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

Report No.: 50-302/85-43

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: December 9-13, 1985

Inspector: C. Smith 1-23-86
C. Smith Date Signed

Approved by: For R W Wright 1-23-86
G. A. Belisle, Acting Section Chief Date Signed
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection involved 34 inspector-hours on site in the areas of licensee action on previous enforcement matters, design control, and tests and experiments.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. Alberdi, Manager, Site Nuclear Services
*K. Baker, Assistant to the Manager, Nuclear Operations Engineering
*C. Brown, Assistant Nuclear Outage and Modification Manager
R. Carbiener, Nuclear Modifications Specialist
J. Colby, Manager, Site Nuclear Engineering
*J. Cooper, Jr., Nuclear Surveillance and Modification Approval Record (MAR) Test Superintendent
*D. Eggleston, Operations Superintendent
C. Elan, Nuclear Modification Specialist
*T. Frijouf, Compliance Specialist
*P. Haines, Nuclear Licensing
*V. Hernandez, Senior Nuclear QA Specialist
W. Johnson, Nuclear Modification Specialist
W. Johnson, Nuclear Plant Engineering Superintendent
M. Jones, Nuclear Modification Specialist
K. Lancaster, Manager, Site Nuclear QA
*P. McKee, Plant Manager
R. McLaughlin, Nuclear Modification Specialist
W. Newman, III, Nuclear Reliability Supervisor
*S. Powell, Senior Nuclear Licensing Engineer
*V. Roppel, Manager, Plant Engineering and Technical Services
*W. Rossfeld, Site Nuclear Compliance Manager

NRC Resident Inspector

*T. Stetka, Senior Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on December 13, 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

(Open) Severity Level IV Violation (302/85-15-01): Failure to Assure That Conditions Adverse to Quality Were Promptly Corrected

Licensee responses dated June 17 and September 17, 1985, denied this violation. The licensee response dated September 17, 1985, did state, however, that several program enhancements for elevating unresolved quality assurance (QA) audit findings had been instituted. These included a memorandum issued from the Vice President, Nuclear Operations, and a revision to QAP-8, Quality Program Audits. The memorandum from the Vice President, Nuclear Operations, was issued prior to September 17, 1985. QAP-8 was revised to include these program enhancements on September 30, 1985, and issued on October 9, 1985. These program enhancements should correct the identified weaknesses in audit finding resolution. Administrative errors appear to be the reason for the delay in issuing QAP-8 by September 17, 1985; consequently, a deviation is not warranted. Until implementation of these program enhancements can be fully evaluated, this item remains open.

4. Design Program (37702)

References:
(a) 10 CFR 50 Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants, Criterion III

(b) 10 CFR 50.54(a)(1), Conditions of Licenses

(c) Regulatory Guide 1.64, Quality Assurance Requirements for the Design of Nuclear Power Plants

(d) ANSI N45.2.11-1974, Quality Assurance Requirements for the Design of Nuclear Power Plants

(e) Regulatory Guide 1.33, Quality Assurance Requirements (Operations)

(f) ANSI N18.7-1976, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants

(g) 10 CFR part 50.59, Changes, Tests and Experiments

(h) Technical Specifications Section 6.5, Review and Audit

The inspector reviewed the licensee design change program required by references (a) through (h) to determine if these activities were conducted in accordance with regulatory requirements, industry guides and standards, and technical specifications. The following criteria were used during the review to assess the overall acceptability of the established program:

- Procedures have been established to control design changes which include assurance that a proposed change does not involve an unreviewed safety question or a change in technical specifications as required by 10 CFR 50.59.

- Procedures and responsibilities for design control have been established including responsibilities and methods for conducting safety evaluations.

- Administrative controls for design document control have been established for the following:

    - Controlling changes to approved design change documents
    - Controlling or recalling obsolete design change documents such as revised drawings and modification procedures
    - Release distribution of approved design change documents

- Administrative controls and responsibilities have been established commensurate with the time frame for implementation to assure that design changes will be incorporated into:

    - Plant procedures
    - Operator training programs
    - Plant drawings to reflect implemented design changes and modifications

- Design controls require that implementation will be in accordance with approved procedures.

- Design controls require assigning responsibility for identifying post-modification testing requirements and acceptance criteria in approved test procedures and for evaluation of test results.

- Procedures assign responsibility and delineate the method for reporting design changes to the NRC in accordance with 10 CFR 50.59.

- Controls require review and approval of temporary modifications in accordance with Section 6 of the Technical Specifications and 10 CFR 50.59.

The documents listed below were reviewed to determine if these criteria had been incorporated into the licensee design program:

Florida Power Corporation FSAR
Section 1.7.1.3, Design Control
Section 1.7.1.16, Corrective Action

AI-400 Plant Operating Quality Assurance Manual Control Document, Revision 59

CP-114 Procedure for Handling Permanent Modifications, Temporary Modifications, Modification Revisions, Field Change Notices, and Advanced Field Change Notices, Revision 42

CP-111 Documenting, Reporting, and Reviewing Nonconforming Operations Reports, Revision 32

CP-134 Preparation, Approval, and Performance of MAR Functional Test Procedures, Revision 7

AI-700 Conduct of Nuclear Plant Engineering and Technical Services, Revision 26

MOP-500 Modification, Revision 1

MOP-501 Site Approval of MAR Work Packages, Revision 4

MOP-504 Processing of MAR Field Change Notices, Revision 2

MOP-508 Turnover of Modifications (Completed/Partial) to Nuclear Operations, Revision 2

MOP-401 Control of Work Requests, Revision 4

MOP-402 Preparation of Work Packages, Revision 6

MOP-405 Job Completion, Walkdown, Turnover, and Nonconforming Item Reporting, Revision 5

MOP-600 Construction Verification, Revision 3

Nuclear Operations Modification Procedure 2, Modification Procedure, Revision 1

Safety Related Engineering Procedure 8, Corrective Action, Revision 5

Engineering Guideline No. 7, Engineering Disposition of Field Change Requests, Revision 0

The licensee has assigned responsibility for MAR preparation, which documents the safety evaluations and review and approval of nuclear plant modification activities, to the on-site/off-site Nuclear Operations Engineering organization. The inspector conducted interviews with licensee management from the on-site Nuclear Operations Engineering group to ascertain their functional responsibilities, levels of authority, and

internal and external interface requirements in connection with design change program activities. The inspector determined that station designed modifications are performed within the limits of the resources of the on-site Nuclear Operations Engineering group. All other nuclear plant modifications are performed by the off-site Nuclear Operations Engineering organization or their engineering consultant.

In 1984 the licensee established what is referred to as an enhanced design program. This program provides for systems/components walkdowns prior to and during the detail design process. Project walkdowns, as they are called, are intended to establish communications between the design office and site personnel on a continuing basis. Topics covered as they relate to the design efforts are as follows:

Installation
Operations
Testing
Inspection
Training
Maintenance
ALARA
Other particulars associated with nuclear plant modification

The inspector inquired as to whether or not project walkdowns were performed for MARs that were installed during Cycle V refueling outage. Licensee management stated that because of the advanced stage of the detail design process, project walkdowns were not performed. The interface of the on-site Nuclear Operations Engineering with the Nuclear Modification and Outage group was reviewed and discussed with licensee management. In particular, the implementation of corrective action by on-site Nuclear Operations Engineering for identified design nonconformances and/or the processing and disposition of Field Change Notices were discussed. Based on these discussions and a review of the program documents, controls for corrective action and Field Change Notices appear to be adequate.

The licensee has established a Nuclear Outage and Modification Program which controls modification installation and testing activities. This program also controls the interfaces of the Nuclear Outage and Modification organization with design, operating, and procurement organizations to assure that adequate controls are exercised over all aspects of the modification effort. A Nuclear Modification Project Management Group from within this organization administers all work activities for MARs. These activities start with the on-site receipt of an approved MAR package and continues until each MAR package has been installed, tested, turned over to Operations, and closed out. Individual Nuclear Project Managers are given sole responsibility for the administration of assigned MAR packages from initial on-site receipt to final close out.

The inspector conducted interviews with selected Nuclear Project Managers assigned responsibility for the following MAR packages. These MAR packages have not yet been closed out for various reasons.

MAR #77-07, NNI Cabinet Modification
MAR #80-02-80, CX Solenoid Replacement
MAR #80-04-06, Condensate System Low Flow
MAR #81-05-33, Smoke Detectors

Discussions concerning the outstanding items associated with each MAR package were conducted with licensee management. Further discussion concerning the administration of the Incomplete Items List (ICIL) and exceptions identified during the construction verification phase of the design program were also held. The inspector reviewed the programmatic controls for transforming ICILs/Exceptions into Field Change Notices and ensured that the program requires the participation of Nuclear Operation Engineering in the resolution and disposition of nonconformances. Based on discussions with the licensee management and a review of the program documents, the programmatic controls appear adequate with the following exception. Nuclear Modification and Outage Procedure MOP-405, paragraph 4.2.6.6, assigns responsibility to the installer for providing a preliminary disposition and obtaining resolution of an Exception if the item can be reworked in accordance with the original approved MAR, Work Request/Package, procedure, etc. This occurs prior to the review and approval of the disposition by the cognizant Nuclear Project Manager. Additionally, if this disposition is approved by the Nuclear Project Manager, because the program defines "Rework Exceptions" as dispositions of nonconformances in accordance with an approved MAR, Work Package, etc., Nuclear Operation Engineering is not provided an opportunity for review and approval of these dispositions.

The inspector discussed the significance of introducing unintended design changes into approved MAR packages via the disposition of "Rework Exceptions" by the installers, concurrent with the Nuclear Project Manager's approval. Licensee management confirmed that all nonconformances were dispositioned by use of Field Change Notices (FCNs) which afforded Nuclear Operations Engineering the opportunity for review and approval of these FCNs. This potential problem is fully addressed and documented in Inspection Report No. 50-302/86-01.

The licensee Construction and Verification group is assigned responsibility to ensure that completed work is in conformance with specifications, drawings, and instructions provided with a MAR Work Package and associated FCNs. This feature of the enhanced design program was implemented for MAR Work Packages installed during the Cycle V refueling outage. The inspector conducted discussions with the Nuclear MAR Test Supervisor who has been assigned responsibility for these activities. A listing of post-modification tests performed for completed MARs was reviewed. Additional

discussions concerning the corrective actions for nonconformances (Exceptions) identified during post-modification tests were also held. Licensee management confirmed that nonconformances identified during post-modification testing are processed in accordance with MOP-405. Licensee management further stated that nonconformances identified after turnover of the modified system/component to operations are processed in accordance with CP-111.

Pursuant to discussions with licensee management concerning the general topic of corrective action, and the implementation of the Construction Verification program, a narrow scope in-depth inspection of this area will be required to be performed in order to verify the effectiveness of this part of the enhanced design program.

Within this area, no violations or deviations were identified.

5. Tests and Experiments (37703)

References:
(a) 10 CFR 50 Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants

(b) 10 CFR 50.59, Changes, Tests and Experiments

(c) 10 CFR 50.54(1)(1), Conditions of Licenses

(d) Technical Specification 6.5, Review and Audit

(e) Regulatory Guide 1.33, Quality Assurance Requirements (Operations)

(f) ANSI N18.7-1976, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants

The inspector reviewed the licensee's tests and experiment programs required by references (a) through (f) to determine if the program was in conformance with regulatory requirements, commitments in the application, and industry guides and standards. The following criteria were used during this review to assess the overall acceptability of the established program:

- A formal method has been established to handle all requests or proposals for conducting plant tests involving safety related components.

- Provisions have been made to assure that all tests will be performed in accordance with approved written procedures.

- Responsibilities have been assigned for reviewing and approving test procedures.

- A formal system, including assignment of responsibility, has been established to assure that all proposed tests will be reviewed to determine whether they are as described in the FSAR.

- Responsibilities have been assigned to assure that a written safety evaluation required by 10 CFR 50.59 will be developed for each test to assure that it does not involve an unreviewed safety question or a change in Technical Specifications (TS).

The documents listed below were reviewed to determine if the previously listed criteria had been incorporated into the licensee's tests and experiments program:

Florida Power Corporation FSAR
Section 1.7.1.11, Test Control
Section 1.7.1.16, Corrective Action

AI-400 Plant Operating Quality Assurance Manual Control Document, (POQAM), Revision 59

CP-134 Preparation, Approval and Performance of MAR Functional Test Procedures, Revision 7

The inspector reviewed the licensee's tests and experiments program documents to determine if a test program had been established to assure that all testing required to demonstrate satisfactory in service operation of structures, systems, and components had been identified. Additionally, all testing is performed in accordance with approved written procedures. The inspector verified that provisions had been established for performing written safety evaluations (required by 10 CFR 50.59) for special tests to assure that unreviewed safety questions or changes to the TS do not exist.

The scope of the program documents, which delineate the controls for the plant test program, is described in AI-400 and the controls are as follows:

Volume X - Surveillance Procedure
Volume XVI - Performance Testing Procedures
Volume XV, Section IV - Pump and Valve Program

Additional requirements of the test program are delineated in CP-134 for MAR Functional Test procedures.

The inspector conducted interviews with licensee management to ascertain the administrative controls applicable to the performance of special tests as defined in 10 CFR 50.59. Licensee management stated that special tests are conducted within the controls of the test program described in any of the above documents. Administrative controls for special test, per se, have not been established. The inspector verified that required Nuclear Safety

Evaluations for Unreviewed Safety Question determination (USQD), and Technical Specification reviews and approvals are performed for special tests. Based on discussions with licensee management and a review of the program documents, the administrative controls appear to be adequate.

The licensee's post-modification functional test requirements delineated in CP-134 are intended to verify that modified system/subsystems and/or components meet the design acceptance criteria. An inspection of the implementation of the post-modification test program will be required to assure procedural and regulatory compliance.

Within this area, no violations or deviations were identified.