



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

Report No.: 50-302/85-28

Licensee: Florida Power Corporation  
3201 34th Street, South  
St. Petersburg, FL 33733

Docket No.: 50-302

License No.: DPR-72

Facility Name: Crystal River 3

Inspection Conducted: June 18-20, 1985

Inspector:

*W. C. Liu*  
for W. P. Ang

*7/8/85*

Date Signed

Approved by:

*B. R. Crowley*  
J. J. Blake, Chief  
Engineering Branch  
Division of Reactor Safety

*7/8/85*

Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 17 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 systems (IEB 79-14).

Results: No violations or deviations were identified.

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

P. F. McKee, Nuclear Plant Manager  
J. T. Telford, Director, Quality Programs  
\*B. J. Hickle, Assistant Nuclear Operations Manager  
\*G. A. Becker, Nuclear Mechanical/Structural Engineering Manager  
W. L. Rossfeld, Nuclear Compliance Manager  
\*A. Petrowsky, Nuclear Structural Engineer  
\*J. L. Bufe, Nuclear Compliance Specialist  
\*D. G. Green, Nuclear Licensing Specialist  
G. Beall, Corporate Nuclear Safety Coordinator

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

#### Other Organization

#### Fluor Mechanical Services

J. Niernberger, Mechanical Field Engineer

NRC Resident Inspector

\*T. Stetka

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on June 20, 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 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

(Closed) Violation 302/85-16-01, Pipe Support Installation Discrepancies. Florida Power Corporation letter of response dated May 17, 1985, has been reviewed and determined to be acceptable by Region II. The inspector held discussions with the Nuclear Plant Manager and the responsible Nuclear Structural Engineer and examined the corrective action as stated in the letter of response. The inspector concluded that Florida Power Corporation had determined the full extent of the subject noncompliance, performed the

necessary survey and followup actions to correct the present conditions and developed the necessary corrective actions to preclude recurrence of similar circumstances. The corrective action identified in the letter of response have been implemented.

#### 4. Unresolved Items

Unresolved items were not identified during the inspection.

#### 5. Pipe Support Baseplate Designs Using Concrete Expansion Anchors (IEB 79-02) and Seismic Analysis for As-Built Safety-Related Piping Systems (IEB 79-14)

On March 14, 1985, the license submitted supplemental information to its response to IE Bulletin 79-02. Region II Inspection Report 50-302/85-16 documented an inspection performed to verify licensee compliance with IEBs 79-02 and 79-14 requirements and licensee commitments. A followup inspection to the above noted inspection was performed. Discussions were held with the licensee during the inspection regarding completion of the work committed to by the licensee in their March 14, 1985 letter. The licensee stated that all Wej-it type concrete expansion anchors for safety-related seismically analyzed pipe supports for large bore piping had been repaired. Inspections and documentation work were being completed. In accordance with the March 14, 1985 letter, the pipe supports for small bore safety-related seismically analyzed piping would not be completed until November 1, 1985. The following repaired pipe supports were selected, records reviewed, and repairs inspected for compliance with IEBs 79-02 and 79-14 requirements and licensee commitments: SFH-533, SFH-526, DHH-511, and DHH-514.

On April 25, 1985, Crystal River Unit 3, (CR3) Nonconforming Operation Report (NCOR) 8566 identified that a portion of the control complex Heating, Ventilating, and Air Conditioning (HVAC) support baseplate concrete expansion anchors were installed with bolts tack welded and short bolts. On April 26, 1985, CR3 Nonconformance Report (NCR) 02832 was issued regarding the discrepancy identified on NCOR 8566 and identified the problem to be a potentially significant condition. On May 8, 1985, a response to NCR 02832 noted that 146 control complex HVAC supports had been found with improperly installed concrete expansion anchors. The NCOR further reported that inspections of a random sample of HVAC supports in the intermediate, auxiliary and reactor buildings showed no evidence of similar conditions. On May 31, 1985, Licensee Event Report 85-004-00 officially reported that approximately 55% of the supports in the safety-related portion of the control complex HVAC system had "deceit bolts" installed. "Deceit Bolts" was defined as a bolt which has the head cut from the stem and then the head welded onto its mounting bracket so that it appears to be a complete and properly installed bolt.

An inspection was performed to determine adequacy of licensee inspections and corrective action for Licensee Event Report (LER) 85-004-00. During discussions with the licensee regarding the above noted problem, the licensee indicated that information that they had been able to accumulate

indicated that the problem appeared to be mainly associated with work performed by the contractor for the original installation of the control complex HVAC supports. A visual walk through inspection of the auxiliary building and the control room was performed by the NRC inspector to determine if there was any evidence of improperly installed concrete expansion anchors on pipe supports, cable tray supports, conduit supports and component supports. No improperly installed concrete expansion anchors were observed. The licensee's instructions for inspection of the control complex HVAC supports and instructions were reviewed. An inspection was performed of repairs being accomplished and completed repairs of control complex HVAC supports. Based on the inspection of the Licensee's Corrective Action, the licensee was informed that the corrective action should address the following items.

- a. Since the evaluation of adequacy of HVAC supports in the intermediate, auxiliary and reactor buildings was based on walk through rather than detailed visual inspections, the licensee should select a sample of safety-related seismically analyzed HVAC supports in those buildings and perform detailed inspections of the selected sample pipe supports.
- b. The licensee should perform inspections of any other safety-related work performed by the contractor in question.
- c. The licensee obtained an exemption for the IEB 79-02 inspection of safety-related small bore pipe support concrete expansion anchors. However, the licensee should evaluate if the identified improper installation of concrete expansion anchors on HVAC supports could include safety-related small bore pipe supports that had not been included in the IEB 79-02 inspections.
- d. IEB 79-02 did not include safety-related component (pumps, valves, etc.) supports and cable tray supports. The licensee should evaluate if the improper installation of HVAC support concrete expansion anchors could include safety-related component supports and safety-related cable tray support.

The licensee was informed that LER-85-004-00 would be left open pending completion of its corrective action. IEB 79-02 and IEB 79-14 were also left open pending completion of bulletin requirements and licensee commitments.

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