

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555 August 20, 1990

Docket Nos. 50-250 and 50-251

> Mr. J. H. Goldberg Executive Vice President Florida Power & Light Company Post Office Box 14000 Juno Beach, Florida 33408-0420

Dear Mr. Goldberg:

SUBJECT: TURKEY POINT UNITS 3 AND 4 - INTERIM RELIEF FROM THE INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES (TAC NOS. 76702 AND 76703)

On October 3, 1989, you submitted your response to Generic Letter 89-04. Your submittal consisted of a review of your Inservice Testing (IST) Program for the second 10-year interval, along with several requests for relief from various sections of the ASME Pressure Vessel Code. The staff has not yet completed a detailed review of your submittal; however, we have, with the help of our contractor, EG&G Idaho, completed a preliminary review. As a result of our preliminary review, we have determined that an interim period of relief is appropriate.

The staff has determined that, for the interim period, an acceptable level of safety will be provided by your proposed alternative testing. Therefore, the relief requests of your October 3, 1989, letter are granted with the exception of those identified in the enclosure to this letter. You are authorized to implement your proposed program as modified by the provisions in the enclosure, recognizing that additional restrictions could result from the staff's final review.

For the relief requests identified in the enclosure, the interim relief expires at the end of the next refueling outage or when the staff issues its Safety Evaluation (SE), whichever comes first. For the remainder of the relief requests, interim relief expires when the staff issues its SE. Since the interim approval does not represent the results of the final program review, the final SE could contain relief request denials or identify components that should be added to the Turkey Point Inservice Testing Program.

Until we complete our detailed review of the IST program, you should comply with both the existing Technical Specifications (TS) and the proposed IST program as modified by the provisions of the enclosure. In the event that conflicting requirements arise for any component, you must comply with the more restrictive requirements. The granting of this relief from the ASME Code does not relieve you from any of the requirements in existing TS.

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Mr. J. H. Goldberg Florida Power and Light Company

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ENCLOSURE

REVIEW OF RELIEF REQUESTS TURKEY POINT PLANT, UNITS 3 AND 4 PUMP AND VALVE INSERVICE TESTING PROGRAM

This report documents problem areas encountered during EG&G Idaho's review of the pump and valve inservice testing program relief requests submitted by Florida Power and Light Company for their Turkey Point Plant, Units 3 and 4. The licensee's proposed alternate testing for the affected relief requests does not provide an acceptable long-term alternative to the Code requirements, therefore, the licensee should comply with the provisions identified in this report.

Relief Request No. VR-2

In Relief Request No. VR-2, the licensee has requested relief from the stroke time measurement requirements of the Code for the auxiliary feedwater flow control valves, CV-*-2816, -2817, -2818, -2831, -2832, and -2833; and proposed to verify the operability of these valves by observing the response and operation of the auxiliary feedwater system during the integrated system surveillance testing. Valves used only for system control are exempted from a the Code testing requirements, however, if control valves perform an active safety function such as failing open upon loss of actuator power, they should be full-stroke exercised and have their stroke times measured in accordance with Section XI. The licensee's proposed alternative for these valves provides limited information on the functioning of the valves and, therefore, is acceptable on an interim basis until the end of the next refueling outage. This method provides no objective means of determining valve degradation and is, therefore, unacceptable for the long-term. By the end of the next refueling outage the licensee should develop a means of exercising these valves and measuring their full-stroke times at the Code-required frequency unless a reduced test frequency is justified. It is possible that this testing could be performed during valve fail-safe testing. The licensee should develop an alternate testing method as described above and notify the staff regarding the disposition of this relief request.

Relief Request No. VR-6

In Relief Request No. VR-6, the licensee has requested relief from the stroke time measurement requirements of the Code for the CVCS charging header flow control valves, HCV-*-0121, and proposed to verify the operability of these valves by observing them as they are exercised open and closed. These valves perform an active safety function in the closed position as containment isolation valves, therefore, they should be full-stroke exercised and have their stroke times measured in accordance with Section XI unless specific relief is requested and approved. The licensee's proposed alternative for these valves provides limited information on the functioning of the valves and, therefore, is acceptable on an interim basis until the end of the next

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τ. . refueling outage. This method provides no objective means of determining valve degradation and is, therefore, unacceptable for the long term. By the end of the next refueling outage, the licensee should develop a means of measuring the full-stroke times of these valves at the Code-required frequency unless a reduced test frequency is justified. It is possible that this testing could be performed during valve fail-safe testing. The licensee should develop an alternate testing method as described above and notify the staff regarding the disposition of this relief request.

Relief Request No. VR-9

In Relief Request No. VR-9, the licensee has requested relief from the exercising requirements of the Code for the containment spray header check valves, 3-0890A, 3-0890B, 4-0890A, and 4-0890B, and proposed to part-stroke exercise these valves open with flow once every 5 years and to disassemble and inspect them on a sampling basis each refueling outage. The licensee will also verify these valves in the closed position at least once every 2 years in conjunction with Appendix J leak rate testing.

Disassembly, together with inspection, to verify the full-stroke capability of check valves is an option only where full-stroke exercising cannot practically be performed by flow or by other positive means. The NRC staff considers valve disassembly and inspection to be a maintenance procedure that is not a test and not equivalent to the exercising produced by fluid flow. This procedure has some risk which may make its routine use as a substitute for testing undesirable when some method of testing is possible. Check valve disassembly is a valuable maintenance tool that can provide a great deal of information about a valve's internal condition and as such should be performed under the maintenance program at a frequency commensurate with the valve type and service.

The use of valve diagnostics to determine that a check valve opens fully or sufficiently to pass maximum required accident flow during a partial flow test is considered an acceptable means to satisfy the Code requirements. The licensee should investigate the use of alternate testing methods to full-stroke exercise these valves, such as using non-intrusive diagnostic techniques to demonstrate whether they swing fully open during partial flow testing.

If the licensee's investigation reveals that full-stroke testing with flow is not feasible, then valve disassembly may be used as an alternative to Code testing provided that the licensee performs this procedure in accordance with Generic Letter 89-04, performs a partial flow test of each valve refueling outage and provides assurance of proper reassembly by performing a partial flow test and leak rate test prior to returning a valve to service following the disassembly and inspection procedure. Based on the past part-stroke exercising of these valves, the biannual leak testing, and past disassembly and inspections of these valves, the licensee's proposed alternative is considered acceptable on an interim basis. However, prior to restart from the next refueling outage, the licensee must resubmit this relief request addressing the concerns raised in the above evaluation regarding the use of non-intrusive methods, if practical, and, if not practical, the partial flow testing each refueling outage and after reassembly.

Relief Request No. VR-11

In Relief Request No. VR-11 the licensee has requested relief from the exercising requirements of the Code for the safety injection hot leg injection check valves, 3-0874A, 3-0874B, 4-0874A, and 4-0874B, and proposed to part-stroke exercise these valves open with flow once each refueling outage. The licensee will also verify these valves in the closed position at least once every 2 years by leak rate testing. The licensee's alternate testing does not verify full-stroke exercise of these valves in `accordance with the Code and is, therefore, not acceptable.

The use of valve diagnostics to determine that a check valve opens fully or sufficiently to pass maximum required accident flow during a partial flow test is considered an acceptable means to satisfy the Code requirements. A nonintrusive method of testing these valves may be practical, therefore, the licensee should actively pursue the use of non-intrusive diagnostic techniques to demonstrate whether these valves swing fully open during partial flow testing. If the licensee's investigation reveals that full-stroke testing with flow is not feasible, then valve disassembly may be used as an alternative to Code testing. The licensee should perform this procedure in accordance with Generic Letter 89-04 and partial flow test each valve each refueling outage and prion to returning a valve to service following the disassembly and inspection procedure.

Based upon the past part-stroke exercising of these valves each refueling outage and the biannual leak rate testing, the licensee's alternative is considered acceptable on an interim basis. However, prior to restart from the next refueling outage, the licensee must resubmit this relief request addressing the concerns raised in the above evaluation regarding the use of non-intrusive methods, if practical, and, if not practical, disassembly and inspection on an appropriate schedule and partial flow testing after reassembly.

Relief Request Nos. VR-12, -13, -14, and -15

In Relief Request Nos. VR-12, -13, -14, and -15 the licensee has requested relief from the exercising requirements of the Code for the listed safety injection system check valves, and proposed to part-stroke exercise these valves open with flow during cold shutdowns and to disassemble and inspect them on a sampling basis once every 10 years. The licensee will also verify these valves in the closed position at least once every 2 years by leak rate testing.

Disassembly, together with inspection, to verify the full-stroke capability of check valves is an option only where full-stroke exercising cannot practically be performed by flow or by other positive means. The NRC staff considers valve disassembly and inspection to be a maintenance procedure that is not a test and not equivalent to the exercising produced by fluid flow. This procedure has some risk which may make its routine use as a substitute for testing undesirable when some method of testing is possible. Check valve disassembly is a valuable maintenance tool that can provide a great deal of information about a valve's internal condition and as such should be performed under the maintenance program at a frequency commensurate with the valve type and service.

The use of valve diagnostics to determine that a check valve opens fully or sufficiently to pass maximum required accident flow during a partial flow test is considered an acceptable means to satisfy Code requirements. The licensee should investigate the use of alternate testing methods to full-stroke exercise these valves, such as using non-intrusive diagnostic techniques to demonstrate whether they swing fully open during partial flow testing.

If the licensee's investigation reveals that full-stroke testing with flow is not feasible, then valve disassembly may be used as an alternative to Code testing provided that the licensee performs this procedure in accordance with Generic Letter 89-04 and performs a partial flow test of each valve prior to returning it to service following the disassembly and inspection procedure. Further it is not clear that the licensee has met the criteria of Generic Letter 89-04, Attachment 1, Position 2, for extending the inspection interval for these yalves.

Based on the part-stroke exercising of these valves every cold shutdown the biannual leak testing and past disassembly and inspections of these valves, the licensee's proposed alternative is considered acceptable on an interim basis. However, prior to restart from the next refueling outage, the licensee must resubmit this relief request addressing the concerns raised in the above evaluation regarding the use of non-intrusive methods, if practical, and, if not practical, the partial flow testing after reassembly and the proposed interval of disassembly.

Relief Request No. VR-22

In Relief Request No. VR-22, the licensee has requested relief from the stroke time measurement requirements of the Code for the listed diesel fuel oil supply control valves, and proposed to verify the operability of these valves by observing them during testing of the emergency diesel generator and the diesel fuel oil transfer pumps. These valves perform active safety functions in the open position to provide diesel fuel oil flow paths, therefore, they should be full-stroke exercised and have their stroke times measured in accordance with Section XI unless specific relief is requested and approved. The licensee's proposed alternative for these valves provides limited information on the functioning of the valves and, therefore, is acceptable on an interim basis until the end of the next refueling outage. This method provides no objective means of determining valve degradation and is therefore unacceptable for the the long-term. By the end of the next refueling outage the licensee should develop a means of measuring the full-stroke times of these valves at the Code-required frequency unless a reduced test frequency is justified. It is possible that this testing could be performed during valve fail-safe testing. The licensee should develop an alternate testing method as described above and notify the staff regarding the disposition of this relief request.

Relief Request No. VR-24

In Relief Request No. VR-24, the licensee has requested relief from the testing requirements of the Code for components when the redundant train is inoperable and proposed to delay testing of these components until the inoperable train has been returned to service. When one train of a safety system is inoperable, it is important to test components in the redundant train to verify that they are operable, and thereby give assurance of operability of the safety system. In fact, some plant Technical Specifications require testing of the operable train when a redundant train is inoperable. The licensee's proposal may be non-conservative, therefore, relief is not granted.

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Relief Request No. VR-25

In Relief Request No. VR-25 the licensee has requested relief from the individual leak rate testing requirements of the Code for the listed valves and proposed to leak rate test these valves in groups and to apply a maximum permissible leakage rate to each combination of valves. The licensee's proposed alternate testing may not be conservative since it may permit excessive leakage through certain individual valves without requiring corrective actions. Although leakage limits will be assigned for each listed containment isolation valve combination, the licensee has not indicated how these leakage limits will be determined or if they will be set so corrective action will be required when any valve in the group is degraded, even the smallest valve. Each containment isolation valve should be individually leak rate tested if practicable. Relief from the individual leak rate testing requirements is granted where it is only practical to test valves in groups, provided the licensee addresses the following. The licensee should revise its procedures, if necessary to ensure that leak rates for valve groups are set such that excessive leakage through any individual valve, even the smallest, is detected and appropriate corrective actions taken.

The staff has determined that granting the interim relief as described above will provide an acceptable level of quality and safety until the detailed review is completed or the next refueling outage, whichever comes first.

Sincerely,

Original signed by

Herbert N. Berkow, Director Project Directorate II-2 Division of Reactor Projects I/II Office of Nuclear Reactor Regulation

Enclosure: As stated

cc w/enclosure: See next page

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