



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

Report Nos.: 50-250/87-52 and 50-251/87-52

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: December 14 - December 18, 1987

Inspector: Rich C. Chou 2-18-88
R. C. Chou Date Signed

Approved by: J. J. Blake 2/22/88
J. J. Blake, Chief Date Signed
Materials and Processes Section
Division of Reactor Safety

SUMMARY

Scope: This routine, announced inspection was in the areas of previous open items, pipe support base plate design using concrete expansion anchor bolts (IEB 79-02), and seismic analyses for as-built safety-related piping systems (IEB 79-14).

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *T. V. Abbatiello, Supervisory Engineer, Quality Assurance (QA)
- *J. Arias, Jr., Regulation Compliance Supervisor
- *R. J. Earl, Plant Quality Control (QC) Supervisor
J. Gnecco, Civil Engineer, Juno Beach Headquarter
- *P. C. Higgins, Site Lead Engineer
- *J. W. Kappes, Plant Maintenance Superintendent
- *M. O. Kulp, Project Engineer - JPE
- *J. A. Labarrague, Technical Department Supervisor
- *D. I. Lanier, Power Plant Mechanical Engineer, Juno Beach Headquarter
J. F. O'Brien, Project QC Supervisor (Construction)
- *L. W. Pearce, Operations Superintendent
- *G. Salamon, Compliance Engineer
- *F. H. Southworth, Acting Plant Manager
- *W. R. Williams, Jr., Assistant Superintendent - Planned Maintenance
- *H. T. Young, Project Site Manager

Other licensee employees contacted included construction craftsmen, engineers, technicians, mechanics, and office personnel.

Other Organizations

- J. Crytzer, Quality Control Inspector, Stone and Webster
- M. Moran, Mechanical Engineer, Teledyne
- A. Swislocki, Civil Engineer, Teledyne

NRC Resident Inspectors

- *G. Schnebli, Resident Inspector
- *T. F. McElhinney, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on December 18, 1987, with those persons indicated in paragraph 1. The inspector described the areas inspected and discussed in detail the inspection findings listed below. Dissenting comments were not received from the licensee. The following new items were identified during this inspection:

Unresolved Item (UNR) 50-250, 251/87-52-01, Discrepancies on As-Built Drawings and Calculations of Piping Systems for IEBs 79-02 and 79-14.

Inspector Follow-up Item (IFI) 50-250, 251/87-52-02, Maintenance Procedures for Piping Systems.

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

- a. (Open) UNR 50-250, 251/85-12-01, Pipe Support Modification and Inspection. The matter concerned the fact that free movement of the sliding support for the Teledyne Hanger No. A-8942 was apparently not provided for, and therefore, performance of a technical audit for all modified sliding supports was committed to by the Licensee. The licensee responsible engineers stated that this Technical Audit would be completed by January 29, 1988. Teledyne Engineering Service (TES) letter report 6589-1 to Florida Power and Light Company (FPL) dated January 16, 1987, was presented to the inspector for information. TES had established the requirements for performing a technical audit (i.e. on reviewing the calculations for all sliding supports, checking sliding plate support calculations to identify similar potential problems, and evaluating the need for walkdown.) TES had also reviewed all Turkey Point safety-related piping systems for the purpose of identifying sliding type supports for which it provided design modifications. The sliding supports were reviewed for potential interference with oversized as-built welds, anchor bolts, etc. A total of 25 sliding type pipe supports were identified by TES as having design characteristics which have the potential for precluding proper pipe movement (interference) and will require walkdown inspection. TES will perform engineering evaluations based on the walkdown information.
- b. (Closed) UNR 50-250, 251/87-01-01, Discrepancies of Installed Piping, Pipe Hangers/Restraints During IEB 79-14 and IEB 79-02 Walkdown.

The matter concerned that the discrepancies in installed piping and pipe hangers/restraints found by previous NRC inspectors during reinspection which were not found by the licensee during their IEB 79-14 and IEB 79-02 walkdown. The previous inspectors walked down and reinspected 17 isometrics (ISO) and 64 pipe supports. Discrepancies were found such as tap branches not shown, base plate size differences, gap existed but not required, gap required but not provided, support required but not existing, support not required but existing, missing nuts or washers, support unable to slide due to rust, support calculation not including other gang support loads, no load plate or load plate painted over for spring can, support locations out of tolerance, wrong orientation of members, wrong elevation views, abandoned anchor bolt holes, etc. The inspector held discussions with the licensee responsible engineers and reviewed the information provided. The licensee grouped the above discrepancies into 61 items as shown in EWO Number PTPOM-5404 dated

May 5, 1987, and performed a function operability analysis item by item with the recommended actions.

After reviewing the licensee's explanations and neglecting the minor discrepancies, the inspector concluded that ten problems appear to be major discrepancies. The ten problems are base plate size differences, U-bolt missing, gang support calculation not including the additional support loads, support locations out of tolerance, support not existing as ISO shown or required, additional support existing but not shown in ISO, non-dead weight support carrying dead weight, old support not removed from field, support unable to slide, and loose nuts. The licensee responsible engineers attributed the above problems as human errors during the walkdown. The recommended actions stated in EWO such as hardware changes, hardware fixing, calculation revisions, and drawing revisions are not completed by the licensee for inspection. The licensee engineers stated that the corrective actions would be completed later, depending on the resources and schedules (with no time limit or commitment). Since similar discrepancies were identified during the current walkdown reinspection, the inspector decided to close UNR 50-250, 251/87-01-01 and combine all the above required actions into new UNR 50-250, 251/87-52-01, Discrepancies on As-Built Drawings and Calculations of Piping Systems for IEBs 79-02 and 79-14.

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. One unresolved items identified during this inspection are discussed in paragraph 5.

5. (Open) Pipe Support Base Plate Design Using Concrete Expansion Anchor Bolt (IEB 79-02) and Seismic Analyses for As-Built Safety-Related Piping Systems (IEB 79-14) - Units 3 and 4

a. Observation of Installed Piping and Hangers

The inspector randomly selected three piping isometrics which included 14 hangers that had been QC final-inspected for the Safety Injection and Residual Heat Removal Systems (SI & RHR) and Component Cooling Water System (CCW). The piping and hangers were reinspected with the assistance of QC inspectors, engineers, and construction craftsmen. The piping was reinspected against detail drawings for configuration, dimensions, branch location, hanger location, hanger identification, valve identification, and valve operator orientation. The hangers were reinspected against their detail drawings for configuration, identification, dimensions, clearances, member size, welding, baseplate, fastener/anchor bolt installation, and damage protection.



b. Summary of Results

The results were discussed with the QC inspector and engineers to determine the effectiveness of the IEBs 79-02 and 79-14 programs. The comments and discrepancies identified by the inspector during the walkdown are listed below.

<u>Piping Isometric/Pipe Hangers</u>		<u>Comment/Discrepancy</u>
- Iso 5177-102-SK-P-338	Rev. B	- Actual dimension from top of Valve No. 3-880B to centerline of elbow is 1'-7", isometric shows 9". Tolerance is 6".
- 3-SIH-1	Rev. 0	- No saddle in field
- IC-225-1	Rev. 0	- None
- SR-164	Rev. 0	- None
- 3-SIH-4	Rev. 0	- None
- 3-SIH-3	Rev. 1	- None
- 3-SIH-2	Rev. 0	- Gang support for 2" diam. pipe not shown on drawing
		- Loose nut and nut with two threads shorted
		- One safety-related pipe nearby (vibrating) with 13' vertical and 15' horizontal runs without any support
- Iso 5177-102-SK-P-333	Rev. B	- None
- SR-165	Rev. 0	- None
- IC-224-1	Rev. 0	- None
- SR-166	Rev. 0	- Rod Bent and in contact with handrail of a equipment platform
- 3-SIH-9	Rev. 0	- L4"x3"x3/8" in field, drawing shows L4"x3"x1/2"
- SR-163	Rev. 0	- None
- ISO 5610-P-614-S	Rev. 0	- Partially Inspected None

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|------------------------------|--------|---|
| - SR-172 | Rev. 0 | <ul style="list-style-type: none"> - Item No. 3 is Plate 4"x4"x3/8". Plate size not shown on drawing - Item No. 4, 5, and 6 with 1/2" diam. nuts, studs, and Rod in field. Dwg shows all as 1/4" diam. |
| - SR-173 | Rev. 0 | <ul style="list-style-type: none"> - Item No. 7 with plate 3"x1-1/2"x1/2" in field, drawing shows plate 6"x3"x1/2" - Existing part of support steel 2-C4x5.4 with 5'-10" long partially shown on drawing without channel size and length - Old support not removed from field as required by isometric |
| - 8074-H-327-01/
3-SR-137 | Rev. 0 | <ul style="list-style-type: none"> - Orientations of Item No. 9 are wrong. Length of Item No. 9 shown on drawing should be 5" TYP. instead of 6" TYP. |

The discrepancies as shown above were quickly evaluated by the licensee and were verified to have no impact on system function operability.

c. Findings and Conclusions

The inspector expressed a concern about the similar findings during this and the previous walkdown reinspections. Particularly, neither of the gang supports were identified during the licensee walkdown nor were included in the main support calculations identified in walkdown. The similar gang support problem was previously identified by the Inspection Report No. 50-250, 251/85-12 and closed out by the Inspection Report No. 50-250, 251/86-13. The previous inspector noted that an additional support was attached to Teledyne Support A-6026 that was not shown on the pipe support drawing that had not been identified by QC. The gang support problems were identified in five cases over three inspections. The licensee should consider the gang supports as a generic problem and resolve it. The other concern was that the licensee set no time limit to fix the corrective actions for the discrepancies or deficiencies identified by the inspectors. During the exit meeting, the management stated that the licensee

would form a task force team as soon as possible to evaluate the major problems and concerns identified or expressed by the inspectors, the licensee walkdown program, and the time schedule for the corrective actions. The inspector decided to close out UNR 50-250, 251/87-01-01 and combined all the discrepancies into those found during this inspection and identified as the new UNR 50-250, 251/87-52-01, Discrepancies on As-Built Drawings and Calculations of Piping Systems for IEBs 79-02 and 79-14.

The inspector held discussions with the license maintenance superintendent about the plant maintenance over the items such as base plate rusted, missing nuts, sliding supports unable to slide due to rust, load plate for spring can missing or painted over, etc. Currently, the Turkey Point does not have a maintenance program for the periodic check on piping systems to find deficient items such as rust, bent members, missing nuts, loose nuts, load plate missing or painted over, clearances, etc. Preventive maintenance on piping systems is in development and a program will be completed by June 30, 1988. This program will address identified preventive maintenance, and repair and restoration maintenance. After the program is developed, procedures and training will follow prior to implementation. Additionally, a painting and preservation program is under way on a plant wide basis. The program's first cycle will be completed this year and will continue on a spot maintenance program basis into the future. The licensee agreed to remove and prevent the rust in the heavy or potentially high rust areas as the priority maintenance items. Pending the development of the preventive maintenance program and the corrective actions on the identified rust, the item is identified as IFI 50-250, 251/87-52-02, Maintenance Procedures for Piping Systems.

No violations or deviations were identified during this inspection.