



Florida Power

CORPORATION

Crystal River Unit 3
Docket No. 50-302

June 16, 1997
3F0697-14

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555-0001

Subject: Notice of Violation, NRC Inspection Report No.50-302/97-01
NRC to FPC letter, 3N0597-14, dated May 16, 1997

Dear Sir,

In the subject letter, Florida Power Corporation (FPC) received a request for a supplement to FPC's response to the subject Notice of Violation. This correspondence provides the requested information.

Sincerely,

John Paul Cowan
Vice President, Nuclear Production

JPC/JPB

Attachments

cc: Regional Administrator, Region II
NRR Project Manager
Senior Resident Inspector

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PDR ADOCK 05000302
Q PDR



Attachment 1
FLORIDA POWER CORPORATION
NRC INSPECTION REPORT NO. 50-302/97-01
REPLY TO A NOTICE OF VIOLATION

VIOLATION 50-302/97-01-01

10 CFR Part 50, Appendix B, Criterion V, Instruction, Procedures and Drawings, requires in part, that activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstances.

Contrary to the above, as of February 6, 1997, the licensee failed to prescribe quality related clearance tagging activities into an appropriate procedure in that Compliance Procedure 115, Nuclear Plant Tags and Tagging Orders, Revision 73, was inadequate because it did not require local tagging of valves or components and gagging of air-operated valves for red tag clearances. This inadequacy resulted in a valve being repositioned while under a red tag clearance.

This is a Severity Level IV Violation (Supplement 1).

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

FPC accepts the violation.

REASON FOR THE VIOLATION

The reason for the violation was procedural non-compliance due to personnel errors. The clearance should not have been authorized or accepted without identifying the Air Removal Valve (ARV) ARV-1 as a boundary valve. ARV-1 is the valve that repositioned while under a red tag clearance. Compliance Procedure (CP)-115, Nuclear Plant Tags and Tagging Orders, required air operated valves used for isolation to be gagged closed and motive air isolated and vented off. Additionally, the Assistant Nuclear Shift Supervisor (ANSS) should not have authorized the work package without knowing the effect the solenoid valve maintenance would have on the clearance. The Clearance Holder should have consulted the clearance or control room personnel prior to authorizing the solenoid valve work and questioned the boundaries, since they were not identified on the clearance. The Shift Supervisor On-Duty (SSOD), should have consulted with the board operators about the status of ARV-1 or received a brief from the ANSS regarding his previous discussion with the maintenance technician.

A procedural deficiency in CP-115 contributed to the violation in that local red tags were not required on valves whose control switches were tagged.

In addition to the ARV-1 incident, Crystal River Unit 3 has experienced other tagging related errors. As a result of these errors, FPC conducted a root / common cause assessment.

This assessment included a review of precursors generated in 1996 against the tagging program. The review revealed instances of procedure noncompliance, lack of understanding of the procedural requirements, switching and tagging training weaknesses, and inadequate reviews of clearances. As a result of these problems, a revision to CP-115, Nuclear Plant Tags and Tagging Orders, was completed. The revision included the following:

Complex or unique tagging orders require a second review by a licensed operator.

Signature of the Clearance Authority for approval to remove tags and restore equipment.

Improved guidance relating to double valve isolation.

Additional guidance for tagging air operated valves (AOVs), which requires tagging the air supply to AOVs, prohibits the use of clearances in cases where AOVs cannot be gagged, and requires tagging of the valve body for AOVs if the air line is not in close proximity.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

An immediate stand-down of tagging order related activities was conducted to ensure personnel understand the significance of the tagging process and the details of this event. This stand-down affected Mechanical, I&C, and Electrical Maintenance, System Maintenance as well as Facility Services and Plant Operations. A briefing on the ARV-1 incident was conducted, with the briefing information being turned over to ensure other shift crews received the information.

A walkdown of outstanding tagging orders, and a review of tags on local control stations was conducted. The walkdown revealed the following discrepancies:

27 boundary valves were not identified on clearances.

2 air operated valves were not in their fail-safe position.

6 tagging orders with maintenance in progress were lacking Shift Manager initials.

2 tagging orders were inappropriately considered clearances.

All discrepancies were immediately corrected and documented under the corrective action program.

Required reading was developed for Plant Operations personnel that described the event and the lessons learned.

The Operations Manager discussed this event and the interim corrective actions with plant operators.

A revision to CP-115 was issued on March 26, 1997, that required tagging of local valves in the same manner as boundary valves.

A copy of the root / common cause report was provided to the maintenance shops for their review. A training summary for the changes in CP-115, Revision 74, was also provided to the maintenance shops as required reading.

Additional corrective actions that resulted from the root / common cause analysis include:

Training was provided to the Plant Operations Crews stressing the importance of the Switching and Tagging Program.

A curriculum review meeting was held on May 15, 1997 to review the effectiveness of Switching and Tagging training. Enhancements to the training will include converting from computer based training to stand-up lecture and specific training for maintenance and operations personnel emphasizing their role in the switching and tagging program.

A revision to CP-115 will be completed by June 27, 1997 to simplify and improve the process.

An assessment will be conducted by February 24, 1998 to determine effectiveness of the corrective actions taken and to evaluate compliance with CP-115.

CORRECTIVE ACTIONS THAT WILL BE TAKEN

None.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

FPC is in full compliance.

VIOLATION 50-302/97-01-02

Technical Specification 5.6.1.1 requires, in part, that procedures be implemented covering activities as recommended in Regulatory Guide 1.33, Appendix A, Revision 2, dated February 1978. Appendix A recommends administrative procedures to cover the authorities and responsibilities for safe operation and shutdown, procedure adherence and temporary change method. The licensee implemented the above Appendix A recommendations, in part, through Procedure AI-500, Conduct of Operations and OI-09, Operations Procedures. OI-09 requires that activities will be performed in accordance with approved instructions.

The licensee's modification functional test procedure, Modification Approval Record 96-10-05-01, Test Procedure-1, Attachment A, states that after the emergency diesel engine has been stopped for at least 15 minutes, but not more than 20 minutes, steps 4.6.30 through 4.6.34

should be performed. Step 4.6.30 trips the fuel racks, which should prevent an inadvertent diesel start while rolling it with air.

Contrary to the above, on February 1, 1997, a non-licensed plant operator failed to follow instructions contained in licensee procedure Modification Approval Record 96-10-05-01, Test Procedure-1, Attachment A for restoring the emergency diesel generator EDG-1A, following the functional test. Specifically, several steps, including 4.6.30, were not completed as required, resulting in an unplanned start of the emergency diesel generator.

This is a Severity Level IV Violation (Supplement 1).

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

FPC accepts the violation.

REASON FOR THE VIOLATION

The cause of the violation was personnel error due to a failure to exercise good judgment, and self-induced pressure to complete the task.

The Primary Plant Operator (PPO) performed a step out of sequence when he rolled the emergency diesel generator EDG-1A with starting air prior to tripping the fuel rack resulting in the unplanned emergency diesel generator start. A procedure note required that the PPO roll the diesel with air within a time limit following diesel shutdown. The PPO was concerned that he would exceed the time limit which he thought might affect the emergency diesel generator.

While the PPO knew that procedure steps were required to be performed in sequence, he failed to exercise good judgment by skipping several steps to roll the diesel with air in order to satisfy the time limit requirement.

The PPO skipped the step to manually trip the fuel rack. Instead of tripping the fuel rack, the PPO observed the position of the fuel rack from a distance and erroneously concluded the rack was tripped.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The Operations Manager discussed the unacceptable performance by the PPO. In addition, a personal improvement plan to improve the PPO's performance was developed using FPC's progressive discipline program.

The involved individual will not be permitted to perform the duties of the PPO until the performance improvement plan is complete and approved by the Operations Manager.

CORRECTIVE ACTIONS THAT WILL BE TAKEN

None.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

FPC is in full compliance.

VIOLATION 50-302/97-01-04

Technical Specification Surveillance Requirement 3.7.13.1 requires that the licensee verify the fuel storage pool water level is ≥ 156 foot plant datum once per 7 days during movement of irradiated fuel assemblies in the fuel storage pool.

Contrary to the above, between August 1994 and November 1996, on five occasions during irradiated fuel movement, the licensee failed to perform a valid surveillance test, in that instruments, SF-1-LT1 and SF-1-LT2, used to verify fuel storage pool water level, were not within their allowable calibration intervals. Subsequent calibrations revealed that SF-1-LT1 was outside the acceptance criterion and could not be calibrated within it, and SF-1-LT2 was found with a significant zero offset, but was able to be calibrated within acceptance criteria.

This is a Severity Level IV Violation (Supplement 1).

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

FPC accepts the violation.

REASON FOR THE VIOLATION

The computer program developed for operations to identify Out of Cal/Inoperable Instruments as a corrective action for Problem Report 90-8002 was not incorporated into formal operations training. The expectation that operators use this program to verify the status of instruments used in surveillance procedures was not effectively communicated to operations personnel. As a result, operators were not aware that this computer program was available to use in confirming the calibration status of instruments used in surveillance procedures. Operators believed instruments outside their calibration interval would be marked "Out of Service". However, the "Out of Service" program did not include instruments beyond their calibration frequency.

Previous corrective actions taken by the Engineering Department responsible for the Instrument Calibration Program did not resolve the instruments being outside their calibration interval. A 1990 Problem Report, which identified the instruments were beyond their calibration frequency, was closed without the corrective action to resolve the transmitter tolerance issue being completed.

The instruments were calibrated by a work request governed by Administrative Procedure, AI-605, Preventive Maintenance Program instead of a technical specification surveillance procedure. AI-605 did not contain adequate guidance for required actions when instruments exceed their calibration interval.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

Effective December 16, 1996, fuel storage pool water level is being monitored by an alternate method until SF-1-LT1 and SF-1-LT2 can be returned to service.

A review of other preventive maintenance calibration procedures identified additional instruments beyond their calibration frequency. Precursor Cards (PCs) were written to track the completion of the calibrations. Three of the PCs have been closed with the instrument calibrations completed. The fourth PC tracked instruments used to satisfy Technical Specification (TS) Surveillance Requirement (SR) 3.6.5.1, concerning Reactor Building average temperature. The calibration of these instruments is in progress; Restart Issue M-8 addresses this concern. The total number of instruments beyond their calibration frequency was added as an item for discussion and tracking to the Plan of the Day.

On February 15, 1997, a Night Order was issued to instruct Operations to run a computer check using the SP Tag Status, prior to performance of surveillance procedures. This check provides a mechanism to ensure that instruments used in surveillance procedures are not overdue for calibration or are otherwise inoperable.

Operations Surveillance Procedure SP-301 was revised in April 1997, to give specific guidance on verifying instruments are within their normal calibration frequency.

The View/Print Working Copy program has been revised. A cover sheet is now printed with working copies of SPs which require the SP TAG STATUS report to be run. The initial date that the report is run is included. This cover sheet is transmitted with the completed SP.

CORRECTIVE ACTIONS THAT WILL BE TAKEN

The use of the SP Tag Status program will be incorporated into the Operations formal training program by September 1, 1997 and incorporated into operator re-qualification training in the fourth quarter.

AI-605 will be revised by June 30, 1997, for the following:

- To provide guidance on what constitutes justification for not calibrating instruments.

- To give specific guidance for actions required when instruments exceed their calibration interval.

- To require Weekly SP Tag Status reports be delivered to the NSSOD to identify instruments that have exceeded their calibration interval.

Operations Surveillance Procedure SP-300 will be revised by September 15, 1997, to give specific guidance on verifying instruments are within their normal calibration frequency.

AI-400E will be revised by June 15, 1997, to reflect the above change to the View/Print Working Copy Program concerning MACS SP TAG STATUS.

FPC is developing formal expectations and duties to be completed by June 30, 1997, for Daily Schedulers, which will include guidelines in developing the Daily Schedule, emphasize the importance of Scheduling of AI-605 calibrations (PM Program) and the requirement to verify and validate information when used to justify not scheduling/performing required AI-605 calibrations.

Instruments used to satisfy technical specification required surveillances will be incorporated into scheduled calibration surveillance procedures by November 26, 1997. Instruments that are outside their calibration interval will be declared "Out of Service" and will not be used until calibrated.

FPC's plans to address corrective action program enhancements are discussed in FPC's letter to the NRC of April 11, 1997 (3F0497-34). A revised corrective action program has been implemented which includes a single graded approach process (priority classification), a screening committee, root cause teams, and a Corrective Action Review Board (CARB). The revised process ensures that Precursor Cards are promptly reviewed, prioritized, and distributed to the assigned owner. This has resulted in improvements of timely cause determination and corrective action implementation.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

FPC is in full compliance as of December 16, 1996, with the implementation of the alternate method for monitoring fuel storage pool water level.

VIOLATION 50-302/97-01-07

10 CFR 50, Appendix B, Criterion III, Design Control, requires measures that assure that the applicable regulatory requirements and design basis for safety-related components are correctly translated into specifications, drawings, procedures, and instructions. When this translation is accomplished through calculations, the measures must assure that the assumptions and data used in performing the calculations are justified and correct.

Contrary to the above, as of February 22, 1997, the licensee's measures did not assure that the applicable regulatory requirements and design basis for safety-related components would be correctly translated into specifications, drawings, procedures, and instructions. The design assumptions for Auxiliary Building temperatures used in the Environmental and Seismic Qualification Program Manual (ESQPM) and in instrument loop uncertainty setpoint calculations were not properly translated into procedures for calibration of the instruments, the Engineering Design Basis Document, or the Final Safety Analysis Report. Additionally, there were no procedures for ensuring that the Auxiliary Building temperatures would be maintained within the ranges assumed by the ESQPM and the instrument setpoint loop uncertainty calculations.

This is a Severity Level IV violation (Supplement 1).

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

FPC accepts the violation.

REASON FOR THE VIOLATION

The reason for the violation was inadequate design control in that FPC failed to ensure analysis/calculation design inputs and assumptions were properly identified and maintained in implementing and operational procedures. Specifically, area temperature requirements were not adequately controlled resulting in the potential for calibrations to occur outside of required temperature limits. This could result in increased instrument error due to larger differential temperature bands than were assumed in supporting analysis/calculations.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

PC 97-0984 was initiated to document the lack of administrative controls to ensure temperature ranges assumed in instrument calculations are being maintained to prevent adversely impacting the instrument string error calculations. An initial assessment was conducted to determine the sensitivity of the final results of the calculations to variations in the assumed temperature ranges; for those instruments that were evaluated, the impact on the results and conclusions of the calculations was negligible. However, because of the potential for past safety related calibrations to have been performed outside of analyzed parameters, a four hour report was submitted in accordance with 10 CFR 50.72(b)(2)(i) and a Licensee Event Report (LER 97-007-00) was submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(ii)(A) as an unanalyzed condition. Subsequently, Restart Issue D-26 has been developed to address the issue and ensure appropriate resolution prior to restart. An action plan has been developed to include:

1. Identification of instrument surveillance procedures performed since the last refueling outage, the dates the procedures were performed, and the daily temperatures on those dates;
2. Evaluation to determine which current Mode 5 required instruments could potentially be adversely impacted by temperature variations larger than those assumed by the design calculations, evaluation of the impact of the temperature variations on the affected instruments, and initiation of required corrective actions;
3. Development of procedural controls to ensure calibrations are performed within design basis temperature requirements, and the subsequent performance of required instrument calibrations;
4. Development of administrative controls to ensure that other engineering requirements are correctly translated from the instrument setpoint calculations to the applicable operation and maintenance procedures; and
5. Completion of an engineering evaluation and root cause analysis.

Action plan item (1) has been completed.

CORRECTIVE ACTIONS THAT WILL BE TAKEN

Action plan items (2) and (3) will be completed to address the condition of the instrumentation. Based on current plant configuration, instrumentation required for Mode 5 operation has been evaluated and resultant corrective actions have been completed. Procedure controls to ensure calibrations are performed within design basis temperature requirements will be established by August 1, 1997. Recalibration of instrumentation within the design temperature range will be completed as part of restart to ensure compliance with the design temperatures assumed in the instrument calculations.

Action plan item (4) will be completed by August 29, 1997, to ensure engineering requirements specified in the calculations are translated into plant operations and maintenance procedures. This will support proper equipment calibration and operation.

Action plan item (5) the root cause is complete and in the corrective action review process at this time. A supplement to the LER will be submitted to identify the root causes and corrective actions taken once the engineering evaluation is completed.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

A supplement to LER 97-007-00 will be issued by July 18, 1997. Full compliance will be achieved with the completion of Restart Issue D-26 which will be completed prior to startup.

VIOLATION 50-302/97-01-03

10 CFR 50, Appendix B, Criterion XVI requires that measures shall be established to assure that conditions adverse to quality such as deficiencies and nonconformances are promptly identified and corrected.

This requirement is implemented by Florida Power Corporation Quality Program Section 1.7.1.16, Corrective Action

Contrary to the above, since December 1993, deficiencies and nonconformances were identified in safety related cables but were not corrected. Calculation E91-0020 identified deficiencies or nonconformances with safety-related cables MTL-117, AHC-656 and MTL-67, but as of February 14, 1997, they had not been corrected.

This is a Severity Level IV violation (Supplement 1).

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

FPC accepts the violation.

REASON FOR THE VIOLATION

The reason for the violation is that cable ampacity issues were not believed to be an immediate concern for plant operation. Therefore, resolution of the problems identified in the Electrical Calculation Enhancement Program Open Item Report (OIR) was not given a high priority. Programmatically, the corrective action process did not assign an appropriate priority to this issue. As a result, no plan, schedule, or resources were directed toward the resolution of the concerns identified in the OIR. In addition, no active tracking mechanism existed to identify suspect cables and ensure resolution.

CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

PC 96-3705 was initiated to identify ampacity concerns with power cables previously evaluated as acceptable and initiate a review of the basis for those conclusions. This precursor card will track the resolution of the ampacity concerns in the original OIR.

Restart Issue D-22 will complete the review of the cable ampacity issues and address potential operability concerns that arise.

CORRECTIVE ACTIONS THAT WILL BE TAKEN

Restart Issue D-22 action plan will be completed and a report will be prepared describing the scope of review, the methodology used to evaluate the cables, the results obtained, and corrective actions taken. Completion of Restart Issue D-22 will ensure that the ampacity concerns with suspect cables are resolved.

Newly installed cables are now subject to the requirements of the Electrical Design Criteria Manual which specifically addresses the cable ampacity sizing criteria. In addition, the sizing criteria is being clarified.

FPC's plans to address corrective action program enhancements are discussed in FPC's letter to the NRC of April 11, 1997 (3F0497-34). A revised corrective action program has been implemented which includes a single graded approach process (priority classification), a screening committee, root cause teams, and a Corrective Action Review Board (CARB). The revised process ensures that Precursor Cards are promptly reviewed, prioritized, and distributed to the assigned owner. This has resulted in improvements of timely cause determination and corrective action implementation.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance will be achieved when Restart Issue D-22 is completed prior to startup.

Attachment 2

This table contains a listing of commitments contained in this supplemental response.

RESPONSE SECTION	COMMITMENT	DUE DATE
Pg. 4	CP-115 is being revised (Revision 75) to simplify and enhance the process.	June 27, 1997
Pg. 4	An assessment will be conducted to determine effectiveness of the corrective actions taken and to evaluate compliance with CP-115.	February 24, 1998
Pg. 7	The use of the SP Tag Status program will be incorporated into the Operations formal training program by September 1, 1997 and incorporated into operator re-qualification training in the fourth quarter.	September 1, 1997
Pg. 7	AI-605 will be revised by June 30, 1997, for the following: To provide guidance on what constitutes justification for not calibrating instruments. To give specific guidance for actions required when instruments exceed their calibration interval. To require Weekly SP Tag Status reports be delivered to the NSSOD to identify instruments that have exceeded their calibration interval	June 30, 1997
Pg. 7	Operations Surveillance Procedure SP-300 will be revised by September 15, 1997, to give specific guidance on how instruments are to be verified within their normal calibration frequency.	September 15, 1997

Pg. 8	AI-400E will be revised by June 15, 1997, to reflect the above change to the View/Print Working Copy Program concerning MACS SP TAG STATUS.	June 15, 1997
Pg. 8	FPC is developing formal expectations and duties to be completed by June 30, 1997, for Daily Schedulers which will include guidelines in developing the Daily Schedule, emphasize the importance of Scheduling of AI-605 calibrations (PM Program) and the requirement to verify and validate information when used to justify not scheduling/performing required AI-605 calibrations.	June 30, 1997
Pg. 8	Instruments used to satisfy technical specification required surveillances will be incorporated into scheduled calibration surveillance procedures. Instruments that are outside their calibration interval will be declared "Out of Service" and will not be used until calibrated.	November 26, 1997
Pg. 9	Develop procedural controls to ensure calibrations are performed within design basis temperature requirements, and the subsequent performance of required instrument calibrations;	August 1, 1997
Pg. 9	Develop administrative controls to ensure that other engineering requirements are correctly translated from the instrument setpoint calculations to the applicable operation and maintenance procedures.	August 29, 1997
Pg. 10	A supplement to LER 97-007-00 will be issued by July 18, 1997.	July 18, 1997