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

Report Nos.: 50-400/85-10

Licensee: Carolina Power and Light Company
411 Fayetteville Street
Raleigh, NC 27602

Docket Nos.: 50-400 License Nos.: CPPR-158

Facility Name: Shearon Harris

Inspection Conducted: February 20 - March 20, 1985

Inspectors: P.K. Hardin for 3/26/85
G. F. Maxwell, Senior Resident Inspector (Operations) Date Signed

P.K. Hardin for 3/26/85
R. L. Prevatte, Senior Resident Inspector (Construction) Date Signed

Approved by: P.K. Hardin for 3/26/85
Paul Fredrickson, Section Chief
Division of Reactor Projects Date Signed

SUMMARY

Scope: This routine, announced inspection entailed 163 inspector-hours on site in the areas of electrical; heating; ventilation and air conditioning; fire protection; nonconformance control; storage; preoperational test program and other activities.

Results: Of seven areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Licensee Employees Contacted

R. A. Watson, Vice-President Harris Nuclear Project
C. C. Wagoner, Project General Manager, Construction
*R. M. Parsons, Project General Manager, Construction Confirmation Completion
J. L. Willis, Plant General Manager, Operations
E. J. Wagner, Manager Engineering
L. I. Loflin, Manager Harris Plant Engineering Support
M. Thompson, Jr., Manager Engineering Management
B. Van Metre, Manager Harris Plant Maintenance
N. J. Chiangi, Manager QA/QC Harris Plant
C. S. Hinnant, Manager Start-up
J. M. Collins, Manager Operations
*A. H. Rager, Manager Construction Inspection
*G. L. Forehand, Director QA/QC
*C. S. Bohanan, Director Regulatory Compliance
*M. D. Vernon, Superintendent QC
*D. A. McGaw, Superintendent QA

Other licensee employees contacted included construction craftsmen, 12 engineers, 14 operators, 7 mechanics, and 15 office personnel.

Other Organizations

*G. F. Cole, Vice-President Daniel Construction Company

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on March 20, 1985, with those persons indicated in paragraph 1 above.

No written material was provided to the licensee by the resident inspectors during this reporting period. The licensee did not identify as proprietary any of the materials provided to or reviewed by the resident inspectors during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Electrical (51053C, 51063C, 92706B)

a. The inspector accompanied construction inspection personnel on an inspection of completed electrical conduit 16215B-SA in the reactor containment building. The inspection covered the following:

(1) Conduit location, routing, size and identification;

(2) Torquing of fasteners;

(3) Bending radius;

(4) Couplings, fittings and grounding;

(5) Interferences;

(6) Supports;

(7) Separation requirements;

(8) Adherence to drawings, specifications and procedures;

(9) Qualification of inspection personnel;

(10) Documentation of inspection results and nonconforming conditions.

b. The inspectors observed the installation activities associated with Class 1E cables with the following numbers: 10942K-SB, 10229G-SB, 10638P-SA, 10638G-SA and 10293B-SA. These observations related to cable pulling and termination and various switchgear and cabinets. The following were evaluated during these observations:

(1) The latest termination cards were in use;

(2) The size and type cable was correct;

(3) The cable identification (cable number and color code) was correct;

(4) The correct bending radius was applied;

(5) The cable routing was correct;

(6) The cables were protected from damage;

(7) Qualified electrical inspection personnel were monitoring the installation activities.

(8) Approved drawings and specifications were being used;

(9) Approved materials were being used;

(10) Cleanness;

(11) Calibration of tools and instruments;

(12) Approved work and inspection procedures were being used;

(13) Documentation of inspections and nonconformances.

No violations or deviations were identified in the areas inspected.

5. Heating, Ventilation and Air Conditioning Systems (HVAC) (50100)

The inspector accompanied construction inspection personnel during an inspection of HVAC ductwork, package number HV-1-G-496-002. This inspection covered duct pieces numbered 3941, 3942, 3943 and 3944 at elevation 258' in the diesel fuel oil storage and transfer building. The following were evaluated during this inspection:

a. Installation in accordance with approved drawings, procedures and specifications;

b. Proper location, identification and damage, if any;

c. Installation of attachments;

d. Fastening material type, identification and torquing;

e. Qualification of inspection personnel;

f. Documentation of inspection results and nonconformances.

No violations or deviations were noted in the areas inspected.

6. Fire Prevention/Protection (42051C, 92706B)

a. The inspectors observed the fire prevention and protection activities related to containing combustible materials where the ignition of these materials could damage safety-related structures. The inspectors also observed the ongoing site training activities for the construction fire brigade.

b. Some of the specific areas observed by the inspectors during this period are as follows:

(1) Nonflammable protective coverings were observed over such equipment as the electrical control cabinets at elevation 286' of the reactor auxiliary building and over various safety-related pumps and components located throughout the plant.

(2) The inspectors observed during the various tours of the reactor auxiliary building and the containment building that the accumulation of combustible materials in these areas was being minimized.

(3) Flammable materials were stored to prevent or reduce the likelihood of combustion.

(4) Welding activities were observed in at least 15 separate locations throughout the site and in each instance it was observed that appropriate fire extinguishing equipment was available within close proximity of the welding activities. It was also noted that the portable fire extinguishers contained sufficient fire extinguishing medium, as evidenced by displaying current inspection stickers and unbroken seals.

(5) The inspectors observed that at the various elevations throughout the reactor auxiliary building and the containment building, fire suppression devices are strategically located and readily available for use.

During the above observations the following were referenced for requirements: FSAR sections 1.8 and 9.5; Regulatory Guide 1.39 and NFPA Standards.

No violations or deviations were noted in the areas inspected.

7. Nonconformance Control (92706B)

The inspector reviewed closed nonconformances 84-1967, 84-1709, 84-1739, 84-1767, 84-1847, 84-2511, 84-2514, 84-2534, 85-0185 and 84-2532. This sample of ten closed nonconformances was reviewed to determine the following:

a. Adequacy of identification of nonconformances;

b. Proper review and evaluations;

c. Correction disposition and details;

d. Verification, acceptance and review of disposition;

e. Performance of reinspections;

f. Adequacy of corrective action and preventive measures, if required;

g. Proper final review and closeout.

No violations or deviations were noted in the areas inspected.

8. Storage (50073C and 92706B)

The inspectors toured warehouses 1, 2, 3 and 5, and various plant equipment storage areas. During the tours, the storage conditions of the equipment were evaluated to determine whether requirements are being met as follows:

a. Piping and equipment, in general, were stored off the ground or floor to prevent entry of dirt into them, or contamination from environmental conditions.

b. The storage areas were identified sufficiently to provide identification and locations as required.

c. Access was adequate for placement or removal of parts and equipment.

d. Warehouse equipment was stored in the correct position.

e. The temperature and humidity controls were being maintained as required.

f. Access to plant storage areas was being maintained.

g. Equipment installed heaters were energized as required.

h. Protective covers were in place.

During the observations, the following were referenced for requirements: PSAR Section 1.8, and construction procedures AP-XIII-07 and PGD-002.

No violations or deviations were identified in the areas inspected.

9. Preoperational Test Program (71302)

a. The inspector conducted tours of the various plant areas. The following items were observed and assessed during the tours to assure compliance with requirements.

(1) The general condition of the plant's housekeeping and the overall condition of equipment was observed.

(2) The plant was found to be free of any major fire hazards. Flammable materials were being protected from ignition sources and were being controlled in accordance with site administrative procedures.

(3) In-process test activities were observed for the component cooling water pumps and portions of the system. During the week of March 4, 1985, the inspector observed the running of the pumps to fulfill the requirements of operations test procedures which supported the testing of the residual heat removal system flush.

(4) During the weeks of February 25 and March 4, 1985, the inspector evaluated the in-process flushing activities for portions of the charging and safety injection system piping (CVCS). During the testing activities, drawings CAR-2165-G-805, G-806 and G-808 and procedure 1-2060-F08 were referenced for requirements.

The inspector inquired about the installation inspection status and qualification requirements for the instrumentation tubing and pressure indicators for the CVCS system. The instruments were installed on instrument rack A1-R10 which is located in the reactor auxiliary building at elevation 236'. The inspector was informed by CP&L QA personnel that the Release for Test (RFT) package for the CVCS system had listed the instrumentation installation inspection records as an exception. However, the seismic qualification documents were not available at the job site for six pressure instruments installed in the CVCS system. The pressure instruments had been receipt inspected and accepted along with the other instruments located on rack A1-R10.

On March 8, 1985 the inspector met with the responsible CP&L engineering and QA personnel, concerning the above type pressure instrumentation. The inspector was informed that CP&L had encountered similar instances where the same manufacturer of the CVCS pressure instruments, Dresser Industries, had sent fifty pressure instruments to the Harris plant. The fifty instruments had been ordered by EBASCO, with the requirements for them to be seismically qualified. However, site receipt inspectors found that the supplier, Dresser Industries, had failed to provide proof that the instruments were seismically qualified. A nonconformance report, DDR-683, was written on September 23, 1981, to document the unsatisfactory condition. The nonconformance was evaluated and documented as a reportable condition per the requirements of 10 CFR 50.55(e) and 10 CFR 21.

However, the pressure instruments located in the CVCS, reactor coolant, residual heat removal and other NSSS systems contain Dresser instruments which were supplied by Westinghouse.

Westinghouse-supplied (Dresser) pressure instruments have not been evaluated by CP&L to determine whether they are acceptable to sustain a seismic event. The inspector was informed that as a result of the inquiry, a nonconformance report, NCR 85-0638, has been written to document the concern with Westinghouse-supplied Dresser pressure gauges. This concern will be evaluated during subsequent inspections.

b. The inspector observed operations personnel deenergizing electrical components as required by the clearance program when equipment is being placed out of commission for repairs, test or rework.

c. The inspector observed the status of the plant being correctly identified in the control room by operations personnel. The roving operators were making frequent tours of the various buildings and were maintaining adequate control of plant systems and equipment.

d. The inspector observed in-process maintenance activities on the 6.9kv switchgear breakers. The activities were being accomplished in accordance with procedural requirements of the electrical maintenance procedure for operations, PIC-E004. The maintenance activities which were being conducted on the breakers were as follows: conducting insulation resistance tests; cleaning and lubricating the moving parts; checking contact surfaces and adjusting contacts as required.

e. The inspector observed the in-process adjustment and setting of the over current relays for many of the 6.9kv cubicles. The activities which were evaluated included: selection of the correct over current values from the revised specifications; selecting the correct relays to be changed; making the proper adjustments to the relays; then rechecking the trip devices to assure that they trip at their new setpoint values.

No violations or deviations were identified in the areas inspected.

10. Other Activities (92706B and 71302)

a. The Senior Resident Inspector (Construction) provided technical assistance to C. Barth, Office of the Executive Legal Director, during activities associated with acquiring a deposition for the Harris hearings.

b. During this reporting period two Region II inspectors visited the Harris site. The results of their inspections are documented in separate Region II inspection reports.

c. The Senior Resident Inspector (Construction) attended the weekly status meeting for Request for Turnover (RFT) and continued to track the status for turnover of the Passive Safety Injection System RFT No. 2090.001. This system will be tracked until turnover.

d. On March 8, 1985, CP&L assigned Gary Meyer as general manager Milestone Completion for the Harris site. In this position he will report directly to R. A. Watson, Vice-President Harris Project, and will be responsible for the areas of construction, engineering, start-up, planning and scheduling.

e. On February 28 and March 1, 1985, the Senior Resident Inspector (Operations) attended portions of the CP&L emergency preparedness classes. During the weeks of March 4 and 11, 1985, a Region II inspection team visited the site and evaluated CP&L's emergency preparedness program. The results of the evaluation will be documented in a separate Region II report.

f. During the week of March 4, 1985, three NRR personnel conducted a human factors evaluation of the control room. The results of the evaluation will be addressed in NRR correspondence or in a supplement to the Safety Evaluation Report.

g. During the week of March 11, 1985, the Senior Resident Inspector (Operations) conducted an inspection at the Watts Bar facility to provide assistance to the Watts Bar Senior Resident Inspector (Operations).