

UNITED STATES NUCLEAR REGULATORY COMMI. SION REGION II 230 PEACHTREE STREET, N.W. SUITE 1217 ATLANTA, GEORGIA 30303

Report No.: 50-302/77-11 Docket No.: 50-302 License No.: DPR-72 Licensee: Florida Power Corporation 3201 34th Street, South P. O. Box 14042 St. Fetersburg, Florida 33733 Inspection at: Crystal River, Florida Inspection conducted: June 14-17 and 27-30, 1977 Inspector-in-Charge: T. N. Epps Inspector: J. D. Martin Accompanying Personnel: None Reviewed by: H. C. Dance, Chief Reactor Projects Section No. 1 Reactor Operations and Nuclear Support Branch

Inspection Summary

Inspection on June 14-17 and 27-30, 1977 (Rpt. No. 50-302/77-11) Areas Inspected: Routine unannounced inspection of power escalation test results, followup of unresolved items, surveillance and limiting conditions for operation. The inspection involved 73 inspector-hours on site by two inspectors.

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Results: Of the four areas inspected, no items of noncompliance or deviations were found in three areas; one item of noncompliance was found in one area (infraction - failure to comply with a limiting condition for operation action statement - Details I, paragraph 5).

DETAILS I

Prep red by: <u>7-15-77</u> T. N. Epps, Reactor Inspector Date

T. N. Epps, Reactor Inspector Reactor Projects Section No. 1 Reactor Operations and Nuclear Support Branch

Dates of Inspection: June 14-17 and 27-30, 1977

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Reviewed by: <u>ACAmer</u> H. C. Dance, Chief Reactor Projects Section No. 1 Reactor Operations and Nuclear Support Branch

Persons Contacted 1.

Florida Power Corporation (FPC)

- G. P. Beatty, Jr., Nuclear Plant Manager
- W. R. Nichols, Operations Supervisor
- P. F. McKee, Assistant Nuclear Plant Manager
- D. W. Pea. 'ck, IV, Compliance Engineer
- J. Cooper Compliance Auditor
- G. Claar, Compliance Auditor
- C. Goering, Compliance Auditor
- J. L. Harrison, Chemical/Radiation Engineer
- K. O. Vogel, Computer and Controls Engineer
- G. M. Williams, Compliance Plant Engineer
- D. H. Ruzek, Results Engineer
- Other Operations Personnel
- 2. Licensee Action on Previous Inspection Findings

Not inspected.

3. Unresolved Items

No new unresolved items.

4. Exit Interview

A meeting was held by '. N. Epps and J. D. Martin with G. P. Beatty on June 30, 1977. Items discussed included a summary of areas inspected and the noncompliance item in Details I, paragraph 5.

A meeting was also held by T. N. Epps with G. P. Beatty on June 17, 1977, to discuss part of the inspection findings concerning surveillance.





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5. Limiting Conditions for Operation and Surveillance

This inspection included review of the licensee's planned surveillance program including review of many specific surveillance and LCO requirements in Section 3/4 of the Crystal River-3 Standard Technical Specification (STS). Following is a list of items reviewed with pertinent comments.

- (a) SP-317 (RCS water inventory) was reviewed for June 15, 1977. RCS leakage was determined to be approximately 0.5 gpm.
- (b) SP-312 (Heat Balance) conducted on June 16, 1977, was reviewed with no significant comment.
- (c) The inspector reviewed Iodine-131 activity data, in the reactor coolant, for the period June 5-14, 1977. I-131 activity has increased to approximately 0.1 microcuries per gram, indicating a small amount of leaking fuel, but is well below the STS 3.4.8 limit.
- (d) The inspector reviewed problems that existed with the emergency start capability of the <u>steam driven emergency feedwater pump</u> (EFP-2).

Sometime when this pump was started in the cold condition an overspeed trip would occur. The licensee determined that condensate was accumulating in the steam supply lines to the EFP-2 turbine. During cold start the condensate caused the governor valve to remain open long enough to overspeed the turbine and cause it to trip. While a solution was being formulated to this problem the licensee stationed an operator at the pump to reset the trip valve if the pump was required to function and tripped.

The licensee installed manual blowdown valves in the steam supply lines to the EFP-2 turbine and implemented a program to drain the steam supply lines at two hour intervals. The inspector observed modifications to steam line drain systems and startup testing of this pump on several occasions during this inspection.

On June 30, 1977, the EFP-2 pump startup surveillance test (SP-349B) was successfully conducted. The licensee plans to maintain a periodic steam supply line drain program until further modifications can be formulated and installed.

- (e) Borated Water Storage Tank (BWST) and Core Flood Tank (CFT) level and boran concentrations were verified to meet T.S. 3.5.4 and 3.5.1 requirements on June 15 and June 6, 1977, respectively.
- (f) SP-422 (RCS heatup), SP-355 (ES Monthly Functional Tests), and SP-112 (Calibration of RPS) were reviewed and the inspector had no significant comments.

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(g) SP-181 (containment air lock test) was reviewed to determine that T.S. 4.6.1.3 b&c were met. This surveillance procedure is required to be conducted on a 6 month interval plus or minus 25 percent which allows a maximum interval of 228 days. The inspector observed that the first test was conducted on October 18, 1976, and the next one was conducted on June 3, 1977, which is 228 days (the maximum allowable interval) between surveillance tests.

The licensee committed to review his program for scheduling surveillance to assure that surveillance intervals are met. See Details II on this subject.

- (h) SP-354 (Diesel Generato: fuel sample) was reviewed for eight surveillance intervals from February 11 through May 1, 1977, and it was verified that T.S. 4.8.1.1.2.b was being met.
- (i) While in the control room at 0900 hours on June 30, 1977, the inspector observed that the control rod 3 group 6 absolute position indicator was at 37.5 percent withdrawn while the other rods in that group were at approximately 90 percent withdrawn. The reactor was at 60 percent power as indicated by power range nuclear instrumentation.

A log book review of events that lead up to the condition stated above showed that an assymetric rod fault condition was present at 2053 hours the previous day and reactor power was not reduced to below 60 percent until approximately 9 hours later. This was contrary to technical specification 3.1.3.3.a.l which required that reactor power (thermal) be reduced to 60 percent or below within 8 hours for the above case. The inspector stated in the exit interview that this was an item of noncompliance.

(j) The inspector reviewed three items in the CR-3 operating license to verify licensee actions. Licensee documentation was reviewed showing that modifications to BWST level indications were complete, installation and testing of flow indicators in the ECCS system to provide indication of 40 gpm flow for boron dilution were complete, and installation of a duel setpoint pilot-operated relief value on the pressurizer was complete.

- (k) The inspector reviewed a letter from the nuclear steam system vendor (B&W) to FPC, dated June 9, 1977, involving the NaOH dilution event reported in LER 302/77-17. The letter summarized analysis that indicated that the possibility existed for the shutdown reactor to return to critical if dilution occurred and continued for approximately 18 minutes or less depending upon initial conditions. The inspector stated that this is a potential unreviewed safety question and that the subject including a licensee report would receive further review by the NRC.
- (1) The inspector also observed a fire drill during this inspection on June 14, 1977. Licensee response time for get ing a source of water to the test area was approximately 5 minutes.



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DETAILS II

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Prepared	by ()	INI	artin	<u> </u>
	J. #	. Marti	in, Reactor	Inspector

J. D. Martin, Reactor Inspector Nuclear Support Section Reactor Operations and Nuclear Support Branch

Dates of Inspection; June 27-30, 1977

Reviewed by: R. D. Martin, Chief Nuclear Support Section Reactor Operations and Nuclear Support Branch

Persons Contacted 1.

Florida Power Corporation (FPC)

- G. P. Beatty, Jr., Maclear Plant Superintendent
- P. F. McKee, Assistent Nuclear Plant Superintendent
- W. D. Pedrich, IV, Compliance Engineer
- J. C. Hobbs, Jr., Manager, Generation Testing
- D. Breeclove, Office Manager
- G. Claar, Compliance Auditor
- J. Cooper, Compliance Auditor
- C. Goering, Compliance Auditor

Babcock and Wilcox Company (B&W)

J. Putman, Startup Test Engineer

2. Licensee Action on Previous Inspection Findings

Unresolved Items

(Open) 77-3/1, (77-2/1) Offsite Organization

Followup inspection on previously identified unresolved item 77-3/1, (77-2/1) revealed that the amendment to the Technical Specification (TS) to Change Figure 6.2-1 has not been approved. Until such time that the amendment is approved this item will remain open.

3. Unresolved Items

No new unresolved is ns.

4. Management Exit Interview

A management interview was held on June 30, 1977. Refer to Details I, paragraph 4, for matters discussed and personnel attending at the exit meeting.

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5. Power Ascension Testing Data Review

Final test results as documented in TP-71-800-0 (Rev. 2) "Power Escalation" were reviewed to assure that the licensee had performed an adequate evaluation of the test results and that all required testing has been completed. The review also verified that all testing anomalies have been evaluated and resolved by the licensee. A review of the outstanding test deficiencies revealed that those items requiring further design study are in fact identified.

Within the areas inspected no further discrepancies were left identified.

6. Review of Surveillance and Limiting Condition for Operations

The inspector reviewed reactor operations to assure that surveillance of components and equipment associated with safety-related sytems is being conducted as required by Section 3/4 of Crystal River-3 Technical Specification (TS) and in accordance with approved procedures. The review also verified that reactor operations were in conformance with Technical Specification requirements for limiting conditions for operation (LCO). The following TS Sections, Pre-operational Test Procedures and Surveillance Procedures (SP) were reviewed:

- a) LCO 3.1.2.1 Boration Systems SP-320 and SP-347
- b) LCO 3.1.3.4 <u>Rod Drop Time</u> Preoperational Test TP-71-710-3
- c) LCO 3.7.4.1 Nuclear Services Sea Water System Preoperational Test TP-71-600-25
- d) LCO 3.3.3.5 <u>Remote Shutdown Instruments</u> SP-161, 162, 330 and 333
- e) LCO 3.3.1.1.1 <u>Reactor Protection System</u> SP-110, 112 and 113

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- LCO 3.4.9.1 RCS Press /Temp. Limits £) SP-422
- LCO 3.9.1.1.1 AC Sources g) SP-321

No specific discrepancies were found in meeting the surveillance intervals or limiting conditions for operation. It was noted, however, that in some cases the surveillance frequency dates were based on data transmittal date rather than on the date the data was actually taken.

The licensee agreed that this practice could cause problems in meeting the surveillance intervals and agreed to review the program of scheduling surveillance tests.