRED?		YES	NO (Explain above)
LOCAL							
OTHER GOV AGENCIES				MODE OF OPERATION UNTIL CORRECTED	ESTIMATE FOR RESTART DATE:		ADDITION INFO ON BACK?

EMERGENCY PLAN IMPLEMENTING PROCEDURE 20101, PAGE 96
DUTIES OF EMERGENCY COORDINATOR

NRC FORM 361 ADDITIONAL INFORMATION USNRC OPERATIONS CENTER

RADIOLOGICAL RELEASES CHECK OR FILL IN APPLICABLE ITEMS *(specific details/explanations should be covered in event description)*

	LIQUID RELEASE		GASEOUS RELEASE		UNPLANNED RELEASE		PLANNED RELEASE		ONGOING		TERMINATED
	MONITORED		UNMONITORED		OFFSITE RELEASE		T.S. EXCEEDED		RM ALARMS		AREAS EVACUATED
	PERSONNEL EXPOSED OR CONTAMINATED				OFFSITE PROTECTIVE ACTIONS RECOMMENDED				*State release path in description		

	Release Rate (Ci/sec)	% T.S. LIMIT	HOO GUIDE	Total Activity (Ci)	% T.S. LIMIT	HOO GUIDE
Noble Gas			0.1 Ci/sec			1000 Ci
Iodine			10 uCi/sec			0.01 Ci
Particulate			1 uCi/sec			1 mCi
Liquid (excluding tritium & dissolved noble gears)			10 uCi/min			0.1 Ci
Liquid (tritium)			0.2 Ci/min			5 Ci
Total Activity						

	PLANT STACK	CONDENSER/AIR EJECTOR	MAIN STEAM LINE	SG BLOWDOWN	OTHER
RAD MONITOR READINGS:					
ALARM SETPOINTS:					
% T.S. LIMIT (If applicable)					

RCS OR SG TUBE LEAKS CHECK OR FILL IN APPLICABLE ITEMS: *(specific details/explanations should be covered in event description)*

LOCATION OF THE LEAK *(e.g., SG #, valve, pipe, etc)*:

LEAK RATE:	UNITS: gpm/gpd	T.S. Limits:	SUDDEN OR LONG TERM DEVELOPMENT:
LEAK START DATE: TIME:		COOLANT ACTIVITY & UNITS: PRIMARY -	SECONDARY -

LIST OF SAFETY RELATED EQUIPMENT NOT OPERATIONAL:

EVENT DESCRIPTION *(Continued from front)*

ATTACHMENT 1
(Page 1 OF 1)

DE-ESCALATION GUIDELINES

Discussion

Once the Plant classifies a Site Area Emergency, or General Emergency, only the Emergency Control Officer has the authority to de-escalate to a lower classification level. The following guidelines provide points to consider when de-escalation may be appropriate.

1. Review Plant Emergency Classification Table (PTN EPIP-20101), to assure that classification criteria to enter event is no longer applicable, or referenced situations are under control.

2. Verify additionally that the plant is stable, under control, and trend or prognosis indicates that improvement is the most likely prospect. consider the following:

   a. Subcriticality

   b. Core cooling mode

   c. Heat sink mode

   d. RCS Pressure Boundary Integrity

   e. Inventory Control (Primary and Secondary Coolant)

3. Verify there is no foreseeable likelihood of a significant uncontrolled release. consider the following:

   a. Containment Pressure

   b. Containment/Auxiliary Building Radiation Levels

   c. Waste Gas Storage Tank Pressures and Activities

   d. Contaminated Water Volumes and Activities

4. Verify long-term staffing for both the site and EOF is organized in place as appropriate for the event.

EPIP 20101, Duties of the Emergency Coordinator

The following information has been incorporated into EPIP 20101:

1) Guidance on classification of simultaneous emergencies

2) Lessons learned from the Three Mile Island Site Area Emergency Security Event

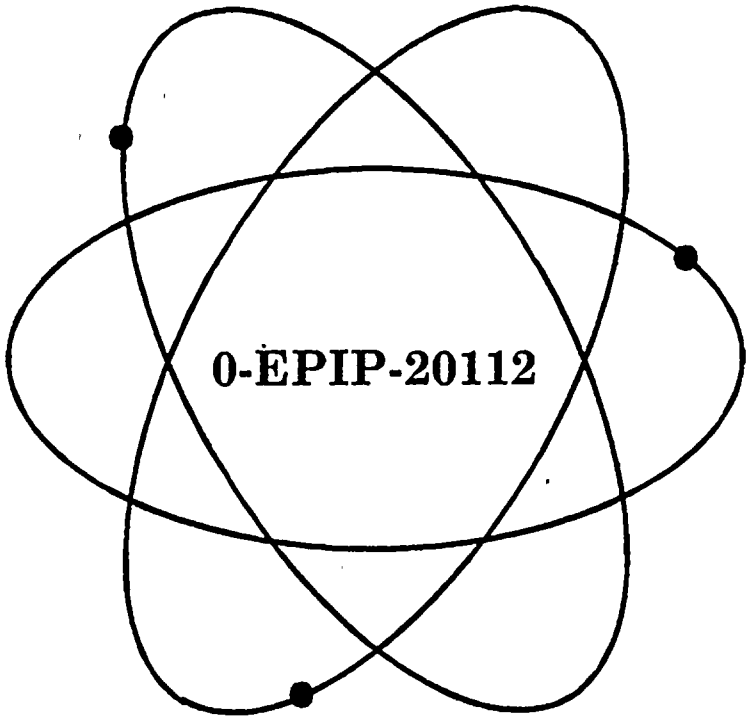
3) References to Homestead Air Force Base have been deleted.

4) Miscellaneous administrative updates

Florida Power & Light Company

Turkey Point Nuclear Plant

This procedure may be affected by an O T S C (On The Spot Change) verify information prior to use
Date verified _____ Initials _____



Title:

Communications Network

Safety Related Procedure	
Responsible Department:	Emergency Preparedness
Reviewed by PNSC:	93-049
Approved by Plant General Manager:	3/25/93
Periodic Review Due:	1/6/96
Implementation Date:	3/29/93

RTSs 92-1132P, 93-0447 *PCM 92-124*

★/AWT/dt/bsc

LIST OF EFFECTIVE PAGES

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1.0 PURPOSE

1.1 This procedure provides descriptive information on the various modes of communication available at the Turkey Point Plant as required by the Turkey Point Radiological Emergency Plan, and provides instructions for their use.

1.2 This procedure describes the communications network available for use at the Turkey Point Plant in emergency conditions.

1.3 Instructions are also included on the use of alternate communications systems when part of the network has been affected by the emergency and is not operable.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

2.1 References

2.1.1 Final Safety Analysis Report

1. FSAR, Section 7.7, Operating Control Stations

2.1.2 Plant Procedures

1. 0-ONOP-105, Control Room Evacuation
2. 3-OSP-300.2, Alternate Shutdown Panel 3C264 Switch and Instrument Alignment Check
3. 4-OSP-300.2, Alternate Shutdown Panel 4C264 Switch and Instrument Alignment Check
4. 3/4-OSP-300.4, Dedicated Alternate Shutdown Communication System Operability Test
5. EPIP-20101, Duties of the Emergency Coordinator
6. EPAD-007, Emergency Response Facilities and Equipment Surveillances

2.1.3 Regulatory Guidelines

1. Code of Federal Regulations, Title 10, Part 50, Appendix E
2. NRC IE Information Notice 85-44, Emergency Communication System Monthly Test
3. NRC IE Information Notice 86-97, Emergency Communications System

2.1.4 Miscellaneous Documents

1. Turkey Point Radiological Emergency Plan
2. FPL Radio Operations Handbook
3. 5610-E-250 Communications System Diagram
4. PC/M 87-261, New (Unit 4) EDG Building Lighting, Fire Protection, Communications, and HVAC
5. PC/M 90-493, Public Address System in Southern Plant Area
6. PC/M 92-124, Offsite Radio Communication Project
7. Vendor Manual V000596, Motorola/Offsite Radio

2.2 Records Required

2.2.1 None

2.3 Commitment Documents

2.3.1 None

3.0 RESPONSIBILITIES

3.1 Emergency Response Organization (ERO) Members

3.1.1 Making communications in accordance with this procedure if assigned to an ERO position required to make communications.

3.1.2 Bringing available radios to the Operations Support Center (OSC) for use by Emergency Response Teams (ERTs).

4.0 DEFINITIONS

4.1 Plant Page Systems

4.1.1 The plant page system is a solid-state public address system which uses noise-cancelling dynamic microphone handsets located throughout the plant site (Protected Area, Switchyard, Nuclear Training Center, Employee Processing Facility, Central Receiving Facility, etc.). The system includes one paging channel and one party line channel. The two channels are independent such that paging can be accomplished without disturbing communications on the party line channel. The PTN Page System can be merged with the PTF Page System to allow site-wide communications from any of the PTN or PTF stations. The Page Merge switches are located on the Unit 3 and 4 RCO's desk and on the PTF Control Center Operator's desk.

4.1.2 Power to the Paging System is supplied from a variety of sources. The original page system, located throughout the power block area, receives power from vital Motor Control Center 3D (breaker 30824) via a 480V/120V transformer located in the Cable Spreading Room. Alternate power is available from PTF General Service Station MCC via PTF LP-11. A 60 amp double-pole double- throw disconnect switch is mounted behind Unit 3 Vertical Panel B for swapping power as required.

4.1.3 During the 1991 Dual Unit Outage the Plant Page System was expanded to cover the Unit 4 EDG Building and the southern plant areas. These areas of the system were provided independent power supplies to minimize loading on the original page system. The page system in the Unit 4 EDG building receives power from MCC 4K via 4DP87 located in the Unit 4 EDG Building (see PC/M 87-261). The southern plant area page system receives power from DP99 located in the Mechanical Maintenance Machine Shop. DP99 receives power from 4J Load Center via DP437 (see PC/M 90- 493). The following plant areas are supplied by Power Panel SBT located in the NAB Telephone/LAN Room.

1. NAB Plant Page Power/South Perimeter Page Power (SBT-1)
2. Simulator/Trng Page Power (SBT-10)
3. TB-7016 (NEB Page Power) (SBT-11)
4. TB-7004 (Material Warehouse Page Power/South Page Power) (SBT-12)

4.2 Motor Maintenance/Refueling Circuit

4.2.1 This communications system is separate from the Plant Page System, except that it receives 120V AC power from the Plant Page System power supply source. This circuit consists of various outlets throughout the plant, near major equipment both inside and outside the containment, and at the fuel handling areas. A headset, with attached microphone, can be plugged into these outlets to enable communication while leaving the operator's hands free. Outlets for this circuit are also provided in the control room of Units 3 and 4. This system allows communications between the Control Room and stations, as well as communications between stations.

4.3 Plant Bell System Telephones

4.3.1 There are numerous Bell Telephone System lines connected to the plant through the switchboard in the Nuclear Administrative Building (NAB) for normal dial telephone service. Several extensions of this system are located throughout the Protected Area to facilitate in-plant communication.

4.3.2 Offsite telephone communications are provided via two paths: commercial underground telephone lines on Palm Drive, and fiber optic lines from the General Office on the FPL Transmission Lines. Additionally, a backup Microwave System has been installed which will automatically pick up the services provided by the FPL Fiber optic if this line fails. The antenna for this system is located on the NAB roof. Telephone service is provided via the Southern Bell Homestead Telephone Office. All Turkey Point extensions, including Fossil Plant and Land Utilization Extensions (246 exchange), are routed through the Telephone Room in the NAB. Direct Inbound Dial (DID) calls to the plant, i.e. calls to plant extensions beginning with a "6" or "7", will be routed from the Homestead Office to the plant via either the Palm Drive lines or the fiber optic line for connection to the plant phone system. Non-DID plant extensions may be accessed from offsite by calling the switchboard (246-1300) which will allow automated or manual transfer to the desired extension. All calls to 246-1300 are routed to the plant via the Palm Drive telephone line.

4.3.3 In addition to the plant telephone extensions (246 exchange), there are direct Homestead telephone extensions (245/247/248 exchanges) located throughout the plant. These extensions are independent of the plant telephone system, but are routed to the plant via the Palm Drive telephone lines.

4.3.4 All of the emergency telecommunications circuits, i.e. State of Florida Hot Ring Down, National Warning System (NAWAS), FTS-2000, are routed via the Palm Drive Telephone lines from the Southern Bell Homestead Telephone Office.

4.3.5 LEASE LINE: A direct line to the System Operations Power Coordinator's Office, which is also connected to several other plants and substations, is constantly monitored by means of open speakers at the control rooms of the various plants (including PTF and PTN) and at the switchboard in the System Operations Power Coordinator's Office. This line is in constant use, and its main function during both normal and emergency conditions is for transmitting and receiving instructions and information to and from the System Operations Power Coordinator's Office.

4.3.6 The direct line to Homestead AFB (located in the communications area of the NPS Office) is provided for emergency use and for obtaining meteorological data when both meteorological towers are out of service.

NOTE

The Homestead Air Force Base line is out-of-service pending government action. The National Weather Service has instrumentation monitoring meteorological conditions at Homestead Air Force Base. Refer to the Emergency Response Directory for National Weather Service/NOAA telephone numbers and Homestead Air Force Base contacts.

4.4 Company FM Radio System

4.4.1 UHF/VHF Radio Systems

UHF and VHF Radio Systems are provided for offsite communication with Florida Power & Light facilities and Government Agencies. The transceivers for these systems are installed in Cabinet C474, located in the Control Building Elevator Vestibule on the mezzanine (30 foot) elevation. Antennas are mounted on the Missile Barrier between the Computer Room Chiller Units on the Control Room roof. Control units are installed in the NPS's office which allow channel selection and local volume control of the system via the plant telephone lines. Each radio can be connected to six separate control units in parallel to allow use of the radios from multiple locations. The radio units receive nonvital uninterruptible power from AC Panel 3P31, Breaker 15, and have individual, local batteries for enhanced reliability. The Control Units receive Vital AC power from DP-312A, Breaker 3 via Fire Protection Panel, C39A. Listings of the UHF and VHF channels is provided in the Emergency Response Directory.

NOTE

The PTN UHF and VHF Radio Systems are to be operated from the remote control units. Local operation of the radio units is to be performed by qualified radio personnel only. Contact the Emergency Preparedness Coordinator or Miami Radio personnel if local operation is necessary. Refer to the Emergency Response Directory for telephone numbers.

4.4.2 UHF Radio System: The UHF radio is a 450 Mega Hertz (MHz) unit that may be used to communicate with the PTN Emergency Operations Facility (EOF), System Operations, Storm Headquarters, and other Florida Power & Light facilities and mobile units located throughout Dade Country. The system utilizes radio repeaters located throughout Dade County (Princeton, Hialeah, and Brickell) to provide communications throughout the area. Channel 9 (display indicates FPL 9) is guarded (i..e., monitored) by the Miami Radio Shop, and may be used to establish offsite communications. A local government frequency is also available, and may be used to communicate with Dade County Emergency Operations Center, if necessary. In an emergency, any channel may be used to establish communications.

4.4.3 VHF Radio System: The VHF radio is a 150 MHz unit that may be used for longer range communications than the UHF System to the PTN EOF and FPL Corporate Offices in Juno Beach.

1. DIRICO 1 through 12 are Tone Groups which use a radio repeater located on the DIRICO Radio Tower in North Dade County. The Tone Groups allow different groups to communicate privately using the same frequency. DIRICO 12 is designated as the FPL Emergency Channel. In the event of an emergency, FPL Radio personnel will assume control of the channel assignments. All stations should monitor DIRICO 12 and radio personnel will coordinate Talk Group assignments for emergency communications.

2. In the event that the DIRICO repeater failed, communication may be made on DIRICO SIMP. This channel is a conventional, simplex mode of operation that uses the DIRICO repeater frequency to communicate directly between individual stations, independently of the repeater. In this mode of operation, PTN would be able to communicate with stations in North Dade County, including the PTN EOF/General Office.

3. The Cutler Power Plant has VHF channels which are available on the PTN VHF Radio System.

4. U. S. Coast Guard (USCG) and NOAA Weather Radio Channels are also available on the PTN VHF System. USCG CH 16 and 22A are emergency channels which may be used for emergency communication if required. NOAA Weather Channels may be used to monitor weather conditions and receive weather advisories.

4.5 Portable Radios

NOTE

Radio Transmissions are restricted in certain areas which are posted throughout the plant. Always observe posted restrictions.

4.5.1 Numerous portable radio transmitter-receiver sets operating on the Turkey Point 900 Megahertz Trunked Radio System are available to supplement the fixed communications equipment in the plant. These small, light-weight, battery-operated sets which may be easily carried by personnel to any location on the plant site provide extensive communications capabilities among all plant departments, and provide access to the telephone system. For further explanation of the radio system operation, see Enclosure 1.

4.6 FPL Intelligent Tandem Network (ITN)

4.6.1 Each of the main Company Offices have their own company designated telephone exchange number, allowing inter-office direct dialing. The ITN is accessed by dialing "8" from a plant extension. Refer to the FPL Inter-Office Directory for more details on the FPL ITN.

4.7 FPL Radio Paging System

4.7.1 Company telephones can inter-office dial the FPL Radio Paging System. This system is capable of reaching pagers in most areas of Dade, Broward, Palm Beach, and Sarasota counties. Pagers are regularly assigned to key personnel. Additional pagers can be quickly assigned as necessary.

4.8 Commercial Paging System

4.8.1 Commercial pagers are issued as an alternative to the FPL Radio Paging System. Most of the commercial pagers have a range from Fort Pierce to Key West.

4.9 National Warning System (NAWAS)

4.9.1 The NAWAS is the backup communication system to the State Hot Ring Down telephone. The NAWAS is installed in the Nuclear Plant Supervisor's office in the Unit 3 and 4 Control Room, and in the EOF. This system uses commercial, protected telephone land lines routed along Palm Drive. The initial emergency notification and all status updates to the State Warning Point at the Division of Emergency Management, Monroe County, and the Dade County Emergency Management Directors will be made via NAWAS if the State Hot Ring Down telephone is inoperable. If NAWAS is also inoperable, then notification will be made via commercial telephone.

4.10 Local Government Radio (LGR) System

4.10.1 The LGR System is installed in the NPSs office, in the Control Room, in the TSC, and in the EOF. This system, which operates on frequencies assigned to the State Division of Emergency Management (DEM), can be used to maintain communications with the State Department of Health and Rehabilitative Services (DHRS), Mobile Emergency Radiological Laboratory (MERL), and the Emergency Management Directors. The frequency band of the LGR provides reliable communication for a range of approximately 20 miles.

4.10.2 Two frequencies are assigned for LGR use. 39.18 Mega Hertz (MHz) is the primary frequency, and is assigned to the F2 selector buttons on the Plant LGR. 39.10 MHz is the backup frequency, and is assigned to the F1 selector buttons on the Plant LGR.

NOTE

The PTN LGR System is to be normally operated from the control units. Local operation of the radio units should only be performed by qualified radio personnel. Contact the Emergency Preparedness Coordinator or Miami Radio personnel if local radio operation is necessary. Refer to the Emergency Response Directory for telephone numbers.

4.10.3 The PTN LRG System radio unit is located at the PTN Telecommunications Radio Tower approximately one-half mile west of the plant along the Alternate Evacuation Route. The antenna is mounted on the Radio Tower. Control units located in the NPSs office and the TSC operate the radio by means of the plant telephone system, via underground telephone cable from the radio tower to the Nuclear Employee Processing Building (NEPB) via telecommunications manways and conduits. The PTN EOF LGR System utilizes similar equipment and configuration, and provides a backup means of communication with the plant.

4.11 Emergency Notification System (ENS)

4.11.1 As of June 1992, the old ENS circuit ("red phone") has been replaced with the FTS-2000 Telephone Network. ENS circuits for notifications to the NRC Operations Center are incorporated into the FTS-2000 network. ENS extensions on the FTS-2000 network are located in the Control Room, the Technical Support Center, the Simulator Control Room, the NRC Resident Inspectors office, and the Emergency Operations Facility. Refer to FTS-2000 Emergency Telecommunication System Description.

4.12 State Hot Ring Down Telephone

4.12.1 The State Hot Ring Down telephone is installed in the Units 3 and 4 Control Room, the TSC, and the EOF. This system uses dedicated commercial telephone lines and is activated through pre-designated two digit access "telephone numbers". The initial notification and all status updates of an emergency are made via this system to the State Department of Emergency Management (State Warning Point-Tallahassee) and the County Emergency Management Directors. NAWAS serves as a backup.

4.13 Health Physics Network (HPN)

4.13.1 The HPN is installed in the TSC and EOF. This system uses FTS-2000 telephone lines. The HPN is designed to provide health physics and environmental information to the NRC Operations Center and the NRC Region II Response Center in the event of an ongoing emergency.

4.14 Dedicated Alternate Shutdown Communications System

4.14.1 This system is completely independent of the normally used Plant Page System. It is provided to enable the operators to coordinate operations and monitor status of the plant during Control Room Evacuation conditions (see 0-ONOP-105, Control Room Evacuation). Units 3 and 4 Alternate Shutdown Communications systems are permanently cross-connected to facilitate communications throughout the plant. To meet regulatory requirements, the Alternate Shutdown Communications system is protected from any fires in the Control Room, Cable Spreading Room, or North-South Breezeway. Most units have only a unit-specific wall station, however the following "common" areas have a wall station for each unit:

1. 3B 4160 Volt Swgr Room (Alternate Shutdown Panel)
2. 4B 4160 Volt Swgr Room (Alternate Shutdown Panel)
3. Auxiliary Feedwater Pump Cage
4. Auxiliary Building Hallway
5. Technical Support Center
6. 3B EDG Room
7. Main Control Room

4.14.2 The Control Room stations are normally isolated from the other stations for fire protection via Key Lock switches located in the Computer Room (switch normally in Isolate position). The Key Lock switch, when positioned to Normal, provides for Control Room communications necessary for an orderly transfer of control back to the Control Room.

4.14.3 Operation of this system is identical to the normal Plant Page System. In addition to a handset, each communications station is provided with a headset and extension cord, stored in a locked communications headset box. Power is provided from power panels 3/4P93, located in their respective units B 4160 Volt Switchgear Room. All wall stations are uniquely identified as Alternate Shutdown Communications Stations.

4.15 Cellular Telephone Backup System

4.15.1 Separate telephone sets in the offices of the NPS and Site Vice President have been dedicated as a backup telephone system. These sets are interfaced with permanently installed cellular telephone units in the Telephone Frame room and have a permanently installed backup battery and AC power fed from the Security System Diesel backed load center. Antennas for these telephones are located on the Nuclear Administration Building roof.

4.16 Portable Cellular Units

4.16.1 Portable cellular telephones are stored in the OSC HP Equipment Lockers, in the PTN Medical Facility, and the Emergency Preparedness Office. The units contain their own batteries and a variety of accessories for different uses. The OSC cellular telephones are used as a communications medium between the Emergency Response Teams offsite and the Plant, and may be used to fill any communications gap which may develop. The PTN Medical Facility telephone is provided to provide status of the transportation and treatment of a contaminated injured individual to an offsite medical facility.

4.17 Security Station Cellular Phones

4.17.1 Cellular phones are installed in the Central and Secondary Alarm Stations (CAS and SAS) to provide backup communications with Local Law Enforcement Agencies (LLEAs) in accordance with the PTN Security Plan. These phones have Uninterruptible Power Supplies (UPSs) and primary and backup antennas located in the Machine Shop for CAS and the Nuclear Entrance Building (NEB) for SAS.

4.18 FTS-2000 Emergency Telecommunications System

4.18.1 The NRC has replaced the old ENS and HPN circuits with the FTS-2000 Emergency Telecommunications System. The FTS-2000 system is an AT&T telecommunications network used by U.S. government agencies, and is similar to FPL's Intelligent Tandem Network (ITN). This system is provided by the U.S. government and is for official use only. Refer to Enclosures 1 and 2 for FTS-2000 services and their locations.

4.19 Alternate Communications Systems

4.19.1 In cases where an emergency has affected one of the normal means of communications, or in the case that a normal system is out of service, the following system will serve as backup:

Normal System	Alternates
Plant Page System	Portable Radios, Bell System Telephones, Dedicated Alternate Shutdown Communications System
Bell System Telephones	Cellular Telephones, Portable Radios

4.20 High Frequency/Automatic Link Establishment (HF/ALE) Radio System

4.20.1 The HF/ALE Radio System is an automated mode of high frequency, single side band (HF SSB) radio communications (2 to 30 Mega Hertz) which has the ability of long range, world wide communication. ALE is an option of the Motorola MICOM-1 HF SSB radio which is designed to automatically select the best working channel out of the available channels assigned to the user. THE HF/ALE uses a combination of HF SSB techniques (scanning, selective calling, sounding, channel selection, and link quality analysis (LQA)) to make long range high frequency communications as easy and reliable as possible. Refer to Enclosure 4, HF/ALE Radio System Principles of Operation for more information.

NOTE

The HF/ALE Radio System is designed to be operated remotely from the telephone set located in the NPSs office. Local operation should only be performed by qualified radio personnel. If location operation of the HF radio is necessary, contact the Emergency Preparedness Coordinator or Miami Radio personnel. Refer to the Emergency Response Directory for telephone numbers.

4.20.2 The PTN HF/ALE Radio System consists of: two HF/ALE radio units; two HF antennas, and associated components (tuners, etc); and a remote telephone handset located in the NPSs office, and selectable to either HF/ALE radio. The two HF/ALE radios are designated as

1. Onsite and
2. Offsite

Either of these radios may be accessed by the telephone set which has a switch to select either the onsite or offsite radio.

4.20.3 Onsite HF/ALE Radio: The onsite HF/ALE radio is located in the Control Building Elevator Vestible Mezzanine (30 foot) Elevation, in Cabinet C474A. It receives power from nonvital, uninterruptible AC Panel 3P31, Breaker 15. The antenna is a long wire antenna connected between the Missile Barrier on the Control Building roof, and the Cask Storage Crane Girder. The radio is connected to the plant telephone system to provide remote control from the Control Room.

4.20.4 Offsite HF/ALE Radio: The offsite HF/ALE radio is located at the PTN Telecommunications radio tower approximately one half mile west of the plant on the north side of the cooling canals. The radio unit is located in the block building located at the base of the radio tower. The equipment at the tower location normally receives power from the MacGregor Substation, and has an emergency generator if normal power is lost. The antenna for this radio is a long wire connected between concrete transmission pole just east of the radio tower. This radio is remotely controlled by the telephone set in the NPSs office via buried telephone cable which connects to the plant telephone system.

5.0 PROCEDURE

5.1 Emergency Use of the Plant Page System

NOTES

- *Do not keep the Plant Page System busy unnecessarily; if a prolonged conversation is to be carried on, request the other party to call your station on the Bell phone, thus releasing the Plant Page System for other use.*
- *Always speak clearly, distinctly, firmly, and with normal tone when using any of the communications systems described.*
- *Do not leave the Plant Page System page pushbutton depressed while carrying on a normal conversation, as this will tie up the paging channel, preventing another party from using the paging channel.*
- *All radio communications shall be conducted in accordance with Federal Communications Commission regulations and company rules as set forth in Reference 2.1.4.2, FPL Radio Operations Handbook.*
- *The use of the Plant Page System during emergency conditions is to notify plant personnel of the emergency and to issue appropriate instructions to cope with the emergency.*
- *The spoken message will be broadcast through all Plant Page speakers but will not interfere with party line channel conversations.*

5.1.1 Lift the handset from its holder.

5.1.2 IF necessary to inform PTF personnel, THEN place the Page Merge switch (on Unit 3 or 4 RCO desk) to "ON".

5.1.3 Depress the Page Activation Button on the handset.

5.1.4 Speak into the handset mouth piece.

5.1.5 At communication completion, release the Page Activation Button.

5.1.6 Request non-emergency use of the party line channel to cease by speaking into the handset mouth piece without depressing the Page Activation Button, if necessary.

5.1.7 Place the Page Merge Switch to "OFF" if necessary.

5.2 Emergency Use of the Motor Maintenance/Refueling Circuit

NOTE

This system may be used during emergencies to communicate and issue instructions to personnel working to correct the emergency condition, or stationed by the areas where outlets from this system are located, thus leaving the PA system clear for other emergency related use.

5.2.1 Obtain headset and microphone sets from the Control Room or Maintenance Department.

5.2.2 Issue sets to personnel assigned to the station with which it is desired to communicate.

5.2.3 Plug the head and microphone sets into the jacks at the station.

5.2.4 Speak normally, clearly, and distinctly into the microphone for communications.

5.2.5 WHEN communications are to be terminated, THEN unplug the head and microphone set from the jack and return them to their storage place.

5.3 Use of the Bell System Telephones

NOTE

The Bell System telephone lines assigned to the plant are the normal means of communication with outside agencies, both during normal and emergency conditions. All lines can be accessed through the switchboard in the Nuclear Administration Building.

5.3.1 Perform one of the following steps to access the Plant Bell System from outside of the plant:

1. Dial direct by combining the three digit prefix "246" to any extension beginning with a "6" or "7" (Direct Inbound Dial-DID), or

2. Access the plant switchboard by first dialing 246-1300 followed by the desired plant extension.

5.3.2 Accessing Outside Numbers Using the Plant Bell System

NOTES

- *The use of the Bell System telephone lines is normally unrestricted (except for placing long distance phone calls) and outgoing calls may be made using standard Bell System procedures.*
- *Outgoing calls may be restricted from any plant extension on a case by case basis. An extension may have unrestricted access (dial "8" and dial "9" capability), FPL ITN access only (dial "8"), local exchange access only (dial "9"), or no outgoing access. Contact MIS Department regarding access restrictions.*

1. Accessing a Local Phone Number
   a. Dial 9 to obtain a local outside line.
   b. Dial local number at the receipt of a dial tone.
2. Calling Within the FPL ITN System from an ITN Capable Phone
   a. Dial 8 to call within the ITN system (i.e., Turkey Point to Juno Beach).
   b. Dial ITN number at receipt of a dial tone.
3. Making a Personal Long Distance Call (Normal Working Hours Only)
   a. Dial "0" to contact the switchboard operator.
   b. Request a long distance line.
   c. Provide the operator with the following information:
      (1) Desired area code and phone number.
      (2) Your name
      (3) Means of charging the call (credit card, home phone, or collect)
   d. The switchboard operator will dial the desired number and connect you.

5.3.2 (Cont'd)

4. Making a Business Long Distance Call via the ITN System

   a. Dial "8".

   b. Dial the desired area code and phone number at receipt of a dial tone.

   c. Dial your valid ITN authorization number after the authorization prompt tone is heard.

5.3.3 Calling Another Extension Within the Plant

NOTE

The Bell System telephones in the plant are also four digit extensions for intra-plant calls.

1. Dial the four digit number assigned to the desired extension to reach another extension in the plant.

5.3.4 Use of Facsimile Machines

NOTES

- *Extensions assigned to facsimile machines can be used for voice communication; however, normal use is limited to the facsimile machine.*
- *Facsimile machines are located in numerous locations. Refer to the Emergency Response Directory for locations and extension numbers.*
- *These instructions are valid for facsimile machines connected to "246" extensions. If a facsimile machine is hooked up to a "245", "247", or "248" number, dialing "8" or "9" is not required, and ITN long distance service is not available.*
- *Facsimile machines may receive at any time while the power switch is on.*

1. Ensure power switch is on.

2. Place the documents to be faxed face down in the document holder.

5.3.4 (Cont'd)

3. Enter the number of the receiving fax machine utilizing the keypad to perform the following:

   a. To send a fax to another Turkey Point extension, dial the four digit extension number.

   b. To send a fax to a location in the FPL ITN, dial 8, "pause", and then the desired ITN extension.

   c. To send a fax to a local number not on the FPL ITN, dial 9, "pause", and then the desired local phone number.

   d. To send a fax to a long distance extension not on the FPL ITN, dial 8, "pause", dial the desired fax number (area code and phone number), "pause", "pause", "pause", and then dial the ITN authorization code.

4. Press the FAX/SEND button.

5.3.5 Use of the Lease Line

NOTE

During an emergency, the party requiring the use of this line for emergency related communications shall identify himself, state that the line is needed for emergency use, and request that all other parties using the line for non-emergency communications clear the line.

1. Remove the handset from its holder (this cuts out the speaker).
2. Call the station or party desired using their call name.
3. Replace the handset in its holder when communications are complete.

5.3.6 Use of the Direct Line to Homestead AFB (Located in NPS Office)

NOTE

This line is out-of-service pending government action at Homestead Air Force Base. Refer to the Emergency Response Directory (ERD) for current telephone numbers at Homestead Air Force Base.

5.3.7 Use of the Emergency H-E-L-P Phone Number

NOTES

- *The following extensions have been designated as emergency numbers:*

  Emergencies-1000

  Fire-4444

  Medical-4040

  Safety-6500

  Health Physics-6599

  Security-6911

- *The NPS Emergency line (1000) and the Fire phone (4444) emergency extensions are restricted to incoming calls only.*
- *H-E-L-P line instructions are posted on phones located throughout the plant.*

1. To report an emergency, dial 4357 (i.e. H-E-L-P) from any plant extension.
2. A voice message will prompt a response by providing the following options:
   a. Emergency-for reporting any emergency to the NPS at extension 1000.
   b. Fire-for reporting any fire emergency to the Fire phone on the Unit 3 RCOs desk at extension 4444.
   c. Security-for contacting the Central Alarm Station (CAS) at extension 6911.
   d. Health Physics-for contacting the Health Physics Shift Supervisor at extension 6599.
   e. Safety-for contacting the Safety Department at extension 6500.
   f. Operations Support Center-for contacting the OSC during a declared emergency at extension 7169.
   g. Technical Support Center-for contacting the TSC during a declared emergency at extension 4613.

5.4 Use of the Portable Radio Transmitter-Receivers (Walkie-Talkies)

NOTES

- *Various portable radio transmitter-receivers are available in the plant for communication with personnel throughout the plant and may be used when it is desired to communicate with personnel in areas where there are no permanent communication devices, such as in the outlying areas of the plant.*
- *Portable radios will be used during emergency conditions and when a normal means of communication is not functioning.*
- *When activating the Emergency Response Facilities, available Motorola 900S radios should be brought to the Operations Support Center for use by Emergency Response Teams.*
- *Each radio may be selected to one of 18 available talk groups. Call group listings are usually affixed to the side of the radio, and may be reprogrammed by Security Department.*

5.4.1 Turn on the portable radio by rotating the volume control clockwise.

5.4.2 Select the desired talk group by selecting the six position and three position switches to the proper position.

5.4.3 Transmit by depressing the Push-To-Talk (PTT) switch on the side of the radio (or on the side of an installed extension microphone/speaker) and speaking into the front speaker.

5.4.4 Release the PTT switch to receive of the same channel.

5.4.5 WHEN no further transmission or reception is desired, THEN turn the radio off by rotating the volume control counterclockwise.

5.5 Use of the National Warning System (NAWAS)

5.5.1 Pick up the handset from its cradle.

5.5.2 Call the desired station by name (i.e., "State Warning Point") and identify your station.

5.5.3 Advise the personnel on the other end of the system of the conditions at the plant.

5.5.4 WHEN communications are complete, THEN replace the handset on its cradle.

5.6 Use of the Local Government Radio (LGR)

5.6.1 Communicating with the LGR

NOTE

The LGR System is to be operated from the control units. Local operation of the radio unit is to be performed by qualified radio personnel only. Contact the Emergency Preparedness Coordinator or Miami Radio personnel if local operation is necessary. Refer to the Emergency Response Directory for telephone numbers.

1. Select Frequency: Press and release the "F1/F2" button to select the desired channel
   a. F2 (39.18 M Hz) Primary
   b. F1 (39.10 M Hz) Secondary
2. Monitor Channel: Press and hold the "MONITOR" button and listen for voice traffic.
   a. If no voice traffic is present, release the "MONITOR" button and continue with the next step, "Transmit".
   b. If voice traffic is present, wait until the channel is clear before transmitting.
3. Transmit:
   a. Handset in Cradle:
      (1) Press and hold the "TRANSMIT" button.
      (2) Verify the "XMIT" light is on.

NOTE

For optimum performance, always be within a 2 foot range of the microphone which is located under the handset.

      (3) Speak at normal voice level towards the microphone.
   b. Using the Handset:
      (1) Press and hold the Push-to-Talk (PTT) bar located on the underside of the handset grip.
      (2) Verify the "XMIT" light is on.
      (3) Speak at normal voice level into the handset microphone.

5.6.1 (Cont)

4. Listen:

   a. Release the "TRANSMIT" button or PTT bar to listen for incoming calls or responses.

5.6.2 Using the LGR Intercom

1. Start Intercom

   a. With Handset in Cradle:

      (1) Press and hold the "INTERCOM" button.

      (2) Speak at normal voice level towards the microphone.

   b. Using the Handset

      (1) Press and hold the "INTERCOM" button. Do NOT use the PTT bar.

      (2) Speak at normal voice level into the handset microphone.

2. When communication has ended

   a. Release the "INTERCOM" button.

   b. Replace the handset in cradle, if used.

5.7 Use of the State Hot Ring Down Telephone

NOTE

The State Hot Ring Down telephone uses dedicated phone lines to contact the State Department of Emergency Management warning points through the use of two-digit access codes. Each warning point is accessed through its own two-digit code.

5.7.1 Lift the handset and dial "22" for the State Warning Point.

5.7.2 WHEN acknowledged, THEN identify yourself and the facility you are calling from.

5.7.3 Relay all applicable data, as necessary.

5.7.4 WHEN communications are to be terminated, THEN replace the handset.

5.8 Use of the FTS-2000 Emergency Telecommunications System

NOTES

- *Within one hour of the time that the Emergency Plan is implemented, the NRC Operations Center (NRCOC) is required to be notified using the NRC FTS-2000 ENS circuit.*
- *If FTS-2000 is inoperable, commercial telephone lines shall be used to notify the NRCOC.*
- *The FTS-2000 system uses dial tone from one of the FTS-2000 Network Service Nodes located throughout the United States.*
- *No access codes or prefixes need to be dialed. Only dial the appropriate 10-digit telephone number.*
- *NRCOC phone numbers and the functions each FTS-2000 phone (ENS, HPN, etc.) are posted on a sticker on the FTS-2000 telephone and are also listed in the PTN Emergency Response Directory.*

5.8.1 To place a call using FTS-2000, perform the following:

1. Lift the receiver on the FTS-2000 telephone and listen for a dial tone.
2. WHEN receiving the dial tone, THEN dial the first number listed on the sticker affixed to the FTS-2000 telephone, using all 10 digits.
3. IF the first number is busy, THEN proceed on with the next number on the list.
4. Continue calling until communications are established.

5.8.2 Reporting FTS-2000 Trouble

NOTES

- *Problems with the FTS-2000 system should be reported to the NRC.*
- *Commercial phone numbers for the NRCOC may be found in the PTN Emergency Response Directory and are also the same as those posted on the FTS-2000 telephone. Standard long distance calling procedures need to be used to contact the NRC via commercial circuits (see Substep 5.3.2.4).*
- *Once notified of FTS-2000 problems, the NRC is responsible for any corrective actions unless the problem is determined to be within the plant telephone system. The NRCOC reports FTS-2000 problems to the FTS-2000 Trouble Handling Information System (THIS), operated by U.S. West Communications. The THIS issues the NRC a trouble ticket number and provides them periodic status updates. The THIS relays the problem report to the AT&T FTS-2000 Network Control Center (NCC).The NCC analyzes the problem and attempts to isolate or determine the problem location. Isolation is performed between the FTS-2000 switch and the plant telephone system. If the problem is within the FTS-2000 system, the NCC will direct corrective action including dispatch of work crews and report restoration of the circuit to the NRCOC upon completion of repairs. If the NCC determines that no problem exists within the FTS-2000 portion of the circuit, the NRCOC will be informed of this via the THIS. The NRCOC will then inform the licensee that the problem is within the plant telephone system.*

1. IF trouble is noted with the FTS-2000 system, THEN notify the NRCOC.

2. IF the trouble is isolated to the plant telephone system, THEN take corrective action by notifying the plant Management Information Systems (MIS) Department.

5.9 Use of the Dedicated Alternate Shutdown Communications System

NOTES

- *The Dedicated Alternate Communications System is used for maintaining constant communications between manned stations in the event that the Control Room requires evacuation.*
- *Notify the Unit RCO if it becomes necessary to break communications or when communications are restored.*
- *Maintain the Control Room circuits isolated via the Keylock switches until control is to be reestablished in the Control Room.*
- *Dedicated Alternate Shutdown headsets should be disconnected when leaving an area to prevent excessive background noise on the communication circuit.*

5.9.1 Set up the desired station by performing the following:

1. Remove the headset and extension cord from the locked communications box.
2. Plug the headset into the jack.
3. Establish and maintain communications as directed by procedure.

5.9.2 Use the page feature to contact plant personnel by performing the following steps:

NOTE

The paging key switch must be released when paging is no longer required.

1. Key the paging switch on the handset, or headset extension cord.
2. Make announcement into the microphone.
3. Release the paging key switch.

5.9.3 When use is to be terminated, restore the headset and extension cord to the communications box and relock the box.

5.10 Use of the Cellular Telephone Backup System

5.10.1 To use the cellular telephones located in the Nuclear Plant Supervisor's office or the Site Vice President's office, follow standard Bell System procedures as follows:

1. Lift the handset.
2. Dial the desired telephone number.
3. Replace the handset at conversation completion,

5.11 Use of the Portable Cellular Telephone Units

5.11.1 Ensure the power is on.

5.11.2 Lift the handset.

5.11.3 Dial the desired number.

5.11.4 Press the "SEND" button.

5.11.5 Press the "END" button at conversations end.

5.11.6 Replace the handset.

NOTE

The PTN UHF and VHF Radio Systems are to be operated from the remote control units. Local operation of the radio units is to be performed by qualified radio personnel only. Contact the Emergency Preparedness Coordinator or Miami Radio personnel if local operation is necessary. Refer to the Emergency Response Directory for telephone numbers.

5.12 Use of the PTN UHF and VHF Radio Systems

5.12.1 The UHF and VHF Radio Systems operate identically.

NOTE

By depressing the "HOME" button on the control unit, the primary channels listed below will be selected.

1. Select the desired channel using the "Mode" toggle bar, or depressing the "HOME" button.
   a. UHF System - FPL 9 (Primary
   b. VHF System - DIRICO 12 (Primary)

5.12.1 (Cont'd)

2. Adjust volume level using the "VOL" toggle bar. Level is indicated on Control Unit display.

   a. Leave the handset in the cradle to adjust the built in speaker volume.

   b. Lift handset from cradle to adjust ear piece volume.

3. Check that the "Busy" light on the Control Unit is not on. If the "Busy" light is on, wait for the channel to clear.

NOTE

The built in speaker is cut out when the handset is out of the cradle.

4. To transmit:

   a. Using the built-in speaker and microphone, depress the "TRANSMIT" bar.

   b. Using the handset, lift the handset and depress the Push to Talk button on the handset.

5. Wait for the red "Transmit" light to come on steady.

6. Speak slowly and clearly into the microphone.

7. If there is no response on the primary channel, select any other channel and repeat the previous steps.

5.13 Use of the HF/ALE Radio System

NOTE

The HF/ALE Radios are to be operated from the remote telephone set in the NPSs office. Local operation is to be performed by qualified radio personnel only. Refer to the Emergency Response Directory for Emergency Preparedness and Miami Radio personnel contracts, if local operation is necessary.

5.13.1 Placing an HF/ALE call:

1. Select the desired radio set using the selector switch on the back of the telephone.

   a. Onsite

   b. Offsite

5.13.1 (Cont'd)

NOTE

If the telephone set is off hook, and 10 seconds elapse without depressing a key or you press a non-digit key, a busy tone will be heard. If this occurs, hang up the telephone and try the call again.

2. Lift the telephone handset.

3. Listen for a dial tone.

NOTES

- *If the called party goes off hook within one (1) minute, the Ring back tone will stop and communications are established. From this point on, if neither party presses the Push to Talk (PTT) button for five (5) minutes, a Fast Busy tone will be heard, and the link will be disconnected.*
- *When making HF/ALE communications*

  1. *Do not pause too long between sentences.*
  2. *Say "Over" at the end of the message and release the Push to Talk (PTT) button to listen.*
  3. *Give the called operator time to say "Over" and release the PTT button before you depress your PTT button and start talking.*
  4. *It is recommended to repeat the first word at the message to ensure the HF/ALE radios are properly keyed.*

4. Dial the four (4) digit extension of the desire station. Refer to the Emergency Response Directory for a listing of stations.

   a. If a busy tone is heard after the fourth digit, the address is not in the HF/ALE directory. Hang up the telephone, verify the address number, and attempt the call again.

5. Listen for a Wait tone (approximately every 3 seconds) while the HF/ALE attempts to establish a link with the desired station.

6. Listen for a Ring back Tone (like a telephone ringing) indicating that the link has been established, and the station being called is ringing.

   a. If a busy tone is heard, the link could not be established. Hang up the HF/ALE telephone set and attempt the call again or call another station.

5.13.1 (Cont'd)

NOTE

When placing a call, it may take up to 3 minutes to establish a link.

7. When the called station answers, depress the PTT button and talk into the handset microphone.

8. When the conversation is finished, terminate the link by going on hook (placing the handset in the telephone cradle).

   a. If the other party goes on hook first, you will hear a Fast Busy tone which will stop when you go back on hook.

9. Verify the selector switch on the HF/ALE telephone set is in the Onsite position unless continued communications using the offsite HF/ALE radio is planned.

5.13.2 Receiving an HF/ALE Call

NOTES

- *The HF/ALE Telephone set can receive a call when the handset is on hook or off hook.*
  1. *If on hook, the telephone will ring like a normal telephone.*
  2. *If off hook, you will hear a normal telephone ringing tone which will stop when you press the PTT button.*
- *If the HF/ALE call is not answered within one (1) minute, the communication link will be automatically terminated.*

1. Go off hook (i.e. pick up the handset) and listen for the three second Long Distance tone.
2. When the Long Distance tone stops, press the PTT button, identify the station by saying "This is Turkey Point Nuclear, Over", and release the PTT button.
3. Conduct the communication using the PTT button, speaking into the handset microphone, releasing the PTT button, and listening to the handset earpiece.
4. When the conversation is finished, terminate the link by going on hook.
   a. If the other party goes on hook first, you will hear a Fast Busy tone which will stop when you go on hook.
5. Verify the selector switch on the HF/ALE telephone set is in the Onsite position unless continued communications using the Offsite HF/ALE radio is planned.

END OF TEXT

ENCLOSURE 1
(Page 1 of 3)

DESCRIPTION AND USE OF THE MOTOROLA MTX-900S SMARTNET RADIO SYSTEM

The Motorola SmartNet is a system employing computer technology in an FM 900MHz repeater radio system. The entire site is controlled via the central computer which maintains frequency control of the system. The system works on what is known as Trunking technology. A Central Site Controller (CSC) monitors a preset Control Channel for any incoming requests for service. This request is sent to the CSC in a digital form on a preset frequency. The CSC will control all frequencies in the system and will assign radios to the most appropriate frequencies as they become available. Using this method the system can serve a small amount of frequencies to a vast amount of users.

As a user uses the radio, the CSC will assign that radio to a frequency for the moment in time. As the user continues use, the CSC may assign a different frequency and will instruct the user's radio to actually change frequency as needed. The user has no need to be concerned about which frequency to tune the radio to as this will be a function of the radio itself via instructions from the CSC. All the user has to remember is that at times others may be using the system and that all channels may, at any one time, be in use. At that time, the radio will inform the user by emitting a special tone from the radio.

Turkey Point has a system of 5 repeaters and 1 CSC. If a frequency is available for the user, the CSC will transmit a digitized message to the user's radio, as well as all other radios that are set to the selected channel. Thus, if your radio is set, via the channel selectors on the top of the radio, to talk group DELTA the CSC will first identify your radio in a list of authorized radios that are allowed access to this system. If your radio does not identify itself by either sending a special coded site security number and/or is not in the access authorization list, the radio is ignored by the system and will not be allowed to use any of the frequencies assigned to the system. However if the radio is authorized, the CSC will then locate the next available frequency of the 5 assigned and will instruct the users radio as well as any other radio that is set via the channel selector switches to switch to the frequency that has been assigned. If a frequency is not available at that time a BONK sound will be heard from your radio for as long as the talk button is held down. If this BONK is emitted, the user should release the push to talk (PTT) button on his radio. When a frequency becomes available, the radio will emit a DE DE DIT sound indicating a frequency has become available and the user may proceed with his transmission.

Since the system is computer controlled, it is likely from time to time, though hopefully very seldom, to experience technical problems. If for any reason the CSC should fail, the system will continue to function in what is called the FAILSOFT mode. In this mode the user's radio will automatically tune itself to a preset frequency for the duration of the CSC outage. In this mode the radio will emit a very faint beep sound every 10 seconds and will constantly be receiving a DEAD CARRIER from the repeater to which the radio has been assigned. The frequency the radio will tune to will depend on which channel the selector on the radio is set to at the time of CSC failure. This condition will last for as long as the CSC is down. After the CSC is brought back online, the radio will return to the normal operating mode and all features above will again become available.

ENCLOSURE 1
(Page 2 of 3)

DESCRIPTION AND USE OF THE MOTOROLA MTX-900S SMARTNET RADIO SYSTEM

The System is also on an Uninterruptible Power Supply (UPS) System. This system consists of plant equipment in the form of Diesel Power Systems as well as standby batteries. If the system experiences power losses, the system will revert to battery backup. While on battery backup power, the system will continue normal operation however it will go into a battery revert mode which will cause the repeaters to switch to half output power. Thus, in times of power outages the range of the system may be decreased due to the half output power mode. When the power is restored, the system will return to normal output power.

At times it may become necessary for a radio user to be contacted; however, the user may not be able to hear voice communications, for instance in times of high noise. If the user must be contacted, the system can be instructed to send an ALERT to the user's radio at which time the user's radio will emit 4 LOUD beeps which are at a volume much higher than that which can be set with the normal volume control. This feature can be initiated from a computer console in the Security Central Alarm Station (CAS) by request through the Security Specialist. If the radio is alerted, it will continue to give the 4 beeps in increments of 5 seconds until the user pushes the PTT to transmit. This feature is able to be used regardless of the channel the radio is set on. The only reason the alert may not be received by the user's radio is in the case of the battery being discharged, the radio is in an area where reception is not possible, the radio is out of range of the system, or the radio is turned off.

In addition to the alert feature, the system can also ask the radio its status. This request for status will give the computer console in the CAS the channel the radio is turned to and will also tell the operator if the radio is turned on or off. Again, this feature is available by request through the Security Specialist.

One other feature needs mention. This is the ability to disable the radio. This feature would be used if the radio is not accounted for by the user and is presumed stolen or lost. The CAS operator can instruct the system via the computer console to put the radio in a sleep or disabled mode. In this mode the user's radio will not receive or transmit any voice transmissions, although the computer console can again be used to request the radio's status. This feature can be reversed if the radio is recovered and returned to service. This again is a feature that the Security Specialist can request for you.

The MTX-900S Smartnet radio generates the following audible tones to indicate radio operating conditions:

Illegal Mode A low-pitched *baaaah* tone is heard when an invalid or unprogrammed operation is attempted, for example:

1) the rotary and toggle switches are set to an unprogrammed position

2) no response is received from the trunking controller to a Private Conversation request (trunked systems only)

3) the phone button is pressed but the radio is not authorized to access the telephone network.

ENCLOSURE 1
(Page 3 of 3)

DESCRIPTION AND USE OF THE MOTOROLA MTX-900S SMARTNET RADIO SYSTEM

Low Battery	A cricket-like *chirp-chirp* heard when the PTT is released indicates that the battery charge is getting low. This tone will also sound every two minutes when the radio is idle.
Time-Out Timer	A low-pitched *baaah* tone heard while transmitting indicates that the present transmission will be cut off in four seconds. Quickly release the PTT and press it again to cancel the tone and finish transmitting your message.
Valid Key	A *chirp* tone is heard when the keypad or push buttons are pressed to indicate the button press is accepted.
Invalid Key	A *bonk* tone is heard when the keypad or push buttons are pressed to indicate the button press is rejected.
Talk Permit	On radios with this feature enabled a high-pitched *dih-dih-dit* tone heard when the PTT is pressed indicates that a channel grant has been received from the trunking controller and the radio can transmit.
Dispatch Busy	A continuous *bah-bah-bah* tone heard when the PTT is pressed indicates that the system is busy (no voice channels are available). Release the PTT and wait for a Call Back tone.
Call Back	This is the same as the Talk Permit tone. It is heard following a Dispatch Busy when a voice channel becomes available. When the Call Back tone is heard, press the PTT to transmit.
Talk Prohibit/ Out-of-Range	A continuous *baaah* tone heard when the PTT is pressed indicates that is no response from the trunking controller; transmission is not possible. The radio may be out-of-range or not authorized to access the trunked system.
Emergency Alarm	If active, either one or five *beep* tones will be heard when the orange side button is pressed (after the valid key *chirp* recognition is heard). One *beep* indicates that the alarm was sent but not acknowledged by the central controller. Four more *beep* tones indicate that the alarm has been acknowledged.
Emergency Exit	To exit emergency operation or to reset the emergency button following an emergency call, the orange emergency side button must be pressed and held for 1.5 seconds. At that time a valid key *chirp* will be heard, followed by a one second *beep* tone.

ENCLOSURE 2
(Page 1 of 1)
FTS-2000 SERVICES

The following NRC essential emergency communications functions are provided by FTS-2000 voice and data service:

1. Emergency Notification System (ENS): Initial notification by the licensee, as well as ongoing information regarding plant systems, status, and parameters.

2. Health Physics Network (HPN): Communication with the licensee on radiological conditions (in plant and offsite) and meteorological conditions, as well as the assessment of trends, and the need for protective measures onsite and offsite.

3. Reactor Safety Counterpart Link (RSCL): Established initially with the NRC base team, and then with the NRC site team representatives once they arrive at the site, to conduct internal NRC discussions on plant and equipment conditions separate from the licensee and without interfering with the exchange of information between the licensee and the NRC. This is the channel by which the NRC Operations Center supports NRC reactor safety personnel at the site. In addition, this link may also be used for discussion between the Reactor Safety Team Director and the licensee plant management at the site.

4. Protective Measures Counterpart Link (PMCL): Established initially with the base team, and then with the NRC site team representatives once they arrive at the site, to conduct internal NRC discussions on radiological releases and meteorological conditions, and the need for protective actions separate from the licensee and without interfering with the exchange of information between the licensee and the NRC. This is the channel by which the NRC Operations Center supports NRC protective measures personnel at the site. In addition, this link may also be used for discussion between the Protective Measures Team Director and the licensee plant management at the site.

5. Emergency Response Data Channel (ERDS): This is the channel over which the raw reactor data is transmitted from the site. The ERDS is being implemented by a separate NRC project and PC/M, and will provide a data path to allow transmission of plant computer (ERDADS) data directly to the NRC via FTS-2000. This will require manual activation after declaration of an emergency.

6. Management Counterpart Link (MCL): Established for any internal discussions between the Executive Team Director or Executive Team members and the NRC Director of Site Operations or top level licensee management at the site.

7. Operations Counterpart Link (OCL): Established with the base team and the NRC site team for access to any of the products or services provided on the NRC Operations Center's Local Area Network. This includes technical projections, press releases, status reports, electronic mail, and various computerized analytical tools.

ENCLOSURE 3
(Page 1 of 1)

FTS-2000 LOCATIONS

FTS-2000 service extensions for PTN (both onsite and offsite) consist of the following:

1. Control Room

   NPS Communications Area: ENS

2. Technical Support Center (TSC)

   Emergency Management Area: ENS

   Dose Assessment Area: HPN

   NRC Conference Room: ENS PMCL HPN
   RSCL OCL MCL

3. Computer Room

   ERDS (one per unit)

4. Simulator Control Room

   NPS Communications Area: ENS

5. Emergency Operations Facility (EOF)

   NRC Conference Room: ENS

   Dose Assessment Area: HPN

   NRC Area: ENS PMCL HPN
   RSCL OCL MCL

ENCLOSURE 4
(Page 1 of 1)

HF/ALE RADIO SYSTEM PRINCIPLES OF OPERATION

Operations of the HF/ALE radio from the telephone set is very similar to the normal operation of a telephone. FPL Telecommunications has set up a Network of HF/ALE stations or addresses. The directory of the Network Addresses is maintained in the Emergency Response Directory. Each HF/ALE radio has a private four digit address, analogous to a telephone directory. The directory of addresses is also programmed in the onsite and offsite HF/ALE radios. The HF/ALE radio automatically contacts each address in its directory periodically throughout the day. By doing so, the radio knows the best frequency to attempt communications on with each addressee. Thus, for normal operation, the radio operator simply lifts the handset, listens for dial tone, dials the desired number, hears the ring tone, and hangs up at the end of the conversation. Unlike the normal telephone there are two activities that take place when using the HF/ALE telephone set to transmit and receive:

1. Pressing the Push to Talk (PTT) button on the handset before talking
2. Saying "Over" at the end of each message.

Refer to the Operations Section of this procedure for specific steps on making or receiving an HF/ALE call.

NOTE

The HF/ALE radios are to be operated from the telephone sets for normal communications. Local operation of the radios should only be performed by qualified radio personnel. Contact the Emergency Preparedness Coordinator, or Miami Radio personnel if local operation is necessary. Refer to the Emergency Response Directory for telephone numbers.

FINAL PAGE

FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT UNITS 3 AND 4
EMERGENCY PLAN IMPLEMENTING PROCEDURE 20133
MARCH 5, 1992
Safety Related

1.0 Title:

Operations Support Center (OSC) Activation and Operation

2.0 Approval and List of Effective Pages:

2.1 Approval:

Change dated: 3/5/92 Reviewed by Plant Nuclear Safety Committee: 92-037

Approved by Plant General Manager - Nuclear: 3/5/92

Periodic Review Due: 12/26/94 Implementation Date: 3/27/92

2.2 List of Effective Pages:

Page	Date	Page	Date	Page	Date	Page	Date
1	03/05/92	7	03/05/92	13	03/05/92	19	03/05/92
2	03/05/92	8	03/05/92	14	03/05/92	20	03/05/92
3	03/05/92	9	03/05/92	15	03/05/92	21	03/05/92
4	03/05/92	10	03/05/92	16	03/05/92	22	03/05/92
5	03/05/92	11	03/05/92	17	03/05/92	23	03/05/92
6	03/05/92	12	03/05/92	18	03/05/92		

3.0 Scope:

3.1 Purpose:

3.1.1 This procedure provides guidance for the activation and operation of the Operations Support Center (OSC).

3.2 Discussion:

3.2.1 The OSC is a staging area for emergency response personnel during emergency response activities. This facility is located on the West End 2nd floor of the Nuclear Maintenance Building (Attachment 1, OSC Layout).

3.2.2 Security Force Instruction 6307 provides information to the Security Officer for responding to and preparing his post in the OSC.

RTSs 91-1629, 92-0282

This procedure may be affected by an O T.S.C (On The Spot Change) verify information prior to use.
*Date verified*_____ *Initials*_____

★/AWT/ms/dt

3.2.3 Not all procedures needed in the OSC are kept in the file cabinets. If additional procedures are needed from the Document Control Spare Copy Room, the OSC Health Physics Supervisor should evaluate the radiological conditions in the NAB and the NMB - NAB breezeway before Document Control personnel are dispatched to obtain the needed materials. Additionally, if additional equipment or supplies are needed, the same protocol should be used when accessing other areas of the plant.

3.2.4 The Emergency Preparedness Department will provide an additional 10 radios to the OSC for Team use.

3.2.5 Attachment 3, Securing OSC Ventilation, provides instructions for minimizing potential radiological hazards, but does not isolate the facility. Alternate facility locations should be considered if hazardous conditions persist.

3.2.6 Backshift (peak and mid shift) maintenance planning personnel may be available to retrieve Vendor Technical manuals, if necessary.

3.2.7 Two Fax machines are available in the OSC. The OSC Operations Fax Machine will primarily be used for communications with the TSC. The OSC Chemistry Fax Machine will primarily be used for communication with the Health Physics and/or Chemistry Count Rooms.

3.2.8 The Security Operations Support Representative is a Licensed Operator stationed in the Security Command Post to provide Operational interface and, liaison for security personnel during emergency situations when the onsite Emergency Response Facilities are activated. Operational questions from security should be coordinated through the TSC Security Supervisor to the Security Operations Support Representative.

3.3 Authority:

3.3.1 Turkey Point Plant Radiological Emergency Plan

3.4 Definitions:

3.4.1 Radiological Hazard - Any radiation monitors 100 mR/hr over normal readings or airborne radioactivity at MPC levels.

3.4.2 Emergency Response Team (ERT) - A team of selected, qualified individuals comprised of Health Physics Radiation Protection Men, Chemistry Technicians, Journeymen from Mechanical, I&C, and Electrical Maintenance, Contract Medical Response Personnel, and Plant Operators utilized to respond to an emergency situation and conduct re-entry, mitigation, and radiological monitoring activities.

3.4.3 Essential Personnel - Personnel assigned to fill positions in the Turkey Point Emergency Response Organization as listed in the Emergency Response Directory.

3.4.4 Non-Essential Personnel - Personnel not pre-assigned specific emergency response duties.

4.0 Precautions:

4.1 The OSC is normally located on the West End 2nd floor of the Nuclear Maintenance Building. If radiological conditions make this area uninhabitable, the OSC may be relocated to another area.

4.2 During any declared emergency with radiological hazards, no OSC personnel can be in the field without dedicated HP coverage. If only one HP Tech is attached to a team, that team may not break up until another HP Tech joins the team to provide necessary coverage.

4.3 Cameras are provided in the Document Control revolving locker. They should be utilized for teams investigating problems so accurate information can be transmitted to the OSC.

4.4 When possible and as conditions warrant, Security System cameras located around the plant may be used in investigating problems during an emergency. Requests should be made through the TSC Security Supervisor and may employ the Security Operations Support Representative.

5.0 Responsibilities:

5.1 Emergency Response Team Members are responsible for bringing their radios to the OSC, assisting in the set up of the OSC per Attachment 2 of this procedure, and performing tasks as requested by their supervisor.

5.2 The OSC Supervisor is responsible for the following:

5.2.1 Maintaining accountability, control, and habitability of the OSC during activation, operation and de-activation.

5.2.2 Coordinating and directing OSC activation, operation, and de-activation.

5.2.3 Ensuring communication links are established and updates are made to the TSC.

5.2.4 Directing formation, dispatching, and maintaining accountability of ERTs.

5.2.5 Directing implementation of Attachment 3, Securing OSC Ventilation, if radiological hazards exist in the facility.

5.2.6 Coordinating and directing shift turn over of the OSC.

5.2.7 Ensuring a log of activities is maintained.

5.3 The OSC Health Physics Supervisor is responsible for the following:

5.3.1 Ensuring accountability and minimum staffing of Health Physics personnel in the OSC.

5.3.2 Coordinating Health Physics coverage with the discipline Supervisors in the OSC for ERTs and field personnel.

5.3.3 Ensuring dosimetry is distributed and the required paperwork is completed for OSC personnel and ERTs.

5.3.4 Ensuring the Health Physics section of the OSC is set up according to Attachment 1, OSC Layout.

5.3.5 If radiological conditions warrant (i.e., release in progress, Control Room Radiation Monitor alarm, etc.) and sufficient OSC HP personnel are available, ensure that coverage is provided to the Control Room for contamination control and exposure monitoring.

5.3.6 Dispatching ERTs - Offsite for radiological monitoring in accordance with EPIP-20129, Emergency Response Team - Offsite.

5.3.7 Implementing EPIP-20111, Re-Entry.

5.3.8 Ensuring the OSC Supervisor is aware of all ERT activities.

5.3.9 Coordinating emergency exposures with the OSC Supervisor, TSC Health Physics Supervisor, and the Emergency Coordinator.

5.3.10 Maintaining a log of activities.

5.4 The OSC Operations, Chemistry, Mechanical, I&C, and Electrical Supervisor are responsible for the following:

5.4.1 Ensuring accountability and minimum staffing of applicable personnel in the OSC.

5.4.2 Ensuring the applicable section of the OSC is set up according to Attachment 1, OSC Layout.

5.4.3 Implementing EPIP-20111, Re-Entry.

5.4.4 Ensuring the OSC Supervisor is aware of all ERT activities.

5.4.5 Maintaining a log of activities.

6.0 References/Records Required/Commitment Documents:

6.1 References:

6.1.1 Turkey Point Radiological Emergency Plan

6.1.2 EPIP-20111, Re-Entry

6.1.3 EPIP-20129, Emergency Response Team - Offsite

6.1.4 Security Force Instruction 6307

6.2 Commitment Documents:

6.2.1 None

7.0 Records and Notifications:

7.1 Upon de-activation of the OSC, the following completed documents shall be transmitted to the Emergency Preparedness Supervisor who shall review and retain for archival purposes:

7.1.1 The OSC Supervisor and discipline Supervisors in the OSC shall each maintain a log book of activities performed during a plant emergency. Log books shall be stored in the OSC Document Control Cabinet.

7.1.2 OSC Staff Accountability Log, Attachment 4. |

8.0 Instructions:

NOTE: The OSC is a non-smoking designated facility. Eating and drinking shall be controlled and limited by the OSC Supervisor, and shall be prohibited whenever habitability surveys reveal any surface or airborne contamination activity.

8.1 The following steps should be accomplished for OSC activation:

8.1.1 The Emergency Response Team members should assist in the set up of the OSC in a layout similar to Attachments 1 and 2 and await further instructions from their discipline supervisors.

8.1.2 The OSC Security Officer should complete the following steps.

1. Obtain OSC Staff Accountability Logs (similar to Attachment 4) from the OSC Document Control Cabinets.

2. Referring to a form similar to Attachment 1, ensure that the OSC Staff Accountability Board is obtained (next to OSC HP Lockers), and setup so that OSC accountability can be maintained and OSC Supervisors can view the board to ensure sufficient OSC staffing.

3. If available and not distracting from other duties, assist in setup of the OSC referring to Step 8.1.1.

8.1.3 The OSC Supervisor should complete the following steps:

1. Sign in on the OSC Staff Accountability Board.

2. Upon arrival of the OSC Security personnel, ensure that keys for vehicle gates have been obtained and that control of access to and egress from the OSC is maintained.

3. Ensure Security personnel obtain accountability information from the OSC Staff Accountability Board for initiation of Attachment 4, OSC Staff Accountability Log.

4. Ensure Health Physics personnel conduct equipment inventories and habitability surveys, as necessary.

5. Obtain personal dosimetry and complete associated documentation.

6. Ensure all OSC Supervisors are accounting for personnel presently working on tasks for the Control Room and are entering information on the OSC Staff Accountability Board.

7. Ensure communication links with the TSC are established.

8. Ensure the copy machine from the Instrumentation and Control shop has been transferred to the OSC and is operational.

9. Ensure status boards are being updated in a timely manner.

10. Verify the establishment of the radiological control point by Health Physics personnel in the Maintenance Building.

11. Verify the OSC is set up in a layout similar to Attachment 1, OSC Layout.

12. Upon arrival of the OSC Document Control Personnel, ensure access is established to the OSC Document Cabinets and that assistance obtaining controlled documents is being provided to the OSC Staff.

    NOTE: The Emergency Coordinator has the authority to waive individuals' emergency response training requirements.

13. Initiate corrective actions to fill vacant positions, as necessary.

14. Establish full accountability for OSC personnel.

15. Ensure the following OSC positions are filled to satisfy minimum staffing requirements prior to declaring the OSC operational:

    a. OSC Supervisor (1)

    b. Mechanical Maintenance Journeymen (2)

    c. Electrical Maintenance Journeymen (3)

    d. I&C Maintenance Journeymen (1)

    e. Health Physics Technicians (12)

    f. Chemistry Technicians (2)

16. Ensure the TSC and Control Room are notified when the OSC is deemed operational.

17. Announce operational readiness to OSC personnel.

18. Direct OSC Recorder to maintain time/event information in the OSC Supervisor Logbook.

8.1.4 The OSC Operations Supervisor should complete the following steps:

1. Sign in on the OSC Staff Accountability Board.

2. Ensure that the Operations section of the OSC is set up per Attachment 1, OSC Layout.

3. Obtain personal dosimetry and complete associated documentation.

   NOTE: Plant Operators should stay in their work areas if it is determined that there is not a radiological hazard.

4. Determine status of on shift Plant Operators.

   CAUTION: During emergency situations, the Plant Operator should obtain ICCS Keys from the break glass boxes in the Plant Operator shacks prior to reporting to the OSC.

5. Ensure the ICCS Keys and all available Hand Held Emergency Radios are obtained by the Plant Operators prior to them reporting to the OSC.

6. Ensure accountability of Plant Operators.

   a. If all Plant Operators are present in the OSC, verify that they have signed in on the OSC Staff Accountability Board.

   b. If all Plant Operators are not present in the OSC, establish contact (radio or plant page) with the Operators to acquire accountability information (name, badge No.) and enter on the OSC Staff Accountability Board.

7. If applicable, discuss with the OSC Health Physics Supervisor sending Health Physics coverage to Plant Operators in the plant.

8. Obtain emergency information status from shift personnel.

9. Anticipate and plan for the request of typical accident team tasks (i.e., PAHM's in service within 30 minutes of SI, PASS in service within 3 hours, etc.).

10. Obtain copies of Team Briefing/Debriefing Form stored in the OSC Document Control cabinet (form similar to Attachment 2 and 4 in EPIP-20111, Re-Entry).

11. Maintain a log of activities.

8.1.5 The OSC Health Physics Supervisor should complete the following steps:

1. Sign in on the OSC Staff Accountability Board.

2. Obtain emergency status information from shift personnel.

3. Ensure all available Hand Held Emergency Radios are transferred from the Health Physics Shift Supervisors (HPSS) office to the OSC.

4. Ensure HP phones are forwarded to the OSC.

5. Ensure accountability of Health Physics personnel:

   a. If all Health Physics personnel are present in the OSC, verify that they have signed in on the OSC Staff Accountability Board.

   b. If all Health Physics personnel are not present in the OSC, establish contact (radio or plant page) with them to acquire accountability information (name, badge No.) and enter on the OSC Staff Accountability Board.

   NOTE: The RCA Checkpoint should be maintained until accountability is established and all non-essential personnel have left the RCA. The RCA Checkpoint may be maintained open if the Emergency Coordinator deems it necessary.

6. Ascertain the status of the RCA Checkpoint.

7. Determine the need to send Health Physics coverage to personnel presently in the plant.

8. Ensure that the Health Physics section of the OSC is set up per Attachment 1, OSC Layout.

   NOTE: The key to the Health Physics Emergency Equipment Lockers is located at the HPSS's office and in the Break Glass Box in the OSC.

9. Verify that the Health Physics Emergency Equipment Lockers have been opened and equipment has been checked.

10. Ensure that the OSC radiological control point (usually established on the ground floor at the North-East End of the Nuclear Maintenance Building) has been established.

    a. Ensure all other 1st floor entrance doors and 2nd floor exit doors are blocked by the stanchions stored in the OSC Document Control cabinet.

11. Ensure habitability surveys of the OSC are initiated, as necessary. If abnormal radiological conditions threaten the facility, evaluate securing OSC ventilation and make appropriate recommendations to the OSC Supervisor.

12. Ensure that the communication link to the TSC has been established.

13. Coordinate with the TSC Health Physics Supervisor support of the Offsite Assembly Area.

14. Obtain personal dosimetry and distribute dosimetry to OSC personnel and ensure OSC Dose Recorder initiates all required paperwork.

15. Verify the ability to record and track dose.

16. Initiate corrective actions, as necessary, to fill open Health Physics positions.

17. Obtain copies of Team Briefing/Debriefing Form stored in the OSC Document Control Cabinet (form similar to Attachment 2 and 4 in EPIP-20111, Re-Entry).

18. Maintain a log of activities.

19. Coordinate the acquisition of company vehicles for Emergency Response Teams - Offsite with the TSC Maintenance Superintendent.

20. Ensure the ERTs-Offsite are prepared for dispatch for radiological monitoring in accordance with EPIP-20129, Emergency Response Team-Offsite, and dispatch as necessary.

21. If a radiological release is occurring or expected, anticipate the dispatch of the ERTs-Offsite.

22. Verify that status boards are being updated.

23. Ensure that the portable multi channel analyzer is taken to the OSC.

24. If radiological conditions warrant, and sufficient personnel are available, dispatch HP coverage to the Control Room.

8.1.6 The OSC I&C, Electrical, and Mechanical Supervisors should complete the following steps:

1. Sign in on the OSC Staff Accountability Board.

2. Ensure accountability of maintenance personnel.

   a. If all maintenance personnel are present in the OSC, verify that they have signed in on the OSC Staff Accountability Board.

   b. If all maintenance personnel are not present in the OSC, establish contact (radio or plant page) with them to acquire accountability information (name, badge No.) and enter on the OSC Staff Accountability Board.

3. Ensure that the applicable maintenance sections of the OSC are set up per Attachment 1, OSC Layout.

4. Obtain personal dosimetry and complete associated documentation.

5. If applicable, discuss with the OSC Health Physics Supervisor sending Health Physics coverage to the maintenance personnel in the plant.

6. Initiate corrective actions to fill open positions.

7. Obtain copies of Team Briefing/Debriefing Form stored in the OSC Document Control Cabinet (form similar to Attachments 2 and 4 in EPIP-20111, Re-Entry).

8. If directed by the OSC Supervisor, dispatch personnel to secure OSC ventilation per Attachment 3 and obtain fans to circulate air within the facility.

9. Maintain a log of activities

10. Obtain emergency status information from shift personnel.

8.1.7 The OSC Chemistry Supervisor should complete the following steps:

1. Sign in on the OSC Staff Accountability Board.

2. Ensure accountability of Chemistry and Contract Medical Response Personnel.

   a. If all Chemistry and Contract Medical Response Personnel are present in the OSC, verify that they have signed in on the OSC Staff Accountability Board.

b. If all Chemistry and Contract Medical Response Personnel are not present in the OSC, establish contact (radio or plant page) with them to acquire accountability information (name, badge No.) and enter on the OSC Staff Accountability Board.

3. Ensure that the Chemistry section of the OSC is set up per Attachment 1, OSC Layout, including:

   a. OSC Chemistry Fax machine operability, and

   b. Chemistry Count Room Fax machine operability.

4. Obtain personal dosimetry and complete associated documentation.

5. If applicable, discuss with the OSC Health Physics Supervisor, sending Health Physics coverage to Chemistry personnel in the plant.

6. Initiate corrective actions to fill open positions.

7. Coordinate the planning of Containment Air Sampling, and Post Accident Sampling, as necessary.

8. Obtain copies of Team Briefing/Debriefing Form stored in the OSC Document Control Cabinet (form similar to Attachments 2 and 4 in EPIP-20111, Re-Entry).

9. Maintain a log of activities.

10. Ensure that the communication link to the TSC has been established.

11. Obtain emergency status information from shift personnel.

12. Verify that the Emergency Medical Vehicle is staged.

8.2 The following steps should be accomplished for OSC operation:

8.2.1 The OSC Supervisor should complete the following steps:

1. Ensure OSC Security personnel are controlling access to and egress from the OSC, and are maintaining Attachment 2, OSC Staff Accountability Log.

2. Check personal dosimetry and ensure responsible OSC staff check personal dosimetry approximately every 30 minutes.

3. Provide updates to OSC personnel and teams in the plant, as needed (classification changes, status of release, etc.), and approximately every 30 - 60 minutes.

4. Provide updates to the TSC Maintenance Manager of team activities.

5. Direct Emergency Response Team formation for re-entry activities and dispatch in accordance with requests from the TSC in accordance with EPIP-20111, Re-Entry.

6. Coordinate approval of exposures exceeding 10 CFR 20 exposure limits with the Emergency Coordinator and in accordance with EPIP-20111, Re-Entry.

7. Periodically verify the information on the status boards.

8. Periodically review the OSC Supervisors Logbook for accuracy.

9. Ensure all OSC discipline Supervisors are implementing EPIP-20111, Re-Entry.

10. In the event of an evacuation of the Protected Area, ensure that the list of OSC personnel is transmitted to the TSC Security Supervisor for accountability.

11. Prior to an evacuation of the Protected Area, ascertain activation of the offsite assembly area and ensure Health Physics personnel have been dispatched, as needed.

12. Maintain OSC accountability.

13. If the habitability of the OSC requires OSC evacuation, contact the Emergency Coordinator to discuss relocation of the OSC. If the OSC ventilation should be secured, direct the OSC Maintenance Supervisors to implement Attachment 3 and to set up fans in the OSC for ventilation.

14. Determine OSC manpower requirements for extended operations.

15. Establish a shift relief schedule, as necessary.

16. Transmit the shift relief schedule to the TSC Maintenance Superintendent for approval by the Emergency Coordinator, as necessary.

17. Direct shift turnover of OSC personnel, as necessary.

18. Perform shift turnover to alternate OSC Supervisor, as necessary.

8.2.2 The OSC Health Physics Supervisor, OSC Chemistry Supervisor, OSC Operations Supervisor, OSC I&C Supervisor, OSC Mechanical Supervisor, and OSC Electrical Supervisor should complete the following steps:

1. Check personal dosimetry and ensure responsible OSC staff check personal dosimetry approximately every 30 minutes.

2. Select qualified personnel for Emergency Response Team re-entry assignments.

3. Maintain an adequate number of emergency response personnel.

4. Maintain communications with Emergency Response Teams.

5. Conduct briefings and coordinate Emergency Response Teams in accordance with EPIP-20111, Re-Entry.

6. Verify Emergency Response Team dose tracking and recording.

7. Verify time and manpower constraints are enforced for Emergency Response Teams utilizing SCBA's and track the air time remaining in each SCBA throughout SCBA use.

8. If applicable, maintain communications with counterparts in the TSC (Health Physics, Chemistry).

9. If the dispatch of ERTs - Offsite is required, coordinate acquisition of radiological monitoring vehicles with the TSC Maintenance Manager.

10. Ensure status boards are being properly maintained.

11. Maintain all OSC documentation.

12. Brief the OSC Supervisor on Emergency Response Team and re-entry activity status.

13. Coordinate shift relief with the OSC Supervisor, as necessary.

8.3 The following steps should be accomplished for OSC de-activation:

8.3.1 The OSC Supervisor should complete the following steps:

1. Coordinate OSC de-activation with the Emergency Coordinator.

2. Direct OSC de-activation with all OSC personnel.

3. Verify OSC accountability and ensure Attachment 4, OSC Staff Accountability Log has been properly completed by OSC Security personnel and relayed to the OSC Recorder.

4. Ensure the OSC Recorder collects all OSC generated paperwork.

5. Ensure the OSC has been returned to its original condition and an inventory of equipment has been completed.

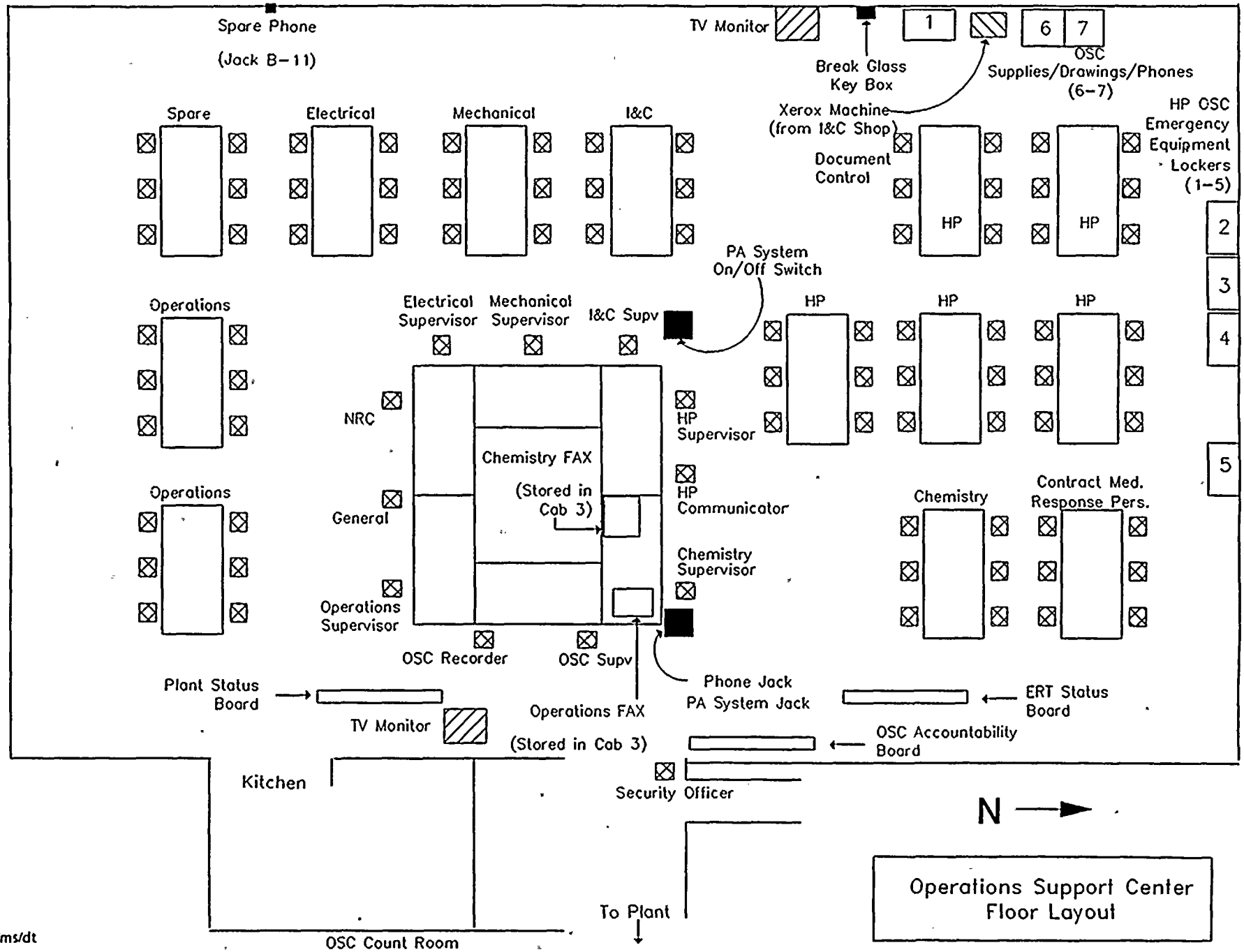
6. Forward all documentation to the Emergency Preparedness Supervisor.

7. Release OSC personnel, as appropriate.

OPERATIONS SUPPORT CENTER (OSC) ACTIVATION AND OPERATION

ATTACHMENT 1 (Page 1 of 1)

OSC LAYOUT



ATTACHMENT 2
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OSC ACTIVATION

NOTE: All responders to the OSC should bring all available departmental radios to the OSC and test them for operability upon arriving at the OSC.

NOTE: These instructions assume that the OSC is being set up in its normal location (NMB second floor lunch room). However, the OSC may need to be set up in another location if radiological conditions threaten the safety of OSC responders. Coordinate with Maintenance to move the equipment in the OSC cabinets to the location directed by the Emergency Coordinator or the OSC Supervisor. The set up diagrams and directions provided in the OSC should also be brought to the new facility. If this move is required, the OSC should be set up as close to the normal fashion as possible under the direction of the OSC Supervisor.

1. Move the OSC Staff Accountability Board (normally stored near the HP lockers) to the OSC entrance hallway. Place it so the OSC Security Officer can refer to it and control access and so OSC Supervisors can review it to ensure sufficient OSC staffing.

2. Sign in on the Staff Accountability Board under your position on the "1" line (the "2" line is for your relief). Write your badge number next to your name!

NOTE: Emergency Locker keys can be obtained from the break glass key box located on the OSC west wall.

3. If not already done, obtain Emergency Locker keys (for the HP lockers and the Document Control rotary lockers) and unlock and open these lockers.

NOTE: A diagram similar to Attachment 1, OSC Layout, is provided in two plastic cases. One case is mounted on the support column at the OSC entrance, and the other is mounted on the OSC west wall directly under the break glass key box. This diagram should be used for guidance in setting up the OSC.

4. Set up the OSC in a manner similar to Attachment 1, OSC Layout:

a. Set up the tables and chairs as shown in the diagram. It is important to set up the tables properly so that the facility functions as required and that the telephone cords will reach their assigned terminal locations.

b. Telephone set up:

(1) Remove the telephones and the telephone jack panel stored in the Document Control "Times Two" lockers (rotating lockers on the west wall).

ATTACHMENT 2
(Page 2 of 3)
OSC ACTIVATION

(2) Plug the telephone jack panel end into the outlet located on the support column near the OSC entrance and place the panel on the floor in the center of the tables.

(3) Place the telephones on the tables in the locations shown in the diagram according to the telephone numbers (each telephone has an identification label).

(4) Plug the telephones into the telephone jack panel as marked. The telephones must be plugged into the corresponding jack outlet in the panel for proper operation.

(5) Plug the telephone labeled "spare" into the jack located on the west wall (south end).

c. Remove the fax machines from the cabinets and place them in the location as shown in the diagram. Plug the telephone cords into the telephone jack as labeled. Plug the power cords into the nearest electrical outlet.

d. The PA microphone is stored in the Document Control cabinet. Plug it into the support column near the entrance (as shown on the diagram), and then ensure the amplifier control switch (located on the support column in the center of the OSC) is placed in the on (up) position. Test the PA microphone and adjust the volume as necessary. The volume control is located next to the PA microphone plug.

e. Remove the position/discipline name placards from the Document Control cabinet. Place these placards in their brass bases and set them in the locations shown in the diagram. These are to help identify the groups and supervisors.

5. (HPs only) Inventory and ensure operability of Health Physics equipment and instrumentation.

6. Obtain the Xerox copy machine from the Instrumentation and Control Shop and set it up per Attachment 1, OSC Layout. Plug the power cord into the nearest electrical outlet and check for operability.

7. Move all other status boards to the positions shown in Attachment 1, OSC Layout (the ERT Board should be next to the HP area, and the SOE Status Board should be next to the OSC Supervisor).

8. (HPs only) Provide assistance as needed to the OSC Dose Recorder to establish the assignment and documentation of dosimetry to OSC personnel.

NOTE: Health Physics may not be able to issue dosimetry to all OSC personnel immediately. Personnel assigned to Emergency Response Teams will take priority.

ATTACHMENT 2
(Page 3 of 3)
OSC ACTIVATED

9. Coordinate with Health Physics to obtain personal dosimetry and complete the required paperwork.

NOTE: The numbers marked in red next to the various positions on the OSC Staff Accountability Board indicate the minimum number of personnel in that position required. If that number of personnel is not present, the OSC cannot be activated. It is very important that adequate staffing be established as soon as possible in order to provide support and meet regulatory requirements. If you know of additional personnel on site who can fill positions on the OSC Staff Accountability Board, they should be contacted and told to report to the OSC. If they are out in the field performing important functions that cannot be stopped (actions needed to mitigate the emergency) as directed by the Emergency Coordinator, or are dispatched prior to the facility being activated (upon the request of the Emergency Coordinator), their names and badge numbers should be recorded on the OSC Staff Accountability Board and their status should be given to the OSC Supervisor as soon as possible. These personnel count toward the minimum staffing requirements for facility activation and therefore must be listed on the Staff Accountability Board.

CAUTION: Prior to OSC activation, personnel who need to remain out in the field should attempt to get a partner (call the Control Room if necessary). Due to the possibility of radiological conditions changing rapidly, Health Physics RPMs may be sent to accompany personnel remaining out in the field to provide radiological monitoring coverage. If RPMs are not available, any available personnel from the OSC should perform radiological monitoring coverage.

CAUTION: Plant Operators should remain in the plant until the OSC is ready to activate UNLESS there is a radiological hazard (an area radiation monitor reading 100 mr/hr or more above normal, or airborne activity at or above MPC levels). They need to relay their names and badge numbers to the Control Room or OSC. If there is a radiological hazard, Plant Operators should report to the OSC to obtain an individual for radiological monitoring coverage, and complete tasks as required. No one should remain in an area where they may exceed their allowed dose margin without the express permission of the Emergency Coordinator. Just prior to OSC activation, Plant Operators should report to the OSC after completing their assigned tasks.

10. If adequate staffing is not established in the OSC, contact any additional personnel in the needed discipline who have not yet responded and have them report to the OSC.

11. Remain in the area designated for your discipline and prepare to perform any tasks assigned by the OSC Supervisor.

ATTACHMENT 3
(Page 1 of 1)

SECURING OSC VENTILATION

The following instructions are to be used to secure all the air handlers supplying the Nuclear Maintenance Building in the event that the OSC ventilation must be secured for radiological hazards:

1. Outside on the north side of the NMB is Room 116. In this room on the west wall by the entrance are the controls for AHU1 and AHU2. These units are to be secured by positioning the Hand/Auto switch to the off (center) position.

2. On the second floor of the NMB in Room 207, are the controls for AHU's 3 and 4. AHU3 control is on the west wall near the back of the room and AHU4 control is on the north wall in the back of the room. These units are to be secured by positioning the Hand/Auto switch to the off (center) position.

3. On the third floor of the NMB in Room 304, are the controls for AHU's 5 and 6. AHU5 control is on the west wall near the back of the room and AHU6 control is on the north wall in the back of the room. These units are to be secured by positioning the Hand/Auto switch to the off (center) position.

NOTES:

- Auxiliary equipment, i.e., compressors, chill water pumps, etc; do not need to be shutdown in order to stop air movement within the building.

- Even with all the air handlers shutdown, outside air is still present to the system through a common duct from the roof. The system is NOT designed to provide isolation, and will not prevent freeflow of air into the building.

- The NMB will not have a positive pressure within the structure with the NMB ventilation system secured.

ATTACHMENT 4
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OSC STAFF ACCOUNTABILITY LOG

DATE: _____

POSITION	NAME	BADGE NO.
OSC Supervisor		
OSC Recorder		
OSC Document Control Personnel		
OSC Security Officer		
OSC Operations Supervisor		
Plant Operators		
OSC Health Physics Supervisor		
OSC Health Physics Communicator		
OSC Dose Recorder		
OSC Health Physics Technicians		

ATTACHMENT 4
(Page 2 of 3)
OSC STAFF ACCOUNTABILITY LOG

POSITION	NAME	BADGE NO.
OSC Health Physics Technicians (Cont'd)		
OSC Chemistry Supervisor		
OSC Chemistry Technicians		
Contract Medical Personnel (First Aid)		
OSC Mechanical Supervisor		
Mechanical Maintenance Personnel		
OSC Electrical Supervisor		
Electrical Maintenance Personnel		
OSC I&C Supervisor		
I&C Maintenance Personnel		
Miscellaneous Positions/Additions		

OPERATIONS SUPPORT CENTER (OSC) ACTIVATION AND OPERATION

ATTACHMENT 4
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OSC STAFF ACCOUNTABILITY LOG

POSITION	NAME	BADGE NO.
Miscellaneous Positions/Additions:		