

Florida Power

CORPORATION

Crystal River Unit 3
Docket No. 50-302

November 9, 1995
3F1195-14

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

Subject: Notice of Violation (NRC Inspection Report No. 50-302/95-16)
NRC to FPC letter, 3N1095-13, dated October 13, 1995

Reference: Licensee Event Report 95-010-00
(FPC to NRC letter, 3F0795-06, dated July 20, 1995)

Licensee Event Report 95-014-00
(FPC to NRC letter, 3F0995-05, dated September 18, 1995)

Licensee Event Report 95-016-00
(FPC to NRC letter, 3F0995-13, dated September 29, 1995)

Dear Sir:

By your letter of October 13, 1995, Florida Power Corporation (FPC) received a Notification of Violation (NOV) concerning an inadequate procedure that resulted in reduced cooling water flow to a Makeup Pump (MUP) motor. Additionally, a Notice of Deviation (NOD) relating to the maintenance of the Technical Support Center (TSC) ventilation system was included in that letter. The purpose of this letter, with its attachment, is to provide our response to the NOV and NOD.

In your cover letter, you also requested that we include a supplemental response to a previous violation. The request was in regard to an additional example of an incorrect setpoint. This letter also addresses that concern.

It should be noted that this NOV was identified by FPC and reported to the NRC by LER 95-010. The NOD was also identified by FPC and has been reported to

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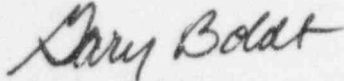
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the NRC by LER 95-014. The additional example of an incorrect setpoint was identified by FPC and reported to the NRC by LER 95-016.

Sincerely,



G. L. Boldt
Vice President
Nuclear Production

GLB/RLM

Attachment

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

**FLORIDA POWER CORPORATION
NRC INSPECTION REPORT NO. 50-302/95-16
REPLY TO A NOTICE OF VIOLATION**

VIOLATION 50-302/95-16-03

Technical Specification 5.6.1.1 requires that written procedures be established, implemented and maintained for activities recommended by Regulatory Guide 1.33, Revision 2, Appendix A, February, 1978. Regulatory Guide 1.33, Appendix A requires procedures be developed for the operation of letdown and purification systems and for the operation of component cooling systems.

Contrary to the above, the licensee's procedure to perform a flow balance of the decay heat closed cycle cooling water system to makeup pump 1A motor was inadequate in that the resultant flow was 32 gpm versus the required 50 gpm flow per the design basis. This resulted in the operation of the makeup pump 1A outside of its design basis.

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

Florida Power Corporation (FPC) accepts the violation.

REASON FOR THE VIOLATION

The cause of this event was an inadequate procedure. The normal cooling water supply to MUP-1A is via the Nuclear Closed Cycle Cooling Water System (SW). The Decay Heat Closed Cycle Cooling System (DC) is a lower pressure system and serves as a backup source of cooling water. Both the DC and SW systems were flow balanced to various components (including MUP-1A) using procedure PT-136, titled "DC and SW System Flow Measurements and EGDC-1A KW loading Due to ES Pumps."

PT-136 contained steps to balance the flow to MUP-1A as supplied by the DC system. The procedure did not contain steps requiring the balancing of SW flow to MUP-1A. When using this procedure to perform prior system balances, interim procedure changes were made that changed the requirement from balancing the DC supply to MUP-1A to balancing SW flow to MUP-1A. The justification for these interim procedure changes was that MUP-1A was normally supplied by the SW system and not the DC system. By balancing the flow with higher pressure SW, the DC system did not supply the required flow when used to provide cooling water to MUP-1A.

CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

1. DC cooling to MUP-1A was placed under administrative control to ensure that MUP-1A is not aligned to DC cooling until flow balancing is completed.
2. The minimum required design basis cooling flow to MUP-1A has been re-evaluated. This evaluation concluded that MUP-1A would have operated satisfactorily during both routine and accident conditions with cooling water supplied by the DC system at an indicated flow to the motor cooler of 32 gpm. This was completed July 6, 1995.

3. The design basis of the DC system with reduced flow to other components when DC is aligned to MUP-1A has been evaluated. A second evaluation considered the reduction of SW system flow when MUP-1C is aligned to SW. These actions were completed on September 11, 1995 and no additional concerns were identified.
4. Component upper flow limits have been established for the DC system for use in flow balancing. This was completed on August 17, 1995.
5. SW system interfaces have been evaluated to determine if similar alternate system line-ups exist which need to be considered as part of the system re-balance. This evaluation was completed on August 29, 1995 and determined that an additional procedure revision to Operating Procedure OP-408 "NUCLEAR SERVICES COOLING SYSTEM" will be required. This revision is dependent on the installation of an orifice during the Refuel 10 outage which is currently scheduled for the spring of 1996.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

1. Component upper flow limits will also be established for the SW system for use in flow balancing. This will be completed by December 1, 1995.
2. Procedure PT-136 has been separated into two procedures to clearly differentiate between DC and SW flow balancing. The DC system procedure (PT-136B) has been issued. The SW procedure (PT-136A) will be revised prior to its next use.
3. Flow balancing of the DC system is in progress with the "B" train completed on October 18, 1995. Flow balancing of the "A" train is expected to be complete by the end of 1995. The SW system will be flow balanced during the Refuel 10 outage currently scheduled for the spring of 1996.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance will be achieved with completion of flow balancing of both systems. SW system flow balancing will be conducted during Refuel 10 currently scheduled for the spring of 1996.

FLORIDA POWER CORPORATION
NRC INSPECTION REPORT NO. 50-302/95-16
REPLY TO A NOTICE OF DEVIATION

DEVIATION 50-302/95-16-05

NUREG-0737, Clarification of TMI Action Plan Requirements, Supplement 1, item III.A.1.2, Upgrade Emergency Support Facilities, requires (in part) that each facility shall have a Technical Support Center (TSC) which will be habitable to the same degree as the control room for postulated accident conditions.

In response to item III.A.1.2. in a letter to the NRC dated January 11, 1980, the licensee committed to providing protection from radiological hazards, including direct radiation and airborne contaminants as per General Design Criterion (GDC) 19 and Standard Review Plan (SRP) 6.4 for the technical support center.

In response to Generic Letter 81-10, Post-TMI Requirements for the Emergency Operations Facility, the licensee's letter to the NRC, dated April 14, 1981, stated that the TSC would be functional per the guidance of NUREG-0696 and NUREG-0737 (Item III.A.1.2).

NUREG-0696, Functional Criteria for Emergency Response Facilities, Section 2.6, Habitability, states (in part) the following:

Since the TSC is to provide direct management and technical support to the control room during an accident, it shall have the same radiological habitability as the control room under accident conditions. TSC personnel shall be protected from radiological hazards, including direct radiation and airborne radioactivity from inplant sources under accident conditions, to the same degree as the control room personnel.

The TSC ventilation system shall function in a manner comparable to the control room ventilation system. The TSC ventilation system need not be seismic category I qualified, redundant, instrumented in the control room, or automatically activated to fulfill its role. A TSC ventilation system that includes high-efficiency particulate air (HEPA) and charcoal filters is needed, at a minimum.

Acceptance Criteria in SRP 6.4 includes meeting the requirements of GDC 19, as it relates to maintaining the control room in a safe, habitable condition under accident conditions by providing adequate protection against radiation. The "Licensee Enhanced Design Basis Document" states, in part, "The TSC air handling system emergency filter fan ASH-62 design flow requirement is 3000 cfm."

Contrary to the above, on August 18, 1995, the licensee determined that the TSC ventilation system had not been properly maintained per their commitments. Specifically, the proper flow balance was not maintained on the system, resulting in a high flow rate of 4600 cfm in the emergency (recirculation) mode of operation versus the design flow rate of 3000 cfm, degrading the performance of the ventilation filtration system. This caused the TSC ventilation system to be operating outside its design basis since July 1994.

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

FPC agrees with the deviation.

REASON FOR THE DEVIATION

Two mechanical factors have been identified which adversely affected the system flows:

1. Fan performance substantially exceeded design flow requirements. This required throttling of system dampers to a point where slight changes had significant effects on system flows. Fan speed has been reduced to correct this problem.
2. Motorized dampers were used to balance system flows. In conjunction with the excessive fan performance, repeatability of damper position when the system was cycled could have affected flows. This problem has been corrected by removing power from the dampers and setting them to a fixed position.

This problem has also been attributed to lack of proper identification of design requirements. Design Change Notice (DCN) 92-534 was issued to provide setpoints for damper flow balance. The design drawing incorrectly indicated an outside air requirement of 500 CFM (instead of the calculation range of 375 to 509 CFM) and recirculation flow of 2,500 CFM. Unless otherwise stated on the design drawing, the flow balancing procedure MP-217 provides a flow tolerance of +/- 10% of the design number. This tolerance was used to balance the system, causing the 509 CFM limit specified in the dose calculation to be exceeded. The minimum outside air requirement of 375 CFM specified in the design calculations was not affected since it fell within the 500 +/- 10% band.

The DCN failed to adequately specify the required flow range.

CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

1. As noted in items 1 and 2 above, work was initiated to properly balance TSC emergency air flow.
2. An extensive engineering effort was undertaken to review the problems associated with the TSC ventilation system. This effort resulted in a comprehensive corrective action plan issued on October 31, 1995.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER DEVIATIONS

1. Procedures will be revised to provide lineup and test points for the ventilation system emergency mode of operation. These revisions will be completed by December 15, 1995.
2. The minimum TSC staffing level required to support emergency operations is being evaluated to determine the impact on TSC ventilation design and testing, if any. If no modifications to the ventilation system are required, this will be completed by December 15, 1995 and any additional flow balancing will be completed by January 15, 1996. If modifications are required, the corrective action plan will be revised and new completion dates will be provided.

DATE WHEN CORRECTIVE ACTIONS WILL BE COMPLETE

Dates for completion of identified corrective actions are stated above. The NRC will be formally notified of any changes to the corrective action plan or completion dates.

SUPPLEMENTAL RESPONSE TO VIOLATION 50-302/95-02-04

As stated in NRC Inspection Report 50-302/95-16, "...the design basis for the EFIC natural circulation cooldown setpoint was not correctly incorporated into procedures in that on August 31, 1995 the licensee found that the EFIC natural circulation setpoints were presently set at 281 inches in the OTSG in lieu of the required 316 inches. This is a violation of 10 CFR 50, Appendix B, Criterion III and is identified as an additional example of the violation 50-302/95-02-04 which was issued under EA 95-16."

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

Florida Power Corporation (FPC) accepts the violation.

REASON FOR THE VIOLATION

The primary cause was a change in the methodology used by FPC for instrument setpoint determination. This change was based on problems identified in 1994 and reported in LER 94-006-03 relative to Reactor Protection System (RPS), Engineered Safeguards Actuation System (ESAS), and Emergency Feedwater Initiation and Control (EFIC) setpoints being set non-conservatively in surveillance procedures. FPC has undertaken a program to expand the scope of the Analysis/Calculations to correct the deficiency using Instrument Society of America (ISA) standard RP67.04, Part II, "Setpoints for Nuclear Safety-Related Instrumentation," which was approved by the ISA in September 1994. This methodology was unavailable when the original setpoints were developed. It was expected that the setpoints using the newer methodology would differ from those developed using the original methodology.

CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

1. A formal operability evaluation was conducted in accordance with NOD-14, "Evaluating Operability and Determining Safety Function Status." This activity was completed on August 31, 1995. This evaluation determined that the EFIC system remained operable and would function as required by the ITS.
2. A Short Term Instruction (STI) has been issued to operations personnel to change the EOP setpoint for maintaining natural circulation.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

The EFIC system setpoint for natural circulation will be changed to reflect the revised calculations during the Refuel 10 outage. Appropriate procedures will be revised and instrument string calibrations will be performed.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

The procedures noted above will be revised prior to their next performance, currently scheduled for the Refuel 10 outage in the spring of 1996.