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SUBJECT: Requests permission to use alternative to ASME Code Section XI.

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DUKE POWER

September 4, 1996

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Subject: Duke Power Company

Catawba Nuclear Station, Units 1 & 2
Docket Nos. 50-413, 50-414

McGuire Nuclear Station, Units 1 & 2
Docket Nos. 50-369, 50-370

Oconee Nuclear Station, Units 1, 2 & 3
Docket Nos. 50-269, 50-270, 50-287

Request to use Alternative to ASME Code Section XI
Duke Power Request for Approval of Alternative

Background

Pursuant to 10 CFR 50.55a (a) (3) (i & ii), Duke Power Company requests the use of an alternative to the ASME Boiler and Pressure Vessel Code Section XI for Catawba Units 1 and 2, McGuire Units 1 and 2 and Oconee Units 1, 2, and 3. Specifically, Duke Power requests approval to use the provisions of Code Case N-524, "Alternative Examination Requirements for Longitudinal Welds in Class 1 and 2 Piping Section XI, Division 1," dated August 9, 1993. This Code Case has not been listed in the latest published revision (Revision 11) of NRC Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability-ASME Section XI Division 1." A copy of Code Case N-524 is included for your information as Attachment 1 of this letter.

Utilization of the above Code Case will reduce personnel radiation exposure with the reduction of necessary prep time, insulation removable and surface and volumetric inspection time. Duke Power believes the same level of

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quality can be maintained and personnel safety improved by implementing the alternative means provided by Code Case N-524. It is estimated that approximately 3.75 man-hours per examination can be saved if Duke is permitted to use Code Case N-524. It is further estimated that these examinations will be performed on a total of approximately 347 welds during future outages. Each of these examinations typically results in an average personnel radiation exposure of 25 mr/hr per longitudinal weld.

System/Component for Which Alternative is Requested:

Examination Category B-J	Class A piping longitudinal welds
Examination Category C-F-1	Class B piping longitudinal welds
Examination Category C-F-2	Class B piping longitudinal welds

Code Requirement:

It is required by the 1989 ASME Section XI Code (no addenda) that for surface and volumetric examinations of Class A piping longitudinal welds, Table IWB-2500-1 Examination Category B-J, the examination include at least a pipe-diameter length but not more than 12 inches of each longitudinal weld intersecting the circumferential welds. For Class B piping longitudinal welds, Table IWC-2500-1 Examination Categories C-F-1 and C-F-2, requires that surface and volumetric examination of the longitudinal weld include 2.5t at the intersecting circumferential weld.

Request for Approval of Alternative Examinations:

Duke Power requests approval of Code Case N-524 and proposes to apply it as an alternative to the rules for surface and volumetric examination of longitudinal piping welds specified in Table 2500-1, Examination Category B-J and Table IWC-2500-1, Examination Categories C-F-1 and C-F-2. Code Case N-524 states that *"It is the opinion of the Committee that the following shall apply:*

- (a) When only a surface examination is required, examination of longitudinal piping welds is not required beyond those portions of the welds within the examination boundaries of intersecting circumferential welds.*

(b) When both surface and volumetric examinations are required, examination of longitudinal piping welds is not required beyond those portions of the welds within the examination boundaries of intersecting circumferential welds provided the following requirements are met.

(1) Where longitudinal welds are specified and locations known, examination requirements shall be met for both transverse and parallel flaws at the intersecting of the welds and for that length of longitudinal weld within the circumferential weld examination volume;


(2) Where longitudinal welds are specified but locations are unknown, or the existence of longitudinal welds is uncertain, the examination requirements shall be met for both transverse and parallel flaws within the entire examination volume of intersecting circumferential welds."

Implementation:

Oconee Unit 3 begins Refueling Outage EOC 16 on November 1, 1996. Duke would like to use this alternative examination described in the Code Case at that time. It is requested that a reply granting approval to use Code Case N-524 (copy attached) be received by the beginning of the upcoming Oconee outage. It is Duke's understanding that Code Case N-524 has previously been approved by the NRC Staff for use at WNP Unit 2.

If you have questions concerning this request for alternative, please call J. S. Warren at (704) 382-4986

Very truly yours,


M. S. Tuckman

MST/JSW

Attachment: Copy of Code Case N-524

xc w/Att: S. D. Ebnetter
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CASES OF ASME BOILER AND PRESSURE VESSEL CODE**Approval Date: August 9, 1993***See Numerical Index for expiration
and any reaffirmation dates.***Case N-524****Alternative Examination Requirements for
Longitudinal Welds in Class 1 and 2 Piping
Section XI, Division 1**

Inquiry: What alternative requirements may be applied to the surface and volumetric examination of longitudinal piping welds specified in Table IWB-2500-1, Examination Category B-J, Table IWC-2500-1, Examination Categories C-F-1 and C-F-2 (Examination Category C-F prior to Winter 1983 Addenda), and Table IWC-2520, Examination Category C-G (1974 Edition, Summer 1975 Addenda)?

Reply: It is the opinion of the Committee that the following shall apply:

(a) When only a surface examination is required, examination of longitudinal piping welds is not required beyond those portions of the welds within the examination boundaries of intersecting circumferential welds.

(b) When both surface and volumetric examinations are required, examination of longitudinal piping welds is not required beyond those portions of the welds within the examination boundaries of intersecting circumferential welds provided the following requirements are met.

(1) Where longitudinal welds are specified and locations are known, examination requirements shall be met for both transverse and parallel flaws at the intersection of the welds and for that length of longitudinal weld within the circumferential weld examination volume;

(2) Where longitudinal welds are specified but locations are unknown, or the existence of longitudinal welds is uncertain, the examination requirements shall be met for both transverse and parallel flaws within the entire examination volume of intersecting circumferential welds.