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

Report No.: 50-302/89-20

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: August 5 - September 8, 1989

Inspectors: _____ For 10/3/89
P. Holmes-Ray, Senior Resident Inspector Date Signed

_____ For 10/3/89
J. Tedrow, Resident Inspector Date Signed

Approved by: _____ 10/3/89
R. Crlenjak, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope:

This routine inspection was conducted by two resident inspectors in the areas of plant operations, security, radiological controls, Licensee Event Reports and Nonconforming Operations Reports, facility modifications, and licensee action on previous inspection items. Numerous facility tours were conducted and facility operations observed. Some of these tours and observations were conducted on backshifts.

Results:

One violation was identified: Failure to follow procedural requirements and maintain ASV-167 locked; Failure to comply with procedural requirements, paragraphs 2.b and 4.b.(1).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. Alberdi, Manager, Nuclear Plant Technical Support
G. Boldt, Vice President Nuclear Production
*G. Becker, Manager, Site Nuclear Engineering Services
*P. Breedlove, Nuclear Records Management Supervisor
*M. Collins, Superintendent, Nuclear Safety and Reliability
*J. Cooper, Superintendent, Technical Support
*A. Friend, Nuclear Principal Licensing Engineer
R. Fuller, Senior Nuclear Licensing Engineer
*B. Hickle, Manager, Nuclear Plant Operations
*H. Koon, Assistant Nuclear Maintenance Superintendent
*K. Lancaster, Manager, Site Nuclear Quality Assurance
*C. Long, Nuclear Quality Control Supervisor
*G. Longhouser, Superintendent Nuclear Security
*W. Marshall, Nuclear Operations Superintendent
P. McKee, Director, Nuclear Plant Operations
W. Neuman, Supervisor, Inservice Inspection (ISI)
*S. Powell, Supervisor Quality Systems
*S. Robinson, Superintendent, Nuclear Chemistry and Radiation Protection
V. Roppel, Manager, Nuclear Operations Maintenance and Outages
*W. Rossfeld, Manager, Nuclear Compliance
P. Skramstad, Superintendent, Nuclear Chemistry/Radiation Protection
*F. Sullivan, Manager, Nuclear Configuration Management
E. Welch, Manager, Nuclear Electrical/Instrumentation and Control Engineering Services
*R. Widell, Director, Nuclear Operations Site Support
*M. Williams, Nuclear Regulatory Specialist
K. Wilson, Manager, Nuclear Licensing

Other licensee employees contacted included office, operations, engineering, maintenance, chemistry/radiation and corporate personnel.

*Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Review of Plant Operations (71707)

The plant began this inspection period in power operation (Mode 1). A plant shutdown was commenced on August 25, 1989 to initiate repairs to RWP-2B. The plant remained in Mode 5 for the remainder of the period.

a. Shift Logs and Facility Records

The inspector reviewed records and discussed various entries with operations personnel to verify compliance with the Technical Specifications (TS) and the licensee's administrative procedures.

The following records were reviewed:

Shift Supervisor's Log; Reactor Operator's Log; Equipment Out-Of-Service Log; Shift Relief Checklist; Auxiliary Building Operator's Log; Active Clearance Log; Daily Operating Surveillance Log; Short Term Instructions (STI); and Selected Chemistry/Radiation Protection Logs.

In addition to these record reviews, the inspector independently verified clearance order tagouts.

No violations or deviations were identified.

b. Facility Tours and Observations

Throughout the inspection period, facility tours were conducted to observe operations and maintenance activities in progress. Some operations and maintenance activity observations were conducted during backshifts. Also, during this inspection period, licensee meetings were attended by the inspector to observe planning and management activities.

The facility tours and observations encompassed the following areas: security perimeter fence; control room; emergency diesel generator room; auxiliary building; intermediate building; battery rooms; and, electrical switchgear rooms.

During plant walkdown on September 5, 1989, the inspector noticed that the bypass valve (ASV-167) around the steam inlet valves (ASV-5/204) to the turbine driven emergency feed pump was not locked in position as required. OP-450, Emergency Feedwater System, valve check list 2, has ASV-167 shown as locked throttled. Valve ASV-167 found unlocked is considered a violation of OP-450. This is the first example of failure to follow procedural requirements (see paragraph 4.b.(1) for an additional example).

The inspectors also observed conditions in the following areas:

(1) Monitoring Instrumentation

The following instrumentation and/or indications were observed to verify that indicated parameters were in accordance with the TS for the current operational mode:

Equipment operating status; area atmospheric and liquid radiation monitors; electrical system lineup; reactor

operating parameters; and auxiliary equipment operating parameters.

No violations or deviations were identified.

(2) Shift Staffing

The inspector verified that operating shift staffing was in accordance with TS requirements and that control room operations were being conducted in an orderly and professional manner. In addition, the inspector observed shift turnovers on various occasions to verify the continuity of plant status, operational problems, and other pertinent plant information during these turnovers.

No violations or deviations were identified.

(3) Plant Housekeeping Conditions

Storage of material and components, and cleanliness conditions of various areas throughout the facility were observed to determine whether safety and/or fire hazards existed.

No violations or deviations were identified.

(4) Radiological Protection Program

Radiation protection control activities were observed to verify that these activities were in conformance with the facility policies and procedures, and in compliance with regulatory requirements. These observations included:

- Entry to and exit from contaminated areas, including step-off pad conditions and disposal of contaminated clothing;
- Area postings and controls;
- Work activity within radiation, high radiation, and contaminated areas;
- Radiation Control Area (RCA) exiting practices; and,
- Proper wearing of personnel monitoring equipment, protective clothing, and respiratory equipment.

Area postings were independently verified for accuracy by the inspector. The inspector also reviewed selected Radiation Work Permits (RWPs) to verify that the RWP was current and that the controls were adequate.

No violations or deviations were identified.

(5) Security Control

In the course of the monthly activities, the inspector included a review of the licensee's physical security program. The performance of various shifts of the security force was observed in the conduct of daily activities to include: protected and vital area access controls; searching of personnel, packages, and vehicles; badge issuance and retrieval; escorting of visitors; patrols; and compensatory posts. In addition, the inspector observed the operational status of Closed Circuit Television (CCTV) monitors, the Intrusion Detection system in the central and secondary alarm stations, protected area lighting, protected and vital area barrier integrity, and the security organization interface with operations and maintenance.

No violations or deviations were identified.

(6) Fire Protection

Fire protection activities, staffing and equipment were observed to verify that fire brigade staffing was appropriate and that fire alarms, extinguishing equipment, actuating controls, fire fighting equipment, emergency equipment, and fire barriers were operable.

No violations or deviations were identified.

3. Review of Maintenance (62703) and Surveillance (61726) Activities

Surveillance tests were observed to verify that approved procedures were being used; qualified personnel were conducting the tests; tests were adequate to verify equipment operability; calibrated equipment was utilized; and TS requirements were followed.

The following tests were observed and/or data reviewed:

- SP-146, EFIC Monthly Functional Test;
- SP-300, Operating Daily Surveillance Log;
- SP-301, Shutdown Daily Surveillance Log;
- SP-317, RC System Water Inventory Balance; and,
- SP-421, Reactivity Balance Calculations.

In addition, the inspector observed maintenance activities to verify that correct equipment clearances were in effect; work requests and fire prevention work permits, as required, were issued and being followed; quality control personnel were available for inspection activities as required; and, TS requirements were being followed.

Maintenance was observed and work packages were reviewed for the following maintenance activities:

- Replace operator on DHV-11 in accordance with MP-402A, Maintenance of Limitorque Valve Operator Type SMB-000;

- EFP-2 lube oil change in accordance with PM-133, Equipment Lubrication Procedure and Cleanliness Inspection;
- MP-150, Maintenance of Raw Water Pumps; and,
- PM-112D, Heat Exchanger Maintenance Inspection/Cleaning/Shooting and Plugging.

One violation was identified concerning performance of MP-150 (see paragraph 4.b.(1)).

4. Review of Licensee Event Reports (92700) and Nonconforming Operations Reports (71707)

a. Licensee Event Reports (LERs) were reviewed for potential generic impact, to detect trends, and to determine whether corrective actions appeared appropriate. Events that were reported immediately were reviewed as they occurred to determine if the TS was satisfied. LERs were reviewed in accordance with the current NRC Enforcement Policy.

(1) (Open) LER 89-23: This LER reported degraded offsite power and failure of the motor driven Emergency Feedwater Pump to start. The licensee is reviewing offsite power configurations and will develop a surveillance program for relays which initiate emergency feedwater on a loss of offsite power. The LER will remain open pending completion of the corrective actions.

b. The inspector reviewed Nonconforming Operations Reports (NCORs) to verify the following: TS are complied with, corrective actions as identified in the reports or during subsequent reviews have been accomplished or are being pursued for completion, generic items are identified and reported as required by 10 CFR Part 21, and items are reported as required by TS.

NCORs were reviewed in accordance with the current NRC Enforcement Policy.

NCOR 89-207, dated August 28, 1989, reported that a Quality Control hold point for assembly of RWP-2B was missed in procedure MP-150, Maintenance of Raw Water Pumps. Paragraph 4.2.5 states "Check all machined mating surfaces and remove all burrs and foreign matter buildup that could be detrimental to reassembly and gasket sealing. Note any indications on Enclosure 6. Nuclear Quality Control (NQC) is to verify that machined mating surfaces are free of burrs and foreign matter. When the missed hold point was discovered during procedure review for shift turnover, the job was stopped, condition of the assembly of the pump was reviewed and the job resumed. Failure to make the required hold point inspection is considered to be the second example of failure to comply with procedural requirements.

Violation (50-302/89-20-01): Failure to comply with procedural requirements.

5. Followup of On-Site Events (93702)

August 26 - An Unusual Event (UE) was declared at 0541 due to a T.S. Required S/D when Raw Water Pump 2B could not be returned operable within 72 hours. The SRI responded to site and coordinated followup with Region II. The UE was cleared on August 27, 1989, at 1639, when the unit entered mode 5. The pump was declared inoperable after failing a periodic surveillance test because of inadequate flow. Details of this event are contained in NRC Inspection Report 50-302/89-24.

August 28 - An UE was declared at 0345 on August 28, 1989 due to loss of emergency bus 3A upon failure of the 4160 to 480 stepdown transformers. The plant was in mode 5 on decay heat removal from the "A" train. The B train was tagged out for work in the B raw water pit associated with the RWP-2B work. With the loss of the "A" train 480 volt bus, decay heat removal was interrupted for about 15 minutes while operators cleared the B train for operation. During this time the reactor coolant system (RCS) warmed from 190 degrees F to 208 degrees F as indicated by the incore data logs. The RCS was again below 200 degrees F on B train decay heat removal at T+23 minutes. This unavoidable mode change from mode 5 to mode 4 caused by equipment failure was promptly and properly identified and corrected by the plant operators. Return to mode 5 was accomplished in the minimum time.

September 4 - On September 4, 1989 at 1800 hours an UE was declared due to greater than one gallon per minute unidentified leakage from the RCS. The plant was in mode 5 on B train decay heat removal. The leakage was found to be from the B decay heat pump mechanical seal. Decay heat removal was changed to the A train. The UE was cleared at 1810. The senior resident inspector was on-site during this event.

6. Licensee Action on Previously Identified Inspection Findings (92702 & 92701)

a. (Closed) Violation 302/88-29-01, Failure to have an adequate maintenance procedure for the replacement of a hotleg RTD.

MP-101 was revised to require a leak check at NOT/NOP after replacement.

b. (Closed) IFI 302/88-29-04, Review the licensee's completion of corrective action for placing the RPS in shutdown bypass without resetting the high power reactor trip setpoint.

Revision 47 to SP-113 added the requirement for the NSSOD or the reactor engineer to provide the required High Flux Trip Setpoint. The person providing the setpoint and the setpoint are recorded in the procedure.

c. (Closed) Violation 302/88-29-05, Failure to properly implement procedure SP-132.

Paragraph 4.1.6.3 of AI-600, Conduct of Maintenance was revised to require pre-job briefing on refuel evolutions.

d. (Closed) Violation 302/89-06-01, Failure to adhere to the requirements of procedure SP-354A, Monthly Functional Test of the Emergency Diesel Generator EGDG-1A and OP-707, Emergency Diesel Generator Miscellaneous Activities.

An operation Study Book (OSB) entry was made emphasizing proper valve control. OSB documentation was reviewed and all signatures had been made.

e. (Closed) IFI 302/89-08-01, Review clarifications to procedure PM-112, Heat Exchanger Maintenance Inspection/Cleaning/Shooting and Plugging.

Revision 19 to PM-112 was issued and resulted in a easy to follow procedure.

7. Exit Interview (30703)

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on September 8, 1989. During this meeting, the inspector summarized the scope and findings of the inspection as they are detailed in this report with particular emphasis on the violation.

The licensee representatives acknowledged the inspector's comments and did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

Item Number	Description and Reference
50-302/89-20-01	Violation - Failure to follow procedural requirements.

8. Acronyms and Abbreviations

CCTV - Closed Circuit Television
CFR - Code of Federal Regulations
IFI - Inspector Followup Item
ISI - Inservice Inspection
LER - Licensee Event Report

MAR - Modification Approval Record
MCC - Motor Control Center
NCOR - Nonconforming Operation Report
NOP - Normal Operating Pressure
NOT - Normal Operating Temperature
NQC - Nuclear Quality Control
NRC - Nuclear Regulatory Commission
NSSOD - Nuclear Shift Supervisor on Duty
OSB - Operator Study Book
PM - Preventive Maintenance
RCA - Radiation Control Area
RCS - Reactor Coolant System
RWP - Radiation Work Permit
SLUR - Second Level Undervoltage Relays
SP - Surveillance Procedure
SRI - Senior Resident Inspector
STI - Short Term Instruction
TS - Technical Specification
UE - Unusual Event
VIO - Violation