



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

Report No.: 50-302/78-21

Docket No.: 50-302

License No.: DPR-72

Licensee: Florida Power Corporation
3201 34th Street South
P. O. Box 14042
St. Petersburg, Florida 33733

Facility Name: Crystal River 3

Inspection at: Crystal River Site, Crystal River, Florida

Inspection conducted: August 14-18, 1978

Inspectors: R. H. Wessman
D. R. Quick
H. C. Dance (August 17-18, 1978)

Approved by: H. C. Dance
H. C. Dance, Chief
Reactor Projects Section No. 1
Reactor Operations and Nuclear Support Branch

9/29/78
Date

Inspection Summary

Inspection on August 14-18, 1978 (Report No. 50-302/78-21)

Areas Inspected: Routine unannounced inspection of plant operations and outage activities; review of Licensee action on previous inspection findings; review of Licensee Event Reports; review of IE Circulars; review of licensee organization and administration; and facility tour.

The inspection involved 84 inspector-hours on-site by three NRC personnel.

Results: Of the six areas inspected one item of noncompliance was identified in one area (Infraction-Failure to follow procedures in the area of facility cleanliness - paragraph I-5 (78-21-01)).

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DETAILS I

Prepared by:

R. H. Wessman
 R. H. Wessman, Reactor Inspector
 Reactor Projects Section No. 1
 Reactor Operations and Nuclear
 Support Branch

9/26/78
 Date

Dates of Inspection: August 14-18, 1978

Reviewed by:

H. C. Dance
 H. C. Dance, Chief
 Reactor Projects Section No. 1
 Reactor Operations and Nuclear
 Support Branch

9/29/78
 Date

1. Persons Contacted

Florida Power Corporation (FPC)

G. P. Beatty, Jr., Nuclear Plant Manager
 *W. R. Nichols, Operations Superintendent
 *R. F. McKee, Technical Services Superintendent
 W. R. Klein, Reactor Engineer
 *J. Cooper, Compliance Engineer
 *G. M. Williams, Compliance Plant Engineer
 *G. R. Westafer, Maintenance Superintendent
 P. D. Breedlove, Office Manager
 *H. B. Lucas, Administrative Supervisor
 *J. R. Wright, Chem/Rad Protection Engineer
 P. E. Griffith, Training Coordinator
 G. Boldt, Plant Performance Engineer
 *W. A. Cross, Technical Specifications Engineer

*Denotes those persons present at exit interview.

2. Licensee Action on Previous Inspection Findings

The inspector reviewed various open items, unresolved items, and licensee responses to items of non-compliance. The status on these items is indicated below:

- a. (Open) Unresolved Item 77-6/2: Loss of Power to ICS. This item was reviewed by the inspector, and documented in Region II Reports 77-25 and 78-10. MAR 77-10-09 has been issued but installation is not complete.

- b. (Open) Outstanding Item (Details I, paragraph 11. d of RII Rpt. 77-17): Diesel Generator Annunciators. This MAR was reviewed by the inspector as documented in Region II Report 78-10. The installation of this modification was completed in April 1978. In that the system retest has not been specified and revisions to annunciator (and/or operating and surveillance procedures) are not specified this item remains open.
- c. (Open) Outstanding Item (Details I, paragraph 6.b of RII Rpt. 77-18): Modification Requests Relating to Annunciators. Various modifications relating to annunciators are pending, the majority of which relates to heat tracing. Since they are not complete this item remains open.
- d. (Closed) Outstanding Item (Paragraph 6 of RII Rpt 77-19): Training Program. This item concerned the implementation and documentation of certain training activities required by AI-1200, Conduct of Training. The licensee has revised the AI's and training administrative requirements are now covered by AI-800, Conduct of Administrative Services. The inspector determined that training schedules and lesson plans have been established and has reviewed attendance records for selected training activities. The inspector noted that several training activities, particularly for health physics/chemistry personnel, were behind schedule due to the manpower demands of the outage. This item is closed.
- e. (Closed) Infraction: Maintenance Administration (RII Rpt. No. 77-21). This item was reviewed by the inspector as documented in Region II Report 78-6. Applicable maintenance administrative procedures have been revised and implemented. These procedures are:
- CP-113, Procedure For Handling Work Requests Including Discrepancies and Corrective Actions, dated 7/13/78
 - CP-115, In-Plant Equipment Clearance and Switching Orders, dated 8/11/78
 - AI-600, Conduct of Maintenance, dated 1/26/78.
- Additional inspection of maintenance program implementation will be part of a future inspection.
- f. (Closed) Outstanding Item (Paragraph 6 of RII Rpt. 77-23): "Q-List" for Safety-Related Items. This item concerned the generation of such a list to facilitate the procurement of safety-related items. The FPC Equipment List has been issued, dated July 12, 1978, and identifies QA and non-QA items on a system basis. This item is closed.

- g. (Open) Outstanding Item (Paragraph 6 of RII Rpt. 77-23): Certifications for purchased chemicals. Certain chemicals, such as sodium hydroxide, have not been purchased with appropriate certifications or specifications. The licensee is in the process of determining requirements, establishing specifications, and implementing a program to monitor chemicals subsequent to receipt. This item remains open.
- h. (Closed) Outstanding Item 78-04-02 (Paragraph 6 of RII Rpt. 78-4): Administrative Controls for Nonsafety-Related Modifications To Systems That May Interconnect To Contaminated Systems. This item resulted from the inspector's review of circumstances relating to an unplanned release that occurred on February 1, 1978. CP-115, In-Plant Equipment Clearance and Switching Orders, dated August 11, 1978, reflects the inclusion of this administrative guidance. This item is closed.
- i. (Closed) Outstanding Item 78-04-03 (Paragraph 7 of RII Rpt. 78-4): REI for High Pressure Injection Line Support. This item concerned the support configuration for the high pressure injection line connected to RCP-3A2 discharge. At the time of inspection number 78-4 the licensee received confirmation from Gilbert Associates Inc. (GAI) that the anticipated movement of this line was acceptable. Additional information received from GAI on February 8, 1978 provided justification for the licensee's decision to add no additional supports to this line. This item is closed.
- j. (Closed) Outstanding Item 78-04-04 (Paragraph 8.b. of RII Rpt. 78-4): Discrepancy in SP-201. This surveillance procedure, entitled Hydraulic Snubbers Inspection, had contained a discrepancy in the inspection interval. SP-201 has been revised and the inspection intervals contained therein meet Technical Specification requirements.
- k. (Open) Infraction 78-06-01 (Paragraph 5 of RII RPT 78-6): Failure to Follow Administrative Procedures Covering Usage of Plant Procedures
- (1) Paragraph 5.a of RII Rpt. 78-6 listed various procedures which had not received annual reviews. A check of these procedures indicated that several had still not received the annual review; hence this item remains open.
 - (2) Paragraph 5.b of RII Rpt. 78-6 concerned documenting procedure reviews made as a result of Technical Specification changes or plant modifications. A review of several recently revised documents indicated that these reviews are now being documented, closing this item.

- (3) Paragraph 5.c of RII Rpt. 78-6 concerned processing of temporary changes to procedures. A revision to AI 400, Plant Operations Quality Assurance Manual Control Document, clarifies processing of temporary changes. A review of control room copies of several procedures (with temporary changes in effect) revealed no discrepancies, closing this item.
- (4) Paragraph 5.d of RII Rpt. 78-6 concerned control over enclosures to procedures (when separated from the procedure and used as a working copy). The licensee has revised the Document Control procedure series and has established controls over these enclosures, closing this item.
- l. (Open) Unresolved Item 78-06-02 (Paragraph 3 of RII Rpt 78-6): Record Retention Controls of NUS Manual 1833. This publication is being revised (but has not been completed) to bring retention controls in compliance with Technical Specifications. Completion is expected by January 31, 1979. This item remains open.
- m. (Closed) Outstanding Item 78-06-03 (Paragraph of RII Rpt. 78-6): Housekeeping Discrepancies. Several items relating to housekeeping had been previously resolved by the licensee. Of particular interest to the inspector had been peeling paint on nuclear service closed cycle cooling headers in the reactor building. The peeling paint has been cleaned off and these pipes are being insulated. In that the insulation was essentially complete at the time of this inspection. This item is closed.
- n. (Open) Outstanding Item 78-06-04 (Paragraph 8.i of RII Rpt. 78-6): Modification to Steam Rupture Matrix. Two MAR's (Nos. 78-4-4 and 78-7-2) are being generated to implement this modification. The modification will be reviewed upon implementation.
- o. (Open) Deficiency 78-08-01 (Paragraph 6 of Details I to RII Rpt. 78-08): Fire Rating for Record Storage Vault Door. The licensee has a modification pending to correct this deficiency. Completion is expected by December 15, 1978.
- p. (Closed) Unresolved Item 77-08-03 (Paragraph 5.d of Details II to RII Rpt. 78-08): Modification Approval Record Form. This item indicated that the form in use was different than the form specified by CP-114, Procedure for Control of Permanent Modifications, Temporary Modifications, and Deviations. A review of recent modification (MAR) packages indicated that the correct form is being used. This item is closed.

- g. (Closed) Deficiency 78-10-01 (Paragraph 6 to RII Rpt. 78-10): Late Submittal of Monthly Operating Report. The licensee has established a tickler system to assure submittal of this report within Technical Specification time limits. No other late reports have occurred. This item is closed.
- r. (Open) Unresolved Item 78-10-02 (Paragraph 13 of RII Rpt. 78-10): Cleaner Used in Ultrasonic Sink. This item concerns the acceptability for nuclear application of the cleaner currently in use. The licensee has not received certification as to this cleaner's acceptability.
- s. (Open) Unresolved Item 78-10-03 (Paragraph 13 of RII Rpt. No. 78-10): Decontamination Procedures. This item related to three activities that were not addressed by facility decontamination procedures. Although the licensee is writing specific decontamination instructions for safety-related items (on a case basis), this unresolved item has not been addressed. This item remains open.
- t. (Closed) Outstanding Item 78-10-04 (Paragraph 7 of RII Rpt. 78-10): Additional Inspector Review of Fuel and Reactor Internals Data. Based upon the inspector's continued inspection of outage and core reload activities, as documented in RII Rpt 78-16 and this report, this item is closed.

- u. (Closed) Outstanding Item 78-10-05 (Paragraph 11 of RII Rpt. 78-10): Jumper Log Discrepancies. The jumper log was reviewed during the conduct of this inspection and no discrepancies were identified, closing this item.
- v. (Closed) Outstanding Item 78-10-06 (Paragraph 12 of RII Rpt. 78-10): Gaseous Release Sample Analytical Procedures. This item concerned a failure in analytical procedures to assure that gaseous release samples would be analyzed for conformance to 10 CFR 20.403 limits. RP 105, Radioactive Airborne Release Permit Procedure, has been revised to include this provision.
- w. (Closed) Infraction 78-16-03 (Paragraph 7.a of RII Rpt. 78-16): Use of Noncertified Hook. The inspector confirmed the implementation of commitments made in the licensee's response (dated July 28, 1978) to the Notice of Violation. Additionally, the licensee has conducted training concerning the use of hooks and slings at a plant staff safety meeting on August 8, 1978. The licensee has recalled any untagged slings that were in use in the spent fuel pool building and the reactor building and will not allow their issue for use until they are load-tested and tagged accordingly. This item is closed.

- x. (Closed) Infraction 78-16-04 (Paragraph 7.b of RII Rpt. 78-16): Failure to Take Adequate Corrective Action. This item related to the inadvertant movement of damaged (or potentially damaged) fuel assemblies prior to their inspection). The inspector confirmed licensee actions were as stated in their response (dated 28 July 1978) to the Notice of Violation. This item is closed.

3. Unresolved Items

None

4. Exit Interview

A meeting was held by R. H. Wessman with G. R. Westafer (acting for the Nuclear Plant Manager) and members of his staff on August 18, 1978. Items covered by this inspection were discussed, including a new noncompliance item concerning plant cleanliness (See paragraph 5 of these Details).

Mr. Wessman identified Mr. Don Quick as the new Region II facility project inspector for Crystal River 3, effective August 21, 1978.

The inspector and the licensee discussed selected aspects of the licensee's program leading to the restart of the unit. It is the inspector's understanding that the licensee will accomplish the following prior to startup of the reactor:

- Review POQAM Procedures for temporary changes made to support outage conditions and assure only applicable changes remain in effect.
- Review jumper and equipment clearance logs to purge all irrelevant jumpers or clearances.
- Complete system lineups of nuclear and safety-related systems that may have been out-service or affected by outage activities.

5. Plant Cleanliness Inspection

The inspector toured portions of the facility at various times during the week of the inspection to observe plant housekeeping and cleanliness. The inspector examined licensee actions against the criteria established by ANSI N45.2.3 - 1973, Housekeeping During the Construction Phase of Nuclear Power Plants, and CP-116, Standard Cleanliness Specifications.

CP-116, Standard Cleanliness Specifications, provides controls for general area cleanliness in sections 8.1.3 - 8.1.5 and specifically states: "Accumulation of dirt, debris, construction materials, etc.,

from shift to shift shall be prohibited." Contrary to the above, debris were allowed to accumulate along the edge of the fuel transfer canal as observed by the inspectors during the week of August 14-18, 1978. Some of these debris fell onto the reactor vessel plenum, necessitating action by the licensee to retrieve them. This has been identified as an infraction in the Notice of Violation. (78-21-01).

The licensee has committed to Regulatory Guide 1.39 (Rev -1), Housekeeping Requirements for Water-Cooled Nuclear Power Plants, in Section 1.7.6.7.1.S of the FSAR. This Regulatory Guide endorses ANSI N45.2.3 -1973, Housekeeping During the Construction Phase of Nuclear Power Plants, as applicable for operational plants. The inspector stated his concern over general cleanliness in the reactor building and referred the licensee to the foregoing documents. The licensee stated that they would be responsive to cleanliness in their recovery from the outage.

6. Review of Recent Outage Activities

The inspector reviewed recent outage activities and examined documentation for conformance to Technical Specification Requirements and facility procedural controls. The following items were inspected:

- Executed core map documenting core reload. Observed about 30% of videotape made to verify fuel assembly placement.
- Executed copies of FP-602, Irradiated Fuel Assembly Inspection, for the four fuel assemblies received from Oconee Nuclear Power Station.
- Executed fuel assembly move sheets for core load of the four fuel assemblies from Oconee and the associated core components shuffle.
- Executed surveillance documentation confirming satisfaction of prerequisites for fuel movement during the August 11-13, 1978 period.
- Licensee comments relating to the re-inspection of APSR A008. The licensee and Babcock and Wilcox have deemed A008 suitable for reuse in the reactor. This closes outstanding item 78-19-02.
- Executed copies of FP-301, Spent Fuel Receiving, Unloading, and Empty Cask Shipment and SP-428, Verification of Initial Conditions Prior to Spent Fuel Cask Handling, for the four fuel assemblies received from Oconee.

Within the areas inspected, no discrepancies were identified and inspector questions of a minor nature, were resolved.

7. Review of Licensee Event Reports

The inspector reviewed selected LER's for consistency with the requirements of the Technical Specifications and Regulatory Guide 1.16 (Reporting of Operating Information - Appendix A Technical Specifications). The inspector examined the licensee's analysis of the event, the corrective action taken, and discussed the LER with licensee representatives. The following LER's were reviewed:

a. LER 77-118, Core Flood Tank "A" Boron Concentration Low

This LER was previously reviewed by the inspector (See paragraph 6.a to RII Rpt. 77-25). MAR 78-15-18, entitled, "Core Flood Tank Mixing," has been issued for implementation. This MAR will provide for a nitrogen connection to the tank sample line. In that this MAR is not complete and plant operating procedure changes have not been identified, this LER remains open.

b. LER 77-140, Inoperable RCS Leakage Detectors

This LER was previously reviewed by the inspector (See paragraph 6.m to RII Rpt. 77-25). MAR 78-06-14 has been issued to modify the sample pump configuration and install a parallel pump. In that this MAR is not complete and plant operating procedure changes have not been identified, this LER remains open.

DETAILS II

Prepared by:

Donald R. Quick9/20/78

Date

D. R. Quick, Reactor Inspector
 Reactor Projects Section No. 1
 Reactor Operations and Nuclear
 Support Branch

Dates of Inspection: August 14-18, 1978

Reviewed by:

H. C. Dance9/24/78

Date

H. C. Dance, Chief
 Reactor Projects Section No. 1
 Reactor Operations and Nuclear
 Support Branch

1. Persons Contacted

- G. P. Beatty, Jr., Nuclear Plant Manager
- *W. R. Nichols, Operations Superintendent
- *P. F. McKee, Technical Services Superintendent
- *J. C. Wright, Chemistry/Radiation Protection Engineer
- W. R. Klein, Reactor Engineer
- *J. Cooper, Compliance Engineer
- *G. M. Williams, Compliance Plant Engineer
- *G. R. Westafer, Maintenance Superintendent
- *W. A. Cross, Technical Specifications Engineer
- *H. B. Lucas Administrative Supervisor

*Denotes those persons at exit interview.

2. Licensee Action on Previous Inspection Findings

Not inspected.

3. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during this inspection are discussed in Paragraph Nos. 5.a.1), 5.a.2), and 8.

4. Exit Interview

A meeting was held by D. R. Quick with G. R. Westafer, Acting Plant Manager, and members of his staff on August 18, 1978. Items covered by the inspection were discussed.

5. Review of Plant Operation

As part of a general review of plant operations and outage activities, the inspector reviewed the following areas for conformance with Technical Specification and Administrative requirements:

- Nonconforming Operation Reports (NCOR)
- Equipment Clearance Log
- Jumper Log

a. Nonconforming Operation Reports

The inspector reviewed all NCOR's, originated during the period April-June, 1978, to verify conformance to Technical Specification requirements for reporting and limiting conditions for operation. As a result of this review two unresolved items were identified.

- (1) Compliance Procedure 111, paragraph 3.3, provides that the Technical Support Engineer screen each NCOR and determine applicable reportability requirements, if any. In some instances documentation to support this determination was lacking, particularly in the area of unmonitored releases. During the exit interview, the licensee indicated that corrective measures would be implemented. (78-21-02)
- (2) Technical Specification 6.4.2 requires that training sessions be conducted at least quarterly for the Fire Brigade. At the present time a conflict exists between the Technical Specification requirement and the Administrative Instructions. AI-800 requires, in part, that "Special Teams" be retrained annually. The Fire Brigade Training program is described in AI-800, Enclosure 3. The Inspector noted that "Fire Drills", conducted at least quarterly, are being used to implement the training required by Technical Specifications, but that all fire brigade members may not actually participate in these drills on a quarterly basis. The licensee stated that he had not interpreted the Technical Specification to mean that all fire brigade personnel were required to participate in training every quarter. The inspector discussed this item with the licensee during the exit interview and informed him that Technical Specification clarification would be forthcoming. The licensee indicated that training would be implemented in accordance with the clarified position. (78-21-03)

b. Equipment Clearance Log

The inspector reviewed the equipment clearance log, for the period April-June 1978, to assure conformance to the requirements of Compliance Procedures 113 and 115. This was accomplished by verifying documentation and proper tag placement on equipment associated with nine clearances. No discrepancies were discovered; however, the inspector noted there was a sizeable number of outstanding clearances. This was discussed with the licensee at the exit interview and he agreed to audit the clearances and close all those not necessary. This is to be accomplished prior to systems realignment in preparation for the forthcoming startup.

c. Jumper Log

The inspector reviewed the jumper log, for the period April-June 1978 to assure conformance to the requirements of Technical Specification, Section 3 and Compliance Procedure 114. No discrepancies were discovered; however, it was noted there were still a large number of jumpers in place. This was discussed with the licensee at the exit interview and he stated that all unnecessary jumpers would be removed prior to systems realignment in preparation for the forthcoming startup.

6. Reactor Building Flooding Event

While touring the facility, the inspector was informed of an event that occurred on July 19, 1978, which resulted in the flooding of the reactor building (95' level) with approximately 5,000 gallons of reactor coolant system water. The event occurred as a result of surveillance being performed on borated water sources while the reactor coolant system was drained and open for maintenance. The reactor was in Mode 6 (Refueling); however, no refueling or maintenance activities were in progress at the time. Evaluation of the event revealed the cause to be failure of the surveillance procedure to address the positions of two manual valves in the Decay Heat System, either one of which would be normally open with this system in operation in Modes 4, 5, and 6. The licensee added these valves (DHV-39, and DHV -40) to the surveillance procedure following the event. The inspector discussed the event with the licensee at the exit interview and acknowledged that corrective action taken to terminate and recover from the event was proper. The inspector cautioned the licensee about the possibility of similar deficiencies in other procedures designed for use during power operation. The inspector also stated that although this event was not reportable to the NRC under present requirements, he felt that, due to the nature of the event, informal notification would have been appropriate. The licensee indicated that, in the future, the NRC would be informed of similar events.

7. Review of IE Circulars

The inspector reviewed applicable IE circulars with licensee personnel to ascertain that they have been received on site and reviewed by cognizant supervisory personnel. Licensee's actions on the following IE circulars were reviewed:

<u>Circular No.</u>	<u>Subject</u>
78-02	Proper Lubricating Oil for Terry Turbines
78-03	Packaging Greater Than Type A Quantities of Low Specific Activity for Shipment
78-04	Installation Errors That Could Prevent Closing of Fire Doors
78-05	Inadvertent Safety Injection During Cooldown
78-07	Damaged Components of a Bergen - Paterson Series 25000 Hydraulic Test Stand
78-08	Environmental Qualification of Safety Related Electrical Equipment at Nuclear Power Plants
78-09	Arcing of General Electric Company NEMA Size 2 Contractors
78-15	Tilting Disc Check Valves Fail To Close With Gravity in Vertical Position

The inspector has no further questions on IE Circulars 78-04, 78-05, 78-07, and 78-09 since they have been received and reviewed by supervisory personnel. These Circulars are closed. However, IE Circulars 78-02, 78-03, 78-08, and 78-15 will remain open pending completion of the licensee's review.

8. Licensee Organization and Administration

The inspector reviewed the licensee's organization to verify conformity to the requirements of Technical Specifications, Section 6 and Administrative Instructions 200, 700, and 800. The inspector has no further questions pertaining to the facility organization at this time. However, the review revealed that the present off site organization, as described in the personnel Manual, dated June 1978, does not agree with Technical Specification Figure 6.2 -1. This discrepancy has been identified in the past as Unresolved Item 77/3-1 and will remain open

until corrective action is implemented by the licensee. The inspector discussed the Unresolved Item with the licensee during the exit interview, at which time, the licensee made a commitment to evaluate the problem and provide plans for a solution by October 1, 1978.