Florida Power
CORPORATION

January 25, 1980

File: 3-0-3-a-3

Mr. Robert W. Reid
Chief
Operating Reactors Branch No. 4
Division of Operating Reactors
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72

Dear Mr. Reid:

On December 11, 1979, Florida Power Corporation received your letter of December 4, 1979, requesting us to submit additional design provisions and test methods to permit leak testing of the valves specified in the enclosure of your letter.

In discussions with Mr. Vic Nerses, NRC/DOR, and Mr. Bob Kirkwood, NRC/DSS, concerning the valves listed in your letter, they indicated that alternative test methods may be substituted for leak rate testing these valves. IWA-2240, Alternate Examinations, of ASME Section XI, accepts the use of alternative examination methods which give results that are equivalent to specified test methods. Based on these discussions with NRC staff members, it is our understanding that the acceptable test method being approved by the NRC is the substitution of an individual valve pressure test in lieu of leak rate testing each valve.

Attached is a revision to the affected pages of our Pump and Valve Testing Program for CR-3, dated July 25, 1979, indicating the testing methods proposed for the valves identified in the enclosure of your letter. Also enclosed is a brief discussion of design modifications necessary for these valves, to accomplish the alternative test method. Where modifications are required, the schedule for performance of these alternate

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tests will be dependent upon engineering design of the modifications and the procurement and installation of this additional equipment. A schedule for performance of these tests will be submitted as soon as these schedule items are determined.

Within 90 days of our receipt of written NRC approval of the Inservice Inspection Program for Crystal River Unit 3, as defined in this letter, and our previous submittals, the specific procedures to implement this program will be developed and issued.

If you require additional discussion concerning these items, please contact this office.

Very truly yours,

FLORIDA POWER CORPORATION

Patsy Y. Baynard

Dr. P. Y. Baynard
Manager
Nuclear Support Services

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Enclosures

STATE OF FLORIDA

COUNTY OF PINELLAS

Dr. P. Y. Baynard states that she is the Manager, Nuclear Support Services, of Florida Power Corporation; that she is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the information attached hereto; and that all such statements made and matters set forth therein are true and correct to the best of her knowledge, information, and belief.

Patsy Y. Baynard
Dr. P. Y. Baynard

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 25th day of January, 1980.

Catherine S. Cameron
Notary Public

Notary Public, State of Florida at Large,
My Commission Expires: August 8, 1983

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ADDITIONAL TESTING & DESIGN MODIFICATION INFORMATION

CFV-1 & 3 - Pressure gauges will be installed upstream of these valves and will be monitored after cold shutdown stroking, during Plant startup. Increasing pressure upstream of these valves will indicate valve leakage. If excessive leakage is observed, corrective action will be initiated.

CFV-2 & 4 - Leakage through these valves can be monitored on a continuious basis by observing pressure and fluid level in core flood tanks A and B. These tanks have high level alarms and the capability of continuous bleed-off.

DHV-1 & 2 - Pressure gauges will be installed upstream of these valves and will be monitored weekly. Increasing pressure upstream of these valves will indicate valve leakage. If excessive leakage is observed, corrective action will be initiated.

DHV-3 - A pressure gauge will be installed downstream of this valve and will be monitored after closing DHV-3 following a cold shutdown and during plant startup. Increasing pressure downstream of this valve will indicate leakage. If excessive leakage is observed, corrective action will be initiated.

DHV-4 - A pressure gauge will be installed downstream of this valve and will be monitored weekly. Increasing pressure downstream of this valve will indicate leakage. If excessive leakage is observed, corrective action will be initiated.

DHV-91 & 93
RCV-12 & 53 - DHV-91 and 93 are being leak rate tested per 10 CFR 50, Appendix J, each refueling. Since these valves are in series with RCV-12 and 53, only DHV-91 & 93 are required to be leak tested.

TABLE 2A
VALVE RELIEF REQUEST BASIS

System: Building Spray continued

Basis for Relief: Part or full stroke of these valves would require introduction of the high caustic solution of sodium hydroxide into the borated water system. The diassembly of these valves without flushing and draining would be a severe safety hazard to personnel. There exists no method for flushing or draining of these valves.

Alternate Testing: There presently is no method for part or full stroke of these valves under any plant condition. The problem is under consideration by the facility's engineering staff. No alternate testing.

3. Valves: BSV-26 and BSV-27

Function: Normally closed valves which open for containment building cooling on 30 psig RB pressure signal which initiates the building spray pumps.

Test Requirement: EF-1F

Basis for Relief: The full stroke of these valves would require initiation of the RB spray system. This would entail spraying the RB with borated water.

Alternate Testing: These valves shall be internally inspected once each inspection period (40 months) per the no flow test of IWV-3521. The inspection shall assure that the disks have freedom of motion and determine the general mechanical condition of the valve including presence of any loose parts, debris, abnormal corrosion products, wear and erosion.

TABLE 2A
VALVE RELIEF REQUEST BASIS

System: Core Flood continued

		After each part or full stroke test, pressure gauges installed down stream of these valves will be monitored, during plant startup, to detect increasing pressures, an indication that CFV-1 or CFV-3 is leaking. Should excessive leakeage occur, corrective action shall be initiated.
3.	Valves:	CFV-18 and CFV-19
	Function:	Provide building isolation, valve opens to allow filling of the CF tank from the MU pumps.
	Test Requirement:	EF-1F
	Basis for Relief:	Normally there is not a reason to add makeup to the CF tank during normal operations or cold shutdown except to makeup for sampling losses.
	Alternate Testing:	EF-3F. When makeup is added to the core flood tank, appropriate entries with procedures shall verify operation of these valves. These valves shall be full stroked each refueling when filling the CF tank after the CF tank test.

TABLE 2A
VALVE RELIEF REQUEST BASIS

System: Decay Heat Removal continued

Alternate Testing: EF-2F. The valve shall be full stroked at cold shutdown with verification being a reduction of RC temperature/pressure.

5. Valve: DHV-3

Function: During normal plant operation it is the first of two closed gate valves which provide reactor coolant isolation from the decay heat removal system.

Removal of decay heat from the reactor vessel during the decay heat mode of operation. This valve is only used in the decay heat mode and not ESA mode.

Valve: DHV-4

Function: During normal plant operation it is the second of two closed gate valves which provide reactor coolant isolation from the decay heat removal system.

Test Requirements: EF-1F, SLT-2

Basis for Relief: These valves are not designed to be stroked during normal plant operation. Stroking the valves subject the low pressure DH piping to the high pressure RC system. The valves also have an interlock to prevent opening with RC pressure greater than 284 psig.

Seat leakage tests for these valves by present design would be hazardous to test personnel due to high radiation. The seat leakage test requires the handling and/or collection of high pressure and temperature radioactive fluid which may flash to steam at the valve seat boundary during testing.

To test these valves would require the addition of drain valves to a class 1 pressure boundary.

Alternate Testing: TF-2F. Valves shall be full stroked and timed at cold shutdown.

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After isolation of DHV-3 during plant start-up, a pressure gauge installed downstream of DHV-3 will be monitored to detect increasing pressures, which is an indication that DHV-3 is leaking. Should excessive leakage occur, corrective action shall be initiated.

TABLE 2A
VALVE RELIEF REQUEST BASIS

System: Decay Heat Removal continued

A pressure gauge shall be installed downstream of DHV-4. The gauge shall be monitored weekly for increasing pressure, which would denote leakage of DHV-3 and 4. Should excessive leakage occur, corrective action shall be initiated.

6. Valves: DHV-9 and DHV-10

Function: Decay heat discharge valves to the borated water storage tank for pump operability checks.

Valves: DHV-105 and DHV-106

Function: Decay heat pump discharge isolation valves to make up and purification pre-filters. The valves are used during shutdown for RC system "cleanup." Not required for normal or safety shutdown functions.

Valves: DHV-75 and DHV-76

Function: Return line to the decay heat pump suction from the makeup system filters. Used during shutdown for RC system "cleanup."

Test Requirements: EF-1F

Basis for Relief: These are passive valves not required to change position to fulfill their function for normal or safety reactor shutdown.

Alternate Testing: Operational checks with appropriate record entries shall record the position of these passive valves before operations are performed and after operations are completed.