

July 20, 1984

DCR 016

Docket No. 50-302

Mr. Walter S. Wilgus
Vice President, Nuclear Operations
Florida Power Corporation
ATTN: Manager, Nuclear Licensing
& Fuel Management
Post Office Box 14042, M.A.C. H-2
St. Petersburg, Florida 33733

Distribution:
Docket File
Reading File
Gray File
RIngram
HSilver
DEisenhut
NRC & L PDR
EJordan
JNGrace
ACRS 10
OELD
HOrnstein
EBlackwood

Dear Mr. Wilgus:

SUBJECT: CRYSTAL RIVER UNIT 3 - RELIEF REQUESTS REGARDING INSERVICE TESTING
(IST) OF PUMP AND VALVES - REQUEST FOR MODIFICATION TO IST PROGRAM

The staff is continuing its evaluation of the Crystal River Unit 3 proposed IST program for the first 120 month interval (3/13/77 to 3/13/87) and is considering your April 12, 1984 request to test pumps quarterly rather than monthly separate from the overall program. We have determined that responses to the staff questions and positions, permitting resolution of a number of issues raised during the course of our review, must be submitted by Florida Power Corporation prior to proceeding with our review and prior to granting your April 1984 request. Most of these issues were discussed with your staff during a meeting and site visit on March 1-2, 1983. The enclosure to this letter describes the deficiencies in the Crystal River IST program as proposed as well as our position in various areas.

You are requested to arrange a meeting on these issues in the near future through Mr. Harley Silver, the Licensing Project Manager assigned to your plant. Mr. Silver can be reached at (301) 492-8434. You should plan to have people from your staff who have the authority to make the necessary commitments on behalf of Florida Power Corporation attend this meeting.

Sincerely,

151

George W. Rivenbark, Acting Chief
Operating Reactors Branch No. 4
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

ORB#4:DL
HSilver;ef
07/20/84

ORB#4:DL
GRivenbark
07/20/84

Crystal River Unit No. 3
Florida Power Corporation

50-302

cc w/enclosure(s):

Mr. Wilbur Langely, Chairman
Board of County Commissioners
Citrus County
Inverness, Florida 36250

Regional Radiation Representative
EPA Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Mr. R. W. Neiser, Senior
Vice President and General
Counsel
Florida Power Corporation
P. O. Box 14042
St. Petersburg, Florida 33733

Administrator
Department of Environmental Regulation
Power Plant Siting Section
State of Florida
2500 Blair Stone Road
Tallahassee, Florida 32301

Attorney General
Department of Legal Affairs
The Capitol
Tallahassee, Florida 32304

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission, Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 220, 7910 Woodmont Avenue
Bethesda, Maryland 20814

Mr. Tom Stetka, Resident Inspector
U.S. Nuclear Regulatory Commission
Route #3, Box 717
Crystal River, Florida 32629

Nuclear Plant Manager
Florida Power Corporation
P. O. Box 219
Crystal River, Florida 32629

Bureau of Intergovernmental Relations
660 Apalachee Parkway
Tallahassee, Florida 32304

Uray Clark, Administrator
Radiological Health Services
Department of Health and
Rehabilitative Services
1323 Winewood Blvd.
Tallahassee, Florida 32301

ENCLOSURE

1. The licensee has requested specific relief from the inlet and differential pressure measurements required by Section XI for the Emergency Diesel Generator Fuel Transfer pumps based on not having installed instrumentation. The licensee does not propose an alternate test. It is our position that the licensee should provide the instrumentation necessary to perform these tests, as required by the Code.
2. The licensee has requested specific relief from the flow measurement requirements of Section XI for the Emergency Nuclear Seawater pumps and has not proposed an alternate test. The licensee's basis is that there is no installed instrumentation. It is our position that the licensee should provide the instrumentation necessary to test these pumps in accordance with the Code.
3. The licensee has requested specific relief from the corrective action requirements of Section XI, paragraphs IWV-3420(g) (1) and (2) for Category A valves. The licensee proposes to use the leakrate of 95% of 0.6La as a limit to replace or repair defective valves and then retest as judiciously as possible. It is our position that this relief request should not be granted because the allowable leakrate requested by the licensee is too large. It is our position that the individual valve allowable leakrates should be linearly determined (i.e., a twelve inch valve would be allowed twice the leakage of a 6 inch valve) such that the sum of the total allowable leakrates is less than or equal to .6La.
4. The licensee has requested specific relief from the exercising requirements of Section XI for valve ASV-50, emergency feedwater pump turbine overspeed trip and throttle valve, and has proposed to test at refueling outages. The licensee's basis is that testing quarterly or at cold shutdown increases the potential for misadjustment of the valve after testing. It is our position that the stated reason is not adequate to grant relief.
5. The licensee has requested specific relief from the exercising requirements of Section XI for valve DHV-91, decay heat removal system to pressurizer spray isolation, and has proposed to stroke and stroke time at cold shutdown. The licensee states that stroking this valve during normal plant operation would be potentially compromising to the decay heat system by stroking a valve connecting a high pressure system to a low pressure system. The licensee states the valve has no safety function. We disagree with the licensee and our position is that this valve should be stroked quarterly. We do not agree that the valve has no safety function.
6. The licensee has requested specific relief from the exercising requirements of Section XI for valves MUV-53 and 57, makeup pump minimum flow recirculation valves, and has proposed to exercise these valves at cold shutdown. The licensee states that stroking of these valves during normal plant operation would interrupt minimum recirculation flow on the running makeup pump. Should the valve

fail in the closed position, damage would result to the makeup (high pressure injection) pump. We do not agree with the licensee's basis and, therefore, conclude that relief should not be granted. The licensee has stated that pump damage could result if the valve fails closed on the running pump. However, we have concluded that operation of the pumps could be shifted and testing conducted per Section XI.

7. The licensee requested specific relief from the full-flow exercising requirements of Section XI for valves BSV-26 and 27 and has proposed to inspect internally every forty months. We have concluded that relief should be granted; however, we cannot justify an inspection interval longer than refueling outages.
8. The licensee requested specific relief from the exercising requirements of Section XI for valves BSV-152 and 153 and proposes not to test them. The licensee's basis is that there is no method for testing since a disassembly/inspection would expose personnel to highly concentrated boric acid. It is our position that the system should be modified so testing can be performed per the Code.
9. The licensee requested specific relief from the Section XI quarterly exercising requirements for valves CFV-2 and 4. The licensee has proposed to partial stroke these valves at refueling outages. It is our position that partial stroking does not provide adequate assurance of valve operability and that the valves should be either exercised per the Code or internally inspected on a refueling outage frequency.
10. At the working meeting of March 1 and 2, 1983, the licensee was asked the question (E-2):

How are check valves CFV-17 and 20 verified to close, their safety-related position, when they are full-stroke exercised quarterly?

Licensee's

Response

These valves only perform a function important to safety in the closed position; therefore, the quarterly exercising of these valves open will be deleted from the IST program and the licensee will provide a request for relief from the Section XI exercising requirements. These valves will be verified shut by the Appendix J leak-rate tests performed during refueling outages.

The change was not made to the program (Reference 1). We have tentatively concluded that the valves cannot be exercised quarterly as the licensee claims. Therefore, so that we can verify the testing that is performed, we request that the licensee provide a copy of the procedure for exercising these valves quarterly.

11. At the working meeting of March 10, 1983, the licensee was asked the following (E-4):

Provide a more detailed technical justification for not full-stroke exercising valves CFV-18 and 19 quarterly.

Licensee's

Response

The only function important to safety that these valves perform is in the closed position. The licensee will, therefore, delete the quarterly stroke testing of these valves to the open position from the IST program and will request relief from the Section XI exercising requirements. These valves will be verified shut by the Appendix J leak-rate tests performed during the refueling outages.

The change was not made to the program (Reference 1). We have tentatively concluded that the valves cannot be exercised quarterly as the licensee claims. So that we can verify the testing that is performed, we request that the licensee provide a copy of the procedure for exercising these valves quarterly.

12. The licensee requested specific relief from the exercising and stroke time test requirements of Section XI for valves DHV-110 and 111 and proposed to operationally test these valves during the decay heat removal system inservice operational tests. We have concluded that system operational testing is not adequate because it does not guarantee that these valves will be exercised at the required frequency or at a full stroke. In the working meeting of March 1 and 2, 1983, the licensee agreed to provide additional information on valve fail-safe position and demonstrate that in the throttled position design accident flow rate from the decay heat pumps would not be restricted (H-5). The additional information was not provided and, therefore, we have concluded that relief should not be granted.
13. The licensee requested specific relief from the exercising requirements of Section XI for valves FWV-45 and 46. The licensee proposes to not exercise these valves. We have concluded that these valves should be tested in compliance with the requirements of Section XI. It is our position that the licensee should modify the system so testing can be performed or institute a valve partial disassembly program on a refueling outage frequency.
14. During the working meeting of March 1 and 2, 1983, the licensee agreed to investigate whether or not the atmospheric steam dump valves, MSV-25 and 26, belonged in the program (Q-2). The valves were not added to the program and no further discussion has been provided. We have concluded that these valves perform a function important to safety and, therefore, should be included in the IST program.

15. In the working meeting of March 1 and 2, 1983, the licensee agreed to change valves MSV-55 and 56 from Category C to Category B/C (Q-1). The licensee also agreed to exercise and stroke time these valves in the open and closed directions. There is no indication that the changes were made. The program for these valves is, therefore, unacceptable.
16. The licensee has requested relief from the leak-rate testing requirements for the following pressure isolation valves. It is the licensee's intention to use installed instrumentation to monitor valve leak tight integrity. However, the proposed method does not provide adequate assurance that the leak tight integrity of each valve is verified individually.

| | |
|-------|---------|
| CFV-1 | MUV-36 |
| CFV-3 | MUV-37 |
| CFV-2 | MUV-42 |
| CFV-4 | MUV-160 |
| DHV-3 | MUV-163 |
| DHV-4 | MUV-164 |

We have concluded that this relief request should be denied.

17. In the working meeting of March 1 and 2, the licensee stated that valves MUV-1, 7, 11, 36, 37, 42, 43, 160, 161, 163 and 164 are not full-stroke exercised (R-3). MUV-1, 7 and 11 would be partial stroke exercised at cold shutdown and full stroke exercised during the system balance procedure after maintenance or system modification. MUV-36, 37, 42, 160, 163 and 164 are partial stroke exercised at cold shutdown. MUV-43 and 161 are partial-stroke exercised quarterly and full stroked after maintenance or system modification during the system balance procedure. The licensee's resubmittal program (Reference 1) did not demonstrate these variances from the Code and no relief requests were submitted. In the resubmittal program the licensee stated that valves MUV-1, 7, 11, 43 and 162 would be partial-stroke exercised quarterly and full-stroke exercised at cold shutdown. The resubmittal also stated valves MUV-36, 37, 42, 160, 163 and 164 would be full-stroke exercised at cold shutdown. We have tentatively concluded that full-stroke exercising these valves at cold shutdown could lead to low-temperature overpressurization. It is our position that the licensee should reevaluate the testing requirements of these valves and make the appropriate changes to the program or provide additional justification as to why the testing shown in the resubmittal program is acceptable.

18. The licensee requested specific relief from the quarterly exercising requirements of Section XI for valves MUV-2, 6 and 10, and proposed to partial stroke these valves quarterly and full stroke at cold shutdown. The basis for relief was that full stroke exercising requires injecting into the core through the HPI nozzles. This type of evolution during power operation would result in a thermal cycle transient on the HPI nozzle. We do not agree with the licensee's basis. In the working meeting, the licensee informed us that these valves have mechanical operators on them (R-3) and are located outside the containment, thus making it possible to exercise these valves quarterly without injecting into the core. Therefore, we have concluded that relief should not be granted because it is possible to exercise these valves and meet the requirements of the Code.
19. In the resubmittal program (Reference 1), the licensee indicated that valves MUV-60 and 72 will be full-flow stroke exercised at cold shutdown. We do not see how this will be done without resulting in a low-temperature overpressurization of the RCS. We request the licensee to verify the procedure. The licensee was also to verify if these valves were important to safety in the closed position (R-7). In the resubmittal, the licensee did not address these discrepancies. It is our position that these valves are also important to safety in the closed position and should be periodically verified to shut.
20. In the working meeting the licensee agreed to change valve SAV-23 from Category E to Category A/E (P-2); this change was not made in the resubmittal program. Our position is that the IST program should be revised to reflect the A/E categorization of valve SAV-23.
21. The licensee has requested specific relief from the exercising requirements of Section XI for valves CFV-1 and 3. The licensee proposes to full-flow stroke exercise these valves at cold shutdown using decay heat flow of 3000 gpm. We have concluded that 3000 gpm may not be enough flow to full-stroke these valves open. Therefore, it is our position that relief should not be granted and the licensee should make a proposal to verify the full stroke capability of these valves. This may require disassembly and inspection on a refueling outage frequency.
22. The licensee did not address exercising or stroke timing the diesel air start valves. It is our position that these valves should be added to the program and tested individually to the Code requirements.
23. The licensee requested relief from the leak-rate testing requirements of Section XI and proposed to use Appendix J leak-rate testing as an alternate test with the plant Technical Specifications as a means of establishing limits. We agree with using Appendix J leak-rate testing as an alternate test program. However, it is our position that the requirements of Section XI IWV-3420(f) and (g) should be met instead of Technical Specification limits.

24. The licensee requested relief from the exercising requirements of Section XI for the diesel fuel oil transfer system check valves. It is our position that relief should not be granted on the basis that it is possible to exercise these valves and meet the requirements of the Code.

25. The licensee requested relief from the exercising requirements of Section XI for the flushing water pump discharge check valves. As an alternate test, the licensee proposes to substitute monitoring for normal valve operation. In the relief request, the licensee demonstrated that the position important to safety is closed and in the normal position, the valves are open, therefore, monitoring in the normal position has no bearing on the position important to safety. It is our position that the valves should be exercised per the Code or the licensee should propose an alternate method.