



# Florida Power

CORPORATION

Crystal River Unit 3

Docket No. 90-302

August 17, 1995  
3F0895-14

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

Subject: Inservice Testing Program (IST) Revised Relief Request V-129

Dear Sir:

Florida Power Corporation (FPC) is requesting review and approval of the attached revision to Relief Request V-129. This relief request was previously submitted and approved by the NRC in accordance with the guidance provided in Generic Letter 89-04, Position 2. Pursuant to 10 CFR 50.55a(3)(ii), FPC is proposing a one-time change to the approved frequency in Relief Request V-129.

Specifically, FPC is requesting to modify the alternating schedule by which these valves (Core Flood isolation check valves CFV-2 and CFV-4) are currently being disassembled and inspected. The currently approved relief request would require at least one of the valves to be done in Refuel 10. These valves were disassembled and inspected during our previous refueling outage (1994), with satisfactory results. The proposed change in schedule, would allow FPC to perform the next inspection of CFV-2 and CFV-4 during refueling outages 11 and 12 respectively. FPC believes our request and its basis are consistent with the guidance given in NUREG 1482, Appendix A, NRC Staff Position 2, "responses," and "current considerations" to questions 12 and 19 of that appendix.

FPC would appreciate your prompt review of this request since it will impact our next refueling outage scheduled for February 1996.

Sincerely,

P. M. Beard, Jr.  
Senior Vice President  
Nuclear Operations

PMB/LVC

Attachment 220018

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## RELIEF REQUEST

V-129

Reference Code: ASME Boiler and Pressure Vessel Code, Section XI, 1983 edition through summer 1983 addenda.

### I. Component For Which Exemption/Relief Is Requested:

- a) Name and identification number (component tag): CFV-2, check valve isolation from "A" core flood tank: CFV-4 check valve isolation valve from "B" core flood tank.
- b) Function: These valves are in the flow path from the core flood tanks to the reactor coolant system (RCS). These valves open to allow the core flood tanks to discharge their contents to the RCS when the RCS pressure drops below core flood tank pressure during a LOCA. These valves also serve to prevent backflow from the Decay Heat (DH) system to the core flood tanks when DH system pressure is greater than core flood tank pressure.
- c) ASME Section III Code Class: 1.
- d) Valve Category: C.

### II. Reference Code Requirement That Has Been Determined To Be Impractical:

- 1) IWV-3522; partial stroke valve exercise during normal plant operation and full stroke valve exercise during cold shutdown.

### III. Basis For Requesting Relief:

- 1) These valves cannot be tested during plant operation because the Core Flood Tanks are maintained at a pressure of 600 psig while the RCS pressure is 2155 psig
- 2) These valves cannot be demonstrated to fully open, using a flow test, due to the magnitude of the system design flow.
- 3) These valves cannot be scheduled for disassembly inspection during cold shutdowns because these outages last for an indeterminate amount of time. Valve disassembly constitutes a major radiological work activity and would stand a very good chance of delaying a plant restart.
- 4) This relief request was previously submitted and approved to utilize the Alternate Examination methods of Generic Letter 89-04, Position 2 for CFV-2 and CFV-4. The alternate examination method, stated that at least one valve shall be disassembled and inspected on an alternating refueling outage frequency (one valve every 4 years). If the inspected valve is found to be degraded to the extent it cannot perform its safety function, then the other valve shall be disassembled and inspected.

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### III. Basis For Requesting Relief (cont):

During Refueling Outage 9 (April, 1994), both CFV-2 and CFV-4 were disassembled and inspected. CFV-2 was inspected per the schedule provided in the relief request. CFV-4 was initially disassembled for a leaking gasketed joint and subsequently inspected; two years ahead of its schedule. No problems were noted in either valves condition or capability to perform its intended safety function.

- 5) A review of the CR#3 maintenance history and the results of the Alternate Testing performed shows that these valves have not been susceptible to disc binding or failure to perform their safety function. Each valve has been inspected twice since 1989 using GL 89-04 Alternate Testing guidelines.
- 6) These valves are partial stroke exercised after disassembly and inspection by conducting a reduced flow test from the core flood tanks to the reactor vessel. This test is also performed during entry into or return to power from cold shutdown.
- 7) The NPRDS data base has been reviewed for in-service failures that have prevented this make and model of check valve from performing the intended safety function. This review shows that there have been no failures of this nature within the industry.
- 8) The average dose acquired in performing this inspection is 0.25R per valve.
- 9) In order to perform the required open and inspect examination of CFV-4, concurrent with the 10 year reactor vessel inspection for which the core barrel must be removed and parked in the deep end of the fuel transfer canal, an additional drain down and re-flood of the fuel transfer canal is required. This activity significantly impacts the critical path time line for Refuel 10 (scheduled for 2/29/96) by the addition of 3 days and a cost of approximately \$1,800,000. Florida Power Corporation considers this to be an "Extreme Hardship" as defined by NUREG-1482, Appendix A, Staff Position 2, Question Group 19.
- 10) There also exists the potential for borated water intrusion to the ex-core instrumentation wells. This results from multiple flexures of the instrument well covers and the subsequent movement of the cover gasket due to the changing head of water above the cover. Should this occur, additional critical path maintenance time, cost, and dose will be incurred to effect these repairs.
- 11) In response to INPO SOER 86-03, these valves were evaluated using the guidance provided in EPRI Guideline NP-5479, Application Guidelines for Check Valves. The evaluation indicated these valves are suitable for their application and intended use.

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### IV. Alternate Examination:

- 1) Disassembly and inspect at least one valve each refueling outage (alternating valves each outage) by the method described below.
- 2) Modify the valve inspection frequency on a one time only basis for CFV-4, such that the next scheduled examination of this valve occurs in Refuel 12 (2000). This will create an inspection interval of 6 years for this one valve. The inspection interval will revert back to 4 years starting with Refuel 12. The inspection interval for CFV-2 will remain unchanged at 4 years with the next scheduled inspection to occur during Refuel 11 (1998).
- 3) If the inspected valve is found to be degraded to the extent it cannot perform its safety function, then the other valve in the group shall be disassembled and inspected also. The subsequent inspection will start again with a single valve.
- 4) The inspection shall assure that the valves disk has freedom of movement and is capable of full stroke. Additionally, the general condition of the valve internals shall be checked for structural degradation including the presence of any loose parts, debris and abnormal or excessive corrosion products.
- 5) All maintenance history of these valves have been compiled and reviewed and it has been determined that the procedures used for inspection adequately monitor any recurring problems. The results of all the inspections resulting from this alternative test method shall become part of the history file on the valves and any discrepancies noted during the preceding inspection shall be closely monitored during any current inspection.
- 6) There is no instrumentation used for this alternative test, therefore, maintenance and calibration data is not applicable.
- 7) Additionally, these valves are partial stroke exercised during entry into or return to power from cold shutdown by conducting a reduced flow test from the core flood tanks to the reactor vessel. This partial stroke test is also performed following re-assembly after disassembly and inspection.
- 8) In order to reduce occupational exposure while performing code examinations, Florida Power Corporation is evaluating the use of Non-Intrusive Examination methods to replace the Open and Inspect method currently used to satisfy ASME Section XI Pump and Valve testing requirements.



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### V. Implementation Schedule:

The Alternate Examination requirements will be met as follows:

- 1) Partial stroke exercise is currently being met.
- 2) Disassembly and inspection was implemented with refuel cycle VII.
- 3) The one time schedule change for CFV-4 is to be implemented during Refuel Outage 10, currently planned to begin on February 28, 1996.