



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

Report Nos. 50-400/79-24, 50-401/79-24, 50-402/79-23 and 50-403/79-23

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

Facility Name: Shearon Harris Nuclear Power Plant

Docket Nos. 50-400, 50-401, 50-402 and 50-403

License Nos. CPPR-158, CPPR-159, CPPR-160 and CPPR-161

Inspection at Shearon Harris site near Raleigh, North Carolina

Inspector: M. F. Hunt for 12/19/79
 R. D. Bradley Date Signed

Approved by: M. F. Hunt for 12/19/79
 J. C. Bryant, Section Chief, RCES Branch Date Signed

SUMMARY

Inspection on November 26-29, 1979

Areas Inspected

This routine, unannounced inspection involved 27 inspector-hours on-site in the areas of construction status; inspector follow-up items; and licensee identified items.

Results

Of the areas inspected, no items of noncompliance or deviations were identified.



DETAILS

1. Persons Contacted

Licensee Employees

- *N. J. Chiangi, Manager, Engineering and Construction QA
- *T. H. Wyllie, Senior Construction Manager
- *R. M. Parsons, Site Manager
- *A. M. Lucas, Senior Resident Engineer
- *G. L. Forehand, Principal Site QA Specialist
- *G. M. Simpson, Principal Site Construction Inspection Specialist

Other licensee employees contacted during this inspection included construction craftsmen, QA technicians, and site civil engineering personnel.

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on November 29, 1979 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Inspector Follow-up Items

(Closed) Inspector Follow-up Item (400/79-23-03): Containment Spray Header Lug Welds. Discussions were held with site management and the licensee's engineering evaluation of attachment weld design was reviewed. During the last inspection, the inspector expressed concern that if the as-welded finish on the attachment welds had remained uncorrected, it might intensify stress beyond allowable design levels resulting in header failure under service conditions. Ebasco was contacted by the licensee and requested to review the analysis of the attachment lugs to determine whether safety of the plant might be impaired if the welds had not been modified to match the revised design. Their analysis showed that the lugs would not fail under simultaneous LOCA conditions (containment spray piping full) and SSE seismic loading, and that operation of the containment spray system would not be impaired. Since no reduction in safety would have resulted from inadvertent installation of the spools with "as-welded" lug attachments, the item is found to be not reportable.



6. Independent Inspection

The inspector conducted an inspection of the Unit 1 containment dome erection area, liner plate fabrication area, containment structures for Units 1 and 2, reactor auxiliary building for Unit 2, and the west auxiliary dam.

Chicago Bridge and Iron continues to work on the prefabrication and erection of the Unit 1 containment dome plate. The prefabrication work is now 64% complete and the dome erection is currently 33% complete. The installation of the sixteenth ring of the containment building liner has been finished. In the Unit 2 containment building, the first section of 3,000 yards of the elevation 216 mat has been placed. Placement of the remaining 4,000 yards is scheduled for December 12, 1979. Seal mat and sloped wall concrete placements are approximately 87% complete for the Unit 3 reactor auxiliary building. Excavation has commenced for the Unit 1 and 2 diesel generator building.

Within the above areas of inspection, no items of noncompliance or deviation were noted.

7. Licensee Identified Items [10 CFR 50.55(e)]

Prior to this inspection, the licensee identified the following items under 10 CFR 50.55(e):

- a. (Open) Item (400/401/79-23-04 and 402/403/79-22-04), Ultrasonic test not performed on vendor supplied spool pieces. Region II was notified on November 22, 1979 that the licensee had determined the omission of NDE testing to be nonreportable in that the subject spool pieces were procured from Southwest Fabrication for use as radwaste drain lines and would operate at essentially atmospheric pressure. This item will remain open pending determination and implementation of adequate corrective measures to preclude acceptance of similar deficient items by the licensee at the site and at the manufacturer.
- b. (Closed) Item (400/79-23-06), Omission of rebar in the Unit 1 containment building exterior wall. The inspector reviewed revision 1 of permanent waiver PW-C-984, held discussions with the site civil engineering staff and the senior resident engineer, examined the repairs made in accordance with the architect-engineer's recommendations, and reviewed letter EB-C-09606 which delineates Ebasco's final investigation results of the effects of the missing bars. It was stated by Ebasco that based on the as-built drawings presented by CP&L, the structural integrity of the exterior wall was satisfied even without the corrections specified in PW-C-984, revision 1. Based on this review, the inspector concurs that this deficiency is not reportable under 10 CFR 50.55(e).
- c. (Open) Item (401/79-23-02), Omission of rebar in a Unit 2 reactor auxiliary building south shear wall. The inspector examined the percussion drilled holes for replacement reinforcing bars and test bars in the south shear wall. Following a review of the Ebasco test

procedure attached to permanent waiver PW-C-983, on November 27, 1979 the inspector examined the test bar installation designed to verify that the shear wall repairs will restore the wall to its original design requirements. Three number 11 grade 60 test bars were installed using alternate II procedure of the permanent waiver. The test bars are from the same heat as the bars which will be used for the repair construction. Grouting of the test bars was made using non-shrink, 5,000 pound M-22 mix. Test bars were installed to a depth of 5 feet whereas the repair bars will be installed to a depth of 10 feet 9 inches. The inspector held discussions with the principal civil engineer and reviewed the concrete placement report for the test bar installation. Three two inch cubes representative of the grout used during the placement were made for compression testing purposes. Region II will be notified prior to the pull test on the test bar installation which is currently scheduled on or about December 26, 1979. Installation of repair bars will follow engineering evaluation of pull test data and Region II concurrence.

- d. (Open) Item (400/401/79-24-01 and 402/403/79-23/01), Defective stud welds on vendor supplied embedment plates. Region II was advised of this potentially reportable item on November 19, 1979. During this inspection, the inspector reviewed the applicable deficiency report DDR 328 and discussed the stud failures with the principal QA specialist. During receiving acceptance testing, bend tests were performed on 252 studded embedment plates supplied by Alfab of Enterprise, Alabama. Of 252 plates inspected, 101 were rejected for 1 to 4 deficient stud welds per plate. The vendor was contacted and has put all plates in his shop on hold pending the results of equipment/stud material evaluation tests. CP&L is also evaluating the weld failures in conjunction with its reportability determination.
- e. (Open) Item (400/79-24-02), Ultrasonic test not performed on three vendor supplied spool pieces. This potential 55(e) item was reported to Region II on November 21, 1979. A similar occurrence is discussed in paragraph 7.a above.

The inspector discussed this matter with the NRC principal inspector for Southwest Fabrication and Welding Company in Region IV who has scheduled an inspection in early December 1979. The deficient spool pieces have been returned to Southwest for completion of ultrasonic acceptance testing as described on deficiency and disposition report DDR 330. The acceptability of previously delivered material is being reverified by the licensee.

- f. (Open) Item (400/79-24-03), Deficient vendor socket welds. On November 16, 1979, Region II was advised of a potentially reportable item concerning undersized socket welds. Three schedule 160 stainless steel spool pieces manufactured by Southwest Fabrication and Welding Company have been returned at their request for undersized fillet welds. The subject spool pieces are 1 inch in diameter and are for

use in the Unit 1 safety injection system. DDR 331 describes the deficient socket welds which have been verified by CP&L prior to being returned for vendor evaluation.

