

OPPD

Omaha Public Power District  
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Omaha, Nebraska 68102-2247  
402/636-2000

September 30, 1994  
LIC-94-0188

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-137  
Washington, DC 20555

REFERENCES: 1. Docket No. 50-285  
2. American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI, 1989 Edition  
3. Letter from NRC (J. T. Larkins) to OPPD (W. G. Gates) dated December 18, 1991  
4. ASME Code Case N-498-1, "Alternative Rules for 10-Year System Hydrostatic Testing for Class 1, 2 and 3 Systems, Section XI, Division 1," Approval Date May 11, 1994

Gentlemen:

SUBJECT: Request for Approval to Implement Provisions of the American Society of Mechanical Engineers (ASME) Code Case N-498-1

Pursuant to 10 CFR 50.55a(a)(3), the Omaha Public Power District (OPPD) requests approval for implementation of the alternative rules of the ASME, Section XI Code Case N-498-1 at Fort Calhoun Station (FCS). These rules would be used in lieu of the 10-year system hydrostatic pressure tests required by ASME Section XI, Table IWB-2500-1, Category B-P; Table IWC-2500-1, Category C-H; and Table IWD-2500-1, Categories D-A, D-B and D-C (Reference 2). Use of the alternative rules of Code Case N-498-1 will result in lower total radiation exposures to personnel and provide significant economic benefits without any reduction in the level of quality or safety of the applicable systems.

Please find attached, the Discussion and Justification for OPPD's request for exemption from performing the 10-year hydrostatic pressure tests on ASME Code Class 1, 2 and 3 components and systems for NRC approval.

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U. S. Nuclear Regulatory Commission  
LIC-94-0188  
Page Two

NRC approval to implement ASME Code Case N-498-1 is requested to allow implementation prior to the 1995 Refueling Outage. Therefore, it is requested that the NRC provide approval prior to March 1, 1995.

If you should have any questions, please contact me.

Sincerely,



W. G. Gates  
Vice President

WGG/d11

Attachment

c: LeBoeuf, Lamb, Greene and MacRae  
L. J. Callan, NRC Regional Administrator, Region IV  
S. D. Bloom, NRC Project Manager  
R. P. Mullikin, NRC Senior Resident Inspector

### DISCUSSION AND JUSTIFICATION

The Fort Calhoun Station (FCS) Inservice Inspection (ISI) Program Plan presently conforms (except for previously docketed relief requests) with the Hydrostatic Test Requirements of Subsections IWB-2500, IWC-2500 and IWD-2500 of the 1989 Edition to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components."

For Class 1 systems, Table IWB-2500-1, Category B-P, Note 6, states "The system hydrostatic test (IWB-5222) shall be conducted at or near the end of each inspection interval." For Class 2 systems, Table IWC-2500-1, Category C-H, Note 5, states "The system hydrostatic test (IWC-5222) shall be conducted at or near the end of each inspection interval or during the same inspection period of each inspection interval of Inspection Program B." For Class 3 systems, Table IWD-2500-1, Categories D-A, D-B and D-C, Note 2, states, "The system hydrostatic test shall be conducted at or near the end of each inspection interval or during the same inspection period of each inspection interval for Inspection Program B."

Recently, ASME Code Case N-498-1, "Alternative Rules for 10-Year System Hydrostatic Testing for Class 1, 2 and 3 Systems, Section XI, Division 1," was approved by the ASME Code Committee on May 11, 1994. The inquiry to the ASME Code Committee was:

"What alternative rules may be used in lieu of those required by Section XI, Division 1, Table IWB-2500-1, Category B-P, Table IWC-2500-1, Category C-H, and Table IWD-2500-1, Categories D-A, D-B, and D-C, as applicable, for the 10-Year System Hydrostatic Test?"

The ASME Code Committee replied that as an alternative to the 10-year system hydrostatic pressure test required by Table IWB-2500-1, Category B-P, the following rules shall be used:

1. A system leakage test (IWB-5221) shall be conducted at or near the end of each inspection interval, prior to reactor startup.
2. The boundary subject to test pressurization during the system leakage test shall extend to all Class 1 pressure retaining components within the system boundary.
3. Prior to performing VT-2 visual examination, the system shall be pressurized to nominal operating pressure for at least 4 hours for insulated systems and 10 minutes for noninsulated systems. The system shall be maintained at nominal operating pressure during the performance of the VT-2 visual examination.
4. Test temperatures and pressures shall not exceed limiting conditions for the hydrostatic test curve as contained in the plant Technical Specifications.
5. The VT-2 visual examination shall include all components within the boundary identified in (2) above.

It is the opinion of the (ASME Code) Committee that, as an alternative to the 10-year system hydrostatic test required by Table IWC-2500-1, Category C-H, the following rules shall be used:

1. A system pressure test shall be conducted at or near the end of each inspection interval or during the same inspection period of each inspection interval of Inspection Program B.
2. The boundary subject to test pressurization during the system pressure test shall extend to all Class 2 components included in those portions of systems required to operate or support the safety system function up to and including the first normally closed valve, including a safety or relief valve, or valve capable of automatic closure when the safety function is required.
3. Prior to performing the VT-2 visual examination, the system shall be pressurized to nominal operating pressure for a minimum of 4 hours for insulated systems and 10 minutes for noninsulated systems. The system shall be maintained at nominal operating pressure during performance of the VT-2 visual examination.
4. The VT-2 visual examination shall include all components within the boundary identified in (2) above.

It is also the opinion of the (ASME Code) Committee that, as an alternative to the 10-year system hydrostatic test required by Table IWD-2500-1, Categories D-A, D-B, or D-C, (D-B for the 1989 Edition with the 1991 and subsequent Addenda), as applicable, the following rules shall be used:

1. A system pressure test shall be conducted at or near the end of each inspection interval or during the same inspection period of each inspection interval of Inspection Program B.
2. The boundary subject to test pressurization during the system pressure test shall extend to all Class 3 components included in those portions of systems required to operate or support the safety system function up to and including the first normally closed valve, including a safety or relief valve or valve capable of automatic closure when the safety function is required.

It should be noted that OPPD has been complying with ASME Code Case N-498 for ASME Class 1 and 2 systems in lieu of the Code required System 10-Year Hydrostatic Tests since 1991 as approved by the NRC in a previous submittal (Reference 3).

OPPD requests approval to perform the system leakage and system pressure tests where applicable for ASME Code Class 1, 2 and 3 systems/piping using the ASME Code Case N-498-1 alternative testing rules stated above in lieu of the 10-year hydrostatic tests presently in the FCS ISI Program Plan, Revision 0. Upon NRC approval of the proposed alternate testing requirements, the FCS ISI Program Plan will be revised to incorporate these testing requirements.

Use of the alternative rules will reduce the testing duration and result in lower total radiation exposures to personnel without any reduction in the level of quality or safety of the applicable systems.

NRC approval to implement ASME Code Case N-498-1 is requested to allow implementation prior to the 1995 Refueling Outage, which is scheduled to commence on March 11, 1995. Therefore, it is requested that the NRC provide approval for implementation of ASME Code Case N-498-1 prior to March 1, 1995.