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

Report Nos.: 50-250/89-28 and 50-251/89-28

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: June 13-16, 1989

Inspector: J. J. Lenahan 7/18/89
Date Signed

Approved by: G. A. Belisle, Chief 7/20/89
Date Signed
Test Programs Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the areas of review of quality records for concrete placed in the new diesel generator building, the snubber surveillance program, a licensee identified item (LER), and licensee action on previous inspection findings.

Results:

In the areas inspected, violations or deviations were not identified.

An unresolved item was identified concerning the adequacy of the licensee's evaluation of Information Notice (IEN) 85-45, Potential Seismic Interaction Involving the Movable In-Core Flux Mapping System Used in Westinghouse Designed Plants. This unresolved item indicates a weakness in the licensee's approach in resolving this technical issue from a safety standpoint in that the resolution has been delayed, and the response was inadequate.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. Arias, Jr., Technical Assistant to Plant Manager
*K. Buzek, ISI Coordinator
*J. Cross, Plant Manager, Nuclear
*S. Franzone, Lead Engineer
K. Harris, Site Vice-President
*A. Zielanka, Site Engineering Supervisor

Other licensee employees contacted during this inspection included engineers, and technicians.

Other Organizations

J. Mazarchyk, Civil QC Supervisor, Stone and Webster

NRC Resident Inspectors

R. Butcher, Senior Resident Inspector
T. McElhiney, Resident Inspector
G. Schnebli, Resident Inspector

*Attended exit interview

2. Review of Structural Concrete Records for New Diesel Generator Building (37700)

The inspector reviewed the records listed below documenting results of inspection and testing performed on concrete placed in the basemat of the new emergency diesel generator building. Acceptance criteria and inspection criteria are specified in the following documents:

- Plant Change/Modification (PCM) 259, Emergency Diesel Generator Building Construction
- Specification CN-2.9, Concrete Materials and Mixes, Concrete Mixing and Transportation
- Specification CN-2.11, Concrete Testing, Placing, Curing and Finishing
- Technique Sheet 10.3-2.1, Concrete Placement
- Technique Sheet 10.2-3.1., Concrete Post-Placement

- Technique Sheet 10.4-1.1, Concrete Field Testing

The following quality records were examined by the inspector:

a. Results of 28 day breaks for test cylinders from concrete placement numbers F-3-EDG-F-1, F-2, and F-3. The test data demonstrated that the concrete strength exceeds the 5000 psi design strength requirements.

b. Inspection Report numbers C-89-0574, 0824, 0853, and 0929 which document inspections of reinforcing steel placements in the basemat.

c. Inspection Report numbers C-89-0863, 0868, 0935 and 0952 which document post-placement inspections for concrete curing.

d. Inspection Report numbers C-89-0826 and 0885 which document inspections of concrete placement activities.

e. Nonconformance Report numbers N 89-0551 and 0578 and Deficiency Report 89-0625 which document and disposition problems identified by QC Inspectors on the above listed inspection reports. The problems were minor and were resolved either by performing additional testing or by revising specifications to clarify requirements for the concrete to be placed in the structure.

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

3. Snubber Surveillance Program, Units 3 and 4 (70370)

The inspector examined procedures and quality records related to the snubber surveillance program and inspected selected snubbers on safety-related piping systems. Acceptance criteria utilized by the inspector appear in Technical Specification 3.13 and 4.14.

a. Snubber Surveillance Procedure Review

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

- Administrative Procedure (AP) 0190.83, Mechanical Shock Arrestor Surveillance Program

- AP 0190.85, Functional Testing of Mechanical Snubbers

- Operating Procedure 0209.9, Visual Examination of Mechanical Shock Arrestors

b. Snubber Inspection

The inspector visually inspected selected snubbers on safety-related piping systems in the Unit 3 containment building. The inspector verified that the snubbers were not damaged, and that attachments to the supporting structure and piping were secure.

c. Review of Quality Records

The inspector reviewed the following quality records:

- Results of visual inspections performed on Unit 4 snubbers in January - February 1986 and in October - November 1988
- Results of visual inspection performed on Unit 3 snubbers in April - May 1987.
- Results of functional tests performed on Unit 4 snubbers in October 1988.
- Results of functional tests performed on Unit 3 snubbers in April - May 1987.

Within the areas inspected, violations or deviations were identified.

4. Licensee Identified Item (LER)

Closed (LER 250/89-007) Missed Surveillance of Unit 3 Snubber Due to Weakness in the Snubber Testing Program. On March 16, 1986, the Inservice Inspection (ISI) Coordinator identified a Unit 3 snubber, number 3-1027, which was not functionally tested during the previous Unit 3 refueling outage as required by Technical Specification (TS) 4.14.1.d. This snubber is mounted on the 3A Residual Heat Removal Pump. The licensee reported this problem to the NRC in a Licensee Event Report dated April 17, 1989.

After this deficiency was identified, the snubber was removed, replaced with a spare snubber, and functionally tested. The functional test results were satisfactory and thus demonstrated that the installed snubber was operable. The licensee determined that the cause of the missed surveillance was a procedural deficiency which resulted in one individual selecting the snubber test population without review or independent verification. The list of snubbers to be tested included snubbers at locations where previous test failures occurred. In order to correct this problem, the licensee added Appendix C to AP 0190.85 which is a listing of snubbers that failed the previous functional test. The ISI coordinator also reviewed functional test data from the two previous outages to ensure that retesting, when required, had been performed per the TS requirements. The inspector also reviewed this data and verified that the missed functional test on the snubber installed at location 3-1027 was an isolated occurrence.

5. Action on Previous Inspection Findings (92701) (92702)

a. (Closed) Inspector Followup Item 250,251/87-21-01: Followup on Licensee's Response to IEN 85-45. The inspector examined the Unit 3 flux mapping system. The inspector noted that the moveable frame, which was positioned over the seal table, was held in place with an attachment to only one anchor bracket. The original design drawings showing details of the movable cart assembly, Teleflux drawing numbers 44308 and 44317, indicated that the movable frame should be restrained during normal operations by an attachment to the frame assembly to two floor-mounted anchor brackets.

The inspector questioned licensee engineers concerning the adequacy of the attachment to one anchor bracket for restraining the movable frame (transfer cart) from interacting with the thimble tubing during a seismic event. The inspector also questioned the basis for the engineering evaluation conducted by licensee engineers summarized in a memorandum dated September 5, 1985, Subject: Turkey Point Units 3 and 4, Flux Mapping System Seismic Interaction, File PTP 100-14. This memorandum stated that the seal table was securely fastened during plant operation as per MP 12407.1 and that a Westinghouse analysis of the equipment showed that the frame would not fail during a seismic event as documented in a Westinghouse Owners Group Letter OG-151 dated June 11, 1985, to Mr. Frank Miraglia, NRC office of Nuclear Reactor Regulation. Maintenance Procedure 12407.1, referenced bolting the movable frame to only one anchor bracket, located on the west side of the floor, per existing conditions. The Westinghouse Owners Group June 11, 1985, letter and a June 7, 1985 letter to Mr. C. M. Wethy, Vice-President Turkey Point, recommended that the adequacy of the restraints provided for the Turkey Point flux mapping system under seismic loads be evaluated. As a result of the inspector's questions regarding the as-built conditions for the movable frame and its potential interaction with the seal table/flux mapping system, the licensee directed Westinghouse to perform an analysis for the existing installation. This analysis was performed during the inspection. Licensee engineers informed the inspector that the preliminary results of the Westinghouse analysis showed that the movable transfer cart could be adequately restrained with an attachment to one anchor bracket. A more detailed seismic analysis was in progress. This analysis will have to be evaluated to determine if the present anchorage system is adequate for long term system operation. The licensee's evaluation of the potential seismic interaction of the movable in-core flux mapping system appeared inadequate and may involve a potential unreviewed safety question. Until the inspector performs a detailed review of the evaluation of the movable frame, and determines the adequacy of the licensee's response in addressing IEN 85-45 this is identified as Unresolved Item 250,251/89-28-01, Adequacy of Licensee's Evaluation of Seal Table Interaction per IEN 85-45.

b. (Closed) Violation 250,251/87-41-01: Failure to Perform Adequate Post-Modification Testing. The licensee's corrective actions for this violation are stated in their November 12 and 13 responses to NRC. The licensee had implemented major changes to control the post-modification testing program to avoid further problem in this area. These corrective actions included the following.

(1) Revision of Quality Instruction (Q.I.) 3.1, Control of Design Performed by JPE, to require engineering design packages to contain a startup testing section. The inspector reviewed QI 3.1 and verified that this procedure was revised to include startup requirements. The inspector noted that the startup requirements were contained in Attachment A to Supplement 3.1-3 of QI 3.1. The inspector examined completed plant change modification (PCM) packages 85-142, 85-148, 87-100, 88-415, and 88-485, and verified that startup testing requirements were included and that post-modification startup tests were implemented.

(2) A Startup Department has been organized. This department is responsible for system acceptance testing. The inspector interviewed selected personnel in the startup department concerning their post-modification testing duties while examining the PCMs previously listed.

(3) AP 0190.15, Plant Changes and Modifications, requires the plant technical staff to perform a engineering review following PCM implementations. The inspector reviewed AP 0190.15.

(4) The licensee committed to revise Procedure 3/4, OSP-203, Engineered Safeguards Test, to require train-by-train safeguards testing to assure proper component functioning. The Unit 4 procedures have been revised to require train-by-train testing and the Unit 4 Safeguards Integrated Testing was witnessed by the Resident Inspectors during the inspection period documented in NRC Inspector Report Numbers 50-250,251/89-18. The licensee is planning revise Unit 3 procedures prior to the Unit 3 safeguards integrated test scheduled for the next Unit 3 refueling outage.

c. (Closed) Unresolved Item 250/89-22-01, Identification of Defective Protective Coatings in the Unit 3 Containment Building. The licensee issued Change Request Notice (CRN) C-2395 to PCM 85-041 to allow removal/repair of damaged coatings in the Unit 3 containment building which were identified by the licensee's Nuclear Engineering staff during walkdowns. The areas with damaged coating were identified on sketches attached to the CRN. The walkdown results and the planned corrective actions were documented in an memorandum dated June 12, 1989, Subject: Turkey Point Unit 3 Containment Coating Removal per Appendix A of Specification CN 2.18. The inspector walked down the Unit 3 containment building and verified that the damaged coatings

were identified on the CRN C-2395 sketches, and were removed in accordance with Appendix A of specification CN 2.18. The inspector noted that approximately 800 square feet of coating had been removed. The licensee identified two small areas where corrosion and/or pitting had occurred under the damaged coatings. This problem was documented and dispositioned on NCR N-89-0741. During the containment walkdown, the inspector noted that the licensee identified and removed, with the exception of a few small areas, all of the damaged coatings. The surfaces where damaged coating was removed is scheduled to be repainted during the next Unit 3 refueling outage.

6. Exit Interview

The inspection scope and results were summarized on June 16, 1989, with those persons indicated in paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed above. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

Unresolved Item 250,251/89-28-01, Adequacy of Licensee's Evaluation of Seal Table Interaction per IEN 85-45