

NRC 2001-009

10 CFR 50.55a

March 19, 2001

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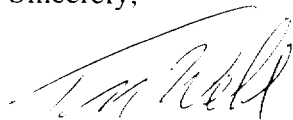
Ladies/Gentlemen:

DOCKETS 50-266 AND 50-301
ASME SECTION XI RELIEF REQUESTS
UNIT 1 RR-1-20 & UNIT 2 RR-2-26
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

As a result of discussions with NRC representatives on February 20, 2001, Point Beach Nuclear Plant has revised relief requests RR-1-20 and RR-2-26 to provide additional detail to provide a more complete implementation of the desired relief.

Approval of these relief requests is desired prior to April 7, 2001, when we will be shutting Unit 1 down for its twenty-sixth refueling outage. Please contact us if there are any questions regarding these relief requests.

Sincerely,



Thomas J. Webb
Licensing Director

FAF/ajr

Attachment

cc: NRC Resident Inspector
NRC Regional Administrator
NRC Project Manager
PSCW

10047

ATTACHMENT 1

UNIT 1 RELIEF REQUEST RR-1-20 **UNIT 2 RELIEF REQUEST NO. RR-2-26**

Components For Which Relief Is Requested

Code Class:	Class 1
Reference:	ASME, Section XI, Tables IWB-2500-1 (1986 Edition)
Examination Category:	B-A, B-D
Item Number:	B1.11, B1.12, B1.21, B1.22, B1.30, B1.40, B1.51, B3.90, and B3.100
Description:	Alternative Requirement to Appendix VIII, Supplement 4 "Qualification Requirements for the Clad/Base Metal Interface of Reactor Vessel"
Component Numbers:	All

Code/CFR Requirements

10 CFR 50.55a provides an implementation schedule for the supplements to Appendix VIII of Section XI (1995 Edition with the 1996 Addenda).

Section XI, 1986 Edition, IWA-2232(a) states, "Ultrasonic examination ... shall be conducted in accordance with Article 4 of Section V," with amendments.

Section XI, 1995 Edition, 1996 Addenda, Appendix VIII, Supplement 4, Subparagraph 3.2, Sizing Acceptance Criteria.

Basis for Relief

10 CFR 50.55a requires implementation of the ASME Code Section XI, 1995 Edition with 1996 Addenda, Appendix VIII, Supplements 4 and 6. The required implementation date for these supplements is November 22, 2000.

10 CFR 50.55a(b)(2)(xv)(C)(1) requires that when applying Appendix VIII, Supplement 4, a depth sizing acceptance criterion of 0.15 inch Root Mean Square (RMS) be used in lieu of the requirements of Subparagraph 3.2(a) and 3.2(b) of the 1995 Edition, 1996 Addenda of ASME Section XI, Appendix VIII. This depth sizing criterion of 0.15 inch RMS is appropriate to Subparagraph 3.2(a), but is not appropriate to Subparagraph 3.2(b) as this subparagraph addresses length sizing, not depth sizing.

Qualifications administered by the Performance Demonstration Initiative (PDI) have used a length sizing acceptance criteria of 0.75 inch RMS since the inception of these demonstrations in 1994. This length sizing tolerance is included in ASME Code Case N-622, which the NRC

approved for use at Florida Power and Light Company's St. Lucie Plant Unit 2 (TAC No. MA5041).

The NRC staff documented its assessment of the PDI program in a report dated March 6, 1996 (TAC No. M98046). Table 2 of this report stated that the NRC assessment team reviewed and did not take exception to the PDI position to change the Appendix VIII, Supplement 4, length tolerance of 0.75 inch RMS.

Conversations between the NRC staff and PDI representatives were held on January 12, 2000. During this conversation it was acknowledged that the 0.75-inch RMS length-sizing criteria should have been addressed in the modifications provided in 10 CFR 50.55a(b)(2)(xv)(C). It was also stated this would be corrected in future revisions.

During discussions between NRC and PBNP representatives, it was determined the original relief request submittal needed additional clarification on the three statistical parameters for depth sizing. A review was performed of the Code, 10 CFR 50.55a, and the Safety Evaluation Report for an identical relief granted to the Duane Arnold Energy Center. This review showed additional information was required for the referenced parameters.

In Supplement 4, Subparagraph 3.2(c), three statistical parameters for depth sizing are invoked. The first parameter, 3.2(c)(1), pertains to the slope of a linear regression line. The linear regression line is the difference between actual versus true value plotted along a through-wall thickness. For Supplement 4 performance demonstrations, a linear regression line of the data is not applicable because the performance demonstration is performed on test specimens with flaws located in the inner 15 percent through-wall. The differences between actual versus true value produce a high grouping of results which resemble a shotgun pattern. The slope of a regression line from such data is very sensitive to small variations, thus, making the parameter of Subparagraph 3.2(c)(1) a poor and inappropriate acceptance criterion. The second parameter, Subparagraph 3.2(c)(2), pertains to the mean deviation of the flaw depth. The value used in the code is too lax with respect to evaluating flaw depths within the inner 15 percent of wall thickness. Therefore, PBNP proposes to use the more appropriate criterion of 0.15 inch RMS of 10 CFR 50.55a(b)(2)(xv)(C)(1), which modifies Subparagraph 3.2(a), as the acceptance criterion. The third parameter, Subparagraph 3.2(c)(3), pertains to a correlation coefficient. The value of the correlation coefficient in Subparagraph 3.2(c)(3) is inappropriate for this application since it is based on the linear regression from Subparagraph 3.2(c)(1).

Alternative Examination

In accordance with 10 CFR 50.55a(a)(3)(i), PBNP requests to use the length sizing qualification criterion of 0.75 inch RMS in lieu of Appendix VIII, Supplement 4, Subparagraph 3.2(b), and to use the RMS value of 10 CFR 50.55a (b)(2)(xv)(C)(1), that modifies the depth sizing criterion of Appendix VIII, Supplement 4, Subparagraph 3.2(a), in lieu of Subparagraph 3.2(c). This will provide an acceptable level of quality and safety.

Implementation Schedule

This alternative to the requirements will be implemented during the Third Ten-Year Inservice Inspection Interval.