UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

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Report Nos.: 50-250/95-07 and 50-251/95-07

Licensee: Florida Power and Light Company

Docket Nos.: 50-250 and 50-251 License Nos.: DPR-31 and DPR-41

Facility Name: Turkey Point 3 and 4

Inspection Conducted: March 20-24, 1995

Inspector: A. Gooden 04/28/95
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Radiological Protection and Emergency Preparedness Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection involved the observation and evaluation of the annual emergency preparedness exercise conducted on March 22, 1995. The inspection was conducted to assess the adequacy of: (1) the licensee's emergency response program; (2) the implementation of the Emergency Plan; (3) the Emergency Plan Implementing Procedures; and (4) the training program for emergency response personnel. The emergency response organization's (ERO) activation, notification, and response were evaluated from the following emergency response facilities (ERFs): Simulator Control Room (SCR), Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF), and the Emergency News Center (ENC). This exercise included full participation by State and local response agencies. The offsite participation was observed by the Federal Emergency Management Agency.

Results:

Within the areas reviewed, no violations, deviations, or exercise weaknesses were identified. The licensee's exercise was considered fully successful in demonstrating that facilities were maintained in a state of readiness, and the ERO was adequately prepared to effectively respond and cope with the postulated emergency. The licensee demonstrated an effective response capability to protect the health and safety of facility personnel and the general public. Program strengths that were noted included:

- Visual aids and props available during news briefings in the ENC.
- Video monitoring capability to show real time actions occurring within the TSC Emergency Coordinator/management area (e.g. TSC briefings, plant status boards, repair priorities, etc.).
- Drill communications capability installed at the Control Room Simulator (e.g. plant page system, State Hot Ring Down telephone, and NRC Emergency Notification System).
- Exercise critique was thorough and detailed.

The licensee's emergency preparedness program (training, facility maintenance, Plans and procedures) was properly maintained and effectively implemented in response to the assumed accident.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*T. Abbatiello, Manager, Site Quality Assurance
*M. Bowskill, Reactor Engineer
*G. Hollinger, Manager, Training
*D. Jernigan, Plant Manager
*H. Johnson, Manager, Operations
*V. Kaminskos, Manager, Service
*F. King, Emergency Preparedness Coordinator
*V. Laudato, Fire Protection Coordinator
*D. Mothena, Manager, Nuclear Emergency Preparedness
*T. Plunkett, Vice President
*R. Steinke, Supervisor, Chemistry
*A. Taylor, Emergency Preparedness Assistant
*E. Weinkam, Manager, Licensing

Other licensee employees contacted during this inspection included craftsmen, engineers, operators, mechanics, security force members, technicians, and administrative personnel.

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*K. Barr, Chief, Emergency Preparedness Section
*T. Johnson, Senior Resident Inspector
*J. King, Intern
*T. Peebles, Chief, Operations Branch

*Attended exit interview

Abbreviations used throughout this report are listed in the last paragraph.

2. Exercise Scenario (82302)

The scenario for the emergency exercise was reviewed to determine whether provisions had been made to test the integrated emergency response capability and a major portion of the basic elements within the licensee's Emergency Plan, as required by 10 CFR 50.47(b)(14), Section IV.F of Appendix E to 10 CFR Part 50, and the licensee's Emergency Preparedness Administrative Procedure Manual EP-AD-005.

The scenario was reviewed in advance of the exercise and was discussed with licensee representatives prior to the exercise. No major problems were identified during the review, but minor inconsistencies became apparent during the exercise. The inconsistencies failed to detract from the overall performance of the licensee's emergency organization. Scenario problems were discussed by the licensee during the exercise critique on March 24, 1995. The scenario developed for this exercise

was adequate to test the capabilities of the onsite and offsite emergency organizations of the licensee and provided sufficient emergency information to State and local government agencies for their full participation in the exercise.

No violations or deviations were identified.

3. Onsite Emergency Organization (82301)

The licensee's organization was observed during the exercise to determine whether the requirements of Paragraph IV.A of Appendix E to 10 CFR Part 50 (as addressed in the Emergency Plan) were implemented with respect to descriptions, responsibilities, and assignment of the onsite emergency response organization.

The inspectors observed that specific emergency assignments had been made for the licensee's emergency response organization and there were adequate staff available to respond to the simulated emergency. The inspectors observed the activation, staffing, and operation of the emergency organization in the SCR, TSC, OSC, EOF, and the ENC. The initial response organization was augmented by designated licensee representatives, and the capability for long-term or continuous staffing of the emergency response organization was demonstrated. The inspector observed good coordination between the emergency response facilities during the transfer of responsibilities from the SCR-EC to the TSC-EC, and the EOF (RM). Staffing at each of the ERFs appeared to be consistent with the licensee's implementing procedures.

No violations or deviations were identified.

4. Emergency Response Support and Resources (82301)

This area was observed to determine whether arrangements for requesting and effectively using assistance resources were made, whether arrangements to accommodate State and local personnel in the EOF were adequate, and whether other organizations capable of augmenting the planned response were identified as specified by 10 CFR 50.47(b)(3), Paragraph IV.A of Appendix E to 10 CFR Part 50, and guidance promulgated in Section II.C of NUREG-0654 (Revision 1).

The licensee's Emergency Plan provided for additional support and resources that may be called upon to assist in an emergency. Representatives of the State of Florida, as well as Dade and Monroe Counties, were accommodated at the EOF located in the FP&L General Office Building in Miami. On arrival, offsite authorities were briefed by the RM regarding current conditions associated with the simulated emergency. Suitable space and equipment were available to support the additional emergency response resources.

No violations or deviations were identified.

5. Emergency Classification System (82301)

This area was observed to verify that a standard emergency classification and action level scheme was in use by the licensee as required by 10 CFR 50.47(b)(4) and Paragraph IV.C of Appendix E to 10 CFR Part 50, and to determine whether that scheme was adequately implemented.

The inspector reviewed Section 3.0 of the Emergency Plan, and EPIP 20101 "Duties of Emergency Coordinator," and determined that the licensee's classification system was adequate for the classification of the postulated accident; and the emergency procedures were used by the SCR shift for initial and continuing mitigating actions during the simulated emergency. The EAL scheme was used to make a prompt and correct initial event declaration, and escalate to a more severe emergency class as postulated emergency conditions warrant. The NOUE and Alert declarations were made by the Nuclear Plant Supervisor as the Emergency Coordinator from the SCR. The SAE and General Emergency were declared by the Emergency Coordinator from the TSC following the transfer of responsibility for classification from the SCR to the TSC.

No violations or deviations were identified.

6. Notification Methods and Procedures (82301)

This area was observed to determine whether procedures had been established for notification by the licensee of State and local response organizations and emergency personnel, and the content of initial and follow-up messages to response organizations had been established; and a means to provide early notification to the population within the plume exposure pathway had been established as required by 10 CFR 50.47(b)(5), 10 CFR 50, Appendix E, Paragraph IV.D, and the specific criteria in NUREG-0654, Section II.E.

The inspector observed that notification methods and procedures had been established and were used to provide information concerning the simulated emergency conditions to Federal, State and local response organizations and to alert the licensee's augmented emergency response organization. Due to the time constraints of this exercise, some elements of the State response organization were pre-positioned in the area. The licensee's initial and follow-up notifications were both timely and accurate.

The Alert Notification System (ANS) for alerting the public within the plume exposure pathway was in place and operational, but was not tested during this exercise.

No violations or deviations were identified.

7. Emergency Communications (82301)

This area was observed to verify that provisions existed for prompt communications among principal response organizations and emergency personnel as required by 10 CFR 50.47(b)(6), 10 CFR 50, Appendix E, Paragraph IV.E, and the specific criteria in NUREG-0654, Section II.F.

Communications among the licensee's emergency response facilities and emergency organization and between the licensee's emergency response organization and offsite authorities were good. No significant communications related problems were identified during this exercise. The inspector discussed as an area for communications improvement, plant page announcements (see Paragraph 9.a.).

No violations or deviations were identified.

8. Public Education and Information (82301)

This area was observed to determine whether information concerning the simulated emergency was made available for dissemination to the public as required by 10 CFR 50.47(b)(7), 10 CFR 50, Appendix E, Paragraph IV.D, and specific criteria in NUREG-0654, Section II.G.

An ENC was located on the second floor of the General Office Building located in Miami, and appeared to be effective in distributing the news releases that were prepared and approved in the EOF. A rumor control program was also in place and included published telephone numbers for public inquiries.

No violations or deviations were identified.

9. Emergency Facility and Equipment (82301)

This area was observed to determine whether adequate emergency facilities and equipment to support an emergency response were provided and maintained as required by 10 CFR 50.47(b)(8), 10 CFR 50, Appendix E, Paragraph IV.E, and the specific criteria in NUREG-0654, Section II.H.

The inspector observed the activation, staffing and operation of the emergency response facilities and evaluated equipment provided for emergency use during the exercise.

a. Simulator Control Room - An inspector observed that SCR personnel acted promptly to initiate emergency response to the simulated emergency. Operators were very knowledgeable of the emergency classification system as evidenced by the timeliness of event recognition and classification. Personnel demonstrated familiarity and competence with emergency procedures and accident mitigation tactics in support of the TSC and OSC. The inspector noted that the SCR communications capability for training purposes was enhanced by the installation of a SHRD phone, plant page capability for plant announcements, and an ENS phone. As an area

for improvement considerations, the inspector discussed two examples where plant paging was inadequate: 1) no announcement was made following the transfer of EC authority from the SCR to the TSC; and 2) the initial site evacuation message (1132 hrs) did not direct evacuees to use the alternate evacuation route (followup page announcement made at 1138 hrs). The beforementioned actions did not result in any adverse impact to plant safety and/or the health and safety of plant personnel.

b. Technical Support Center - The TSC was promptly activated and staffed following notification by the NPS (as the interim EC) regarding the simulated emergency conditions leading to an Alert classification. The TSC staff appeared to be knowledgeable concerning their emergency responsibilities, and TSC operations proceeded smoothly. TSC equipment and supplies were adequate to support the licensee's response to the simulated emergency. The transfer of EC responsibility from the NPS (SCR) to the Plant Manager (TSC) was both timely and effective. Although frequent briefings (approximately 30 minutes intervals) were conducted by the EC, noise levels during EC briefings were unacceptable due to TSC staff conversing with other staff members and/or phone conversations. Although a lack of attention was observed during the EC briefings, command and control was acceptable. The licensee evaluators also identified this item for corrective actions.

c. Operations Support Center - The OSC was promptly staffed following the plant page announcement that all emergency response personnel report to assigned facilities. Following the General Emergency declaration (1233 hrs), the inspector noted that an OSC briefing by the OSC Supervisor was delayed more than 90 minutes (1415 hrs). Additionally, OSC status boards were not always maintained current. The licensee discussed the aforementioned items during the critique for corrective actions.

d. Emergency Operations Facility - The EOF was located on the 5th floor of the General Office Building in Miami. The facility was adequately designed, equipped and staffed to support the emergency response. The minimum staffing requirements were filled by site personnel activated following the Alert declaration. The inspector noted timely activation on the part of site personnel with the additional staffing from Juno Beach being pre-staged. The Recovery Manager provided good command and control, and was prompt in briefing the offsite authorities (State/counties) regarding current plant conditions on arrival in the EOF. As an area for improvement to avoid confusion, the inspector and licensee discussed coordination of site evacuation with the State of Florida, Dade and Monroe Counties.

e. Emergency News Center - The ENC was located on the 2nd floor of the General Office Building in Miami. Facility activation was timely, with effective access control and badging by security personnel. News briefings were conducted at timely intervals with

good visual aids employed by personnel who were cognizant of plant status and accident conditions. One aspect of the ENC discussed by the inspector as an area for improvement involved the delay in confirming the General Emergency status. The General Emergency was declared at 1233 hrs but unconfirmed by the ENC with the EOF until after 1300 hrs.

No violations or deviations were identified.

10. Accident Assessment (82301)

This area was observed to determine whether methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency conditions were in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Appendix E, Paragraph IV.B, and the specific criteria in NUREG-0654, Section II.I.

The accident assessment program included both an engineering assessment of plant status and an assessment of radiological hazards to both onsite and offsite personnel resulting from the simulated accident. During the exercise, the Technical Assessment Team functioned effectively in analyzing the plant status so as to make recommendations to the EC concerning mitigating actions to reduce damage to plant equipment, to prevent release of radioactive materials, and to terminate the emergency condition.

Onsite and offsite radiological monitoring teams were dispatched to assess the degree of radiological hazard in those areas of the simulated plume. The field teams reported results to the dose assessment staff in the TSC rather than the EOF as discussed in EPIP-20129. During ERF activation, responsibility for dose assessment was transferred to the EOF, but offsite monitoring was not assumed by the EOF. The inspector observed close coordination between the EOF and TSC dose assessment staff regarding dose assessment, and control of the ERTs was closely coordinated with the State of Florida. The TSC and EOF dose calculations were computed in parallel and periodically compared with each other and with the State of Florida. However, following indications of a rad release, results from the TSC dose assessment staff were not posted on the dose projection status board for more than one hour. As mentioned above in Paragraph 9.c., the licensee discussed during the critique the maintenance of facility status boards for corrective actions.

No violations or deviations were identified.

11. Protective Response (82301)

This area was observed to verify that guidelines for protective actions during the emergency, consistent with Federal guidance, were developed and in place, and protective actions for emergency workers, including evacuation of nonessential personnel were implemented promptly as required by 10 CFR 50.47(b)(10), and the specific criteria in NUREG-0654, Section II.J.

The inspector observed that radiological exposures were controlled throughout the exercise by issuing emergency workers supplemental dosimeters. Additional actions included periodic habitability surveys (TSC and OSC) and the evacuation (simulated) of non-essential personnel following the SAE declaration. PARs were made to offsite authorities within fifteen minutes of the General Emergency declaration. The PARs were based upon plant conditions, and were consistent with those in the Emergency Plan and procedures.

No violations or deviations were identified.

12. Exercise Critique (82301)

The licensee's critique of the emergency exercise was observed to determine whether the deficiencies identified as a result of the exercise, and the weaknesses noted in the licensee's emergency response organization, were formally presented to licensee management for corrective actions as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, Paragraph IV.F, and specific criteria in NUREG-0654, Section II.N.

The licensee conducted facility critiques with exercise players immediately following the exercise termination. On March 24, 1995, a formal critique of the exercise was held with exercise controllers, key players, licensee plant and corporate management, and NRC personnel. Issues identified as a result of the exercise were presented during the critique. Licensee actions on issues identified during the exercise will be reviewed during a subsequent NRC inspection.

No violations or deviations were identified.

13. Exit Interview

The inspection scope and results were summarized on March 24, 1995, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the exercise observations. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

14. Federal Evaluation Team Report

The report by the Federal Evaluation Team (RAC and FEMA) concerning the activities of offsite agencies during the exercise will be forwarded by separate correspondence.

15. Index of Abbreviations Used in This Report

CFR	Code of Federal Regulations
EAL	Emergency Action Level
EC	Emergency Coordinator
ENC	Emergency News Center
ENS	Emergency Notification System

EOF	Emergency Operations Facility
EP	Emergency Preparedness
EPIP	Emergency Plan Implementing Procedure
ERF	Emergency Response Facility
ERT	Emergency Response Team
FEMA	Federal Emergency Management Agency
NOUE	Notification of Unusual Event
NPS	Nuclear Plant Supervisor
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PAR	Protective Action Recommendation
RAC	Regional Assistance Committee
RM	Recovery Manager
SAE	Site Area Emergency
SCR	Simulator Control Room
SHRD	State Hot Ring Down
TSC	Technical Support Center

Attachment:
Exercise Scope, Objectives, Narrative Summary, and Scenario Timeline

FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
1995 EMERGENCY PREPAREDNESS
ANNUAL EXERCISE
MARCH 22, 1995

2.1 SCOPE

To assure that the health and safety of the general public is protected in the event of an accident at Turkey Point Nuclear Plant (PTN), Florida Power & Light Company (FPL) conducts an annual emergency preparedness exercise. This exercise involves mobilization of FPL, State of Florida, and Dade and Monroe County personnel and resources to respond to a simulated accident scenario. A Controller organization will control, observe, evaluate and critique the exercise to assess the emergency response capabilities of the utility and government agencies. An FPL Controller Organization will control, observe, evaluate, and critique the PTN portion of the Exercise. The Turkey Point Emergency Response Organization and Controller Organization will be evaluated by Nuclear Regulatory Commission (NRC) personnel. The State of Florida, and Dade and Monroe County emergency response organizations will participate in the exercise, and will be evaluated by Federal Emergency Management Agency personnel.

Due to the compressed timeline of the exercise, some portions of the FPL Emergency Response Organization may be prepositioned. All onsite Emergency Response Facilities will be activated in accordance with simulated conditions and appropriate emergency response procedures for the exercise. Exercise participants ("players") will not have any prior knowledge of the simulated accident events, operational sequence, radiological effluents or weather conditions.

The exercise incorporates the following:

Radiological Monitoring Drill - both onsite and offsite teams will be dispatched during the exercise to obtain required air samples and measurements associated with a simulated offsite release of radioactivity and communicate these results to the appropriate Emergency Response Facility (ERF). (Field monitoring team protective clothing and respiratory protection will be simulated in the field.)

Health Physics Drill - involves the response to and analysis of simulated elevated activity airborne or liquid samples, radiation exposure control, emergency dosimetry and the use of protective equipment onsite.

Communications Drill - Actual usage and demonstration of the integrity of emergency response communications links and equipment.

The preceding sub-drills are incorporated into the exercise scenario and will be demonstrated concurrently in the course of the exercise. The overall intent of the exercise is to demonstrate that the FPL staff assigned responsibilities in an emergency situation are adequately trained to perform in accordance with the Emergency Plan and its implementing procedures. Additionally, the scenario assists the State and local government agencies in demonstrating to FEMA that they are adequately trained to perform in accordance with their emergency plans and procedures.

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2.2 OBJECTIVES

The Turkey Point Nuclear Plant (PTN) emergency preparedness exercise objectives are based upon Nuclear Regulatory Commission requirements provided in 10 CFR 50: a) 50.47, *Emergency Plans*; b) Appendix E, *Emergency Planning and Preparedness for Production and Utilization Facilities*; and NRC Inspection Manual, Inspection Procedure 82302, *Review of Exercise Objectives and Scenarios for Power Reactors*. Additional guidance provided in NUREG-0654, FEMA-REP-1, Revision 1, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*, was utilized in developing the objectives. The exercise will be conducted and evaluated using a realistic basis for activities.

The following objectives are consistent with the referenced planning documents:

A. Exercise Planning

1. Conduct an exercise of the PTN Emergency Plan.

2. Provide an opportunity for the State of Florida and Dade and Monroe Counties to participate in an exercise.

3. Prepare an exercise information package to include:

   a. The objectives of the exercise and appropriate evaluation criteria.

   b. The date, time period, place, and a list of participating organizations

   c. The simulated sequence of events.

   d. The time schedule of real and simulated initiating events.

   e. The narrative summary.

4. Conduct a critique of the exercise and prepare an evaluation report.

5. Demonstrate that corrective actions are tracked until completion.

B. Emergency Organizations, Support, and Resource

1. Demonstrate the prompt activation, adequacy of the staffing and set up, as appropriate, of emergency response facilities as follows:

   -Control Room
   -Technical Support Center (TSC)
   -Operations Support Center (OSC)
   -Emergency Operations Facility (EOF)
   -Emergency News Center (ENC)

2. Demonstrate the capability of the FPL Emergency Response Organization to implement their Emergency Plan Implementing Procedures.

3. Demonstrate the ability of the Emergency Response Facility Managers/Supervisors to provide overall direction, including "command and control" by initiating, coordinating, and implementing timely and effective decisions during a radiological emergency.

4. Demonstrate the ability to effectively transfer command and control of emergency response functions from the Control Room to the TSC/EOF.

5. Demonstrate the provisions for continuous staffing of the emergency facilities.

6. Demonstrate the interface capability between the FPL Emergency Response Organization and the State of Florida and Dade and Monroe Counties for effective response coordination to a radiological emergency and adequate protection of the health and safety of the public.

7. Demonstrate the ability to control access to emergency facilities.

8. Demonstrate the ability to provide a liaison at each participating offsite governmental emergency operations center (EOC).

9. Demonstrate adequacy of designated facilities and equipment to support emergency operations.

10. Demonstrate the availability of outside support agencies and organizations who may be requested to provide assistance in an emergency.

11. Demonstrate the ability of corporate personnel to augment the Emergency Response Organization and support the plant staff.

12. Demonstrate the ability to notify emergency response personnel.

C. Accident Assessment and Classification

1. Demonstrate the availability of methods, equipment, and expertise to make rapid assessments of the consequences of any radiological hazards, including the dispatch and coordination of Field Monitoring Teams.

2. Demonstrate the ability to recognize emergency action levels (EALs) and properly classify emergencies in accordance with the Turkey Point Emergency Plan Implementing Procedures.

D. Notification and Communication

1. Demonstrate the ability to notify offsite emergency organizations within approximately 15 minutes of each emergency classification.

2. Demonstrate the ability to notify the NRC of any emergency classification within approximately one hour of the declaration.

3. Demonstrate the ability to notify FPL Emergency Response Organization personnel.

4. Demonstrate the ability to develop and send timely information to State and local authorities as required by the Emergency Plan.

5. Demonstrate the ability to communicate among the Control Room, TSC, OSC, EOF, and ENC, as appropriate.

6. Demonstrate that adequate communication capabilities exist between FPL, and the State and local Emergency Operations Centers (EOCs).

7. Demonstrate the adequacy of communications capabilities between the Emergency Response Facilities and the offsite radiation monitoring teams.

8. Demonstrate the ability to communicate among the Control Room, TSC, EOF, and NRC Operations Center.

E. Radiological Consequence Assessment

1. Demonstrate methods and techniques for determining the source term of releases or potential releases of radioactive material.

2. Demonstrate the adequacy of methods and techniques for determining the magnitude of the releases of radioactive materials based on plant system parameters and effluent monitors.

3. Demonstrate the ability to estimate integrated dose from projected or actual dose rates and to formulate Protective Action Recommendations (PARs).

4. Demonstrate the ability to monitor and control emergency worker radiation exposure and implement exposure guidelines, as appropriate.

5. Demonstrate the availability of respiratory protection, and protective clothing for onsite emergency response personnel.

6. Demonstrate the availability of a procedural mechanism to expeditiously evaluate risks and authorize emergency workers to receive doses in excess of 10 CFR 20 limits, as appropriate.

7. Demonstrate the capability for onsite contamination control.

8. Demonstrate the ability to decontaminate onsite personnel, as appropriate.

10. Demonstrate the capability for onsite and offsite radiological monitoring, to include collection, and analysis of sample media (e.g. air) and provisions for communications and record keeping.

11. Demonstrate the capability to collect and prepare for shipment simulated elevated airborne or liquid samples, as required.

12. Demonstrate the capability to use the Post Accident Sampling System (PASS) (walk-through/simulate).

13. Demonstrate the capability to analyze simulated fluid samples and provide the isotopic and chemical results of the analysis within three hours of the time the sample was first requested.

F. Protective Action

1. Demonstrate the ability to recommend protective actions to appropriate offsite authorities.

2. Demonstrate the ability to advise individuals onsite or in owner controlled areas of emergency conditions.

3. Demonstrate the ability to conduct search and rescue procedures for persons identified as missing during accountability procedures.

G. Public Information

1. Demonstrate the operations of the ENC and the availability of space for the media.

H. Recovery Operations

1. Demonstrate the availability of procedures to support re-entry and recovery.

   a. De-escalation/termination from the emergency phase, and transition to recovery phase.

   b. Inform the State of the opportunity to reduce the need for protective actions.

2. Demonstrate the availability of corporate technical support for planning and reentry/recovery organizations.

I. Exemptions

Areas of the PTN Emergency Plan that will NOT be demonstrated during this exercise include:

1. Site evacuation and relocation of non-essential personnel.

2. Onsite personnel accountability. Security will demonstrate accountability through the use of simulated personnel rosters.

3. Actual shift turnover (long term shift assignments will be demonstrated by rosters).

4. Real time activation of the EOF.

5. Actual drawing of a sample utilizing the Post-Accident Sampling System (PASS).

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3.1 NARRATIVE SUMMARY

3.1.1 Initial Conditions

Unit 3 is operating at 100% power since. The core is at the End of Life with Boron concentration of 170 ppm.

Unit 4 is in Mode 5 preparing for refueling. Normal refueling activities are in progress.

The following items are of interest:

- 3B Emergency Containment Cooler is OOS. Failed Surveillance Test on Midnight shift; a work package is being developed to troubleshoot and repair the failure.
- 3C Auxiliary Feed Water (AFW) Pump is OOS for governor modification and repair.
- The 3A1 Steam Generator Steam Flow Channel is OOS. Troubleshooting is currently in progress. A Containment entry is planned for 12:00 noon to investigate the transmitter.
- Containment Purge is in-service on Unit 3 in preparation for a Containment entry to investigate the Steam Flow Transmitter failure, and perform a routine containment inspection. Unit 4 Containment Purge is secured for maintenance.
- "B" Standby Feedwater Pump is OOS for a Plant Change Modification to install the "Diesel Driver."

System Operations: Demand on the System is moderate with anticipated peak of 11,500 MWe. Service area conditions are normal. St Lucie Unit 1 is offline for refueling (expected return March 30); St. Lucie Unit 2 at 100% power in the Middle of Core Life; Fort Lauderdale Units 1 and 2 are offline for forced outages.

Meteorological Conditions: Current temperature is 78°F, skies are clear, winds are 3 to 5 miles per hour from the south. A high pressure system is stationary over the lower, southeastern United States, and should remain stationary for the next 3-4 days. Forecast high temperature is in the mid to upper eighties and 10% chance of rain.

FLORIDA POWER AND LIGHT COMPANY
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3.2 SCENARIO TIMELINE

TIME	EVENT #	EVENT
Initial Conditions		Unit 3 is on line operating at 100% power at the end of core life. The Unit has been on line for 190 days and at 100% power for 45 days. Containment Purge is in-service on Unit 3 in preparation for a Containment entry to investigate a Steam Flow Transmitter failure and perform a routine containment inspection. The following equipment is out of service (OOS): - 3B Emergency Containment Cooler is OOS. Failed Surveillance Test on Midnight shift; a work package is being developed to troubleshoot and repair the failure. - 3C Auxiliary Feed Water (AFW) Pump is OOS for governor modification and repair. - The 3A1 Steam Generator Steam Flow Channel is OOS. Troubleshooting is currently in progress. A Containment entry is planned for 12:00 noon to investigate the transmitter. Unit 4 is in Mode 5 in a scheduled refueling outage. Containment purge is secured on Unit 4 for maintenance. "B" Standby Feedwater Pump for a Plant Change Modification to install the "Diesel Driver."
0800		Shift personnel (Control Room and Field Operators, Health Physics (HP) Radiation Protection Monitors (RPMs), Chemistry Technicians, etc.) on station
0815		Start the Exercise. Shift briefing accomplished in the Simulator and Operations Crew establishes steady-state operation.
0830	1	A Reactor Coolant System (RCS) leak develops inside containment (indicated by increasing area radiation monitor channels R-1, R-2 and R-3).
0840		The RCS leak stabilizes at approximately 6 gallons per minute (gpm). The Operations crew begins to investigate the leakage, and performs 3-ONOP-41.3, Excessive Reactor Coolant System Leakage.

3.2 SCENARIO TIMELINE (Continued)

Emergency Preparedness Exercise, March 22, 1995

TIME	EVENT #	EVENT
0845	2	The Containment Purge is secured, however POV-3-2603, Containment Purge Exhaust Isolation Valve inside containment fails to close, and indicates intermediate position in the Control Room. All other Containment Purge Supply and Exhaust Valves indicate closed, and containment isolation is verified. There is no indication of a radioactive release, at this time.
0845		The Control Room Crew performs 3-0SP-41.1, Reactor Coolant System Leakrate Calculation.
0900		The RCS leakrate should be determined to be unidentified and greater than 1 gpm.
0915		A **Notification of Unusual Event** should be made based on Unidentified RCS Leakage greater than 1 gpm.
0930	3	The 3A2 Steam Generator Level Instrument fails. The Steam Generator instrumentation malfunctions result in conditions requiring an Automatic Reactor Trip, but the Reactor Protection System fails to trip the reactor (ATWS). The Control Room crew carries out Immediate Actions in accordance with 3-FR-S.1, Response to Anticipated Trip Without Scram, and the reactor is manually tripped from the RCO Console by the RCO.
	4	When the reactor is tripped, the RCS leak increases and stabilizes at approximately 80 gpm.
		Phase A Containment Isolation should have occurred due to increasing radiation levels on radiation monitors R-11 and R-12.
0945		An **Alert** should be declared in accordance with EPIP 20101, Duties of the Emergency Coordinator due to failure of the Reactor to trip on an automatic signal.
1000		RCS leakage is quantified and meets the Alert Emergency Action Level (RCS leakage greater than 50 gpm and within Charging Pump capacity).
		Emergency Operating Procedure (EOP) 3-EOP-E-0, Reactor Trip or Safety Injection, should be completed, and operators should transition to procedure 3-GOP-305, Hot Standby to Cold Shutdown and commence cool-down and depressurization.

3.2 SCENARIO TIMELINE (Continued)

Emergency Preparedness Exercise, March 22, 1995

TIME	EVENT #	EVENT
1015		The Technical Support Center (TSC) and Operations Support Center (OSC) should be activated by this time.
	5	Unit 3 Component Cooling Water (CCW) Deluge System inadvertently actuates. Fire alarm point 35 (Unit 3 CCW Deluge Suppression System) is received in the Control Room.
1040	6	Due to the fire suppression system actuation in the CCW Room, an electrical ground develops on the 3A CCW Pump. 3A 4KV Bus Ground annunciator is received in the Control Room identifying the ground to the Control Room crew.
1045		The Emergency Operations Facility (EOF) should be activated (in standby) with initial staffing. The following Emergency Response Teams (ERT) should be dispatched: - Evaluate the leakage from the containment and release to the environment. - An Operator is dispatched to investigate the Fire alarm. - An Electrical Team to identify and isolate the 4KV bus ground.
1100		Upon investigation of the Fire alarm, the Operator identifies the suppression system actuation with no fire. The suppression system should be isolated.
1115	7	As RCS cooldown and depressurization proceed, the RCS leakage begins to increase.
1130	8	RCS leakage is greater than charging pump capacity. The Control Room crew should carry out the immediate actions of 3-EOP-E-0, Reactor Trip or Safety Injection, and manually initiate Safety Injection
	9	A fuel element defect fails on a fuel assembly in Unit 3 causing RCS activity to increase. Radiation monitors R-1, R-2, R-3 and CHRRMS detect increasing radiation levels in the Containment Building.
	10	When the 3C Emergency Containment Cooler (ECC) starts due to the SI actuation, an electrical short in the motor causes the breaker to overload and trip. An annunciator is received in the Control Room indicating the ECC breaker has tripped.

3.2 SCENARIO TIMELINE (Continued)

Emergency Preparedness Exercise, March 22, 1995

TIME	EVENT #	EVENT
1145		The EC should declare a Site Area Emergency (SAE) in accordance with EPIP 20101, Duties of the Emergency Coordinator based upon the RCS leakage greater than charging pump capacity. The following Emergency Response Teams (ERT) may be dispatched based on plant conditions: - Operations team to preform Post Accident Hydrogen Monitor (PAHM) lineup. - Chemistry team to align Post Accident Sampling System (PASS) for on line monitoring and sample the Unit 3 Containment for activity. - An Electrical team to investigate the 3C ECC breaker. An Owner Controlled Area (OCA) evacuation, and Site Accountability should be initiated (simulated).
1200	11	A failure on the B Auxiliary Feedwater (AFW) pump governor causes a mechanical overspeed trip of the B AFW pump, and loss of one train of AFW. The second train of AFW remains in service to provide secondary system makeup.
1215		An ERT is dispatched to investigate the AFW pump malfunction. Standby Steam Generator Feedwater may be placed in-service, if directed. Accountability should be complete, and Search and Rescue for un-accounted for personnel should be initiated.
1230	12	POV-3-2602, Containment Purge Exhaust Isolation Valve outside containment develops leakage resulting in a loss of containment integrity, and an uncontrolled radioactive release to the environment. The release is monitored by the Plant Vent radiation detectors PRMS R-14 and Plant Vent SPING. The RCS leakage stabilizes at approximately 600 gpm. Chemistry samples and Health Physics surveys confirm the high RCS activity. RCS activity continues to increase as the fuel element defect continues to degrade.

3.2 SCENARIO TIMELINE (Continued)

Emergency Preparedness Exercise, March 22, 1995

TIME	EVENT #	EVENT
1245		A General Emergency should be declared due to RCS leakage greater than charging pump capacity and loss of containment integrity.
		The EOF should be fully operational at this time.
		Onsite survey teams should be dispatched to evaluate inplant radiological conditions.
		Field monitoring teams should be dispatched to locate and track the plume, and PARs should be upgraded based on offsite dose projections, as appropriate.
1300		Protective Action Recommendations (PARs) should be generated based on plant conditions.
	13	Area Radiation Monitor (ARM) channel R-9, Auxiliary Building-Tank and Pump Room (4 foot elevation, Auxiliary Building Sump Area) fails high, and alarms in the Control Room. An ERT is dispatched to investigate the alarm.
1315	14	The 3B ECC breaker may be repaired and returned to service.
1330		Identification of backshift personnel and logistical needs for continued operation of Emergency Response Facilities (ERF) should be considered at this time.
1345		American Nuclear Insurers request information be provided for distribution of temporary housing funds. (i.e., distribution locations, approximate number of recipients, etc.)
1400	15	POV-2603, Containment Purge Exhaust Isolation valve inside containment closes as containment pressure decreases (continuous close signal present).
1415	16	"A" Standby Feedwater Pump trips due to over current on "B" phase.
1430		With the identification of backshift personnel, recovery actions and possible de-escalation from the General Emergency should be discussed at this time.
1500		When all State and local government, and utility objectives have been evaluated, exercise play is terminated.