WOLF CREEK
NUCLEAR OPERATING CORPORATION

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ET 02-0048

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Reference: Letter ET 02-0001, dated February 12, 2002, from Richard A. Muench, WCNOC, to USNRC

Subject: Docket 50-482: Supplemental Information for Inservice Inspection Program Alternative for Limited Examination on Feedwater Nozzle to Steam Generator Shell Weld, Relief Request I2R-23

Gentlemen:

The Reference submitted Relief Request I2R-23 to the Nuclear Regulatory Commission for approval to use an alternative to the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components.

The attachment provides supplemental information for Relief Request I2R-23.

There are no commitments identified in this correspondence.

If you have any questions concerning this matter, please contact me at (620) 364-4034, or Mr. Tony Harris, Manager Regulatory Affairs, at (620) 364-4038.

Very truly yours,

Gary B. Fader

GBF/rlg

Attachment

cc: J. N. Donohew (NRC), w/a
D. N. Graves (NRC), w/a
E. W. Merschoff (NRC), w/a
Senior Resident Inspector (NRC), w/a

A047

**SUPPLEMENTAL INFORMATION FOR
RELIEF REQUEST I2R-23**

The following is a Nuclear Regulatory Commission (NRC) question to clarify the relief request (RR) application (ET 02-0001) dated February 12, 2002, for RR I2R-23.

> In the review of the application, it was noted that a one-sided examination of the steam generator feedwater nozzle-to-shell weld from the shell side using a 60 degree search unit on the perpendicular scans was completed from one direction. A full vee examination could not be performed due to the calibration block not being physically long enough to support a full vee calibration.
>
> Explain why not having a long enough calibration block is an impracticality under 50.55a(g)(6)(i) when a new block could be manufactured. Has the subject calibration block been approved by the Authorized Nuclear Inservice Inspector (ANII) and has examining the subject weld per Appendix VIII been considered?

Wolf Creek Nuclear Operating Corporation (WCNOC) provides the following responses to the above questions.

QUESTION 1:

Explain why not having a long enough calibration block is an impracticality under 50.55a(g)(6)(i) when a new block could be manufactured.

RESPONSE:

The composite amount of Code Required Volume (CRV), which has been examined, is 30%. This is determined as shown below:

45 degree perpendicular scan	100%
60 degree perpendicular scan	50% (coverage in one direction only)
45 degree parallel scan	0% (joint geometry does not allow scan)
60 degree parallel scan	0% (joint geometry does not allow scan)
0 degree scan	0% (joint geometry does not allow scan)

150/500 x 100% = 30%

The only increase in coverage provided by a longer calibration block would be the 60 degree perpendicular scan in another direction. This would increase the composite coverage of the CRV to only 40%. The difficulty in obtaining the material and manufacturing a new calibration block when combined with the effort and dose of reperforming the exam does not result in a compensating increase in safety.

The primary obstacle (as documented in the attachment to WCNOC letter ET 02-0001) is the inability to perform the 45 degree parallel scan, the 60 degree parallel scan, and the 0 degree scan due to the steam generator nozzle forging and nozzle to shell joint geometry. The inability to complete these scans results in a 60% loss of coverage for the CRV.

WCNOC proposes that the completed 45 degree perpendicular scan in both directions and the 60 degree perpendicular scan in one direction, combined with the code required surface exam and the periodic system leakage tests per Category C-H, Table IWC-2500-1, is an acceptable alternative as it provides an acceptable level of quality and safety.

QUESTION 2:

Has the subject calibration block been approved by the Authorized Nuclear Inservice Inspector (ANII) and has examining the subject weld per Appendix VIII been considered?

RESPONSE:

The ANII has approved the subject calibration block.

WCNOC had not previously considered examining the subject weld per Appendix VIII. Per IWA-2232, ultrasonic examination is conducted in accordance with Appendix I. Except for reactor vessels, Appendix I directs the examination of vessels greater than 2 inches in thickness to be conducted in accordance with Article 4 of Section V, as supplemented by Table I-2000-1. Reactor vessels, piping welds, bolts and studs are the only component examinations that are directed by Appendix I to be qualified in accordance with Appendix VIII. Therefore, Appendix VIII is not applicable to steam generator welds.

However, giving consideration to performing an Appendix VIII qualified examination reveals that such an examination could not be performed in accordance with the requirements of 10 CFR 50.55a (b)(2)(xv)(K)(3)(i), applicable to Supplement 7, nozzle-to-vessel weld examinations conducted from the outside of the vessel. 10 CFR 50.55a (b)(2)(xv)(K)(3)(i) requires two opposing circumferential directions that, as described in Relief Request I2R-23, cannot be performed. In addition, trying to perform a limited and modified Appendix VIII examination would result in considerable difficulty in qualifying the examination and additional effort and dose to reperform the examination that does not result in a compensating increase in safety.