UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report Nos.: 50-400/83-04 and 50-401/83-04

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

Docket Nos.: 50-400 and 50-401

License Nos.: CPPR-158 and CPPR-159

Facility Name: Harris 1 and 2

Inspection at Harris site near Raleigh, North Carolina

Inspector: A. K. Hardin for — 2/7/83
G. F. Maxwell — Date Signed

Approved by: A K Hardin for — 2/7/83
P. Bemis, Section Chief — Date Signed
Project Branch No. 1
Division of Project and Resident Programs

SUMMARY

Inspection on December 20, 1982 - January 20, 1983

Areas Inspected

This routine, announced inspection involved 72 inspector-hours on site in the areas of licensee action on previous inspection findings, concrete and cadwelding (Unit 1), storage (Unit 1 & 2), welding (Unit 1), electrical raceway supports (Unit 1), piping systems (Unit 1).

Results

Of the six areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

   Licensee Employees

   *R. M. Parsons, Project General Manager
   *L. I. Loflin, Manager of Engineering
   *A. M. Lucas, Assistant Project General Manager
   *G. L. Forehand, Director of QA/QC
   *M. Thompson, Senior Resident Engineer
   *R. St. Pierre, QA Senior Specialist
   *M. D. Vernon, Superintendent QC
   *M. E. Williams, Jr., QA Senior Specialist

   Other Organizations

   *W. D. Goodman, Project Manager, Daniel Construction Company

   *Attended exit interview

2. Exit Interview

   The inspection scope and findings were summarized on January 20, 1983, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters (55053C)

   (Closed) Unresolved Item (400/82-28-02) "ASTM E-119 Proof Testing of Thermo-Lag." The inspector was provided a copy of the proof tests which were conducted on the Thermo-Lag mixtures being utilized in Unit 1 electrical cable spreading room. The tests and supplemental correspondence between the Architect-Engineer, CP&L and the supplier of the Thermo-Lag were reviewed and evaluated by the inspector. As a result of the evaluation, the inspector has no further questions about the application and testing of the Thermo-Lag mixture being utilized in the cable spreading room. This item is closed.

4. Unresolved Items

   Unresolved items were not identified during this inspection.

5. Concrete and Cadwelding - Unit 1 (92706B, 47053C)

   a. The inspector observed portions of a concrete placement being made in Unit 1 fuel handling building (pour numbered IFHSL286009).

      (1) The condition of the concrete forms was inspected for cleanliness, level and tightness.

(2) Concrete placement activities were inspected as they pertained to delivery time, rate of rise, free fall and testing of the concrete at the point of delivery and consolidation.

(3) Construction inspection personnel were present to assure compliance with the specification and procedural requirements.

(4) Suitable weather protection was provided, as applicable.

(5) Surveillance of the pre-placement activities was conducted by responsible CP&L QA personnel.

b. The inspector observed the cadwelding activities for the reinforcing steel being installed about twenty feet east of the center line of the containment equipment loading hatch. The observations included the following:

(1) The portions of the reinforcing steel to be joined by the cadwelds were cleaned by heating and wire brushing.

(2) The cadweld sleeves were set in place, then the required measurements and dimensional checks were made to assure that the proper fit-up and gaps were maintained.

(3) The cadweld sleeves were heated to assure that they were free of any moisture.

(4) The cadweld hardware was set in place, as required by the work procedure.

(5) The qualification records for those persons conducting the cadwelds were checked and found to be current.

During the above observations, the following were referenced: PSAR section 1.8; design specification CAR-SH-CH-6; construction procedures WP-01, WP-05, WP-15, CQA-6, TP-15, TP-17, TP-02 and QCI 15.2.

No violations or deviations were identified in the areas inspected.

6. Storage - Units 1 and 2 (50053C, 50063C, 50073C)

a. The inspector observed the stored conditions of Units 1 and 2 reactor vessels, their internals and Unit 2 steam generators. The storage conditions were evaluated to determine whether requirements are being met as follows:

(1) The vessels and steam generators were stored in accordance with the procedural requirements.

(2) The protective coatings on the vessels and steam generators were intact.

(3) The supports for the vessels and steam generators were adequate to prevent the entry of excessive dirt or water from accumulating in or around them.

(4) The supports for the vessels and steam generators were adequate to prevent shifting or collapse of the support structures.

b. The inspector toured the outside piping laydown yard number 12. During the tour, the stored conditions of the piping and equipment were evaluated to determine whether requirements are being met as follows:

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

(2) The storage areas were identified sufficiently to provide identity and location as required by those who may be seeking the location of certain pipe spool pieces or equipment.

(3) The drainage, in general, was acceptable in areas where the piping spool pieces and tanks were stored.

(4) Access was adequate for placement or removal of pipe spool pieces and equipment.

c. The inspector observed portions of construction activities which are underway for Unit 1 reactor vessel and its internals. The activities included preparation of the vessel for its initial baseline pre-service inspections that are to be conducted in late January and early February 1983. CP&L has awarded the contract for these inservice inspections, which will include automated ultrasonic examinations of the reactor vessel shell and nozzle welds, to Nuclear Energy Services, Inc.

The inspector observed construction personnel grinding on the nozzles for the lower reactor vessel internals. Upon inquiry, the inspector was informed by Westinghouse personnel that the internals are being checked for fit-up and centering. Site Westinghouse management personnel informed the inspector that all of the construction activities, as they relate to installation and assembly of the reactor vessel internals and parts, will be under the control of the Westinghouse QA Program.

During the observations the following were referred to: PSAR Section 1.8, Construction Procedures WP-106, AP-XIII-05, PGD-002 and AP-XIII-07.

No violations or deviations were identified in the areas inspected.

7. Welding - Unit 1 (50083C)

a. The inspector examined welding activities described below relative to safety-related piping to determine whether applicable specifications and procedures were being met:

(1) Pipe spool weld joint A1-190-1-RH-18-FW38, observed material check.

(2) Pipe spool weld joint A1-190-1-RH-18-FW41, observed material check.

(3) Pipe spool weld joint C1-221-1-S1-2-FW15, observed fit-up.

b. The above observations included examination to determine if:

(1) Welding identification and location were as specified.

(2) Welding procedure specification assignment was in accordance with applicable code requirements.

(3) Welding techniques and sequences were specified and adhered to.

(4) Alignment of parts was as specified.

(5) Welding equipment was in good working order.

(6) Welding personnel were qualified.

(7) Weld history records were available and adequate.

(8) Welding inspection personnel followed the requirements of the visual inspection procedures.

c. The inspector observed the storage and control of the welding electrodes which had been issued to the welding personnel associated with the above welding activities. During this reporting period the inspector observed the contents of 18 portable welding electrode storage containers located at various places throughout the reactor auxiliary and containment building. The electrodes contained within the containers were found to be stored in accordance with procedural requirements.

During the above observations, the following documents were referenced for requirements: ASME Boiler and Pressure Vessel Code Section III and construction Procedures CQC-19, MP-03, MP-05, MP-06, MP-09, MP-10 and FSAR Section 1.8.

No violations or deviations were identified in the areas inspected.

8. Electrical Raceway Supports - Unit 1 (51063C, 92706B, 55063C)

a. The inspector observed the installed condition of expansion anchor bolts which were utilized as part of fastening IE conduit supports, located adjacent to IE conduit pull boxes identified as B1481SB, B1500SB and B1437SA. The observations included the following:

(1) The inspection records for the anchor bolts were evaluated and found to show that the bolts were installed and inspected in accordance with procedural requirements.

(2) The inspector and accompanying CP&L QA personnel took physical measurements of the installed anchor bolts and found them to indicate that the bolts had been installed in accordance with procedural requirements.

(3) The field welds on the above listed IE conduit pull boxes were evaluated and found to be in accordance with procedural requirements except as previously identified by CP&L QC personnel as nonconforming.

b. As a result of the above observations, the inspector noted that the four pieces of steel which had been anchored for the conduit support adjacent to conduit pull box B1437SA had not been fully welded to the support steel. The inspector inquired as to how the welds (tack welds) would be completed without relaxing the torque which had been previously applied to the inspected anchor bolts. CP&L QA personnel also had the same concern which was subsequently documented on a CP&L QA/QC report numbered QAS-RC-83-055. The inspector has no further questions about this matter at this time. However, the applicable construction procedures will be evaluated during future inspections to assure that procedural revisions, as applicable, have been made to resolve QAS-RC-83-055.

During the above observations, the following documents were referenced for requirements: PSAR section 1.8, AWSD 1.1, Construction Procedures WP-33, TP-39 and CP&L Corporate QA Programs.

No violations or deviations were identified in the areas inspected.

9. Piping Systems - Unit 1 (92706B)

a. On January 11, 1983 the inspector observed a worker utilizing a hydrostatic test pump to pressurize a portion of the fire protection piping (line number 8-FP-12-29-1-4). The inspector asked about the procedural requirements for the use of hydrostatic pressure relief devices and control of test gauges as they relate to the fire protection system. The inspector was informed that the current construction procedure for the hydrostatic testing of the fire protection system requires controlled test gauges for "official" tests but there are no specific requirements for the use of pressure relief devices, provided the hydrostatic test pressure gauge is continuously monitored by test personnel.

b. On January 12, 1983, the inspector reviewed the construction procedures for hydrostatically testing the fire protection piping and ASME section III piping. Neither of these two procedures (WP-115 and WP-117) have any specific requirements for installing pressure relief devices during the hydrostatic testing of site piping. The inspector reviewed section 10 of the site Start-up Manual and found it to contain specific requirements for installing pressure relief devices during the hydrostatic testing of ASME section III and fire protection piping.

c. The inspector brought the above inconsistent conditions and concerns to the attention of the site CP&L management. Subsequently, a nonconformance report was written by CP&L QA to address 9.a above (DDR 1291). On January 20, 1983, the CP&L Senior Resident Engineer informed the inspector that the required construction procedures would be revised to require that pressure relief devices be utilized during hydrostatic testing. This condition is identified as an Inspector Follow-up Item, pressure relief devices utilized during hydrostatic tests (400/83-04-01).

No violations or deviations were identified in the areas inspected.