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

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Report Nos.: 50-250/91-49 and 50-251/91-49

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33102

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

Facility Name: Turkey Point 3 and 4

Inspection Conducted: December 2-6, 1991

Inspector: F. N. Wright, Team Leader 1/8/92 Date Signed

Team Members: A. Boland
K. Clark
R. Schin
E. Testa
F. Wadsworth

Approved by: for W. H. Rankin, Chief 1/8/92 Date Signed
Emergency Preparedness Section
Radiological Protection and Emergency Preparedness Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection included the observation and evaluation of the annual emergency preparedness exercise. Emergency organization activation and response were selectively observed in the Control Room Simulator (CRS), Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF), and Emergency News Center (ENC). The inspection also included a review of the exercise objectives and scenario and observation of the licensee's post exercise critique. This exercise, conducted on December 4, 1991, was held in conjunction with emergency response demonstrations by the State of Florida and local government agencies.

In the areas inspected, no violations or deviations were identified. Exercise strengths included the licensee's aggressive scenario; informative and well maintained Emergency Response Facility status

boards; strong CRS staff that demonstrated good teamwork; monitoring, control, and briefings for emergency teams; and an effective interface and working relationship with State and local governments. Within the scope of the observed exercise, the licensee fully demonstrated the capability of implementing its Emergency Plan and procedures to provide for the health and safety of on-site personnel and the offsite public.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*K. Beatty, Training Manager
*W. Bladow, Quality Manager
*R. Brown, Turkey Point Nuclear Plant (PTN) Health Physics (HP)
*J. Crockford, Operations Support Supervisor
*M. Croteau, Operations Representative - Emergency Preparedness (EP)
*J. Danek, Corporate HP
*R. Dodson, Simulator Process Engineer
*T. Finn, Assistant Operations Superintendent
R. Flynn, Assistant Plant Supervisor (Nuclear)
T. Goebbel, Simulator Controller
*S. Hale, PTN Engineering Manager
*W. Haley, Plant Supervisor (Nuclear)
*K. Harris, Senior Vice President
D. Henry, Simulator Controller
*A. Horvath, PTN HP
*J. Hosimer, Director, Nuclear Engineering
*J. Hutchinson, Supervisor, Computer Specialist
*H. Johnson, Operations Supervisor
*W. Joyner, Nuclear Training Department
M. King, Shift Technical Advisor
*T. King, PTN EP Coordinator
*J. Kirkpatrick, Supervisor Emergency Planning
*J. Knorr, Regulatory Compliance Supervisor
*M. Mothena, Manager, Nuclear EP
*K. Lovell, Simulator Engineering Support
*C. Mackay, Nuclear Training Department
*J. Marchese, Construction Manager
*L. Martos, PTN Tech
*G. Patoissi, Quality Assurance (QA) Evaluator
*L. Pearce, Plant Manager
*D. Powell, Licensing Manager
*G. Powell, Nuclear Training Department
*R. Rose, Nuclear Materials Superintendent
T. Ross, QA Evaluator
*C. Rossi, PTN QA
A. Taylor, PTN EP
*D. Taylor, Operations Enhancement Coordinator
*L. Thomas, Nuclear Training Department
*F. Timmons, Security Supervisor
*M. Wayland, Maintenance Superintendent
*J. Webb, Outage Manager
*E. Weinkam, Section Supervisor (Nuclear) Licensing
W. Wogan, Plant Supervisor (Nuclear)

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

Nuclear Regulatory Commission

*R. Butcher, Senior Resident Inspector
*G. Schnebli, Resident Inspector
L. Trocine, Resident Inspector

*Attended Exit Meeting

2. Exercise Scenario (82302)

The scenario for the emergency exercise was reviewed to determine that provisions had been made to test the integrated capability and a major portion of the basic elements existing within the licensee's Emergency Plan and organization 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 scenario was reviewed in advance of the scheduled exercise date and was discussed with licensee representatives. The scenario developed for this exercise was adequate to exercise fully the onsite and offsite emergency organizations of the licensee and provide sufficient emergency information to the State and local government agencies for their participation in the exercise. The exercise scenario was well organized, detailed, and sufficiently challenging to exercise the participants. The scenario events kept most of the staff, including the CRS staff, active throughout most of the exercise. However, some weaknesses in the scenario were noted.

- The initial classification for the exercise was identical to that of the previous year, in that, the initial classification for both exercises was an Alert due to a simulated uncontrolled fire potentially affecting a safety system and offsite support required. This issue was discussed with the licensee's staff and licensee representatives reported that a different initiating event would be appropriate for the next graded exercise.

- The Scenario also did not require the licensee to demonstrate accountability of on-site personnel. During a critique, plant staff reported that they did not want to interfere with site work with such an accountability drill. Licensee representatives reported that an accountability drill would be performed in the upcoming 1992 annual emergency exercise.

The controllers provided adequate guidance throughout the exercise. The inspector observed adequate interactions between

the controller and the players and no controller prompting was observed.

No violations or deviations were identified.

3. Emergency Organization (82301)

The licensee's onsite emergency organization was observed to determine that the responsibilities for emergency response were unambiguously defined, that adequate staffing was provided to insure initial facility accident response in key functional areas at all times, and that the interfaces were specified as required by 10 CFR 50.47(b)(2); 10 CFR 50, Appendix E, Paragraph IV.A; and specific criteria in NUREG-0654, Section II.B.

Through a review of the licensee's Emergency Plan and Implementing Procedures, the inspector determined that the responsibility and authority for directing actions necessary to respond to the emergency were clear and that the initial onsite emergency organization was adequately defined. During the exercise the inspector observed that staff members were available to fill key functional positions within the initial onsite emergency organization. Augmentation of the initial onsite emergency response organizations was accomplished through mobilization of additional day-shift personnel. The inspector observed the activation, staffing, and operation of the emergency organization in the CRS, TSC, OSC, and EOF. Staffing at each facility was consistent with the licensee's Emergency Plan. Because of the scenario scope and conditions, long term or continuous staffing of the emergency response organization was not required.

The licensee declared an Alert at 8:31 a.m. and was able to activate the OSC at 9:00 a.m. (29 minutes) and the TSC at 9:13 a.m. (43 minutes). The licensee also requested activation of the EOF at 8:31 a.m. and it was operational at 10:12 a.m. (101 minutes from initial request in TSC). Real time activation of the EOF and ENC were not exercise objectives and most of the EOF staff was pre-staged in Miami prior to the exercise.

No violations or deviations were identified.

4. Emergency Classification System (82301)

This area was observed to determine that a standard emergency classification and action level scheme was in use by the nuclear facility licensee as required by 10 CFR 50.47(b)(4); 10 CFR 50, Appendix E, Paragraph IV.C; and specific criteria in NUREG-0654, Section II.D.

The designated Plant Supervisor-Nuclear (PSN) in the CRS and the Emergency Coordinator in the TSC promptly and correctly used the Emergency Plan Implementing Procedure (EPIP) 20101, Duties of Emergency Coordinator, Revision (Rev.) dated October 17, 1991, to

identify and classify emergency events. Emergency classifications were appropriately selected in a timely manner.

The Plant Supervisor-Nuclear declared an Alert at 8:31 a.m. for an uncontrolled fire potentially affecting safety systems and offsite support required. The fire, which was at the Unit 3 Intake Cooling Water Intake Pump C, was reported to the control room at 8:17 a.m. The licensee was preparing to declare a Notice Of Unusual Event at 8:26 a.m., but shifted focus to an Alert notification.

The Emergency Coordinator in the TSC declared a Site Area Emergency at 9:55 a.m., following loss of safe shutdown functions-anticipated transient without scram, loss of secondary heat sink, and Reactor Coolant System (RCS) bleed and feed required.

The Emergency Coordinator in the TSC declared a General Emergency at 10:20 a.m., due to potential core damage and loss of heat sink for more than 30 minutes.

No violations or deviations were identified.

5. Notification Methods and Procedures (82301)

This area was observed to assure that procedures were established for notification of State and local response organizations and emergency personnel by the licensee, and that the content of initial and followup messages to response organizations was established. This area was further observed to assure that means to provide early notification to the population within the plume exposure pathway were established pursuant to 10 CFR 50.47(b)(5); Paragraph IV.D of Appendix E to 10 CFR 50; and specific guidance promulgated in Section II.E of NUREG-0654.

The inspector observed that notification methods and procedures were used promptly to provide information concerning the simulated emergency conditions to Federal, State, and local response organizations and to alert the licensee's augmented emergency response staff. Notifications of the State of Florida and local offsite organizations were completed within 15 minutes following the classification and declaration of the emergency event.

During the exercise, the inspector noticed that the State notification forms (State of Florida Notification Message Form For Nuclear Power Plants), were not reviewed or approved by the Recovery Manger (RM) prior to transmittal to the State. The inspector determined that the notification duties had been delegated to the Assistant Recovery Manager during the exercise.

Following the exercise the inspector pointed out to licensee representatives that Section II. B. 4. of NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response

Plans and Preparedness in Support of Nuclear Power Plants, states that the decision to notify offsite authorities of emergency conditions is a non-delegable responsibility. Specifically the paragraph states the following...

> "Each licensee shall establish the functional responsibilities assigned to the emergency coordinator and shall clearly specify which responsibilities may not be delegated to other elements of the emergency organization. Among the responsibilities which may not be delegated shall be the decision to notify and to recommend protective actions to authorities responsible for offsite emergency measures."

The inspector reviewed the following licensee documents which defined EC and RM responsibilities for notifying and recommending protective actions to authorities responsible for offsite emergency measures.

- Turkey Point Emergency Plan (EP); Section 2.2.2., Organization, Facilities, and Support Services; Emergency Response Organization; Florida Power & Light Company Emergency Response Organization;

  - Section 2.2.2.1., Immediate Response Phase, Delegation, stated, that the EC shall not delegate the following responsibilities:

    1) Decision to notify State and local authorities.

    2) Recommendation of protective actions for the public (offsite).

    The section also stated that the RM assumes the responsibility for recommending protective actions when the EOF is manned and operational and that the EC may delegate other responsibilities.

  - Section 2.2.2.2., Expanded Response Phase, Recovery Manager, stated that the specific responsibilities for the RM or his designee include the following:

    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.

- EPIP 20101, Duties of Emergency Coordinator, Rev. dated October 17, 1991 stated, the 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 (PARs). The actual notification can be done by the EC's designee. Notification to offsite agencies and PARs become the responsibility of the RM when EOF is manned and operational.

- EPIP 1102, Duties of the Recovery Manager, Rev. dated October 31, 1991, Section 4.0, Responsibilities, stated the following:

  - The RM is responsible for assuming from the EC the responsibilities of notifications to offsite agencies and issuance of PARs to offsite authorities when the EOF is declared operational.

  - The RM may delegate communications responsibilities to a member of his staff but maintains the responsibility for completion within the required time limit actions.

  - The RM shall not delegate the issuance of PARs.

The licensee's emergency plan clearly specified that the EC shall not delegate notification activities but it did not do the same for the RM. The inspector determined that the licensee's EPIPs for the RM were not straightforward concerning the intent of NUREG 0654, in that, EPIP 1102 did not state that the decision to notify and to recommend protective actions to authorities responsible for offsite emergency measures should not be delegated by the RM.

In a previous exercise NRC inspectors observed that the State notification form did not provide a date, time, and authorization signature line for the EC approval on the State notification forms issued onsite. The inspectors also noted that the State notification forms were being altered after they were reviewed by the EC. As a result of the finding, the licensee committed to 1) revising the form to include review-authorization signature blocks, and 2) provide training to the communicators that had been modifying the State notification forms.

The licensee modified EPIP 20101 to require the EC initial the State notification form, indicating his review and approval of the information contents. The licensee's corporate office modified a copy of the State notification form to include EC/RM approval name, date, and time entry fields. A Student Handout 3210002 addressing the above issues and provided to site and offsite communicators during recent training stated that "The EC or RM will review the State of Florida Notification Form and

indicate approval by initialing the bottom of the form."

The inspector determined through interviews with licensee representatives and other licensee documentation that it was not the licensee's intent to allow the RM to delegate notification authorization responsibilities. The inspector determined that the licensee had intended the RM review and indicate his review by signature on the State notification forms prior to their issue; just as the EP and EPIP 20101 procedures required the onsite EC to perform. That position was further evidenced with the training documentation and the newly added "EC/RM Signature" blocks on the State notification form.

Based on the above, the inspector informed licensee management that continued problems with EC or RM failure to review and document review of State notification forms was an apparent exercise weakness. However, upon further review by the Region II NRC staff, the decision was made not to identify the issues as an exercise weakness due to the following considerations.

- There were no significant discrepancies in any of the issued State notification forms.
- The notification process for State and local governments in the licensee's EOF was redundant. Specifically, the State and local decision-makers were located in the facility and received first-hand knowledge of ongoing events and plant status.
- The RM was signing the PAR forms that were provided to the State agencies in the EOF.
- The licensee's QA staff identified the issue as a finding in an corporate on-going annual audit (QAS-EMP-91-2) of the Emergency Preparedness Program.

Therefore, a review of the licensee's proposed corrective actions to a QA finding, concerning RM reviews and approvals of State notification forms, will be tracked as an Inspector Followup Item (IFI).

IFI 50-250, 251/91-49-01: Review licensee corrective actions for QA finding concerning the review and authorization procedures for EC/RM in issuing state notification forms.

The Early Warning System, consisting of sirens located throughout the 10 mile emergency planning zone (EPZ) that can be used to alert the public within the EPZ, was not activated during the exercise.

No violations or deviations were identified.

6. Emergency Communications (82301)

This area was observed to determine 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 specific criteria in NUREG-0654, Section II.F.

The inspector observed that adequate communications existed among the licensee's emergency organizations, and between the licensee's emergency response organization and offsite authorities.

During the exercise the inspector determined that many of the announcements concerning emergency conditions and information (such as emergency classification) were not audible in all plant and emergency centers. The inspector determined that audibility of the plant page system in high noise areas has been a problem that has existed for several years. As a result, the licensee conducted studies of the plant page system and made modifications to improve it in 1989. Additional plant page system upgrades were requested with Request for Engineering Assistance 91-029 in 1991. The licensee reported that one of the modifications would provide the control room staff the ability to increase voice announcement volumes over the system. The inspector determined that the licensee plans to complete the modification in 1992 during the Unit 3 refueling outage.

No violations or deviations were identified.

7. Emergency Facilities and Equipment (82301)

This area was observed to determine that 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 specific criteria in NUREG-0654, Section II.H.

The inspector observed the activation, staffing and operation of key Emergency Response Facilities, including the CRS, TSC, OSC, ENC, and EOF. In addition, the inspector observed the fire drill.

a. Fire Drill

The inspector observed the licensee's initial response to a simulated fire at the Unit 3 C Intake Cooling Water Pump. The fire was discovered and reported to the licensee's CRS at 8:17 a.m.

The inspector determined that the licensee did not utilize normal procedures for calling out the fire brigade team during the exercise. The licensee's fire brigade, at any

given time, was made up of HP and Operations representatives on shift. During the exercise the licensee established a special fire brigade team to respond to the simulated exercise fire. The special fire fighting team was made up of 3 Operators and 2 HPs. According to licensee representatives, the real fire brigade team was not used so as to: 1) not impact the plant operations and 2) maintain fire brigade response capabilities should a real fire develop. The inspector determined that the real fire brigade could have resulted in 10 to 20 fire fighters responding. When the fire alarm sounded a PA announcement was made for the fire brigade team not to respond. Therefore, the special fire brigade team, which had been designated to respond to the drill fire, arrived on the scene at 8:23. The first two fire fighters arrived with protective clothing and Self Contained Breathing Apparatus. One minute later three other fire fighters arrived. All of the fire team members did not arrive at the fire site with fire protection equipment or with necessary equipment for fire fighting. The fire fighters simulated connecting a hose to a fire hydrant located in the yard of the licensee's Radiological Control Area (RCA). The area is secured with a tall fence and all gates are locked. The fire fighters were simulating their attempts to fight the fire before the inspector departed the fire scene. The licensee reported the fire out at 9:20 a.m.

The scenario called for a request of offsite fire fighting support from a local fire department. The licensee simulated that response with a pickup truck located outside the protected area.

Following the exercise the inspector discussed the simulated activities with the site EP Supervisor. The inspector reported that less simulation, such as, use of on-shift fire brigade team and running fire water supply lines to actual water sources, would have been more appropriate for a real evaluation of fire fighting capabilities during a graded exercise. However, the EP Supervisor felt that the exercise was fully successful meeting all exercise objectives.

No violations or deviations were identified.

b. Simulator Control Room

The Shift Supervisor demonstrated excellent command and control throughout the exercise and classifications and notifications were accomplished efficiently and in a timely manner. Both reactor operators and supervisors demonstrated good use of the Normal, Abnormal, Emergency Operating Procedures (EOPs), and the EPIPs throughout the exercise. The operations staff worked extremely well as a team.

Efficient use of Control Room staff capabilities and the appropriate referral to EOPs/EPIPs led to proper focus on corrective and mitigation actions. Periodic status updates provided by the PSN and APSN were good and the turnover briefing from the PSN to the EC was effective. Use of the Control Room Simulator added valuable realism to the emergency exercise and was considered a exercise strength.

No violations or deviations were identified.

c. Technical Support Center

The inspector observed activation, staffing, and operation of the TSC. There were no major equipment deficiencies. The Emergency Coordinator demonstrated effective command and control and knowledge of plant conditions during the exercise. The transfer of EC duties from the Control Room to the TSC went smoothly. The TSC staff was cognizant of their duties, authorities, and responsibilities. The use of and periodic updating of status boards was excellent. In addition, the location of status boards facilitated quick assessments of plant conditions. Congestion and noise level was kept to a minimum. The engineering support group provided technical evaluations and assessment to the operations group in a timely manner. The engineering support group had prioritized 19 task assignments and provided timely feedback to the EC. The tasks were listed and tracked on a status board.

In general the flow of information and communications with the CRS, OSC, and EOF was good. However, there were significant events that were not communicated to the TSC at large. For example, there was no announcement made in the TSC that the EOF had been activated and that the EC duties of offsite notifications and protective action recommendations had been transferred to the RM in the EOF. Additionally, the PA announcement declaring a General Emergency was not heard in the TSC.

The inspector observed no formal transfer of EC duties to next in line when EC left his duty station for several minutes to take care of personal matters. This was technically required by EPIP 20101, Section 5.3, "Watch Relief." However, the procedure did not provide any guidance addressing temporary relief and turnover requirements for the EC. The inspector discussed the issue with licensee representatives who committed to review the issue and evaluate the need to provide additional procedural guidance.

No violations or deviations were identified.

d. Operational Support Center (OSC)

The inspector observed that, upon Alert declaration, personnel responded promptly to staff the facility. The OSC Director promptly organized the staff and opened and maintained good communication with the TSC. The OSC Director informed OSC staff of plant and emergency status through frequent briefings. Repair teams coordinated with the TSC and HP before dispatch. Teams were briefed on potential radiological conditions and protective measures. Personnel exposures controls and documentation of dose extensions was good and radiological conditions were monitored by HP technicians who accompanied OSC teams. Dispatched repair crews were effectively tracked by the OSC throughout the exercise. Overall, the OSC was effective in providing support in response to simulated events.

The licensee's OSC is located outside the licensee's RCA on the second floor of the Maintenance Building. The location is good, in that, the site procedure room is nearby and most maintenance tools are available on the first floor. The inspector inquired about the ventilation for the OSC and determined that the licensee did not have a special air treatment system for the OSC but that the licensee could switch the building heating and air conditioning system to a recirculation mode with special damper alignment, if necessary. However, the licensee did not have a simple damper alignment procedure posted on the equipment. The licensee believed that such a procedure could be helpful in a real emergency and committed to developing the procedure.

No violations or deviations were identified.

e. Emergency Operations Facility

The EOF was promptly staffed and activated with qualified personnel. The RM provided timely and accurate status updates to the EOF staff. The inspector also noted good command and control of the field monitoring teams. The teams were dispatched early from the site and were positioned at logical projected plume path monitoring points.

The inspector observed initial communications and response activities for the Emergency Control Officer and Nuclear Energy Duty Officer who were pre-staged at the General Offices. Initial notifications, information flow, and response actions were observed to be appropriate for the simulated events in progress.

The EOF was activated approximately 1 hour and 12 minutes following the decision to staff the facility by the ECO. EOF activation was not an objective of the drill, and

Corporate emergency response personnel were pre-staged at the Miami General Offices. The RM promptly assumed his duties upon arrival at the EOF and verified that the appropriate staff were available to fill key response positions. The RM and the facility staff appeared cognizant of their duties, authorities, and responsibilities, with the exception of notification form approvals (see paragraph 5). Appropriate use of procedures were noted, and effective communications were observed between the TSC and EOF at various management and staff levels.

The EOF was provided with adequate equipment to support the assigned staff. Problems associated with the State radio and facsimile capability occurred during the exercise; however, personnel effectively worked through the problems with no negative impact on the exercise resulting. Status boards and other graphical aids were strategically located and generally maintained appropriately. The inspector identified that the inclusion of core damage assessment information and evacuation status in a readily available location would be a program enhancement. Security and access control were observed to be appropriately established and maintained throughout the exercise.

The inspector noted that adequate provisions had been made for accommodating State, local, and Federal representatives in the EOF. The State, local, and licensee interface observed during the exercise was very effective. Good communications and coordination were exhibited by all groups.

Several problem areas were identified by the inspector and discussed with licensee personnel. These included:

- Radio communications to the State field teams and Mobile Laboratory were not operable during the exercise (Local Government Radio). Although the system was designated for use by the State, it was maintained by the licensee. The licensee and State worked through the radio problems well. The radio problems caused some confusion, but the licensee and State adjusted well with no overall impact on the exercise noted. They used telephone communications to the Laboratory, who in turn radioed directions to the field teams. This item was identified by the licensee and State during the player critique.

- The inspector noted much confusion by the EOF Engineering Staff regarding the containment sump level. The team could not understand why the sump level was not increasing even though water was being injected. Prior to the end of the exercise, the team realized

that they were only evaluating the wide range value (which pegged out at 369 inches) rather than the narrow range value which would have accurately represented the sump level. Although the team spent much time on calculations and assessments related to the false monitor reading, it did not override other engineering efforts and plant considerations.

- No 24-hour staffing capability was established for the position of Governmental Affairs Manager in the EOF. The licensee indicated that the personnel depth for this position was only two due to company reorganization. Also, as soon as the new organization was finalized, efforts to increase the number of individuals qualified for this position would be pursued. Licensee representatives stated that the second person for this position was out-of-town and could have been called back if necessary. Twenty-four staffing capability was established for all other positions in the EOF.

- Information on core damage assessment was not available on the EOF status boards for review by facility staff. However, the inspector noted that the Recovery Manager reported the results of core damage assessments routinely during facility briefings.

Strengths observed in the EOF included the following:

- The interface between the licensee and State and local governments in the EOF was observed to be very effective. Good coordination was particularly exhibited regarding environmental monitoring/dose assessment considerations, and the potential need for PARs beyond the 10-mile EPZ.

- Accident assessment in the EOF was excellent. Engineering provided timely and quality support to the TSC Engineering Group. The assessments were also thorough and appropriate priorities were established based on plant conditions.

- The use of portable communications equipment (with ear pieces) provided a good source of information for decision-makers quickly. Continuous updates were being provided to personnel in both the EOF and ENC.

No violations or deviations were identified.

f. News Center

The inspector verified that the personnel performing key

functions were those assigned on the duty roster. Recent reorganization resulted in some new personnel in the ENC. Licensee personnel appeared to understand their responsibilities and exhibited ability to perform their duties. Personnel doing the briefing for the licensee were properly qualified to answer media questions and provided answers to difficult questions within a reasonable time. Overall performance was good.

The inspector observed the following concerning dissemination of information to the media.

- News information from the licensee was generally accurate and timely, however, news releases were issued a little late on the Alert. The declaration of an Alert was at 8:31 a.m. The company's news release was timed at 9:13 a.m. from its offices and 10:33 a.m. from the ENC. However, all FP&L news releases contained appropriate information.

- News release coordination with and among participants was good. The participant coordination area in the ENC was functional and facilitated coordination. Each entity (FP&L, State of Florida, Counties, etc.) issued its own news releases with times and news release numbers. Next, they were issued through the ENC, numbered sequentially, and timed by the ENC. This resulted in two times and two news release numbers on each release. It was suggested that the original time and news release number be eliminated from news releases issued by the ENC in sequential order.

- FP&L security provided good control over access of news media to the briefing area. There was one initial problem when "mock media" personnel were directed up to the briefing area prior to activation of the ENC at 9:45 a.m.

- Corrective and supplemental information was promptly released during subsequent press briefings, and licensee, State and county rumor control personnel exhibited timely knowledge of breaking events.

- Information provided to the public was understandable and not too technical. The company also provided spokes-persons who spoke Spanish to respond to requestors who did not understand English. Emergency Broadcast System (EBS) messages, according to Dade County representatives, are all bilingual.

- The licensee provided a media work area with an adequate number of telephones. For a large accident

over a protracted amount of time, its size and number of phones would require expansion. The licensee did identify early in the drill that they needed to provide a means for reporters to use long distance dialing. A "code" was made available.

Rapid status changes in the licensee's scenario provided a good challenge to the news release process. The ENC staff response was good.

No violations or deviations were identified.

8. Accident Assessment (82301)

This area was observed to determine whether adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition were in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Appendix E, Paragraph IV.B, and 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 engineering accident assessment teams functioned effectively in analyzing the plant status so as to make recommendations to the EC and RM concerning mitigating actions to reduce damage to plant equipment; to prevent release of radioactive materials; and to terminate the emergency condition. In the EOF, engineering assessments were pursued aggressively, and both timely and quality support was provided to the TSC regarding plant mitigation activities. The inspector observed that core damage assessments were performed in accordance with procedures as information became available during the exercise.

Dose assessment performed by EOF personnel was timely and based on actual plant conditions, when possible. Dose projections correlated well with environmental monitoring results from both the State and licensee.

Onsite and offsite radiological monitoring teams were dispatched to determine the level of radioactivity in those areas within the influence of the simulated plume. The activities of the offsite radiological monitoring teams were not directly observed by the inspector. However, communications with and direction of the team from observation in the TSC and EOF appeared adequate. The teams effectively demonstrated their capability to collect those data points and relay data to the emergency response facilities. A particular strength was noted regarding the excellent coordination between the State and licensee on environmental monitoring efforts.

No violations or deviations were identified.

9. Protective Responses (82301)

This area was observed to determine 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 specific criteria in NUREG-0654, Section II.J.

The inspector verified that the licensee had and used emergency procedures for formulating PARs for offsite populations within the 10 mile emergency planning zone. The RM in the EOF provided timely and accurate PARs to State of Florida personnel. PARs were routinely reevaluated for accuracy and status updates were provided to the offsite authorities. Protective actions were initiated for onsite personnel following the Alert declaration by simulating a personnel accountability of those personnel inside the protected area.

No violations or deviations were identified.

10. Radiological Exposure Control (82301)

This area was observed to determine that means for controlling radiological exposures, in an emergency, are established and implemented for emergency workers and that they include exposure guidelines consistent with EPA recommendations as required by 10 CFR 50.47(b)(11), and specific criteria in NUREG-0654, Section II.K.

Licensee procedures required that the station provide and distribute dosimeters to emergency response personnel. In addition, dose records were required to be maintained throughout the emergency. The inspector noted that emergency response personnel in the ERFs were issued radiation monitoring devices and control of personnel radiological exposures for teams out of the OSC was good. The inspector noted that the licensee established radiological control points and performed periodic habitability radiological surveys in the TSC and OSC.

No violations or deviations were identified.

11. Exercise Critique (82301)

The licensee's critique of the emergency exercise was observed to determine whether shortcomings in the performance of the exercise were brought to the attention of management and documented for corrective action pursuant to 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, Paragraph IV.E, and specific criteria in NUREG-0654,

Section II.N.

The licensee conducted facility critiques with exercise players immediately following the exercise termination. Licensee controllers and observers conducted additional critiques prior to the formal critique to management on December 6, 1991.

Issues identified during the exercise were discussed by licensee representatives during the critique. The critique addressed both substantive deficiencies and improvement areas. The critique process included a review of the objectives that had been established for demonstration during the exercise. However, the exercise objective review was primarily limited to reading them to the participants and reporting to them that they were all successfully completed. Some objective comments were solicited and received. It was suggested to members of the EP staff that the exercise critique process address each objective during the controller critique/debriefing and note whether the objective was met, partially met, or failed to be met.

The conduct of the critique was consistent with the regulatory requirements and guidelines cited above. The inspector reported that licensee action on identified findings would be reviewed during subsequent NRC inspections.

No violations or deviations were identified.

12. Licensee Action on Previous Inspection Findings (92701)

(Closed) IFI 50-250, 251/90-38-01: This IFI was written when NRC inspectors observed that the State notification form did not provide a date, time, and authorization signature line for the EC approval on the State notification forms and inspectors noted that the forms were being altered after they were reviewed by the EC. As a result of the finding, the licensee committed to:

1) revising the form to include signature blocks, and

2) provide training to the communicators that had been modifying the State notification forms.

The inspector reviewed licensee's actions concerning the IFI and determined that EPIP 20101 was revised to require the EC review and initial the State notification forms prior to their issuance. The licensee's onsite and offsite staff utilized a State of Florida notification form that was also utilized by other nuclear power facilities in the state. According to the Turkey Point Emergency Preparedness Supervisor the site attempted to have the State modify the form to include the signature block but the State was reluctant to do so since it was utilized by other facilities. Therefore, the site staff revised their procedure to show EC review by his initials on the bottom of the form. The

inspector noted that all State Notification forms completed onsite during the exercise were reviewed by the EC and initialed by him.

A EC/RM signature block was added to the State notification forms used by the licensee's corporate EOF staff. The revised form included the EC/RM signature, date and time fields. The inspector asked site licensee representatives about their use of the form and the EP Supervisor reported that there was no need to modify the State notification form that they were using since their procedure had worked satisfactorily during the exercise.

Training was also provided to both the corporate and site emergency personnel addressing completion of the State notification forms. This item is closed based on these licensee actions.

13. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on December 6, 1991. The inspector summarized the scope and findings of the inspection, including the exercise weakness and inspector followup items. The licensee did not identify any such documents or processes as proprietary. Dissenting comments were not received from the licensee. The item discussed below was presented as an apparent emergency exercise weakness at the NRC Exit Meeting. However, after further review the issue was identified as an IFI to enable the NRC to track the corrective actions for the licensee identified issue (see paragraph 7.e.)

Item Number	Description and Reference
50-250, 251/91-49-01	IFI: Review licensee corrective actions for defining in licensee procedures: 1) EC/RM responsibilities which can not be delegated, 2) the administrative controls and measures to ensure that the EC/RM review and authorize decisions to notify and recommend protective actions to offsite authorities responsible for emergency measures.

Attachments:
Exercise Objectives, Narrative
Summary, and Time Line

FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
1991 EMERGENCY PREPAREDNESS
EVALUATED EXERCISE
DECEMBER 4, 1991

2.2 OBJECTIVES

The Turkey Point Nuclear Plant (PTN) 1991 emergency preparedness evaluated exercise objectives are based upon Nuclear Regulatory Commission requirements provided in 10 CFR 50, Appendix E, *Emergency Planning and Preparedness for Production and Utilization Facilities*. 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. Scenario events will escalate to postulated core damage and subsequent simulated release of radioactive material to the environment.

The following objectives for the PTN portion of the exercise are consistent with the aforementioned documents:

A. Accident Assessment and Classification

1. Demonstrate the ability to identify initiating conditions, determine Emergency Action Level (EAL) parameters and correctly classify the emergency throughout the exercise.

B. Notification

1. Demonstrate the ability to alert, notify and mobilize Florida Power and Light (FPL) emergency response personnel.

2. Demonstrate the capability to promptly notify the U.S. Nuclear Regulatory Commission (NRC), State and Local Authorities of an emergency declaration or change in emergency classification.

3. Demonstrate appropriate procedures for both initial and follow-up notifications.

4. Demonstrate the ability to provide follow-up information to State, Local and Federal Authorities.

5. Demonstrate the ability to provide accurate and timely information to State, Local and Federal Authorities concerning radioactive releases in progress.

C. Emergency Response

1. Demonstrate staffing and activation of Emergency Response Facilities (ERF).

2. Demonstrate planning for 24-hour per day emergency response capabilities.

3. Demonstrate the timely activation of the Technical Support Center (TSC) and Operational Support Center (OSC).

C. Emergency Response (Continued)

4. Demonstrate the functional and operational adequacy of the TSC, OSC, Emergency Operations Facility (EOF) and Emergency News Center (ENC).

5. Demonstrate the adequacy, operability and effective use of designated emergency response equipment.

6. Demonstrate the adequacy, operability and effective use of emergency communications equipment.

7. Demonstrate the ability of each emergency response facility manager to maintain command and control over the emergency response activities conducted within the facility throughout the exercise.

8. Demonstrate the ability of each facility manager to periodically inform facility personnel of the status of the emergency situation and plant conditions.

9. Demonstrate provision of periodic updates regarding plant casualty status to Off-Site Radiological Monitoring Teams.

10. Demonstrate the precise and clear transfer of Emergency Coordinator responsibilities from the Nuclear Plant Supervisor to designated senior plant management and transfer of Emergency Coordinator responsibilities to the Recovery Manager.

11. Demonstrate the ability to promptly and accurately transfer information between Emergency Response Facilities.

12. Demonstrate the ability of the TSC and OSC to coordinate the deployment of emergency teams.

13. Demonstrate the availability of qualified personnel and timely organization of reentry teams to assist in accident assessment and mitigation.

14. Demonstrate the capability for development of Protective Action Recommendations (PARs) for the general public within the 10 Mile Emergency Planning Zone (EPZ).

15. Demonstrate that PARs can be communicated to State and Local Authorities within the regulatory time constraints.

16. Demonstrate the ability to integrate emergency response activities with Federal emergency response personnel.

17. Demonstrate the ability to support State and Local field monitoring activities (EOF only).

D. Radiological Assessment and Control

1. Demonstrate the coordinated gathering of radiological and non-radiological (meteorological) data necessary for emergency response, including collection and analysis of in-plant surveys and samples.

D. Radiological Assessment and Control (Continued)

2. Demonstrate the capability to perform dose assessment.

3. Demonstrate the ability to compare onsite and off-site dose projections to Protective Action Guidelines (PAGs) and determine and recommend the appropriate protective actions.

4. Demonstrate the ability to provide dosimetry to emergency response personnel as required and adequately track personnel exposure.

5. Demonstrate the capability for onsite contamination control.

6. Demonstrate the ability to adequately control radiation exposure to onsite emergency workers, as appropriate to radiological conditions.

7. Demonstrate the decision making process for authorizing emergency workers to receive radiation doses in excess of Turkey Point Plant administrative limits, as appropriate.

8. Demonstrate the ability to control and coordinate the flow of information regarding off-site radiological consequences between radiological assessment personnel stationed at the TSC and EOF.

9. Demonstrate the ability of field monitoring teams to respond to and analyze an airborne radiological release through direct radiation measurements in the environment.

10. Demonstrate the collection and analysis of air samples and provisions for effective communications and recordkeeping.

11. Demonstrate the ability to control and coordinate the flow of information regarding off-site radiological consequences with State radiological assessment personnel.

E. Public Information Program

1. Demonstrate the timely and accurate response to news inquiries.

2. Demonstrate the ability to brief the media in a clear, accurate and timely manner.

3. Demonstrate the ability to coordinate the preparation, review and release of public information with Federal (NRC and FEMA), State and Local Government Agencies as appropriate.

4. Demonstrate the ability to establish and operate rumor control.

F. Medical Emergency

1. Demonstrate the ability to respond to a radiation medical emergency in a timely manner.

F. Medical Emergency (Continued)

2. Demonstrate the capability of the First Aid Team to respond to a medical emergency, administer first aid and survey for contamination on a simulated contaminated injured individual.

3. Demonstrate the capability to arrange for and obtain transport and off-site medical support for a radiological accident victim.

4. Demonstrate the ability of Mercy Hospital personnel to treat an injured and/or contaminated patient.

5. Demonstrate the administrative means to document and monitor status of a medical emergency victim.

G. Fire Emergency

1. Demonstrate the ability of the Fire Brigade to respond to a simulated fire emergency in a timely and appropriate manner.

H. Evaluation

1. Demonstrate ability to conduct a post-exercise critique to determine areas requiring improvement or corrective action.

I. Exemptions

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

1. Site evacuation of non-essential personnel

2. Onsite personnel accountability

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

4. Real time activation of the EOF and ENC. (Emergency response personnel will not be allowed entry to the facilities until an appropriate time in the scenario, but will not be required to transit real-time from Miami due to time limitations in the exercise.)

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

JAN 1 0 1992

FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
1991 EMERGENCY PREPAREDNESS
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3.2 SCENARIO TIMELINE

TIME	EVENT #	EVENT
0730		Initial conditions establish Unit 3 operating at 100% power, in the middle of core life. Unit 3 power history has been full power operation for the last 180 days. Unit 4 is Mode 5, Cold Shutdown. Six Month Surveillance Testing is scheduled to be conducted on the containment isolation purge exhaust valves POV-3-2602 and POV-3-2603 and all administrative requirements are in place. 4B HHSI pump is out of service for maintenance. MOV-536 (PORV Block Valve) has been closed due to PORV-455C leaking. AMSAC is OOS for Surveillance Testing. Demand on the system is moderate with an anticipated peak of 12,000 MWe. Service area conditions are normal. Weather has been sunny and mild for the last week with occasional late afternoon and evening showers. Forecast is for partly cloudy skies, temperatures in the upper 70's and occasional showers for the next four days. Current temperature is 72° with winds from the southeast at 5-10 mph.
0745	1	R-20 alarms and the strip chart recorder indicates a slight increase in activity in the letdown monitor.
0755		In response to the R-20 alarm, Unit 3 Control Room requests a HP survey and chemistry sample per ONOP 11108.1, PRMS Off-Normal Operation. Reactor Engineering should be asked to assess fuel conditions per ONOP 041.4.
0810	2	HP Technician sent to survey the Pipe and Valve Room discovers the Chemistry Technician has fallen and is contaminated. The Chemistry Technician has a broken arm and will require transportation offsite as a contaminated/injured person.
0815	3	A fire alarm in the Unit 3 ICW Pump Area, Alarm Point 27, comes in to the Control Room. The Unit 3 Control Room activates the fire team to combat the fire.
0830		Chemistry and Health Physics have completed their sampling. Health Physics confirms the dose rate in the area of the letdown monitor to be approximately 500 mr/hr. RCS activity has increased but remains within technical specification limits for continued operation.

TIME	EVENT #	EVENT
0835		The fire team has arrived on the scene at the Unit 3 ICW Pump Area and finds a fire underway; the fire team leader advises the Control Room that offsite fire support should be requested (simulated). Conditions are in place for the declaration of an ALERT EMERGENCY based on a potential loss of a safety system due to a fire lasting longer than 10 minutes and offsite fire support is necessary.
0845	4	A previously unidentified crack in a pipe-to-elbow weld on the 3A Cold Leg begins to leak reactor coolant to the containment at approximately 1 gpm. Within minutes, containment atmosphere radiation monitors alarm and the containment sump level increases. Activation of the onsite emergency response facilities has been initiated. The Emergency Control Officer has requested that the EOF emergency responders travel to the EOF and standby.
0900		Operators and the STA have conducted RCS leakrate calculations using charging/letdown mismatch and containment sump levels increase. RCS leakage is determined to be greater than the Technical Specification limit of 1 GPM unidentified leakage.
0905		A controlled reactor shutdown will be initiated within the hour per Technical Specifications.
0915		The onsite emergency response facilities (TSC and OSC) should have been declared operational.
0920		The fire is out but smoldering.
0930	5	The cold leg RCS leakage increases to approximately 3 gpm. Additional charging pumps are maintaining Pressurizer (PRZ) level. Efforts to quantify the increase are initiated. Containment coolers are limiting the increase in containment temperature and pressure. Controlled shutdown continues (if already started) but is increased to 5% per minute.
0945	6	A break in the Main Feedwater System occurs upstream of the Flow Control Valves at the common header junction of the Main and Standby Feedwater Systems. Operators will attempt to trip the reactor but it will fail to trip (Anticipated Transient without Scram-ATWS). Loss of all feedwater occurs due to pipe whip from the Main Feedwater System break disabling Train 2 Auxiliary Feedwater (AFW) Header, and Train 1 AFW Steam Supply Valve (MOV-1405) failing to open.
	7	When RCS Feed and Bleed is required, the operable PORV will fail to open due to a control circuit malfunction and the Block Valve associated with the leaking PORV will fail to open due to a breaker malfunction.

TIME	EVENT #	EVENT
1000		Conditions are in place for declaration of a SITE AREA EMERGENCY based on loss of secondary heat sink has occurred and feed and bleed is required.
		A site evacuation (simulated) is underway via the primary evacuation route. The offsite assembly area should be made ready to receive evacuees.
1015		The Post Accident Hydrogen Monitor is placed into service.
		The first EOF responders arrive at the General Office and initiate the activation of the facility.
1030		The High Head Safety Injection Pumps cannot inject due to high RCS Pressure.
1045		The uncovered upper fuel region of the core begins to release gas gap activity and fuel overheat begins to cause zirconium-water reaction, liberating hydrogen. Containment High Range Radiation Monitors (CHRRMs) increase sharply. Containment hydrogen increases.
1100	8	Containment temperature and pressure increase (less than 20 PSIG pressure). Containment hydrogen concentration continues to increase. CHRRMS are rising and are projected to exceeded 1.3×10^5 R/hr. The containment isolation purge exhaust valves POV-3-2602 (outside containment) and POV-3-2603 (leak through due to containment pressure) start to leak. Efforts to confirm containment status with the onset of the leakage begin.
		Conditions are in place for the declaration of a GENERAL EMERGENCY based on a variety of conditions: (1) Containment High Range Radiation Monitor greater than 1.3E+5 R/hr., and possibly, (2) RCS leakage > 50 GPM and RCS leakage greater than available charging pump capacity (high pressure inhibits effective ECCS flow) and loss of containment integrity which provides a flowpath to the environment, (3) Potential core damage indicated by loss of secondary heat sink, RCS Feed and Bleed required, no HHSI flow, no RHR flow for greater than 30 minutes, and no AFW flow for greater than 30 minutes.
		Protective Action Recommendations (PARs) should be generated on plant conditions.
1115		The Reactor Vessel has been reflooded and the fuel damage has been terminated due to the restoration of SI flow as the RCS is depressurized.
		The Unit 3 containment isolation purge exhaust valves POV-3-2602 and POV-3-2603 fail resulting in a confirmed loss of containment integrity and a release to the environment. R-14 and the plant vent SPING increase as the release initiates.

TIME	EVENT #	EVENT
1115 (Cont)		Field teams should be dispatched to find the plume and PARs should be upgraded based (if not already) on significant core damage and the loss of containment integrity.
1200		Field teams continue efforts to repair the Feedwater System, PORV Control Circuit, and PORV Block Valve Breaker. Plant recovery and stabilization continues in accordance with plant procedures.
1300		Emergency containment filters, emergency containment coolers, and containment spray (if required) have scrubbed and cooled the containment and the reduction in containment pressure is eliminating the release through the containment isolation purge exhaust valves POV-3-2602 and POV-3-2603. Plant vent radiation readings begin to decline. Field monitoring activities continue. The emergency response teams continue to stabilize the reactor, verify safe shutdown and evaluate containment integrity. Discussions of recovery and reentry should begin as the release rate continues to decline.
1330	9	Unit 3 Startup transformer gets a phase to phase ground and the Unit 3B emergency diesel generator fails to automatically start and energize its associated 4 KV bus due to the 3B RHR breaker failing to trip. Operators carry out actions in response to the Loss of Offsite Power. Maintenance personnel are dispatched to investigate the Unit 3 Startup Transformer malfunction.
1345		The ECO is advised that the FPL Group Board of Directors is convening a special meeting for an update on the Turkey Point emergency. He has been requested to present that briefing.
1400		Recovery actions should be considered at this time with the identification of personnel for back shift, possible de-escalation of the General Emergency, and logistical needs for continued operation of the facility.
1500		With the completion of all State, local and utility objectives, terminate Exercise Play.