



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

Report Nos.: 50-324/84-19 and 50-325/84-19

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

Docket Nos.: 50-324 and 50-325

License Nos.: DPR-62 and DPR-71

Facility Name: Brunswick

Inspection Date: July 18 - 20, 1984

Inspection at Brunswick site near Southport, North Carolina

Inspector: J. J. Lenahan

8/7/84
Date Signed

Approved by: Frank Jape
F. Jape, Section Chief
Division of Reactor Safety

8/7/84
Date Signed

SUMMARY

Areas Inspected

This routine unannounced inspection involved 22 inspector-hours on site in the areas of review of surveillance testing of reactor instrumentation isolation valves, review of surveillance testing of snubbers, and followup of a previously identified inspector followup item.

Results

In the areas inspected, no violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *T. E. Cribbs, Regulatory Compliance Specialist
- *C. R. Dietz, Plant Manager
- N. Lankford, Mechanical Engineer
- *J. O'Sullivan, Maintenance Manager
- J. Schott, Mechanical Engineer
- D. Thrift, Mechanical Maintenance Foreman

Other licensee employees contacted included three mechanics.

NRC Resident Inspectors

- *D. O. Myers
- *T. Hicks

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on July 20, 1984, with those persons indicated in paragraph 1 above. The licensee acknowledged the inspection findings.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Surveillance Program for Excess Flow Check Valves (61700)

A review of the surveillance program conducted on excess flow check valves was performed to determine the acceptability of a request to extend the Technical Specifications (TS) surveillance interval by about 10%. The items reviewed are discussed below.

a. Background

Performance of calibration checks on reactor level instrumentation resulted in numerous inadvertant SCRAMS of the reactor from full power. The SCRAMS were caused by the reactor protection system (RPS) instrumentation channels interacting during calibration activities on reactor level instrumentation. Half-scrams were initiated on both trip

channels resulting in a reactor trip. In order to resolve this problem, the licensee prepared plant modification package numbers PCM-268 (for Unit 2) and PCM-269 (for Unit 1). Installation of these modifications provided new reactor vessel instrumentation lines which increased the reliability of the reactor protection system (RPS) by providing a separate instrument line for each half-channel trip system instead of feeding two RPS instruments from one line as was done on the original design. This modification also reduced the inadvertent SCRAMS during calibration activities by eliminating the possibility of calibration activities on one channel affecting the other. The installation of these PCMs was broken down into eight packages, PCM 77-268 A through H and PCM 77-269 A through H. The inspector reviewed PCM package 77-269 D which involved the installation of the new instrumentation lines in Unit 1. The instrumentation lines are seismically designed and have a nominal size of 3/4 inch diameter. Excess flow check valves were installed in these lines to provide for the containment isolation function required by NRC Safety Guide 1.11. The check valves were installed in June of 1981. A hydrostatic test of the system was performed in June 1981, after initial installation. The purpose of the hydrostatic test was to verify that the new instrumentation lines could withstand operating pressures specified by design requirements. Revisions were made to the check valve installation in accordance with Field Revision 87 to PCM 77-269 D in September 1981. The field revision involved modifications to the electrical control wiring which indicated either open or closed valve position.

The inspector examined the procedure and quality records related to surveillance testing of the Unit 1 excess flow check valves. Acceptance criteria utilized by the inspector are specified in Unit 1 TS 3.6.3 and 4.6.3.4.

b. Review of Surveillance Testing Procedure

The inspector reviewed Periodic Test Procedure number PT-02.1.25, Reactor Instrumentation Isolation. This procedure addresses the operability testing of the excess flow check valves at the frequency specified in the TS.

c. Review of Quality Records

The inspector reviewed quality records documenting the results of testing to determine the operability of the excess flow check valves. Review of the records indicated that the isolation function of the valves were initially tested between September 28 and October 2, 1982. The failure to test the isolation function of these valves in accordance with TS prior to declaring the valves operable after they were installed in June 1981, was identified by the licensee to NRC Region II as Licensee Event number 82-103 in September 1982. This LER was previously reviewed and closed out by NRC resident inspectors. As

a result of this problem, the licensee prepared procedure number PT-02.1.25 and performed the initial surveillance test of the valves on Unit 1 and 2 in September and October 1982. However, the hydrostatic testing discussed in paragraph 5.a, above, does not verify the isolation function required by the TS.

During the initial testing, three of the four Unit 1 valves tested met TS operability requirements. One check valve would not fully close during testing. Trouble ticket number TT 1 M-82-8260 was written to repair the valve. After the valve was repaired, it was retested and found to be satisfactory. The inspector also reviewed the results of the initial surveillance tests performed on the four Unit 2 excess flow check valves. The results of testing on these four valves were satisfactory.

Within the areas inspected, no violations or deviations were identified.

6. Snubber Surveillance Programs, Units 1 and 2 (61729)

The inspector examined procedures and quality records related to the snubber surveillance program. Acceptance criteria utilized by the inspector are specified in TS 3/4.7.5.

a. Review of Snubber Surveillance Procedures

The inspector examined the following procedures which control snubber surveillance activities:

- (1) Procedure number PT-19.6.0, Visual Inspection of Snubbers on Safety-Related Systems
- (2) Procedure number PT-19.6.1, Safety-Related Snubber Functional Testing
- (3) Procedure number PT-19.6.3, Inspection of Safety-Related Snubbers Which Have Experienced an Unusual Shock.

b. Review of Quality Records

The inspector reviewed results of visual inspections performed on Unit 1 safety-related snubbers in May 1983 and on Unit 2 safety-related snubbers in February 1983.

Within the areas inspected, no violations or deviations were identified.

7. Previously Identified Inspector Followup Item

(Open) IFI 325/81-22-02, Investigation of Grease Leakage from Containment Building Tendon Voids. This IFI was identified to the licensee during inspection number 81-22 (September 15-18, 1981), after the inspector noted that grease was leaking from grease cans covering the tendon voids on the

north side of the Unit 1 reactor building. The tendons form the post-tensioning system for the 140' long concrete girders which support the reactor building elevation 80', 98.7', and 117.7' floor slabs, and the fuel pool, reactor well, and steam separator and dryer pool. The 90 wire tendons are protected from corrosion by grease that was pumped into the tendon voids. The grease is retained in the tendon voids by caps, called grease cans, which cover the tendon voids. During this inspection, the inspector re-examined the north side of the Unit 1 reactor building and noted that the grease was still leaking from the grease cans. The inspector discussed this item with licensee management personnel during the exit interview. The licensee indicated that they would examine this problem. IFI 325/81-22-02 will remain open pending further review by NRC.