



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO REQUESTS FOR RELIEF FROM INSERVICE INSPECTION REQUIREMENTS

PRESSURIZER SUPPORT SKIRT-TO-SHELL WELD

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

DOCKET NO. 50-423

INTRODUCTION

Technical Specification 4.0.5a for the Millstone Nuclear Power Station, Unit No. 3 states that inservice inspection (ISI) of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of required ASME Boiler and Pressure Vessel Code (the Code) and applicable Addenda, as required by 10 CFR 50.55a(g). Title 10 CFR 50.55a(g)(6)(i) authorizes the Commission to grant relief from Code requirements and to impose such alternative requirements as it determines is authorized by law upon making the necessary findings.

By letter dated March 18, 1987, as supplemented by letter dated August 5, 1988, the licensee requested relief from ASME Code requirements as these requirements related to ISI of the pressurizer support skirt-to-shell weld. The licensee proposed an alternative inspection of the weld.

DISCUSSION AND EVALUATION

1. Relief Request

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief was requested from performing the inservice surface examination on the inaccessible portion of the pressurizer support skirt-to-shell weld, area C-D, as shown on Fig. IWB-2500-13 of the 1983 Edition of the Code.

2. Code Requirement

A surface examination is required for 100% of the weld length of any integrally-welded attachment to the pressurizer. The examination shall be conducted in accordance with ASME Boiler and Pressure Vessel Code, Section XI, 1983 Edition through Summer 1983 Addenda.

3. Licensee's Basis For Requesting Relief

The licensee stated that the geometric configuration of the support skirt-to-shell weld limits the surface to be examined to the one accessible side of the support. In addition, by letter dated August 5, 1988, the licensee stated that radiation levels in the area to be inspected are high and estimates exposure for scaffolding, weld preparation, and performing the examination at 3.1 man-rem. The information submitted by the licensee meets the requirements of 10 CFR 50.55a(a)(3) regarding the difficulty/hardship of the existing Code requirement.

4. Licensee's Proposed Alternative

The licensee stated that the subject weld received a surface examination during preservice inspection in accordance with the 1980 Edition through Winter 1980 Addenda of Section XI and would receive an inservice inspection in accordance with Code Case N-323. Code Case N-323 gives acceptable alternative examination requirements for the subject weld. Stress intensities in Region C-D do not exceed 80 percent of the levels A, B, C, and D service limits (NB-3000) and the usage factor U does not exceed 0.1. The information submitted by the licensee concerning the acceptability of the proposed alternative inspection meets the requirements of 10 CFR 50.55(a)(3).

5. Staff Evaluation

The staff has determined that the geometry of the pressurizer support skirt-to-shell weld at Millstone Unit 3 prevents the licensee from performing the required surface examination of area C-D depicted in Fig. IWB-2500-13 of the 1983 Edition through Summer 1983 Addenda of Section XI of the ASME Code. In lieu of the required surface examination of the area, the licensee has proposed to use as an alternative the examination and design requirements of Code Case N-323 in which a surface examination of only the accessible side of the support is required to be performed provided the stress intensity factors in region C-D do not exceed 80% of Level A, B, C, and D Service Limits (NB-3000) and the cumulative usage factor U [(NB-322.4e(5))] does not exceed 0.1. The licensee has stated that a surface examination of the exterior surface of the weld will be performed and the stress intensity and cumulative usage factors do not exceed the limits cited in the Code Case. The staff therefore finds the proposed alternative will provide an acceptable level of quality and safety by providing reasonable assurance of continued weld integrity and concludes that relief from the Code surface examination requirement for area C-D may be granted as requested.

CONCLUSION

The NRC staff concludes that the code requirement is impractical, and if imposed, would result in additional radiation exposure. Accordingly, pursuant to 10 CFR 50.55a(g)(6)(i) and 50.55a(a)(3), the relief

requested is granted and the alternative examination is authorized. The NRC staff concludes that the relief granted will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden that would result if the requirement were imposed.

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