



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

Report No.: 50-302/84-14

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 Date: April 30 - May 4, 1984

Inspection at Crystal River site near Crystal River, Florida

Inspector: J. J. Blake

for E. H. Girard

5/23/84

Date Signed

Accompanying Personnel: P. L. Eng (RIII)

Approved by: J. J. Blake
J. J. Blake, Section Chief
Engineering Branch
Division of Reactor Safety

5/23/84

Date Signed

SUMMARY

Routine: This routine, unannounced inspection involved 89 inspector-hours on site in the areas of licensee action on previous enforcement matters and pump and valve testing.

Results: A violation was identified - the licensee did not maintain the pump and valve summary status lists of tests required by the applicable code identified in the Technical Specifications.

REPORT DETAILS

1. Persons Contacted

- *V. R. Roppel, Manager of Plant Engineering and Technical Services
- *W. G. Neuman, III, Nuclear ISI Specialist
- *S. E. Primo, Senior Nuclear ISI Specialist
- *P. G. Hughes, Licensing Engineer
- *M. E. Collins, Nuclear Compliance Specialist
- *S. D. Mansfield, Nuclear Compliance Supervisor (Acting)
- G. L. Boldt, Nuclear Plant Operations Manager

Other licensee employees contacted included engineers, records personnel, operators and office personnel.

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on May 4, 1984, with those persons indicated in paragraph 1 above. The licensee was informed of the inspection findings listed below. The licensee acknowledged the findings with no dissenting comments.

Violation, 302/84-14-01, Summary Status Listing of Pump and Valve Tests, paragraph 5.d.

Unresolved Item 302/84-14-02, Missing Pump Test Records, paragraph 5.d.

Unresolved Item 302/84-14-03, Pump Reference Value Ranges, paragraph 5.b.

Inspector Followup Item 302/84-14-04, Inconsistency in Makeup Pump Records, paragraph 5.d.

Inspector Followup Item 302/84-14-05, Archival Quality of Permanent Plant Records, paragraph 5.d.

3. Licensee Action on Previous Enforcement Matters

- a. (Closed) Unresolved Item (302/82-03-02): Welding Consumables Accountability. This item addresses an inspector's concern that the licensee's procedure for control of welding material, CP-103, did not provide adequately described controls for accountability of welding materials. When the item was identified the inspector and licensee agreed that this item could be resolved through a revision to the procedure to provide definite instruction regarding accomplishment of welding material accountability. During the current inspection, the inspector verified that the current revision of procedure (CP-103, Rev. 19) provides adequate instruction relative to welding material accountability and that the procedure has been implemented.

- b. (Closed) Violation (302/82-15-01): Failure to Establish Measures for the Maintenance of Quality Records. This violation addressed inadequacies in the licensee's controls on temperature and humidity in the records storage area. The licensee's letters of response dated September 24, 1982, January 20, 1983, and February 16, 1983 have been reviewed and determined acceptable by Region II. The inspector held discussions with the Nuclear Records Management Supervisor and examined the corrective actions as stated in the letters of response. The inspector concluded that the licensee had determined the full extent of the subject noncompliance, performed the necessary follow-up actions to correct the present conditions and developed the necessary corrective actions to preclude recurrence of the unsatisfactory records storage conditions. The corrective actions identified in the letter of response have been implemented.
- c. (Open) Unresolved Item (302/81-10-01): Liquid Penetrant Applicable Code and Acceptance Criteria. This item involves an inspector's concern that a penetrant examination procedure utilized in inspection of spent fuel storage rack welds referenced a code revision and acceptance criteria that were in conflict with requirements stated in the applicable specification. The procedure (Lackenby Procedure QCP9.3 Rev. 1) provided acceptance of larger penetrant indications than did the specification (NES Specification 80A1487, Rev. 4) and it was not clear which acceptance criteria had been applied in the weld inspections. In addressing this item during the current inspection the NRC inspector reviewed licensee interoffice correspondence dated August 18, 1981 (J. E. Barrett to J. Cooper). This correspondence stated that:
- (1) The weld penetrant examinations were performed utilizing the (less stringent) procedural requirements.
 - (2) The procedural requirements had been reviewed and were determined satisfactory.
 - (3) NES Specification 80A1487 had been revised to correct its acceptance criteria to that of the procedure.
- The inspector requested the revised specification for review. The licensee was unable to provide the document - possibly there was insufficient time to locate it, as it was requested by the inspector near the end of the inspection period. The inspector asked that the licensee insure ready retrievability of the specification for review in a subsequent NRC inspection.
- d. (Open) Violation (302/82-03-01): Failure to Retrieve Construction Radiographs. This violation was identified in response to the licensee's inability to retrieve, and provide for NRC review, adequate records for certain construction radiographic examinations of welds. In partial response to the violation, the licensee indicated (in an August 13, 1982 letter to Region II) that they would perform an audit

to assure that their apparent loss/misplacement of safety-related weld radiographs did not represent a generic concern. The inspector reviewed a file maintained by the licensee relative to this item. The file did not contain the audit. The review was conducted near the end of the inspection period. The licensee was requested to insure that a report of the audit would be readily available in or through their file on the item to facilitate NRC review in a subsequent inspection.

- e. (Open) Deviation (302/84-06-01): Failure to Complete Corrective Actions as Described in the Response to an NRC Violation. This item was identified, in part, as a result of the licensee's failure to provide evidence that a commitment (responding to a previous violation) for calibration of instruments had been met. During a tour, described in paragraph 5.c below, the inspector observed measurement and test instruments to determine if they displayed calibration stickers indicating a satisfactory calibration status.

The inspector observed and questioned the licensee regarding the following conditions, suggestive of potential deficiencies, that were noted during the tour:

- (1) The inlet gage (in a line off valve SWV-200) for pump SWP-1B had no calibration sticker.
- (2) Gage DO-22-PT (in a line off valve DOV-194) for pump RWP-3B had no calibration sticker.
- (3) Pressure transmitters RW-8-PT and RW-23-PT had calibration stickers dated March 1973 and September 1975, respectively. This indicated possibly excessive intervals since the last calibrations for these instruments.
- (4) There was no calibration sticker on PSI gage DO-20-PI which was located between valves DOV-181 and -192.
- (5) The metal tag attached to a pressure indicator read DO-19-PI. The pressure indicator which was located between valves DOV-190 and -179, had no reading. A paper tag tied to the same indicator read:

DO-18-PI
4/13/84 pegged high
Barber WR #55469

A calibration sticker on the gage read "8/15/83 JPL". The above inconsistency (DO-18- versus DO-19-) and "pegged high" notation suggested concern for the calibration controls applicable to the gage.

(6) DC-45-FI, a Brooks Flowmeter was tagged by V. Roberts:

"WR#55742, 5/2/84
RML-5 pegged hi"

(7) The calibration on gage DHI-dPT3 was rendered illegible due to a buildup of boric acid in the immediate area.

The licensee's response to potential deficiencies suggested by the above will be addressed in subsequent NRC inspection conducted relative to deviation 302/84-06-01.

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. New unresolved items identified during this inspection are discussed in paragraphs 5.b and d.

5. Pump and Valve Testing (92706)

The inspector selectively interviewed responsible personnel, reviewed procedures, observed components and test instrumentation, and reviewed records related to inservice testing of pumps and valves to examine the licensee's compliance with commitments and regulatory requirements - including the requirements of ASME Section XI (74S75), the inservice testing code specified by Technical Specification 4.0.5 and 10 CFR 50.55a(g). Details of the interviews, reviews and observations are described below.

a. Interviews

The inspector selectively interviewed the ISI specialists, test scheduling personnel, the second shift control room supervisor, and an operator to examine the adequacy of their knowledge (as applicable to their jobs) of the code, test scheduling requirements, test procedures and record requirements. Areas specifically addressed included the scheduling of tests, handling of test data, and calibration of stop watches utilized in valve stroke timing.

b. Review of Procedures

The inspector reviewed the following surveillance procedures to assure that they adequately implemented the regulatory and code test requirements, including selected Technical Specification limits, as follows:

- (1) Surveillance Procedures SP-435, Rev. 13, "Valve Testing During Cold Shutdown," and SP-349, Rev. 37, "Emergency Feedwater Operability Demonstration," were reviewed to determine that they provided instructions and acceptance requirements in compliance with the code for the valves addressed.

- (2) Surveillance Procedure SP-340, Rev. 33, "ECCS Pump Operability," was reviewed to verify that it provided instructions and acceptance requirements in compliance with code and with Technical Specification minimum flow requirements for the following:

Decay Heat Seawater Pumps
Decay Heat Pumps
Makeup Pumps

In reviewing SP-340 pump test alert and action range limits for compliance with code requirements, the inspector noted that the limits differed from those required by the code. For example, the low action range differential pressure and flow limits for Decay Heat Removal Pump DHP-1A are specified as <140 psig and <2700 gpm, respectively. Had these limits been set as described in code table IWP-310², the high action range limits would be >160 psig and >3090 gpm. The high action range limits specified in the licensee's procedure exceeded those limits and were, respectively, >165 psig and >3200 gpm. The licensee's ISI specialist stated that he could explain the limits utilizing pump test curves. The explanation was not provided during the inspection. The inspector requested that the licensee provide a written justification for the deviation from the code limits for review by an NRC technical specialist. The licensee stated that they would provide the justification along with their response to the violation identified in paragraph 5.d below. Pending further evaluation of the licensee's limits in a subsequent inspection, the adequacy of the limits will be identified as unresolved item 302/84-14-03, Pump Reference Valve Ranges.

c. Observation of Components and Test Instrumentation

The inspectors toured the auxiliary building safety-related pump areas to observe the general condition and calibration of pump of test instrumentation and to determine its compliance with regulatory requirements; to verify that Emergency Feedwater valves EF-14 and -33 were in the positions specified by procedure, and to verify lubricant levels were in compliance with code requirements for pumps MUP-3B, DHP-1B, and both EFW pumps. Potential discrepancies noted with regard to instrumentation calibration are described in paragraph 3.e above.

In addition to the observations of test instrumentation noted above, the inspectors checked the calibration of stop watches utilized for valve timing in the control room. Two watches were examined. Both were found to have current calibrations and appeared on the licensee's Test Equipment Signout Log.

d. Review of Records

The inspector reviewed data from the following pump and valve tests to determine their compliance with code and procedural requirements:

- Valve tests conducted in accordance with procedure SP-435 during the period of January 1983 through March 1984
- Pump tests on Decay Heat Removal, Decay Heat Seawater and Makeup Pumps during the period of June 1983 through November 1983 conducted in accordance with procedure SP-340

In evaluating the pump test data, the inspectors noted that it did not support compliance with the code requirements for a monthly pump test frequency. A tabulation of the pump test reports found in the records, given below, indicates missing test reports:

Test Date	Pump Test Reports (X = report found in records)							
	Decay Heat Seawater		Decay Heat Removal		Makeup			
	3A	3B	1A	1B	1A	1B	1C	
6/22/83	-	X	-	X	-	-	-	
7/-/83	-	-	-	-	-	-	-	
8/17/83	-	X	-	X	-	X	-	
8/21/83	-	-	-	X	-	-	-	
9/07/83	X	-	X	-	X	X	-	
10/05/83	X	-	X	-	-	-	-	
10/19/83	-	X	-	X	-	-	X	
11/16/83	-	X	-	X	-	-	X	

The missing reports suggest either inadequate retrievability of records or that required test frequencies were not met. The licensee was informed of the missing records. It is the inspectors' understanding that, for some dates, tests may not have been required because of a plant outage. Also, the inspectors searched the licensee's record system and retrieved the records with only limited assistance from the plant staff and may have inadvertently failed to locate certain of the records. However, pending complete explanation of the missing records by the licensee, this is considered an unresolved item identified as 302/84-14-02, Missing Pump Test Records. This item will remain open pending Region II's review of the licensee's explanation for the missing records during subsequent inspections.

The inspectors questioned the licensee as to whether they prepared and maintained the pump and valve summary status listings required by code subsections IWP-6210 and IWV-6210. The inspectors were informed that the code status lists were not prepared or maintained. This is considered a noncompliance with the requirements of Technical Specification 4.0.5 and 10 CFR 50.55a(g), which specify compliance with the code requirements. This noncompliance was identified as violation 302/84-14-01, Summary Status Listings of Pump and Valve Tests.

In reviewing microfilmed records for valve testing, the inspectors noted that the surveillance procedure SP-370 title page included with tests conducted October 7, 1983, displayed no approval signature. The licensee was able to provide a hard copy to prove that the approval signature had been on the procedure. In reviewing other records the inspector noticed instances where data on the film was marginally legible. The inspector found that the licensee's "Nuclear Controls Interface Procedure: Records Management," Volume VI, Rev. 0, requires that records be reviewed for archival quality and that the review include verification of the reproducibility of the document. NRC report 302/84-03 noted difficulties in reading the licensee's microfilm records. The inspector informed the licensee that the quality of the microfilm records would be examined further in subsequent inspection. Inspector followup item 302/84-14-05, Archival Quality of Permanent Plant Records, was identified to track this.

One other item of potential concern was noted by the inspectors in reviewing SP-370 records. Discharge pressures recorded for Makeup Pump MUP-1B on January 4, 1982 and June 3, 1982 (from gage MU-2-PI) were 2730 and 150 psig respectively. The inspectors requested an explanation of this inconsistency. This was identified for review in a subsequent inspection as inspector followup item 302/84-14-04, Inconsistency in Makeup Pump Test Records.

Within the areas examined, no violations or deviations were observed except as reported in paragraph 5.d above.