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

Report Nos.: 50-250/85-12 and 50-251/85-12

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33101

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

Facility Name: Turkey Point Units 3 and 4

Inspection Conducted: April 15 - 19, 1985

Inspector: W. P. Ang 4-30-85
W. P. Ang Date Signed

Approved by: J. J. Blake 5/1/85
J. J. Blake, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, announced inspection entailed 33 inspector-hours on site in the areas of pipe support baseplate designs using concrete expansion anchors (IEB 79-02) and seismic analysis for as-built safety-related piping (IEB 79-14).

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*C. J. Baker, Plant Manager
*S. G. Brain, Senior Engineering Manager
*J. M. Donis, Site Engineering Supervisor
*J. F. O'Brien, Quality Control (QC) Supervisor
*M. J. Crisler, QC Supervisor
*M. Mowbray, Site Engineering

Other licensee employees contacted included construction craftsmen, engineers, technicians, operators, mechanics, security force members, and office personnel.

Other Organizations

*J. Gnecco, Project Engineer, Teledyne
*G. P. Nutwell, Project Engineer, Bechtel

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on April 19, 1985, 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 following new items were identified during this inspection:

Unresolved Item 50-250, 251/85-12-01, Pipe Support Modification and Inspection, paragraph 5.

Unresolved Item 50-250, 251/85-12-02, Pipe Support Design Calculations, paragraph 5.

Unresolved Item 50-250, 251/85-12-03, Piping Penetration Restriction, paragraph 5.

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

3. Licensee Action on Previous Enforcement Matters

(Open) Unresolved Item 50-250, 251/82-23-01, Pipe Support Analysis Unresolved Questions

REPORT DETAILS

1. Persons Contacted

Lice See employees

*C. J. Lowry, Plant Manager
*S. G. Brown, Senior Engineering Manager
*J. M. Lewis, Site Engineering Supervisor
*L. T. O'Brien, Quality Control (QC) Supervisor
*M. L. Chisler, QC Supervisor
*M. Moulton, Site Engineering

Other licensee employees contacted included construction craftsmen, engineers, technicians, operators, mechanics, security force members, and office personnel.

Other Organizations

J. Gnecco, Project Engineer, Tetra Tech
C. R. Nutwell, Project Engineer, Ecotel

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on April 18, 1985, with those persons indicated in paragraph 1 above. The inspectors described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The following items were identified during this inspection:

Unresolved item 50-275, 251/85-12-01, Pipe support acceptance and inspection, paragraph 7.

Unresolved item 50-275, 251/85-12-02, Pipe support design calculations, paragraph 5.

Unresolved item 50-250, 251/85-12-03, Piping penetration restraints, paragraph 5.

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

3. Licensee Action on Previous Inspection Findings

(Open) Unresolved item 50-250, 251/84-24-01, Pipe support analysis Unresolved question

a. The unresolved item identified a need for the licensee to upgrade pipe supports with concrete expansion anchor safety factors between two and four. During the inspection the licensee stated that all Unit 4 pipe supports had been upgraded and the remaining Unit 3 pipe supports would be upgraded during the current outage. This part of the unresolved item was closed.

b. The unresolved item also questioned the source of the capacities used by Teledyne for concrete expansion anchor design calculations. During the inspection, the Teledyne onsite representative stated that the Phillips and Hilti capacities had since been obtained from Bechtel and were used on Turkey Point pipe support design calculations. The licensee stated that a small number of Wej-it concrete expansion anchors were used on site. The Teledyne representative informed the inspector that Wej-it catalog capacities were used in the design calculations. The licensee and Teledyne were informed by the inspector of recent on-site testing performed by Crystal River where site-specific capacities were found to be 40% to 60% less than the catalog values. The inspector requested the licensee to evaluate the potential applicability of the Crystal River test values to Turkey Point. Pending confirmation of the adequacy of capacities used in design calculations for Wej-it concrete expansion anchors, the unresolved item was left open.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. Three new unresolved items identified during this inspection are discussed in paragraph 5.

5. Pipe Support Baseplate Design Using Concrete Expansion Anchor Bolts (IEB 79-02) and Seismic Analysis for As-Built Safety-Related Piping (IEB 79-14)

A follow-on inspection to NRC RII Reports 50-250/82-23 and 50-251/82-23 was performed to verify licensee compliance with IEB 79-02 and IEB 79-14 requirements and licensee commitments. The Bulletin requirements were reviewed with the licensee. The inspector was informed by the licensee that all work for Unit 4 for both Bulletins was complete and that all work for Unit 3 would be complete with the modification of approximately 40 supports during the current outage. The licensee agreed that a final report for both Bulletins would be submitted summarizing all previous responses and action taken to complete the Bulletins.

The following specifications/procedures were being used for pipe support modification work and were reviewed:

a. Bechtel Specification 5177-M-56, Rev. 7 - Performance Specification for Field Fabrication and Installation of ANSI B31.1 Safety-Related Pipe Supports for Modifications to Turkey Point Units 3 and 4

b. Bechtel Specification 5177-C-103.1, Rev. 3 - Technical Specification for the Procurement and Installation of Concrete Expansion Anchor Bolts for Modifications to Turkey Point Units 3 and 4

c. FPL Construction QC Technique Sheet (TS) 10.23, Rev. 1 - Pipe Hangers, Supports and Restraints

d. FPL Construction QC Technique Sheet 10.13, Rev. 2 - Expansion Anchors

The following piping stress analysis problems and corresponding pipe support calculations were requested, sampled and inspected:

a. Teledyne Stress Problem CCW-38 - Component Cooling Water Inside Containment

b. Bechtel Stress Problems 162-008 and 162-009, Rev. 1 - MS Supply to AFW Turbine Driven Pump

During the review of Bechtel Stress Problems 162-008 and 162-009, the inspector noted that numerous (approximately 50%) pipe supports were qualified by examination by a pipe support designer - no calculations were performed for the pipe supports. The inspector requested the licensee to determine the justification for not having calculations for pipe supports. Specifically, the licensee was requested to determine if Bechtel had a procedure authorizing the noted condition, availability of guidelines on what to look for and how a pipe support was considered adequate, and compliance with the guidelines. A sample pipe support was selected by the inspector, pipe support 5177-162-80117-H-334-18 and calculations were performed by Bechtel that showed the adequacy of the support. However, pending examination of the above noted guidelines, this concern was identified as Unresolved Item 50-250, 251/85-12-02, Pipe Support Design Calculations.

The following modified, and QC inspected, component cooling water pipe supports were selected and inspected.

a. Teledyne Hanger A-6026, Rev. 2
b. Teledyne Hanger A-8942, Rev. 0, Teledyne Field Memo 1333
c. Teledyne Hanger A-8913, Rev. 0, Teledyne Field Memo 1326

The inspector noted that an additional support was attached to support A-6026 that was not shown on the pipe support drawing, had not been identified by QC, and may not have been accounted for in the pipe support calculation. The inspector noted that support A-8942 was a sliding-type support but adequate clearance for movement of the sliding support was not provided. Teledyne provided corrective action for pipe support A-8942 by issuing Teledyne Field Memo 1731. FPL QC initiated Rev. 2 to QC TS 10.23 to strengthen configuration inspection to include examination of freedom from damage or evidence of unauthorized work. The licensee was requested to determine the technical significance of the above noted conditions. In addition, the licensee was requested to consider

performing a technical audit of pipe support modification work to assure that the noted conditions are not a generic problem. Pending determination of the technical significance and generic implications, this was identified as Unresolved Item 50-250, 251/85-12-01, Pipe Support Modification and Inspection.

An inspection of piping was performed in the Unit 4 pump and valve room. Four penetrations were observed to have wooden wedges or metal rods between the penetration sleeve and the piping. A subsequent inspection was performed by QC on Unit 3 and one additional penetration was observed with a similar condition. The plant QC supervisor issued a memorandum requesting engineering evaluation of the noted condition. Pending licensee determination of cause, technical significance and required corrective action, the item was identified as Unresolved Item 50-250, 251/85-12-03, Pipe Penetration Restriction.

Pending licensee completion of IEB 79-02 and IEB 79-14 requirements, and submittal of a final report, the Bulletins were left open.

No violations or deviations were identified.

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