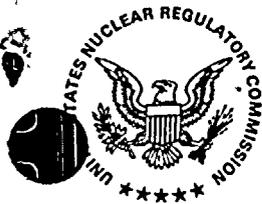


UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199



Report Nos.: 50-400/95-16

Licensee: Carolina Power and Light Company
P.O. Box 1551
Raleigh, NC 27602

Docket No.: 50-400

License No.: NPF-63

Facility Name: Harris Nuclear Plant

Inspection Conducted: October 16-20, 1995

Inspector: *J. L. Kreh*
J. L. Kreh, Radiation Specialist

11-16-95
Date Signed

Approved by: *T. R. Decker*
for T. R. Decker, Acting Chief
Plant Support Branch
Division of Reactor Safety

11-17-95
Date Signed

SUMMARY

Scope:

This routine, announced inspection was conducted to assess the operational readiness of the site emergency preparedness program through selective review (with an emphasis on changes since the last such inspection) of the following programmatic areas: (1) Radiological Emergency Plan and associated implementing procedures; (2) emergency facilities, equipment, instrumentation, and supplies; (3) organization and management control systems; (4) training; (5) independent and internal audits and reviews; and (6) effectiveness of controls in identifying, resolving, and preventing problems.

Results:

In the areas inspected, no violations or deviations were identified. In general, the emergency preparedness program was found to be very well managed and implemented. Recent major renovations of the Technical Support Center, Emergency Operations Facility, and Operational Support Center had significantly improved those facilities (Paragraph 3). Other program strengths included well-maintained emergency response facilities and equipment (Paragraph 3) and a strong training program as evidenced by excellent performance of Control Room personnel during an interview/walk-through. (Paragraph 5). In addition, detailed and aggressive independent audits of the emergency preparedness program demonstrated the licensee's ability to identify and correct program deficiencies (Paragraph 6).

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

M. Blocker, Analyst - Training
*J. Collins, Manager - Training
*J. Donahue, General Manager - Harris Nuclear Plant
*R. German, Manager - Plant Support Services
*M. Hill, Manager - Nuclear Assessment Section
*R. Indelicato, Project Analyst - Emergency Preparedness
*H. Kellogg, Jr., Analyst - Emergency Preparedness
*B. McFeaters, Supervisor - Emergency Preparedness
*A. Moss, Analyst - Emergency Preparedness
K. Pace, Shift Supervisor - Nuclear
*M. Pate, Supervisor - Technical Training
J. Pierce, Manager - Licensed Operator Qualification Training
*R. Prunty, Supervisor - Licensing
R. Rhodes, Shift Technical Advisor - Nuclear
*W. Robinson, Vice President - Harris Nuclear Plant
*W. Seyler, Manager - Special Projects
*T. Walt, Manager - Regulatory Affairs
*B. White, Manager - Environmental and Radiation Control

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

Nuclear Regulatory Commission

*S. Elrod, Senior Resident Inspector

*Attended exit interview on October 20, 1995

Abbreviations used in the remainder of this report are defined in the last paragraph.

2. Emergency Plan and Implementing Procedures (82701)

The Emergency Plan (hereinafter also called "Plan") and PEPs were selectively reviewed with a focus upon the adequacy and acceptability of significant changes which were made in the licensee's emergency preparedness program since January 1993, when the last such inspection of this area was performed. The inspection also evaluated whether the licensee's actions in response to actual emergencies were in accordance with the Plan and PEPs. The inspector reviewed this area of the licensee's emergency preparedness program relative to the following requirements: (a) 10 CFR 50.54(q), which stipulates that changes to an emergency plan may be made without prior NRC approval if regulatory planning standards continue to be met and if the changes do not decrease the effectiveness of the plan; (b) Section IV.B of Appendix E to 10 CFR Part 50, which specifies that the licensee's EALs shall be reviewed and agreed on with State and local governmental authorities prior to

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implementation and on an annual basis; (c) Section V of Appendix E to 10 CFR Part 50, which states that changes to the emergency plan or implementing procedures shall be submitted to NRC within 30 days of such changes; (d) Section 4.0 of the licensee's Emergency Plan, which delineated emergency classification criteria and required actions in response to an emergency declaration; and (e) Section 5.1 of the Plan, which described the processes for developing, approving, and distributing changes to the Plan and the PEPs.

The inspector reviewed the licensee's system for making changes to the Plan and the PEPs. Through selective review of applicable documents, the inspector confirmed that licensee management approved revisions to the Plan and PEPs as required. Selected copies of the Plan and PEPs which were available for use at the Control Room, TSC, OSC, and EOF were checked and found to be current revisions.

The inspector reviewed all licensee records regarding the transmittal of PEP revisions to the NRC between January 1, 1994 and the date of the inspection. The records verified that each of the revisions made to the PEPs during that period had been transmitted to the NRC within 30 days of the changes, as required.

Since the previously referenced January 1993 inspection, the NRC has formally reviewed and approved six revisions (Revisions 19 through 24) of the Plan. The version of the Plan in effect at the time of the current inspection was Revision 25, effective September 20, 1995. This revision had been submitted to (but not yet reviewed by) the NRC. The inspector's preliminary discussion with the Supervisor - Emergency Preparedness, of Revision 25 disclosed no changes that decreased the effectiveness of the Plan. The results of the NRC's formal licensing review of Revision 25 will be communicated to the licensee upon completion.

The inspector verified that current contracts or letters of agreement existed between the licensee and the 12 offsite support organizations listed in Annex A to the Plan. Also verified through documental examination was the licensee's conduct of the required annual review of EALs with State and local governmental authorities for 1994. This review was accomplished by means of a formal presentation in December 1994 to 14 officials of the cognizant State and local agencies. No dissenting observations or comments were received from those agencies, according to the licensee.

Between the January 1993 inspection and the ending date of the current inspection, three emergency declarations were made by the licensee, all at the NOUE level. These emergency declarations were as follows:

- ▶ February 11, 1993, because of the functional loss of the ERFIS plant computer for more than four hours.
- ▶ February 17, 1994, because of the functional loss of the ERFIS plant computer for more than four hours.



- ▶ July 22, 1994, because of the functional loss of both emergency diesel generators.

The inspector's examination of licensee documentation of the events discussed above concluded that each was correctly classified based on the EALs, and that notifications to cognizant offsite authorities were made in accordance with requirements regarding timeliness and content.

The inspector's assessment of this program area concluded that changes to the Plan and PEPs since January 1993 were appropriate and acceptable (excluding changes made in Revision 25, which has not yet been formally reviewed by the NRC), and that the licensee's actions in response to actual emergencies were fully in accordance with the Plan and PEPs. No violations or deviations were identified.

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

This area was inspected to determine whether the licensee's ERFs and associated 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 reviewed this area of the program relative to the following Plan requirements: (a) Section 3.0, which described the licensee's ERFs and emergency communications systems; and (b) Section 5.4.1, which outlined the testing and maintenance program for emergency facilities and equipment.

The inspector toured the Control Room, TSC, OSC, and EOF. Selective examination of emergency equipment, instrumentation, and supplies therein indicated that a satisfactory state of operational readiness was being maintained for these ERFs. Selected emergency communications equipment was checked and found to be functional. Radiological emergency kits were examined and found to be properly maintained, with survey instruments, air-sampling equipment, and self-reading pocket dosimeters available as specified and in conformance with calibration requirements.

The licensee had recently completed major renovations of the TSC, EOF, and OSC. The TSC modifications, completed in August 1995, included a new ergonomic facility layout, new telephone system, and three 100-inch, front-projection video monitors arrayed across one wall of the Command Room. Any of the ERFIS data screens could be displayed on the video monitors, which were readily visible from all seating positions in the Command Room. The modifications to the EOF, completed in September 1995, were similar in nature to those in the TSC, and notably included the relocation of offsite communicators from the Command Room to an adjacent room having glass walls and door to retain a visual nexus. The OSC, relocated in March 1995 within the Waste Processing Building, was now a semidedicated facility with a well-outfitted Command Room. These changes appeared to represent a significant upgrading of the licensee's ERFs, and the inspector commended the licensee's efforts in this regard.

The inspector selectively reviewed completed documentation of facility/equipment surveillances for the period January 1, 1994 through September 30, 1995 performed in accordance with procedure AP-200,

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"Emergency Equipment Inventory". Records indicated that these surveillances were performed at the required frequencies, and the completed procedural documentation indicated that identified problems were corrected expeditiously.

The inspector reviewed the summary data (as transmitted to the FEMA) for 1994 testing of the warning siren system for the Harris Nuclear Plant. For the 79 sirens, the aggregate success rate of the biweekly silent tests, quarterly growl tests, and annual full-cycle test was 98.87%. The success rate of the full-cycle test alone was 96.2%. These rates suggested a strong surveillance/maintenance program by the licensee.

Based upon ERF walkdowns, review of changes to the PEPs, inspection of completed surveillance procedures, and statements by licensee representatives, the inspector concluded that no degradation of capabilities with respect to the ERFs and their associated equipment had occurred since the NRC inspection of this program area in January 1993.

No violations or deviations were identified.

4. Organization and Management Control (82701)

This area was inspected to determine the effects of any changes in the licensee's emergency organization and/or management control systems on the emergency preparedness program, and to verify that any such changes were properly factored into the Plan and PEPs. The inspector reviewed this area of the licensee's emergency preparedness program relative to the following Plan requirements: (a) Section 2.0, which defined the positions, minimum staffing, and functions of the ERO; and (b) Section 5.1.1, which delineated the authority and responsibility for the emergency planning function.

The organization and management of the emergency preparedness program were reviewed and discussed with licensee representatives. Several personnel changes since the January 1993 inspection affected the emergency planning function, although organizationally the Supervisor - Emergency Preparedness was still reporting to the Manager - Regulatory Affairs, who reported to the Vice President - Harris Nuclear Plant. Based upon discussions with the personnel holding the subject positions, and as evidenced by the obvious management support for the emergency preparedness program associated with the ERF upgrade (Paragraph 3), the inspector concluded that management personnel changes did not decrease the licensee's effectiveness in this area.

A notable change in the ERO since the last inspection was the shift of two positions from the TSC. The Emergency Repair Director was relocated to the OSC and the Plant Operations Director to the Control Room. This reduced the number of persons in the TSC and moved the subject positions in such a way as to increase their effectiveness. The Supervisor - Emergency Preparedness indicated that drills and exercises had confirmed an improvement in ERF operations as a result of this ERO change.

The inspector reviewed the licensee's management strategy for ensuring compliance with the Plan requirements addressing the planning standard of 10 CFR 50.47(b)(2), which specifies that "timely augmentation of response capabilities is available." The applicable Emergency Plan requirements were contained in Table 2.2-1 and Figures 2.2-1 and 2.4-1, which delineated the ERO positions required to be filled within either 45 or 75 minutes. On June 9, 1995, the licensee conducted an unannounced, off-hour augmentation drill involving notification of personnel to determine whether required ERO positions at the TSC, OSC, and EOF could be filled within the specified time regimes. The documented results of this drill indicated that the ERO could be augmented in a timely manner and in accordance with the referenced Plan commitments. All "key" positions (specified in the referenced Figures) at the TSC, OSC, and EOF were staffed within 60 minutes. The licensee also conducted monthly pager drills to ensure the continuing capability for timely staffing of the ERO.

No violations or deviations were identified.

5. Training (82701)

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 this area of the licensee's emergency preparedness program relative to the following Plan requirements: (a) Section 5.2, which described the emergency response training program; and (b) Section 5.3, which delineated the licensee's agenda of required exercises and drills.

Training Program Procedure TPP-203, "Emergency Preparedness Training Program", delineated the methodology for implementing the Emergency Plan training requirements. The inspector reviewed selected lesson plans (organized by subject) for the initial emergency response training of nonlicensed ERO personnel. The content of the training material appeared appropriate relative to the need to address the duties and responsibilities of ERO personnel. Annual retraining of ERO personnel comprised a required reading package (generic training) and participation in at least one drill, exercise, or actual emergency response by each person assigned to a "key position" in the ERO (position-specific training). The inspector's review of drill/exercise records for 1994 and 1995 determined that all key personnel had met the requirement for one "participatory" experience; in fact, most such individuals had participated in multiple drills/exercises during each of the referenced years.

In an effort to gauge the effectiveness of the emergency response training program, the inspector conducted a "team" interview with an SSN (the position designated as interim SEC) and an STA. The purpose of this interview process was to ascertain the team's understanding of emergency classification, offsite notifications and PARs, site evacuation, emergency worker dose limits, and nondelegable responsibilities of the SEC. The inspector delineated the guidelines for the interview at the beginning, including the "open book" nature of the evaluation. The Supervisor - Emergency Preparedness was present as an observer during the interview to

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allow for confirmation and firsthand understanding of observations. The interview, which lasted 75 minutes, began with technical questions relating to the duties, responsibilities, and functions of the SEC during an emergency situation, and then presented three plant-specific accident scenarios that required event classification and PAR formulation, as appropriate. The emergency classifications of the three scenarios were General Emergency, Alert, and Site Area Emergency, respectively. The SSN was judged to have demonstrated comprehensive understanding of his duties and responsibilities as SEC in the event of an emergency. All emergency classifications and PARs were timely and correct. No problems were identified during this interview. The methodology for training licensed personnel for emergency response appeared to be very effective, and this area of the emergency preparedness program was judged to be a strength.

No violations or deviations were identified.

6. Independent Reviews/Audits (82701)

This area was inspected to determine whether the licensee had performed an annual independent audit of the emergency preparedness program. The inspector reviewed the licensee's fulfillment (in the years 1994 and 1995) of the requirement in Section 5.1.6 of the Plan for an independent audit of the emergency preparedness program every year by the licensee's NAS.

The NAS conducted extensive, two-week audits using six auditors in 1994 and eight in 1995. The 1995 audit, conducted in May-June and documented in NAS Report No. H-EP-95-01, dated June 22, 1995, identified one strength (interfaces with offsite support organizations), four "issues" (equivalent to NRC violations), and one item for management consideration. The 1994 audit, documented in Report No. H-EP-94-01, dated September 21, 1994, identified two issues and three weaknesses. These audits were judged to be thorough, detailed, and aggressively independent, and fully met the referenced Plan requirements. Furthermore, the audits represented a clear demonstration of the licensee's ability to self-identify and correct emergency preparedness program deficiencies.

No violations or deviations were identified.

7. Effectiveness of Licensee Controls (82701)

This area was inspected to assess the adequacy of the licensee's controls in identifying problems and in implementing appropriate corrective actions. The inspector reviewed this area of the licensee's emergency preparedness program relative to the following requirements:

(a) Section IV.F.5 of Appendix E to 10 CFR Part 50, which specifies that weaknesses or deficiencies that are identified through training critiques shall be corrected; and (b) Section 5.1.1 of the Plan, which required the identification and implementation of needed corrective actions following exercises, drills, appraisals, and audits.

In response to one of the issues identified by the 1994 NAS audit (see Paragraph 6), the licensee instituted use of the plant-wide CAP, supplanting a personal computer-based tracking system previously used for

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the management of less significant follow-up items. The inspector reviewed the open CAP items in the area of emergency preparedness, and reviewed the details of the CAP process from item origination to closure. The CAP appeared to be effective as a management tool for ensuring the completion of corrective action for identified problems in emergency preparedness.

No violations or deviations were identified.

8. Exit Interview

The inspection scope and results were summarized on October 20, 1995 with those persons indicated in Paragraph 1. The inspector described the areas assessed and discussed the inspection results in detail. Positive observations as stated in the "Results" section of this report were communicated to licensee management. No violations or deviations were identified, and no new items will be tracked by the NRC. The inspector also noted that no previous open items were being tracked by the NRC in the area of emergency preparedness. Dissenting comments were not received from the licensee. Although proprietary information was reviewed during this inspection, none is contained in this report.

9. Index of Abbreviations Used in This Report

CAP	Corrective Action Program
CFR	Code of Federal Regulations
EAL	Emergency Action Level
EOF	Emergency Operations Facility
ERF	Emergency Response Facility
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
NAS	Nuclear Assessment Section
NOUE	Notification of Unusual Event
NRC	Nuclear Regulatory Commission
OSC	Operational Support Center
PAR	Protective Action Recommendation
PEP	Plant Emergency Procedure
SEC	Site Emergency Coordinator
SSN	Shift Supervisor - Nuclear
STA	Shift Technical Advisor
TSC	Technical Support Center

