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

Report Nos.: 50-250/89-11 and 50-251/89-11

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33102

Docket Nos.: 50-250 and 50-251 License Nos.: DPR-31 and DPR-41

Facility Name: Turkey Point 3 and 4

Inspection Conducted: February 27 - March 3, 1989

Inspector: H. L. Whitener 3/24/89
H. L. Whitener Date Signed

J. Zeiler 3/24/89
J. Zeiler Date Signed

Approved by: G. A. Belisle 3/27/89
G. A. Belisle, Chief Date Signed
Test Programs Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine announced inspection was conducted in the areas of local leak rate testing and verification of containment integrity.

Results: In the areas inspected violations or deviations were not identified.

One unresolved item was identified concerning the reverse testing of containment isolation valves, paragraph 2.a.(1). A minor weakness was also identified in the local leak rate test procedure concerning inadequate, formal documentation of the containment penetration draining process.

The licensee was responsive to NRC initiatives and involved in assuring quality as evidenced by their interest in performing a thorough review of reverse leak rate tested valves and their willingness to ensure proper draining of containment penetrations.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. Anderson, QA Regulatory Compliance Supervisor
*J. Arias, Jr., Assistant to Plant Manager
*J. Cross, Plant Manager
*R. Earl, QC Supervisor
*S. Hale, Engineering Project Manager
*R. Hart, Regulation and Compliance Supervisor
*J. Odom, Site, Vice President
*K. Remington, System Performance Supervisor

Other licensee employees contacted during this inspection included engineers, security force members, technicians, and administrative personnel.

NRC Resident Inspector

*G. Schnebli, Resident Inspector

*Attended exit interview

2. Local Leak Rate Testing (61720)

The inspectors witnessed the performance of local leak rate tests (LLRTs), reviewed the LLRT procedure, evaluated the test results, and verified that the summation of local leak rate tests meets the allowable leakage limit.

a. LLRT Procedure Review

The inspectors reviewed operating procedure 13404.1, Local Leak Rate Tests, to verify that the content is technically adequate and that procedural instructions are adequate to accomplish the intended activity. The inspectors verified that the procedure contained the following pertinent information: test precautions, limitations, prerequisites, adequate instructions, approved test methods, adequate acceptance criteria, and response for individual and combined LLRT failure. A detailed walk-through was performed for the following penetrations to verify adequate alignment, venting, and draining.

- Penetration 5 Pressurizer Relief Tank (PRT) to Gas Analyzer
- Penetration 6 Nitrogen Supply to PRT
- Penetration 7 Primary Water to Standpipe
- Penetration 8 Pressurizer Steam Sample

- Penetration 9 Pressurizer Liquid Sample
- Penetration 10 Reactor Coolant Drain Tank (RCDT) and PRT to Vent Header
- Penetration 11 Alternate Residual Heat Removal (RHR)
- Penetration 14 Letdown
- Penetration 25 Seal Water Return
- Penetration 31 RCDT Vent to Gas Analyzer
- Penetration 32 Containment Air Return
- Penetration 47 Demineralized Water Supply

During the procedure review and penetration walk-through above, three concerns were identified and discussed with licensee engineers and management as follows.

(1) Reverse Direction Testing

The inspectors' LLRT procedure review identified several containment isolation valves that were tested in a direction opposite to accident pressure. Upon review by the licensee, a total of fourteen isolation valves were identified to be reverse tested.

10 CFR 50, Appendix J, Section III.C.1 states in part: "Type C tests shall be perfomed by local pressurization. The pressure shall be applied in the same direction as that when the valve would be required to perform its safety function, unless it can be determined that the results from tests for a pressure applied in a different direction will provide equivalent or more conservative results." The inspectors pursued this matter with the licensee and determined that in some cases these were gate valves and reverse testing may not be conservative. The licensee agreed to review the valve designs and applications to determine if reverse testing of each valve meets the criterion of Appendix J to 10 CFR 50. This matter was identified as unresolved item (URI) 250, 251/89-11-01, pending NRC review of the licensee's evaluation.

(2) Penetration Draining Instructions

The LLRT procedure did not provide the level of detail necessary for the inspectors to verify and ensure that adequate penetration draining would be accomplished for all leakage tests. Step-by-step instructions of the draining process for each penetration tested was not included in the procedure. The inspectors discussed the need for the licensee to ensure that there are no water seals in the penetrations tested which could inhibit or interfere with valve tests. At the exit meeting the licensee agreed to inspect the penetrations for potential water seals and ensure that adequate draining was performed. Also, draining instructions will be incorporated into the test procedure.

From observation of leak rate testing and discussions with test personnel, the inspectors concluded that the test personnel are familiar with the penetration configurations; understand the vent and draining requirements of Appendix J; and, know the proper response of the test equipment. Since the identified problem is a procedural weakness and not a case of actual failure to drain a penetration, the inspectors considered the licensee's proposed action acceptable. This matter was identified as inspector followup item (IFI) 250, 251/89-11-02.

(3) General Design Criteria Review

In addition to the walk-through conducted for those penetrations listed in paragraph 2.a, the inspectors reviewed these penetrations to determine if valve configurations conform to General Design Criteria (GDC) 55, 56, and 57 of Appendix A to 10 CFR 50. It was found that four of these penetrations (5, 6, 31, and 47) differed from the GDC as described below.

- Penetration 5 No inside containment isolation valve
- Penetration 6 No outside containment isolation valve
- Penetration 31 No inside containment isolation valve
- Penetration 47 Check valve used as outside containment isolation valve

At the exit meeting, the inspectors discussed these differences with the licensee and identified this matter for further NRC review.

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

b. LLRT Witnessing

The inspectors witnessed the performance of leak test activities in order to verify that testing was conducted in accordance with the Technical Specifications and procedural requirements, that test data were properly recorded, and that test personnel conducting the tests demonstrated an understanding of assigned duties and responsibilities. The following Unit 4 tests were witnessed:

- Penetration 25 Reactor Coolant Pump Seal Return on March 1, 1989, "As-Left" Type C Test of Valve No. MOV-381

- Penetration 32 Containment Air Sample Return on March 1, 1989, "As-Left" Type C Test of Valve No. CK-11-003

Both valves had failed initial local leak rate testing and were being retested after repairs. The inspectors reviewed the system lineups

for the tests witnessed and determined that they were in correct test configurations. Test personnel followed approved procedures and utilized qualified test equipment. The inspectors observed that test personnel were quite familiar with the test equipment and the use of the test procedure. Although the results of both tests did not exceed maximum valve leakage limits as specified in the LLRT procedure, test personnel processed plant work requests to have the valves worked on in order to reduce the leakage.

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

c. Leak Rate Test Controls

The inspectors tracked the repair and retest of several valves to verify that controls to ensure maintenance and retest of the valves are adequate. Unit 3 components reviewed included:

Penetration	Valve	Plant Work Order	Description
14	CV-3-200A	2611	Letdown orifice stop
	CV-3-200B	2618	
	CV-3-200C	2566	
15	CK-312C	1053	Charging line check

A request for maintenance is generated by the Technical Department when a valve fails to pass a local leak rate test required by OP 13404.1. This Request is sent to maintenance planners who prescribe the work procedures and post-maintenance testing procedures required. When maintenance is completed, retest of the valve is scheduled through the maintenance foreman. The Technical Department performs the leak rate retest to verify acceptable leakage. Approval of OP 13404.1 constitutes verification that all tests have been performed and that the Type B and C leakage summation is within the acceptable limit. The requirements for Type B and C leakage summation are contained in Appendix B and C of OP 13404.1. The "As-Left" leakage summation for the previous Unit 3 outage is only 37.5% of the allowable leakage.

Based on the limited sample, the inspectors concluded that the licensee has implemented a workable system to ensure that maintenance and retest of containment isolation valves are satisfactorily completed.

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

3. Verification of Containment Integrity (61715)

The objective was to verify the adequacy and implementation of procedures designed to ensure and maintain containment integrity and verify the adequacy and implementation of procedures designed to mitigate contamination releases in the event of a loss of containment integrity following a Loss-of-Coolant Accident. The following containment related systems were inspected for compliance with plant Technical Specifications.

- Containment Airlock Leakage Tests
- Containment Spray System
- Emergency Containment Coolers
- Emergency Containment Filter System
- Post-Accident Containment Ventilation System
- Control Room Ventilation System

a. Procedures Reviewed

- 3-OSP-051.3, Containment Personnel and Emergency Airlock Pressure Test, (Frequency: 6 Months)
- 3-OSP-068.2, Containment Spray Pump Inservice Test, (Frequency: Monthly)
- 3-OSP-055.1, Emergency Containment Cooler Operability Test, (Frequency: Monthly)
- 3-OSP-056.1, Emergency Containment Filter Fans Operability Test, (Frequency: Monthly)
- 3-OSP-056.2, Emergency Containment Filter System Performance Test, (Frequency: 18 Months)
- 3-OSP-056.3, Emergency Containment Filter Charcoal Sample, (Frequency: 18 Months)
- 3-OSP-051.11, Post-Accident Containment Vent System Valve Operability Test, (Frequency: 18 Months)
- 3-OSP-051.7, Post-Accident Containment Vent System Filter Performance Test, (Frequency: 18 Months)
- 3-OSP-025.1, Control Room Ventilation System Operability Test, (Frequency: 18 Months)
- 3-OSP-025.2, Control Room Emergency Ventilation System Filter Performance Test, (Frequency: 18 Months)
- 3-OSP-025.3, Control Room Emergency Ventilation Filter Charcoal Sample Analyzer, (Frequency: 18 Months)

b. Scope of Procedure and Record Review

The inspectors reviewed the above surveillance procedures either totally or in part to verify applicable plant Technical Specification requirements were met, adequate information and instruction were provided, and adequate acceptance criteria and limits were specified. The inspectors also reviewed test records of these surveillance procedures to ensure their performance. The following table describes the records reviewed and gives the applicable technical specification which requires the surveillance test.

Containment System	Procedure No.	Records Reviewed	T.S
Airlock Leak Test	3-OSP-051.3	03/14/87 through 09/19/88	4.4.2.2.b
Containment Spray	3-OSP-068.2	12/03/88 through 02/06/89	4.6.2
Containment Coolers	3-OSP-055.1	12/03/88 through 02/01/89	4.6.2
Containment Filter System	3-OSP-056.1	11/25/88 through 02/08/89	4.7.1.1 4.7.1.2
	3-OSP-056.2	04/06/85 through 10/13/88	4.7.1.2.a 4.7.1.2.b 4.7.1.2.c
	3-OSP-056.3	03/25/87 through 10/07/88	4.7.1.2.b
Post-Accident Vent System	3-OSP-051.11	11/20/86 through 10/16/88	4.7.2.1
	3-OSP-051.7	09/24/86 through 02/16/88	4.7.2.2.a 4.7.2.2.b
Control Room Ventilation System	3-OSP-025.1	02/05/89	4.7.3.1
	3-OSP-025.2	12/02/88 and 02/11/88	4.7.3.2.a 4.7.3.2.c
	3-OSP-025.3	10/06/86 through 12/02/88	4.7.3.2.b

c. Procedure and Record Finding Summary

The procedures reviewed were technically accurate and in conformance with plant Technical Specifications. No unacceptable conditions were observed.

The inspectors' surveillance test record review identified no discrepancies. The inspectors verified the following: surveillance tests were performed at the required frequencies; test results met

acceptance criteria or limits; and appropriate sign-offs, test reviews, and test concurrences were performed. The findings indicated that required plant systems and components designed to ensure containment integrity are being tested as required by plant technical specifications.

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

4. Exit Interview

The inspection scope and results were summarized on March 3, 1989, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results listed below. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

Item Number	Description and Reference
250, 251/89-11-01	URI - Review licensee's evaluation for reverse testing of containment isolation valves, paragraph 2.a.(1).
250, 251/89-11-02	IFI - Review licensee's evaluation to ensure adequate penetration draining and adequate documentation of the draining process, paragraph 2.a.(2).