

CATEGORY 1

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SUBJECT: Requests approval for use alternative to ASME Boiler & Pressure Vessel Code requirements for exam of longitudinal welds in Class 1 & 2 piping.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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December 19, 1995
GO2-95-282

Docket No. 50-397

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

Gentlemen:

Subject: **WNP-2 OPERATING LICENSE NPF-21,
ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI
REQUEST FOR APPROVAL TO USE CODE CASE N-524**

In accordance with 10 CFR 50.55a(a)(3), the Supply System requests approval for WNP-2 to use an alternative to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements for examination of longitudinal welds in Class 1 and 2 piping. The requested alternative is delineated in ASME Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping" which was approved by the ASME committee on August 9, 1993, but has not yet been incorporated into Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability ASME Section XI Division 1." The basis for this request is provided in the Attachment.

The Supply System considers this request to use ASME Code Case N-524 to be a regulatory burden reduction item for WNP-2 with anticipated savings in excess of \$20,000 for the remaining refueling outages in the current 10-year in-service inspection interval. Approval of ASME Code Case N-524 for use at WNP-2 is requested by April 10, 1996 in order to support the upcoming refuel outage. The outage is presently scheduled to begin on April 13, 1996.

Please refer any questions regarding this submittal to Mr. Dave Swank at (509) 377-4563.

Sincerely,



J.W. Parrish (Mail Drop 1023)
Vice President, Nuclear Operations

DPR/lm
Attachment

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ATTACHMENT

ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI REQUEST FOR APPROVAL TO USE CODE CASE N-524

In accordance with 10 CFR 50.55a(a)(3), the Supply System requests approval for WNP-2 to use an alternative to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements for examination of longitudinal welds in Class 1 and 2 piping. The requested alternative is delineated in ASME Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping" which was approved by the ASME Code committee on August 9, 1993. Code Case N-524 has not yet been incorporated into Regulatory Guide 1.147.

Code Case N-524 allows alternative requirements for surface and volumetric examination of longitudinal piping welds specified in Table IWB-2500-1 (Category B-J) and IWC-2500-1 (Category C-F) of ASME Section XI. The alternative requirements of this Code Case limit the surface and volumetric examination requirements of longitudinal welds to the area or volume contained within the examination requirements of the intersecting circumferential weld. The alternative requirements of this Code Case have been reviewed by The Supply System and determined that the use of this Code Case would provide an acceptable level of quality and safety for the following reasons:

- Longitudinal welds are not produced in the field or fabrication shops as is the case of a circumferential weld. Longitudinal piping welds for Class 1 and 2 applications were made by the piping manufacturer under controlled conditions which produced higher quality welds and more uniform residual stress patterns. These welds were examined in accordance with the appropriate ASTM or ASME specifications with additional nondestructive examination requirements imposed by the purchasing specifications. The manufacturing controls specified by the appropriate ASTM or ASME specifications along with the additional examinations imposed by the purchasing specification provides assurance of the structural integrity of the longitudinal weld at the time the piping is manufactured.
- Inservice inspections have provided assurance of the structural integrity of the longitudinal welds during the service life of the plant to date. Based on results of these inservice inspections, WNP-2 has not experienced degradation that would warrant continued examination beyond the intersection area or volume bounded by this Code Case. If any degradation associated with a longitudinal weld were to occur, it is expected that it would be located at the intersection with a circumferential weld. The inspection of this intersection is within the scope of this Code Case.

Based on the above, the continual examination of longitudinal welds as currently required by the 1989 Edition of ASME Code, Section XI is not technically warranted. The ASME Code committee has recognized this fact, and for this reason approved alternative requirements outlined in Code Case N-524.

In addition to the above, there is a significant accumulation of personnel radiation exposure associated with the examination of longitudinal welds. The personnel radiation exposure associated with the examination of longitudinal welds are dependent on the time it would take to remove and reinstall insulation and interferences, prepare the weld for examination, and perform the examinations. Based on the current examination scope for the upcoming outage, exposure savings of approximately 2 person-rem for the reactor recirculation and residual heat removal systems could result from the approval to use the alternative requirements of Code Case N-524. Therefore, the continued imposition of the ASME Code, Section XI examination requirements for longitudinal welds constitutes a hardship to WNP-2 without a compensating increase in quality and safety.

The approval to use the alternative provisions of ASME Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping," is requested for the remainder of the second ten-year inservice inspection interval.

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