Florida
Power
CORPORATION
Crystal River Unit 3
Docket No. 50-302

July 9, 1997
3F0797-39

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

Subject: FPC to NRC letter, 3F0396-14, dated March 25, 1996
Response to a Notice of Violation (NRC Inspection Report No.50-302/95-21)

Dear Sir:

In the subject letter, Florida Power Corporation (FPC) responded to a Notification of Violation concerning a lack of electrical isolation between safety related circuitry and non-safety related circuitry. In that response, FPC stated that a supplement to the response would be provided by December 20, 1996. As noted in NRC Inspection Report 50-302/97-02 dated June 2, 1997, the supplement was not submitted. This correspondence provides the revised response which includes a schedule for resolution of discrepancies associated with the Reactor Building Purge System containment isolation valves. This response also includes the results of our extent of condition review for electrical isolation concerns.

Sincerely,

John Paul Cowan
Vice President, Nuclear Production

JPC/RLM

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

ATTACHMENT 1

FLORIDA POWER CORPORATION
NRC INSPECTION REPORT NO. 50-302/95-21
REPLY TO A NOTICE OF VIOLATION

VIOLATION 50-302/95-21-03

10 CFR 50, Appendix B, Criterion III, Design Control, requires that measures be established to assure that applicable regulatory requirements and the design basis for those structures, systems, and components to which this appendix applies are correctly translated in specifications, drawings, procedures, and instructions. FSAR paragraph 8.1, Design Basis, states that the electrical systems design satisfies the IEEE 308 Proposed Criteria for Class IE Electrical Systems, dated June 1969. IEEE 308 dated June 1969, paragraph 5.2, Alternating Current Power Systems, states; Sufficient physical separation, electrical isolation, and redundancy shall be provided to prevent the occurrence of common failure mode in the Class IE electrical systems.

Contrary to the above, the safety related circuitry for the containment purge and mini-purge valves was found to not be isolated from the non-safety related circuitry for the radiation monitor, RM-A1.

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

Florida Power Corporation (FPC) accepts the violation.

REASON FOR THE VIOLATION

This condition is a result of cognitive personnel error by Engineering during original plant design. The design engineer for the subject circuits failed to recognize the design criteria for electrical isolation as described in IEEE 308 "Proposed Criteria for Class 1E Electrical Systems for Nuclear Power Generating Stations" dated June, 1969. In the case of the containment purge valves, the condition was created by the Architect Engineer during original plant design. In the case of the mini-purge valves, the condition was created by the FPC Nuclear Engineering Department during a plant modification in 1988. This modification used the same design as the original purge valve design.

IMMEDIATE CORRECTIVE ACTIONS

An evaluation of the control circuits for Containment Purge valves AHV-1A through 1D confirmed that the closure function of the valves is maintained in MODES 1 through 4 by the sealed closed position of the valves. There are no credible failure modes which could cause these valves to spuriously open during power operation.

Evaluations of the control circuits for LRV-70 through LRV-73 indicated that a short-circuit in the RM-A1 control cabinet could keep the valves energized, thereby rendering inoperable the Engineered Safeguards Actuation closure signal. The power to these valves was subsequently removed so that the valves would be in their safeguards position until the modifications were made to provide the isolation relays between RM-A1 and the valve circuitry.

ADDITIONAL CORRECTIVE ACTIONS

Permanent modifications have been installed that added isolation relays between the non-safety circuits and valves AHV-1B, AHV-1C, LRV-70, LRV-71, LRV-72 and LRV-73. The modifications completed the corrective actions relating to RM-A1 and these valves.

Modifications for purge valves AHV-1A and AHV-1D are being developed and are scheduled for completion by November 13, 1997. These modifications are being implemented as part of Restart Issue D-30.

ACTIONS TO PREVENT RECURRENCE

The Electrical Design Criteria Manual was developed in 1991 as a single, complete, reliable source of design documentation for electrical circuit routing and other technical areas for the purpose of assuring consistency in the design process.

The extent of condition of electrical isolation discrepancies has been reviewed by FPC. Systems and equipment reviewed include the Leak Rate Testing System, the Radiation Monitoring Control Console, the Reactor Building Environmental Control System, the Pressurizer Heater Motor Control Centers, the Main Control Board and the Toxic Gas Analyzers. No other electrical isolation discrepancies were identified as part of the extent of condition review.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved for AHV-1B, AHV-1C, LRV-70, LRV-71, LRV-72 and LRV-73 by the installation of a permanent modification noted above.

Full compliance will be achieved for AHV-1A and 1D by the installation of a permanent modification scheduled for completion by November 13, 1997 (Restart Issue D-30).

ATTACHMENT 2

FLORIDA POWER CORPORATION

RESPONSE TO VIOLATION NO. 50-302/95-21-03

The following table contains a listing of those actions contained in FPC's response that are considered commitments by FPC.

COMMITMENT	DUE DATE
Install modifications to AHV-1A and AHV-1D.	November 13, 1997.