UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No.: 50-302/83-11

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

Docket No.: 50-302

License No.: DPR-72

Facility Name: Crystal River Unit 3 Nuclear Generating Plant

Inspection at Crystal River site near Crystal River, Florida

Inspector: Ernest A. Panciera for [illegible] 7/1/83
T. F. Stetka, Senior Resident Inspector Date Signed

Approved by: V. Panciera 7/1/83
V. Panciera, Section Chief, Division of Project and Resident Programs Date Signed

SUMMARY

Inspection on April 26 - May 20, 1983

Areas Inspected

This routine, unannounced inspection involved 99 inspector-hours on site by one resident inspector in the areas of plant operations, security, radiological controls, Licensee Event Reports and Nonconforming Operations Reports, 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 back shifts.

Results

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

DETAILS

1. Persons Contacted

Licensee Employees

*G. Boldt, Engineering and Technical Services Manager
J. Brandely, Security and Special Services Superintendent
C. Brown, Nuclear Compliance Supervisor
R. Clarke, Plant Health Physicist
*D. Fields, Results Specialist
B. Hickle, Chemistry/Radiation Protection Superintendent
*E. Howard, Director, Site Nuclear Operations
*P. Hughes, Licensing Engineer
J. Kraiker, Operations Superintendent
*S. Mansfield, Compliance Auditor
*P. McKee, Operations Manager
S. Robinson, Chemistry and Waste Manager
D. Smith, Maintenance Superintendent
*M. Unger, Quality Programs Department
*K. Wilson, Licensing Specialist
*D. Worsham, Nuclear Modifications Specialist

Other personnel contacted included office, operations, engineering, maintenance, chem/rad and corporate personnel

*Present at exit interview.

2. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on May 20, 1983. During this meeting, the inspector summarized the scope and findings of the inspection as they are detailed in this report. During this meeting, the unresolved items and inspector followup item were discussed.

3. Licensee Action on Previous Inspection Findings

(Closed) Inspector Followup (302/82-05-04): The licensee is continuing to have apparent excessive instrument drift problems. An engineering evaluation is in progress to determine whether these drift problems are reportable and involve a generic concern with instrument reliability. This item has been reevaluated and is discussed in paragraph 6.b of this report as an unresolved item. For record purposes, this followup item is closed.

(Closed) Violation (302/83-07-01): The inspector reviewed the licensee's corrective actions and discussed these actions with licensee personnel. It appears these actions were effective to prevent recurrence of the violation.

(Closed) Inspector Followup Item (302/81-19-06): The licensee's engineering failure analysis has determined that the Decay Heat Pump (DHP) bearing failures were the result of surface corrosion forming on unlubricated parts during idle periods. To prevent this corrosion, a vapor space inhibitor has been added to the lubricating oil. This inhibitor leaves a protective film on internal surfaces thus preventing corrosion buildup. The licensee's lubricating procedure (PM-133) has been revised to require use of this inhibitor and the inhibitor is being added to affected equipment.

(Closed) Inspector Followup Item (302/81-23-08): The licensee located a source for Hamlin relays and has replaced all the Crydon relays with the Hamlin relays in accordance with modification 83-04-01. The inspector reviewed this modification and examined relays installed in the field. This item is complete.

(Closed) Inspector Followup Item (302/82-24-01): The licensee has purchased new hygrometers and developed procedure CH-162 to calibrate these instruments. The instruments will be calibrated on a 6 month frequency as delineated in procedure CH-408. New calibrated hygrometers are presently in use.

4. Unresolved Items

Unresolved items are matters which more information is required to determine whether they are acceptable or may result in violations. New unresolved items identified during this inspection are discussed in paragraphs 5.b(8) and 6.b.

5. Review of Plant Operations

The plant continues in the refueling mode and is presently defueled for maintenance work on the Core Support Assembly (CSA). The plant remained in this status for the duration of this inspection period continuing with the extensive maintenance and refuel outage.

a. Shift Logs and Facility Records

The inspector reviewed records and discussed various entries with operations personnel to verify compliance to 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; Control Center Status Board; Auxiliary Building Operator's Log; Active Clearance Log; Daily Operating Surveillance Log; Work Request Log; Short Term Instructions (STI's); Selected Chemistry/Radiation Protection Logs; and Outage Coordinator's Log.

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

No violations or deviations were noted in this area.

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 Rooms; Auxiliary Building; Intermediate Building; Battery Rooms; Electrical Switchgear Rooms; and Reactor Building.

During these tours, the following observations were made:

(1) Monitoring Instrumentation: The following instrumentation was 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 noted in this area.

(2) Safety Systems Walkdown: The inspector conducted a walkdown of the High Pressure Injection System (Makeup System) to verify that lineups were in accordance with license requirements for system operability and that the system drawings and procedures correctly reflect "as-built" plant conditions.

No violations or deviations were noted in this area.

(3) Shift Staffing: The inspector verified by numerous checks that operating shift staffing was in accordance with TS requirements. In addition, the inspector observed shift turnovers on different occasions to verify the continuity of plant status, operational problems, and other pertinent plant information was being accomplished.

No violations or deviations were noted in this area.

(4) 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 exist.

While examining the interior of the Engineered Safeguards (ES) cabinets located in the control room the inspector noted excessive dirt and dust. These cabinets have built-in cooling fans with the intake to the cabinet through a filter mounted on the bottom of the panel access door. While the inspector noted that the filters were clean (the licensee has a program to periodically replace these filters), the excessive dirt buildup indicates that the filters replacement may not be effective. At present the licensee has no program to clean either these cabinets or the Reactor Protection System (RPS) cabinets (also located in the control room). The licensee has developed relay problems in the past that have been attributed to dirt.

The licensee will review this issue and determine what type program can be developed to keep the ES, RPS, and other safety-related electrical cabinets clean.

Inspector Followup Item (302/83-11-01): Review development of a program to keep electrical cabinets clean.

(5) Radiation areas: Radiation Control Areas (RCA's) were observed to verify proper identification and implementation. These observations included selected licensee conducted surveys, review of step-off pad conditions, disposal of contaminated clothing, and area posting. Area postings were independently verified for accuracy through the use of the inspector's own monitoring instrument. The inspector also reviewed selected radiation work permits and observed personnel use of protective clothing, respirators, and personnel monitoring devices to assure that the licensee's radiation monitoring policies were being followed.

No violations or deviations were noted in this area.

(6) Security controls: Security controls were observed to verify that security barriers are intact, guard forces are on duty and access to the Protected Area (PA) is controlled in accordance with the facility security plan. Personnel within the PA were observed to insure proper display of badges and that personnel requiring escort were properly escorted. Personnel within vital areas were observed to insure proper authorization for the area.

No violations or deviations were noted in this area.

(7) Fire Protection: Fire Protection activities, staffing and equipment was 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 are operable.

No violations or deviations were noted in this area.

(8) Surveillance testing: Surveillance testing was observed to verify that approved procedures were being used; qualified personnel were conducting the tests; testing was adequate to verify equipment operability; calibrated equipment, as required, were utilized; and TS requirements were followed.

The following tests were observed and/or data reviewed:

- SP-179, Containment Leakage Test - Types "B" and "C";
- SP-354A, "A" Emergency Diesel Fuel Oil Quality and Diesel Generator Monthly Test;
- SP-130, Engineered Safeguards Monthly Functional Tests; and,
- SP-522, Station Batteries Inspection and Battery Charger Load Test.

During review and observation of Type C containment leak rate testing in accordance with SP-179, the following unresolved items were identified:

a. The inspector noted that the licensee tests some containment isolation valves (CIV's) in a direction opposite to that which would occur during an accident condition. This testing is permitted by 10 CFR, Part 50, Appendix J as long as this testing provides equivalent or more conservative results. A licensee representative stated that such testing met Appendix J requirements and that a report was available documenting this information, however, the report was not available during this inspection period.

Unresolved Item (302/83-11-02): Review local leak rate test report to insure that opposite to accident flow testing is equivalent or more conservative.

b. The inspector noted a number of descrepancies in the procedure which need resolution as follows:

- Enclosures 4 (Equipment Access Door Resilient Seals) and 5 (Fuel Transfer Tube Gaskets) specify using a pressure decay test to test these penetrations. The licensee conducted these tests using a Leak Rate Monitor (LRM) which provides a more conservative and accurate test for leakage. The pressure decay test method was changed by qualified test engineers as permitted by step 6.1 of the procedure.

This finding was discussed with licensee management personnel. The inspector stated that step 6.1 provided an excessively board interpretation of a test and that it appeared to circumvent the temporary change process of Technical Specification 6.8.3. The inspector further stated that the ability to change boundary valves by a qualified test engineer to account for unforseen maintenance or plant conditions was accepable as long as all changes are documented as required in step 6.1.

The licensee will revise step 6.1 to permit boundry valve changes but to not permit test method changes without a temporary procedure change.

Unresolved Item (302/83-11-03): Revise step 6.1 of procedure SP-179 to only permit boundry valve changes by qualified test engineers.

- The tests delineated in Enclosure 17 for valves CFV-26 and CFV-27 need to be corrected since they do not provide a vent path. The completed data for these valves indicates that test engineers noted this descrepancy and provided a proper vent path.

Unresolved Item (302/83-11-04): Revise procedure SP-179, Enclosure 17, to provide proper vent path for valves CFV-26 and CFV-27.

- The inspector noted numerous Enclosures where the return-to-normal of a system was not complete. Though testing is controlled by an Equipment Clearance and associated tags, there were numerous

examples where valves were operated or flanges removed that were not controlled by the procedure or equipment clearance. To resolve this problem the licensee will revise the procedure to insure that all operated valves and/or flanges are included on the Equipment Clearance. In addition a complete check of the status of all test valves, boundry valves, and flanges will be conducted to insure proper status.

Unresolved Item (302/83-11-05): Revise procedure SP-179 to include all boundary valves, test valves, and flanges on an Equipment Clearance.

The procedure does not require removal of the fast charging air line prior to conducting the leak rate test. Failure to remove this line could result in an invalid test if the single isolation valve between the air supply and the LRM were to leak. The inspector observed that test engineers were removing this charging line prior to measuring leakage. The licensee will revise the procedure to require removal of the air line.

Unresolved Item (302/83-11-06): Revise procedure SP-179 to require removal of the fast charge air line prior to testing.

(9) Maintenance Activities: The inspector observed maintenance activities to verify that: correct equipment clearances were in effect; Work Requests (WR's), Radiation Work Permits (RWPs), 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:

- Hydraulic snubber rebuilding and testing in accordance with MP-130, Pipe snubber maintenance and modification (MAR) 83-02-15-01;

- Modification of the main feedwater nozzles in accordance with MAR 82-07-05-01;

- Modification of the auxiliary feedwater thermal sleeves in accordance with MAR 81-09-05-00 (work package review only);

- Modification, overhaul, and testing of the B Emergency Diesel Generator (EDG) in accordance with MAR 80-01-61, and procedures MP-142, Disassembly and Reassembly of Emergency Diesel Generator's General Purpose Special Mounted Pumps and SP-605, Emergency Diesel Generator Engine Inspection/Maintenance;

- Replacement of Engineered Safeguards solid state relays in accordance with MAR 83-04-01 (work package review and field verification only);

- Replacement of Impeller on the B Decay Heat Removal pump in accordance with MP-131 and MP-122; and,

- Maintenance on the B battery bank in accordance with MP-401.

No violations or deviations were noted in this area.

(10) Radioactive Waste Controls - Selected liquid and solid waste processing and releases were observed to verify that approved procedures were utilized, that appropriate release approvals were obtained, that required samples were taken, and that appropriate release control instrumentation was operable.

No violations or deviations were noted in this area.

(11) Pipe Hangers and Seismic Restraints: Several pipe hangers and seismic restraints (snubbers) on safety-related systems were observed to insure that fluid levels were adequate and no leakage was evident, that restraint settings were appropriate, and that anchoring points were not binding.

No violations or deviations were noted in this area.

6. Review of Licensee Event Reports and Non-Conforming Operations Reports

a. Licensee Event Reports (LER's) were reviewed for potential generic impact, to detect trends, and to determine whether corrective actions appeared appropriate. Events, which were reported immediately, were reviewed as they occurred to determine if the TS were satisfied.

LER's 83-14, 83-15, 83-16, 83-19, and 83-20 were reviewed in accordance with the current NRC enforcement policy; and are closed.

b. The inspector reviewed Non-Conforming Operations REports (NCOR) to verify the following: compliance with the TS, 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 the TS.

All NCOR's were reviewed in accordance with the current NRC enforcement policy.

The following NCOR's were reviewed:

83-52	83-91
83-57	83-97
83-59	83-98
83-67	83-100
83-74	83-102 through 83-106
83-75	83-109 through 83-111
83-77	83-113
83-79 through 83-81	83-115
83-85	83-117 through 83-122
83-86	83-124 through 83-129
83-88	83-132
83-90	83-134 through 83-148

As a result of these reviews, the following item was identified:

NCOR's 83-74, 75, 77, 79, 80, 81, 85, 86, 88, 90, 97, 98, 100, 104, 105, 106, 111, 122, 125, and 127 reported equipment out of calibration due to instrument drift. The licensee has had excessive instrument drift problems and is presently performing an engineering evaluation to determine whether these drift problems are reportable and involve a generic concern with instrument reliability.

Unresolved Item (302/83-11-07): Complete engineering evaluation to determine whether instrument drift problems are reportable and of a generic concern.