FPL

JUN 11 2001

L-2001-109
10 CFR 50.55a

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

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Alternative Supplement 4 Length Sizing Criteria
Relief Request No. 24

Florida Power & Light Company (FPL) requests approval of the attached Relief Request No. 24.

Pursuant to 10 CFR 50.55a (a)(3)(i), relief is requested to use an alternative length sizing qualification criterion of .75 inch Root Mean Square Error (RMSE) in lieu of the length sizing requirements of the ASME Section XI, 1995 Edition, 1996 addenda, Appendix VIII, Supplement 4, Subparagraph 3.2(b) and to use the RMSE calculations of 3.2(a) and 3.2(b) in lieu of the statistical parameters of 3.2(c).

Approval of the above Relief Request is requested by September 2001 to support planning for the next Turkey Point Unit 4 refueling outage scheduled for Spring 2002. Please contact Steve Franzone at (305) 246-6228, if there are any questions about this submittal.

Very truly yours,

Terry Jones for

R. J. Hovey
Vice President
Turkey Point Plant

Attachments (1)

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant
Florida Department of Health and Rehabilitative Services

A047

Relief Request No. 24
Alternative to Supplement 4 Length Sizing Criteria

I. COMPONENT IDENTIFICATION:

ASME Section XI, Class 1, Examination category B-A, Item B1.10 longitudinal and circumferential shell welds and B1.20 Head welds subject to Appendix VIII, Supplement 4, examination.

Pressure retaining welds in Reactor Pressure Vessels examined at Turkey Point Units 3 and 4.

II. EXAMINATION REQUIREMENTS:

10 CFR 50.55a(b)(2) was amended to reference Section XI of the Code through the 1995 Edition with the 1996 Addenda (64 FR 51370). ASME Section XI, 1995 Edition, 1996 Addenda, Appendix VIII, Supplement 4, Subparagraph 3.2(b), length sizing qualification criteria requires that flaw lengths estimated by ultrasonics be the true length –1/4 inch +1 inch. As amended, 10 CFR 50.55a(b)(2)(xv)(C)(1) requires that a depth sizing acceptance criteria of 0.15 inch root mean square (RMS) be used in lieu of the requirements of Subparagraphs 3.2(b) Supplement 4 to Appendix VIII of Section XI of the 1996 Addenda of the Code. Subparagraph 3.2(c) contains additional requirements for statistical parameters.

III. RELIEF REQUESTED:

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested to use an alternative length sizing qualification criteria of 0.75 inch Root Mean Square Error (RMSE) in lieu of subparagraph 3.2(b) and to use the RMSE calculations of 3.2(a) and 3.2(b) in lieu of the statistical parameters of 3.2(c). These examinations will be performed during the third inspection interval. This relief request is applicable to Turkey Point Units 3 and 4.

IV. BASIS FOR RELIEF:

On January 12, 2000, NRC staff, representatives from the Electric Power Research Institute (EPRI) Nondestructive Examination Center, and representatives from the Performance Demonstration Initiative (PDI) participated in a conference call. The discussion during the conference call included the difference between Supplement 4, "Qualification Requirements for the Clad/Basemetal Interface of Reactor Vessel," to Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," Paragraph 10 CFR 50.55a(b)(2)(xv)(C)(1) in the rule (Federal Register, 64 FR 51370), and the implementation of Supplement 4 by the PDI

Program. Supplement 4, Subparagraph 3.2(b) imposed a flaw sizing tolerance of –1/4 inch, +1.0 inch of the true length to the performance demonstration qualification criteria. The rule changed Subparagraph 3.2(a) to a depth sizing requirement of 0.15 inch RMS, and the PDI program uses a length sizing tolerance of 0.75 inch RMS for paragraph 3.2(b). The NRC staff acknowledged that Paragraph 10 CFR 50.55a(b)(2)(xv)(C)(1) in the rule was an error and should actually be a length sizing tolerance of 0.75 inch RMS, the same tolerance that was being implemented by the PDI program.

In a public meeting on October 11, 2000 at NRC offices in White Flint, MD, the PDI identified the discrepancy between the Subparagraph 3.2(c) and the PDI program. The NRC agrees that Paragraph 10 CFR 50.55a(b)(2)(xv)(C)(1) should have excluded Subparagraph 3.2(c) as a requirement.

The U.S. nuclear utilities created the PDI to implement demonstration requirements contained in Appendix VIII. PDI developed a performance demonstration program for qualifying UT techniques. In 1995, the NRC staff performed an assessment of the PDI program and reported that PDI was using a length sizing tolerance of 0.75 inch RMS for reactor pressure vessel performance demonstrations. This criterion was introduced to reduce testmanship (passing the test based on manipulation of results rather than skill). The staff noted in the assessment report dated March 6, 1996, that the length sizing tolerance was not according to Appendix VIII but did not take exception to PDI's implementation of the 0.75 inch RMS length sizing tolerance. The staff requested that the length sizing difference between PDI and the Code be resolved.

The solution for resolving the differences between the PDI and the Code for PDI to participate in development of a Code case that reflected PDI's program. The Code case was presented to ASME for discussion and consensus building. NRC representatives participated in this process. ASME approved the Code case and published it as Code Case N-622, "Ultrasonic Examination of RPV and Piping, Bolts and Studs, Section XI, Division 1."

Operating in parallel with the actions of PDI, the staff incorporated most of Code Case N-622 criteria in the rule published in the Federal Register, 64 FR 51370. Supplement 4 to Code Case N-622 contains the proposed alternative sizing criteria, which has been authorized by the staff. The staff agrees that the omission of the length sizing tolerance 0.75 inch RMS in the rule and the inclusion of statistical parameters of Paragraph 3.2(c) of Supplement 4 to Appendix VIII was an oversight. The staff will correct the error in an upcoming rule.

V. ALTERNATIVE EXAMINATIONS:

1. In lieu of the length sizing requirements of the ASME Section XI, 1995 Edition, 1996 addenda, Appendix VIII, Supplement 4, Subparagraph 3.2(b), a length sizing qualification criteria of 0.75 inch RMSE will be used. The RMSE calculation will be used in lieu of Subparagraph 3.2(c).

2. Periodic System Pressure Tests per Category B-P, Table IWB-2500-1

VI. IMPLEMENTATION SCHEDULE:

Third Inservice Inspection Interval