



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

OCT 07 1987

Report No.: 50-400/87-35

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

Docket No.: 50-400

License No.: NPF-53

Facility Name: Shearon Harris

Inspection Conducted: September 14-18, 1987

Inspector: D.M. Collins
for A. E. Tabaka

10-7-87
Date Signed

Approved by: D.M. Collins
for T. R. Decker, Section Chief
Division of Radiation Safety and Safeguards

10-7-87
Date Signed

SUMMARY

Scope: This routine, unannounced inspection was to evaluate selected areas of the emergency preparedness program.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *C. Gibson, Director, Plant Programs and Procedures
- D. Tibbetts, Director, Regulatory Compliance
- *J. Sipp, Manager, Environmental and Radiation Control
- *J. Collins, Manager, Operations
- *D. Braund, Supervisor, Security
- *C. Rose, Jr., Supervisor, Quality Assurance
- *A. Stanley, Project Specialist, Training
- *J. Drake, Emergency Planning Training coordinator
- *A. Garrou, Senior Specialist, Emergency Preparedness
- *A. Poland, Project Specialist, Radiation Control
- *D. Dasburg, Site Engineering
- *J. Floyd, Radiation Control Foreman
- *C. McKenzie, Principal Quality Assurance Engineer
- *M. Wallace, Specialist, Regulatory Compliance
- *D. Markle, Specialist, Fire Protection
- R. Indelicato, Corporate Emergency Preparedness
- J. Blocker, Emergency Preparedness Technician
- T. Waite, Lead Quality Assurance Auditor
- A. Klemp, Quality Assurance Specialist
- M. Stokes, Senior Specialist, Fire Protection
- R. Bassett, Control Operator
- C. Briney, Shift Foreman
- E. Brooks, Shift Foreman
- G. Nathan, Project Specialist, Environmental Chemistry

Other licensee employees contacted included construction craftsmen, engineers, technicians, operators, mechanics, security office members and office personnel.

Other Organization

R. Sharon, Project Specialist, Liquid and Gaseous Effluents, Harris Energy and Environmental Center

Nuclear Regulatory Commission

- *G. Maxwell, Senior Resident Inspector
- S. Burris, Resident Inspector
- *T. Collins, Health Physics Specialist

*Attended exit interview

2. Exit Interview (30703)

The inspection scope and findings were summarized on September 18, 1987, with those persons indicated in Paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee.

3. Licensee Action on Previous Enforcement Matters (92702)

(Closed) Unresolved Item 50-400/87-30-01: Evaluation of licensee action on an NRC commitment concerning a periodic check of Technical Support Center door seals for ensuring adequate maintenance of positive pressure. Since the August 1987 inspection, the licensee had taken appropriate action to resolve this item. A new procedure, Administrative Test Procedure-110, "Technical Support Center Performance Test," was implemented. This procedure called for an operational check of the TSC pressure and habitability systems at least every eighteen months. The licensee had conducted one such test of the system on September 9, 1987, and an acceptable 0.125 inches of water positive pressure was achieved. The inspector also answered further questions concerning this area.

4. Emergency Detection and Classification (82201)

Pursuant to 10 CFR 50.47(b)(4); 10 CFR Part 50, Appendix E, Sections IV.B and IV.C, Section 4.1 of the licensee's Emergency Plan, this program area was inspected to determine whether the licensee used and understood a standard classification and action level scheme.

The inspector reviewed the licensee's classification procedure, PEP-101, "Emergency Classification and Initial Emergency Actions." The event classes in both the Plan and procedures were consistent with the four standard classes required by regulation. The classification procedures did not appear to contain errors which could lead to incorrect or untimely classification.

The licensee's classification system is primarily based on the fission product barrier concept; however, it did contain the anticipatory initiating conditions of NUREG-0654, Appendix 1. Selected emergency action levels (EALs) specified in the Plan and Procedures were reviewed. These EALs examined appeared consistent with those specified in NUREG-0654, and many were based on specific plant parameters obtainable in the Control Room. One item should be noted. The licensee recently implemented an Emergency Plan Advance Change 11(1), dated September 4, 1987, which does affect the EAL scheme. In this revision, two EALs were modified as follows: (1) declaration of an NOUE will be made after the failure of ERFIS for 1 hour, rather than after 15 minutes as previously indicated; (2) declaration of an NOUE will be made after the loss of all representative meteorological data whereas previously it would have been declared upon loss of the onsite meteorological tower only. These changes have not yet been submitted to the Commission for approval, and the



overall effect of the new EALs on the Emergency Plan will be determined subsequent to that time.

The following notification procedures were reviewed:

PEP-102, Site Emergency Coordinator - Control Room

PEP-301, Notification of Non-CP&L Emergency Response Organizations

These procedures, as well as Section 4.2 of the Plan, included criteria for mitigation of offsite notifications. They required that offsite notifications be made to the State and local governments within 15 minutes and to the NRC no later than 1 hour after declaration.

The inspector discussed with licensee representatives the coordination of EALs with State and local officials. Although official documentation was not available, an internal licensee weekly report indicated that such a review had taken place during the week of October 17-23, 1986. The licensee indicated that no dissenting comments were received. In addition, in the September 15, 1986, revision to the State of North Carolina Emergency Response Plan, the Shearon Harris EAL scheme was added to Attachment 4.

Interviews were held with two shift supervisors to verify that they understood the relationship between core status and core damage indicators as containment hydrogen monitor, fuel temperature indicators, and post accident primary coolant analysis. The interviewees appeared knowledgeable of the various indicators.

The inspector reviewed selected Emergency Operating and Abnormal Operating Procedures. The procedures provided direction to users concerning implementation of the Emergency Plan and the potential for exceeding an EAL.

The responsibility and authority for classification of emergency events and initiation of emergency actions were clearly described in the Emergency Plan and Implementing Procedures. Interviews with selected interim Site Emergency Coordinators revealed that they understood their responsibilities and authorities in relation to accident classification, notifications, and protective action decision-making. During these interviews, the individuals were also given hypothetical situations and asked to classify them. No problems were noted.

No violations or deviations were identified.

5. Protective Action Decision-making (82202)

Pursuant to 10 CFR 50.47(b)(9) and (10) and 10 CFR Part 50, Appendix E, Section IV.D.3, this area was inspected to determine whether the licensee

had a 24-hour capability to assess and analyze emergency conditions and make recommendations to protect the public and onsite workers.

The inspector discussed responsibility and authority for protective action decision-making with licensee representatives and reviewed pertinent portions of the licensee's Emergency Plan and procedures. The Plan and procedures clearly assigned responsibility and authority for accident assessment and protective action decision-making. Interviews with members of the licensee's emergency organization revealed that these personnel understood their authorities and responsibilities with respect to protective action decision-making.

The inspector reviewed the Emergency Plan and the following Implementing Procedures:

- PEP-102, Site Emergency Coordinator - Control Room
- PEP-104, Protective Action Recommendations
- PEP-381, Evacuation

The inspector determined that the licensee had made provisions for protecting onsite and offsite individuals in the event of an emergency. The licensee had the criteria and methodology in place for making offsite protective action recommendations based on both fission product barrier status and projected dose rate information consistent with that required by regulation. Criteria for protective action for onsite workers/evacuation had also been developed; however, the basis was solely radiological. Clarification and guidance for this issue will be forthcoming from the NRC. Other aspects of onsite protective measures appeared adequate with one exception, PEP-102 and PEP-381 differed with respect to the action level for which evacuation of non-essential site personnel will be required. PEP-102 indicated an action level based on a projected dose of 100 mrem whole body while PEP-381 indicated 500 mrem whole body. The licensee indicated that the discrepancy would be resolved.

IFI 50-400/87-35-01: Resolve discrepancy in protective action criteria for onsite, non-essential personnel evacuation in PEP-102 and PEP-381.

Walk-through evaluations involving protective action decision-making were conducted with two shift foremen, both of whom appeared to be cognizant of appropriate offsite protective measures. Personnel interviewed were aware of the need for timeliness in making initial protective action recommendations to offsite officials.

Licensee procedures made provisions for contacting responsible offsite authorities on a 24-hour basis. As discussed in NRC Report No. 50-400/87-30, backup communication links with offsite authorities were available.

No violations or deviations were identified.

s6. Knowledge and Performance of Duties (82206)

Pursuant to 10 CFR 50.47(b)(15) and 10 CFR Part 50, Appendix E, Section IV.F, this area was inspected to determine whether emergency response personnel understood their emergency response roles and could perform their assigned functions.

The inspector reviewed the description of the training program in Section 5.2 of the Plan, PEP-403, and Harris Training Unit Instruction 302, and evaluated selected lesson plans. Based on these reviews, the inspector determined that the licensee had established a formal emergency training program. Generally, the program consisted of initial classroom training, self-study retraining, and participation in drills. Demonstration of proficiency was required.

Training records for selected members of the emergency organization were reviewed. These records indicated that personnel designated as primary, interim, and alternate emergency organization members were provided with appropriate training. However, one item should be noted. During the audit of the First Aid Team training, several individuals were identified as lacking the required Red Cross Multi-media training. After licensee review only one individual's training was confirmed to be deficient (the others were either First Responder trained or practicing EMTs). According to licensee representatives, this individual has been enrolled in the Red Cross Course. To prevent recurrence, the licensee provided the following commitments at the exit meeting: (1) the Harris Training Unit will supply the Emergency Planning Specialist with a quarterly training report, with individuals deficient in training being removed from the organization chart; and (2) PEP-403 will be revised to require the completion of Red Cross Multi-media Training prior to taking the SHNPP emergency response training.

Inspector Followup Item 50-400/87-35-02: Ensure that First Aid Team members receive all required training.

According to the licensee's documentation other aspects of the training program were being provided. Records indicated that emergency drills were conducted in accordance with PEP-406, "Performance of Exercises and Drills." These included medical, health physics, radiological monitoring, and post accident sampling drills.

The inspector also reviewed documentation related to the training of offsite support agencies. These records showed that the groups indicated in Section 5.2.3 of the Emergency Plan were invited to participate in annual training. Actual participation by the groups appeared satisfactory. Meeting agendas and course outlines indicated that the necessary training topics were included.

The inspector conducted walk-through evaluations with selected key members of the emergency organization, specifically, two shift foremen. During these walk-throughs, individuals were given hypothetical sets of emergency

conditions and asked to respond as they would during an actual emergency as well as questioned concerning their overall role and responsibilities. The individuals demonstrated familiarity with their emergency response roles, emergency detection and classification, protective action decision-making and notifications.

No violations or deviations were identified.

7. Licensee Audits (82210)

Pursuant to 10 CFR 50.47(b)(14) and (16) and 10 CFR Part 50, this area was inspected to determine whether the licensee had performed an independent audit of the emergency preparedness program.

Records of the Quality Assurance audits were reviewed. These records indicated that only one audit of the Emergency Preparedness Program had been performed to date. The audit was performed by the Corporate Quality Assurance Department during November 3-7, 1986, and was documented in Audit Report No. QAA/0022-86-06. The second annual independent audit is scheduled for September 21-25, 1987. Review of the 1986 audit records indicated that the Plan, Implementing Procedures, training and performance of drills, equipment, and overall capabilities were evaluated. In addition, during 1986 and 1987, the QA group was involved in evaluation of various exercises and onsite drills. Audit findings and recommendations were presented to plant and corporate management. Although evaluation of offsite interfaces was not included in the 1986 audit, appropriate offsite authorities were transmitted the audit findings. Evaluation of this interface is scheduled for the September 1987 audit. A review of the audit reports indicated that the licensee complied with retention requirements for such reports.

Section 5.3.1 and 5.3.2 of the Emergency Plan and the Implementing Procedures requires drill evaluations and exercise critiques. Licensee documentation for the drills and exercises held indicated that such activities were performed. Discussion with licensee representatives and record review indicated that weaknesses identified during the drills and exercises were adequately addressed for corrective action.

The licensee's program for followup action on audit, drill, and exercise findings was reviewed. The licensee's Emergency Plan and Implementing Procedures require followup on deficiencies identified during drills and exercises. The licensee had developed the Emergency Preparedness Tracking System for use in following corrective action of identified areas. A review of selected drill and exercise findings indicated that identified items had received proper licensee attention.

No violations or deviations were identified.

8. Followup on Licensee Events (93700)

The inspector reviewed licensee documentation of actual events which had occurred at the facility since August 1987. Two of the Notifications of Unusual Events involved the failure of the Emergency Response Facility Information System and the third was an unidentified reactor coolant leak rate of greater than 1 gpm. In all three areas, it appeared that the events were properly classified, and the required notifications to offsite organizations and emergency organization personnel were made in a timely manner.

During the course of this inspection the licensee also had a 10 CFR 50.72(b)(1)(v) reportable event related to the loss of the Wake County Early Warning Siren System. On September 16, 1987, during the routine bi-weekly silent test, the licensee was informed that the Wake County sirens did not receive proper indications during the test. The test was repeated several times unsuccessfully, and the sirens were declared inoperable. At 1125 the licensee was informed of the failure and appropriate NRC notification was initiated at 1155. Initially, the failure was thought to be a faulty transmitter; however, subsequent investigation indicated that the signal from the Wake County Warning Point was interrupted due to an off-line handset of the back-up transmitter circuit. The system was placed on the primary transmitter, and retested, and the operability of the Wake County sirens was reported to the licensee at 1950. Followup notification to the NRC was made at that time.

9. Inspector Followup (92701)

- a. (Closed) Inspector Followup Item (IFI) 50-400/87-30-04: Replacement of the public information sign for transients at Holleman's Crossing. The inspector observed the placement of the new sign at the boat ramp.
- v. (Closed) IFI 50-400/87-30-05: Lack of documentation supporting the implementation of PEP-321. The inspector reviewed the records for three Notification of Unusual Events which had occurred since August 1987. For these events, it appeared that PEP-321 was implemented as appropriate, and the required emergency organization personnel were notified. The inspector had no further questions.
- c. (Closed) IFI 86-85-05: Dose projections and field monitoring team data differed significantly. This area was observed during the February 1987 Emergency Exercise and should be considered closed effective NRC Report No. 50-400/87-11.