

WOLF CREEK NUCLEAR OPERATING CORPORATION

Richard A. Muench
Vice President Technical Services

FEB 12 2002

ET 02-0003

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

Subject: Docket 50-482: Inservice Inspection Program Alternative for Limited Examination on Austenitic Stainless Steel Piping Welds with Single Side Access, Relief Request I2R-26

Gentlemen:

In accordance with 10 CFR 50.55a(a)(3)(i), Wolf Creek Nuclear Operating Corporation (WCNOC) hereby requests Nuclear Regulatory Commission (NRC) approval for the use of an alternative to the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Inservice Inspection Program.

Attachment I describes Relief Request I2R-26 to the WCNOC Second Interval Inservice Inspection Program Plan. This relief request is applicable to austenitic stainless steel piping welds with single side access which are part of the high-energy line break augmented inspection program. Complete examinations could not be performed on these welds because of the physical geometry of the weld joints.

During Refuel XI, the subject welds were examined with the best available technique with demonstrated best effort from the accessible side of the welds. WCNOC proposes that the "best effort" examinations provide an acceptable level of quality and safety as required by 10 CFR 50.55a(a)(3)(i).

WCNOC requests approval of this relief request by January 1, 2003. The approval date was administratively selected to allow for NRC review, but NRC approval by this date is not required to allow continued safe full power operation or to conduct a refueling outage.

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Attachment II contains a list of commitments made in this letter.

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

Very truly yours,



Richard A. Muench

RAM/pb

Attachments

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

RELIEF REQUEST I2R-26

Component Identification:

Code Class: 2
Examination Category: Augmented
Item Number: Updated Safety Analysis Report (USAR)
Description: Austenitic Stainless Steel Piping Welds with Single Side Access

Weld Identification Numbers:

BB-11-FW501, BB-11-FW505, BB-11-FW506, BB-11-W504, BB-11-V148-1, BB-11-V148-2,
BB-07-0W002, BB-07-F-111, BB-07-V208-1, BB-07-V208-2

These welds are part of a group of welds on which WCNOCC committed to perform 100 per cent volumetric examination in order to comply with NRC Branch Technical Position MEB 3-1. These welds are located within the "no break zone" associated with high energy piping in containment penetration areas. The "no break zone" is an area where pipe breaks were not postulated due to the stress levels being within limits specified in USAR Section 3.6.2.

Examination Requirements:

10 CFR 50.55a(b)(2)(xv)(A), requires the following examination coverage when applying Supplement 2 to Appendix VIII of Section XI, 1995 Edition with the 1996 Addenda:

(1) Piping must be examined in two axial directions and when examination in the circumferential direction is required, the circumferential examination must be performed in two directions, provided access is available.

(2) Where examination from both sides is not possible, full coverage credit may be claimed from a single side for ferritic welds. Where examination from both sides is not possible on austenitic welds, full coverage credit from a single side may be claimed only after completing a successful single sided Appendix VIII demonstration using flaws on the opposite side of the weld.

10 CFR 50.55a(b)(2)(xvi)(B) requires that examinations performed from one side of a ferritic or stainless steel pipe weld must be conducted with equipment, procedures, and personnel that have demonstrated proficiency with single side examinations. To demonstrate equivalency to two sided examinations, the demonstration must be performed to the requirements of Appendix VIII as modified by this paragraph and 10 CFR 50.55a(b)(2)(xv)(A).

Relief Requested:

Pursuant to 10 CFR 50.55a(a)(3)(i) and 10 CFR 50.55a(g)(6)(i), relief is requested to conduct alternative examinations as described below.

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Basis for Relief:

Pursuant to 10 CFR 50.55a(g)(6)(i), relief is requested from the new examination coverage and qualification demonstration requirements for the above listed austenitic piping welds with single side access based on this being impractical.

Table 1 gives the configuration of the welds and the side that is inaccessible. All of the subject welds are 2-inch connections and are either pipe to valve or pipe to tee configuration. Due to the small size and to the shape of the valve or tee, the subject welds are accessible for ultrasonic test (UT) examination on one side only.

TABLE 1

Weld Number	Configuration	Side Which Is Inaccessible
BB-11-FW501	2" Pipe to Tee	Tee Side
BB-11-FW505	2" Pipe to Valve	Valve Side
BB-11-FW506	2" Valve to Pipe	Valve Side
BB-11-W504	2" Tee to Pipe	Tee Side
BB-11-V148-1	2" Pipe to valve	Valve Side
BB-11-V148-2	2" Valve to Pipe	Valve Side
BB-07-0W002	2" Pipe to Valve	Valve Side
BB-07-F-111	2" Valve to Pipe	Valve Side
BB-07-V208-1	2" Pipe to Valve	Valve Side
BB-07-V208-2	2" Valve to Pipe	Valve Side

The Final Rule for 10 CFR 50.55a(b)(2)(xv)(G)(1) and others which was issued September 22, 1999, requires that if access is available, the weld shall be scanned in each of the four directions (parallel and perpendicular to the weld) where required. Coverage credit may be taken for single side exams on ferritic piping. However, for austenitic piping, a procedure must be qualified with flaws in the inaccessible side of the weld. There are currently no qualified single side examination procedures that demonstrate equivalency to two-sided examination procedures on austenitic piping welds. Current technology is not capable of reliably detecting or sizing flaws on the far side of an austenitic weld for configurations common to US nuclear applications.

The Performance Demonstration Initiative (PDI) Program conforms to the Final Rule regarding the single side access for piping. PDI Performance Demonstration Qualification Summary (PDQS) certificates for austenitic piping list the limitation that single side examination is performed on a best effort basis. The best effort qualification is provided in place of a complete single side qualification to demonstrate that the examiners qualification and the subsequent weld examination is based on application of the best available technology.

When the examination area is limited to one side of an austenitic weld, examination coverage does not comply with 10 CFR 50.55a(b)(2)(xvi)(B) and full coverage may not be claimed.

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WCNOC considers that the use of the proposed alternative examinations described below will provide an acceptable level of quality and safety as required by 10 CFR 50.55a(a)(3)(i).

Proposed Alternative Examinations:

- 1) The best available techniques, as qualified through the PDI for Supplement 2 with demonstrated best effort for single side examination, has been used from the accessible side of the weld. The subject welds have been examined to the fullest extent practical. WCNOC proposes that the completed examinations be considered an acceptable alternative to the augmented inspection requirements.
- 2) Periodic System Leakage Tests per Category C-H, Table IWC-2500-1, provide additional verification of component integrity.

Period for which Relief is Requested:

Relief is requested for the second ten-year interval of the WCNOC Inservice Inspection Program. This interval ends in 2005.

Implementation Schedule:

This relief request will be implemented within 60 days of approval.

WCNOC requests approval of this relief request by January 1, 2003.

LIST OF COMMITMENTS

The following table identifies those actions committed to by Wolf Creek Nuclear Operating Corporation (WCNOC) in this document. Any other statements in this submittal are provided for information purposes and are not considered to be commitments. Please direct questions regarding these commitments to Mr. Tony Harris, Manager Regulatory Affairs at Wolf Creek Generating Station, (620) 364-4038.

COMMITMENT	Due Date/Event
The relief request will be implemented within 60 days of approval.	Within 60 days of approval of the relief request.