



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

JAN 29 1991

Report Nos.: 50-335/91-01 and 50-389/91-01

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

Docket Nos.: 50-335 and 50-389

License Nos.: DPR-67 and NPF-16

Facility Name: St. Lucie Nuclear Plant

Inspection Conducted: January 7-11, 1991

Inspector: James L. Kreh  
J. L. Kreh

29 Jan. 1991  
Date Signed

Approved by: Eldon H. Tuttle for  
W. H. Rankin, Chief  
Emergency Preparedness Section  
Radiological Protection and Emergency  
Preparedness Branch  
Division of Radiation Safety and Safeguards

1/29/91  
Date Signed

SUMMARY

Scope:

This routine, unannounced inspection was conducted to assess the operational readiness of the site emergency preparedness program, and included review of the following programmatic elements: (1) Radiological Emergency Plan and associated implementing procedures; (2) facilities, equipment, instrumentation, and supplies; (3) organization and management control; (4) training; and (5) independent and internal reviews and audits.

Results:

In the areas inspected, no violations or deviations were identified. The site emergency preparedness program was being effectively implemented and adequately supported by plant management. Issues concerning timely activation of the Emergency Operations Facility and the appropriate frequency of staff augmentation drills for the Technical Support Center were discussed in detail with licensee representatives (see Paragraph 4 for details). The licensee agreed to give consideration to the issues in question.

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*J. Barrow, Operations Superintendent
- \*G. Boissy, Plant Manager
- \*H. Buchanan, Health Physics Supervisor
- \*C. Burton, Operations Supervisor
  - B. McDaniel, Fire Protection Coordinator
- \*L. McLaughlin, Licensing Superintendent
- \*D. Mothena, Manager, Nuclear Emergency Preparedness (corporate)
  - L. Neely, Shift Technical Advisor
- \*D. Sager, Site Vice President
  - M. Shepherd, Operations Training Supervisor (Nuclear Training Center)
  - C. Stroud, Special Projects and Programs Coordinator (Nuclear Training Center)
- \*R. Walker, Site Emergency Preparedness Coordinator
- T. Ware, Technical Training Coordinator (Nuclear Training Center)

Other licensee employees contacted during this inspection included operators, technicians, and administrative personnel.

#### NRC

- \*R. Crlenjak, Chief, Reactor Projects Section 2B, Region II
- \*S. Elrod, Senior Resident Inspector
- \*A. Gibson, Director, Division of Reactor Safety, Region II

\*Attended exit interview

### 2. Emergency Plan and Implementing Procedures (82701)

Pursuant to 10 CFR 50.47(b)(16), 10 CFR 50.54(q), and Appendix E to 10 CFR Part 50, this area was inspected to determine whether significant changes were made in the licensee's emergency preparedness program since the last unannounced inspection (March 1990), to assess the impact of any such changes on the overall state of emergency preparedness at the facility, and to determine whether the licensee's actions in response to actual emergencies were in accordance with the Radiological Emergency Plan (REP) and its implementing procedures.

The inspector reviewed the licensee's program for making changes to the Emergency Plan Implementing Procedures (EIPs). The inspector verified that changes to these documents were reviewed and approved by licensee management. Examination of a selected sample of records showed that EIP changes were submitted to the NRC within 30 days of the effective date, as required. Based on review of the EIPs and discussion with the Emergency



Preparedness Coordinator, the inspector concluded that no major substantive changes had been made to the EIPs since the March 1990 inspection, although EIP-3100021E, "Duties and Responsibilities of the Emergency Coordinator", was extensively reformatted in Revision 26, dated January 10, 1991.

Revision 20 of the REP was issued since the above-referenced March 1990 inspection; this document, dated April 13, 1990, was distributed to assigned copyholders (including the NRC) in a timely manner. REP Revision 20, which introduced no major programmatic changes, was previously reviewed and accepted by the NRC (reference: Region II letter to licensee dated May 17, 1990).

The inspector reviewed records pertaining to the emergency declarations which had occurred since January 1, 1990. The records indicated that there were four such declarations, all in the Notification of Unusual Event class. The following is a compendium of the referenced events:

<u>1990 Date</u>	<u>Time declared/terminated</u>	<u>Description of Event</u>
Feb. 10	1610/2123	Transport of a potential contaminated injury to an offsite medical facility
March 3	0148/0200	Identified Unit 2 Reactor Coolant System leakage exceeding 10 gpm
April 16	2025/2120	Identified Unit 1 Reactor Coolant System leakage exceeding 10 gpm
June 14	.0657/0803	Initiation of a Unit 1 shutdown required by Technical Specifications

The documentation of these events indicated that notifications to State and local governments and the NRC were made in accordance with applicable requirements. Each of the listed occurrences was correctly classified based on EIP-3100022E, "Classification of Emergencies." The Emergency Preparedness Coordinator routinely reviewed the response to each classified event in order to identify problems or inconsistencies which may have occurred with respect to the requirements of the EIPs.

No violations or deviations were identified.



3. Emergency Facilities, Equipment, Instrumentation, and Supplies (82701)

Pursuant to 10 CFR 50.47(b)(8) and (9), 10 CFR 50.54(q), and Section IV.E of Appendix E to 10 CFR Part 50, this area was inspected to determine whether the licensee's emergency response facilities and other essential emergency equipment, instrumentation, and supplies were maintained in a state of operational readiness, and to assess the impact of any changes in this area upon the emergency preparedness program.

The inspector toured selected emergency response facilities (ERFs), including the Control Rooms, Technical Support Center (TSC), and Operational Support Center (OSC). These facilities and the emergency equipment therein appeared to be maintained in an appropriate state of readiness. According to observations by the inspector and statements by licensee representatives, no significant ERF changes were made since the last inspection.

The inspector reviewed completed documentation of the monthly equipment surveillance procedure (HP-90) for the Control Rooms, TSC, OSC, Emergency Operations Facility (EOF), Lawnwood Medical Center (Ft. Pierce, FL), and Martin Memorial Hospital (Stuart, FL). Records for the period August - December 1990 for all the listed facilities were reviewed for completeness and to verify that deficiencies identified during the monthly audits were resolved expeditiously. (Documentation of HP-90 audits conducted prior to August 1990 were maintained at the licensee's corporate office and were not requested for review.)

The inspector reviewed records of the biweekly siren patrol of the St. Lucie Alert and Notification System (ANS). These records showed that availability of the sirens, as calculated on a 12-month rolling average, was between 97 and 99 percent throughout the period December 1989 - December 1990, exceeding the Federal Emergency Management Agency criterion of 90 percent.

Based upon ERF walk-downs, review of applicable portions of the REP, inspection of completed surveillance procedures, and statements by licensee representatives, the inspector concluded that no degradation of ERF capabilities had occurred since March 1990.

No violations or deviations were identified.

4. Organization and Management Control (82701)

Pursuant to 10 CFR 50.47(b)(1) and (16) and Section IV.A of Appendix E to 10 CFR Part 50, this area was inspected to determine the effects of any changes in the licensee's emergency response organization and/or management control systems on the emergency preparedness program, to verify that such changes were properly factored into the REP and EIPs, and to determine the effectiveness of management control systems.

The organization and management of the emergency preparedness program were reviewed and discussed with licensee representatives. A new Manager of Nuclear Emergency Preparedness was appointed to the corporate organization in September 1990. This individual had wide experience in the field of emergency planning, and should have a positive impact on the program. There were no other significant organizational or personnel changes in either the plant or corporate emergency planning groups.

The inspector reviewed the licensee's management strategy for ensuring compliance with the REP requirements addressing the planning standard of 10 CFR 50.47(b)(2), which specifies that "timely augmentation of response capabilities is available." The applicable REP requirements were contained in Section 2.4 and Table 2-2a, although the licensee's commitments with respect to the cited planning standard were not clearly defined. Table 2-2a, which is not referenced in the text of the REP, purported to delineate the licensee's "Capability for Emergency Staff Augmentation"; however, what the table displayed were two sets of personnel numbers for each emergency response functional area, with one set labeled as "NUREG-0654 Guidance" and the other as "Estimated Capability" (with a footnote stating, "Estimates based on drills conducted in 1983"). The inspector inferred from this a commitment to the 30- and 60-minute personnel numbers listed under "Estimated Capability" (the more conservative of the two sets of personnel specifications), but licensee representatives stated that their intent was to commit to NUREG-0654 guidance.

Testing of TSC/OSC staff augmentation capabilities was specified in EPIP-3100050E, "Maintaining Emergency Preparedness - Emergency Exercises, Drills, Tests, and Evaluations", Revision 9, dated January 7, 1991. This procedure (in Appendix C) specified an annual drill to test the off-hour capability to augment the on-shift emergency response organization, but was limited to notification of personnel and confirmation of their availability. Only every five years did the licensee intend to conduct an actual, real-time callout of the emergency organization to test off-hour staff augmentation capability (not a new commitment; this has long been an exercise requirement). The inspector informed licensee representatives during the exit interview that, because of the paucity of verification data thus far, the present schedule for testing staff augmentation capability may not be sufficient to provide reasonable assurance of the timely availability of personnel during a real emergency. Licensee management agreed during the exit interview to review this concern.

The licensee's commitment for activating the EOF consisted of a statement in REP Section 2.4.5 that "Arrangements have been made to activate the EOF in a timely manner," and an implication in Table 2-2a that EOF activation would be accomplished within 60 minutes of the decision to activate. Real-time activations of the EOF during the May 1989 exercise and the January 1990 dress rehearsal and exercise required approximately 90, 70, and 120 minutes, respectively (measured from activation order to operational declaration). Discussions between the Nuclear Emergency Preparedness Manager and the inspector regarding REP commitments, NRC

guidance/requirements, and possible alternative concepts for EOF staffing resulted in a licensee commitment to review the EOF activation process in an effort to effect as short an activation time as reasonably achievable under the current concept of operation. This commitment was verified during the exit interview.

The inspector reviewed documentation of program maintenance requirements as specified in EPIP-3100050E, including annual exercises, annual and quarterly communications drills, radiological monitoring drills, Health Physics drills, fire drills, medical emergency drills, and off-hour augmentation drills. The records confirmed that maintenance requirements for calendar year 1990 had been fulfilled.

No violations or deviations were identified.

#### 5. Training (82701)

Pursuant to 10 CFR 50.47(b)(2) and (15) and Section IV.F of Appendix E to 10 CFR Part 50, this area was inspected to determine whether the licensee's key emergency response personnel were properly trained and understood their emergency responsibilities.

The inspector reviewed documentation of the emergency response training program (which was administered by the onsite Nuclear Training Center), including training procedures and selected lesson plans, and interviewed members of the instructional staff. Based on these reviews and interviews, the inspector concluded that the licensee's formal emergency training program was adequately established.

Requalification examinations of 13 Senior Reactor Operators in November 1990 disclosed no significant weaknesses in their capabilities for classifying emergencies and initiating appropriate offsite notifications. Therefore, in accordance with the guidance provided in NRC inspection procedure 82701 (revised December 4, 1990), the inspector omitted the conduct of walk-throughs with licensed operators which previously were used to verify the effectiveness of the training program with respect to emergency detection and classification.

Records of training for selected key members of the emergency response organization were reviewed. This documentation revealed that assigned personnel, including some designated as alternates, were provided with training which was appropriate, in terms of content and frequency, and consistent with applicable requirements. It is noted here for the record that the REP (notwithstanding its prior approval) did not provide for specialized initial training and annual retraining programs for OSC managers and repair teams as specified in Section IV.F of Appendix E to 10 CFR Part 50. However, review of NRC reports on past exercises indicated no response inadequacies involving the personnel in question.

The inspector reviewed the implementation of the training program for offsite support organizations, which was delineated in REP Section 7.2.4. Documentation disclosed that the licensee provided appropriate training during 1990 to fire and rescue personnel (all 15 members of the St. Lucie County Fire Department's local station), medical support personnel (Lawnwood Medical Center), local police agencies, and State and county emergency management agencies.

No violations or deviations were identified.

6. Independent and Internal Reviews/Audits (82701)

Pursuant to 10 CFR 50.47(b)(14) and (16) and 10 CFR 50.54(t), this area was inspected to determine whether the licensee had performed an independent review or audit of the emergency preparedness program, and whether the licensee had a corrective action system for deficiencies and weaknesses identified during exercises and drills.

The latest annual independent audit required by 10 CFR 50.54(t) was conducted May 29 - October 3, 1990 by the licensee's Quality Assurance Department and documented in Audit Report QSL-OPS-90-744, dated October 25, 1990. The findings of the audit, which were presented to licensee management, included only one item requiring corrective action, and this was already underway. The March 1990 NRC inspection noted that the 1989 audit was mostly limited to verification of ERF equipment inventory and operability (see Paragraph 6 of Report Nos. 50-335, 50-389/90-06); review of the 1990 audit checklist disclosed a much more comprehensive and satisfactory scope.

The licensee's methodology for follow-up action on findings from emergency preparedness audits, drills, exercises, and inspections was reviewed. A plant-wide Corrective Action Request (CAR) system was used and appeared to be effective in assigning responsibilities and priorities and in meeting established deadlines for completion of appropriate corrective actions.

The inspector examined documentation of the internal review of the REP and EIPs conducted by the Emergency Preparedness Coordinator in accordance with Section 7.3.1 of the REP. This review precipitated numerous Procedure Change Requests for the EIPs.

No violations or deviations were identified.

7. NRC Information Notices (92701)

The inspector determined that the following recent NRC Information Notices (INs) were received by the licensee, reviewed for applicability, and distributed to cognizant personnel, and that corrective actions, as appropriate, were completed or scheduled.

- ° IN 90-08: Kr-85 Hazards from Decayed Fuel

- IN 90-34: Response to False Siren Activations

## 8. Licensee Action on Previous Inspector Follow-up Items (IFIs)

- a. (Closed) IFI 50-335, 50-389/89-31-01: Failure to follow procedural guidance for follow-up message preparation and transmission.

Additional guidance was provided in EPIP-3100021E via Revision 24, specifically cautioning in the Emergency Coordinator's (EC's) checklists that "Appropriate notification forms shall be completed for all updates." This clarification appeared sufficient to preclude further nonadherence to the referenced procedural guidance.

- b. (Closed) IFI 50-335, 50-389/89-31-02: Failure to disseminate information to governmental agencies about low-level radiological releases associated with a plant casualty.

The Training Department satisfactorily addressed this matter through issuance of a memo to designated ECs. The memo included an NRC letter which defined "radioactive release" in connection with an event at another facility.

- c. (Closed) IFI 50-335, 50-389/89-31-03: Development of alternate personnel access routes to the TSC to ensure timely activation.

This issue was addressed through Revision 24 of EPIP-3100021E, in which the EC's checklists were modified by the following cautionary note: "If a release is in progress, review personnel access with the RTL." This would allow personnel arriving at the plant for TSC augmentation to be directed by the most radiologically acceptable route from the most appropriate entrance point.

- d. (Closed) IFI 50-335, 50-389/89-31-04: Failure to provide respiratory-qualified emergency response team personnel for recovery and reentry teams.

The licensee had addressed this issued by initiating a program to provide respiratory-qualification training to as many maintenance personnel as possible. A computer printout was available which listed names of personnel with current respirator qualification; this listing could be used during an emergency to aid in the selection of appropriate personnel for recovery and reentry teams.

## 9. Exit Interview

The inspection scope and results were summarized on January 10, 1991, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results. A corporate management representative provided a commitment to review the EOF activation process in an effort to effect as short an activation time as reasonably achievable under the current concept of operation. Increasing



the frequency of TSC staff augmentation drills was presented as a possible area for improvement in the emergency preparedness program. These two matters are discussed at length in Paragraph 4. The licensee was informed that four previous IFIs were reviewed and closed, as discussed in Paragraph 8. Although proprietary information was reviewed during this inspection, none is contained in this report. Dissenting comments were not received from the licensee.

