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

Report No.: 50-400/86-08

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

Docket No.: 50-400 License No.: CPPR-158

Facility Name: Harris Unit 1

Inspection Conducted: February 3-7, 1986

Inspector: H. L. Whitener 3/6/86
H. L. Whitener Date Signed

Approved by: Frank Jape 3/6/86
F. Jape, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, announced inspection involved 35 inspector-hours on site in the areas of integrated and local leak rate testing programs and procedures.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. L. Willis, Plant General Manager
*C. S. Hinnant, Manager, Startup
*G. T. Lew, Startup Supervisor
*B. H. Clark, Project Engineer, Startup
*L. W. Holley, Technical Support Engineer
*E. R. Cook, Startup Engineer
*M. G. Wallace, Specialist, Regulatory Compliance

Other Organization

Quadrex Corporation
T. E. Renton, Testing Programs Manager, Leak Rate Specialist

NRC Resident Inspector

*G. F. Maxwell, Senior Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on February 7, 1986, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee.

The inspector informed licensee management that the program and procedures reviewed during this inspection are adequate to meet the regulatory requirements of Appendix J to 10 CFR 50 and ANSI-N45.4. The overall program reflects management involvement, assignment of responsibility, responsiveness to NRC concerns, understanding of technical requirements and conservative resolution of technical problems.

Two minor problems identified for followup inspection were:

a. IFI (50-400/86-08-01): Verify appropriate testing of differential pressure transmitters as extensions of the containment boundary, paragraph 6a.

b. IFI (50-400/86-08-02): Verify resolution for an appropriate local (Type C) test of the outboard isolation valve in penetration M-18, paragraph 6b.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during the inspection.

5. Leak Rate Test Program Review

The inspector reviewed the overall containment leakage rate program to verify that test procedures for meeting the requirements of Appendix J to 10 CFR 50 and ANSI-N45.45 have been developed and approved. In addition to the detailed integrated (Type A) and local (Type B and C) leak rate test procedures, the licensee has developed and approved a number of supporting and prerequisite procedures for controlling activities related to leak rate testing which included:

- Special containment instrumentation calibration, installation, and checkout.
- Containment temperature survey and development of temperature weighting factors.
- Verification of system penetration turnover.
- Installation and checkout of the data acquisition system.
- Verification of compatibility of the data acquisition with computer analysis program.
- Special prerequisite tests on containment access penetrations.
- Structural integrity test and containment inspection.
- Containment air quality control.

The inspector concluded that the licensee has developed controls for activities related to containment leak rate testing which will provide an adequate overall leak rate program.

6. Leak Rate Procedure Review (70307)

a. Integrated Leak Rate (Type A)

The inspector performed a detailed review of the Integrated Leakage Rate Test procedure, 1-8010-P-03, to verify that the technical content of the procedure meets the requirements of Appendix J. This review

indicated that procedural prerequisites, cautions, and instructions are detailed and clearly stated, appropriate test controls are established, and test acceptance criteria and valve alignments are in accordance with the requirements of Appendix J. Review of each penetration alignment showed that the systems are properly aligned, vented, and drained. For those systems required to be vented and drained but which could not be vented and drained during the test, the add-on leakage is specified in Table 9.3 of the procedure.

One anomaly was identified which related to removal of the differential pressure transmitters of the vacuum detection system during the test. These transmitters are an extension of the containment boundary. The licensee agreed to review the instrument design and resolve this matter prior to the Type A test. The inspector identified this matter for followup inspection as IFI 50-400/86-08-01; Verify appropriate testing of differential pressure transmitters as extensions of the containment boundary.

b. Local Leak Rate (Type C)

The inspector performed a detailed review of the Type C test procedure, 1-8010-P-01 and reviewed a sample of test alignments. The inspector concluded that the test controls, acceptance criteria, and valve alignments specified in the procedure met the requirements of Appendix J.

One anomaly was identified which relates to pressurizing a valve in a direction opposite to the accident pressure. The outboard isolation valve in penetration M-18 was tested in the reverse direction. This valve is a flex wedge gate valve which has two seating surfaces with the packing in between the seats. Reverse testing is adequate for in-line leakage across the valve seats but may not indicate packing leakage. The licensee agreed to evaluate the local test on the outboard valve for penetration M-18 to determine if an appropriate test can be performed or if an exemption to Appendix J requirements should be requested. At the exit interview, the inspector identified this matter for followup inspection as IFI 50-400/86-08-02; Verify resolution for an appropriate local (Type C) test of the outboard isolation valve in penetration M-18. This item does not impact the performance of the Type A test.