

Omaha Public Power District  
444 South 16th Street Mall  
Omaha, Nebraska 68102-2247  
402/636-2000

March 6, 1992  
LIC-92-074R

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, 1980 Edition, Winter 1980 Addenda
  3. Letter from Combustion Engineering Owners Group (J. J. Hutchinson) to NRC (Document Control Desk) "CEOG Submittal of CEN-412, Relaxation of Reactor Coolant Pump Casing Inspection Requirements" Dated November 27, 1991 (CEOG-91-716)
  4. ASME Code Case N-481, "Alternative Examination Requirement for Cast Austenitic Pump Casings"
  5. Letter from the NRC (J. T. Larkins) to OPPD (W. G. Gates) Dated December 18, 1991, "Request for Implementation of ASME Code Case N-498, Fort Calhoun Station, Unit 1 (TAC No. M82081)"

Gentlemen:

SUBJECT: Request for Approval to Implement Provisions of ASME Code Case N-481

Pursuant to 10 CFR 50.55a(a)(3), Omaha Public Power District (OPPD) requests relief from performing the Reactor Coolant Pump (RCP) casing volumetric weld examination (Item B12.10) and internal surface visual examination (Item B12.20) that are required by Table IWB-2500-1 of Reference 2. Reference 3 is the primary basis for this relief request.

The Reference 3 topical report was submitted to the NRC for review on November 27, 1991 by Combustion Engineering. This topical report provides specific analyses of the potential for RCP casing weld failure for six (6) nuclear power plants including Fort Calhoun Station (FCS). This report fulfills the evaluation requirement of Reference 4 by providing a persuasive analysis to demonstrate that the failure of the RCP casing welds at Fort Calhoun Station during the Station's lifetime is not a credible event.

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In lieu of the examination requirements of Item B12.10 and B12.20, Reference 4 specified the following alternative examinations:

1. VT-1 visual examination of the external surface of one Reactor Coolant Pump each 10-year inspection interval.
2. VT-2 visual examination during the Reactor Coolant System Hydrostatic Test.
3. VT-3 visual examination of the RCP internals whenever a pump is disassembled for maintenance.

Reference 3 justified use of the alternative examinations noted above based on a significant reduction in radiation exposure to personnel. This would be accomplished without reducing the level of quality or safety of the Reactor Coolant System pressure boundary. Reference 3 shows the FCS RCP casing integrity to be retained for 175 years under expected service conditions.

OPPD agrees with the conclusion of Reference 3 that the VT-1 visual examination of the external surfaces specified in Reference 4 would not be effective from a risk/benefit standpoint. The VT-1 examination would provide only limited benefit over the analytical demonstration of stability described in the topical report. The removal and replacement of the RCP insulation for access to the external surfaces and the examination itself would result in personnel radiation exposure of approximately 12 man-rem for each RCP.

The VT-2 and VT-3 examinations specified in Reference 4 are considered to be effective and require minimal radiation exposure, since no additional insulation removal is required to perform them. It is therefore proposed that the analytical results of Reference 3 be accepted as an alternative to the VT-1 examination of the external surface of one RCP casing weld.

Fort Calhoun Station received NRC approval to implement Code Case N-498, "Alternate Rules for Ten-Year Hydrostatic Pressure Testing Class 1 and 2 Systems" (Reference 5). Therefore, the VT-2 examination would be completed in conjunction with a Reactor Coolant System (RCS) leak test instead of a RCS hydrostatic test.

In summary, OPPD requests relief from the requirements of Item B12.10 and B12.20 in Table IWB-2500-1 of Reference 2. Justification for this relief includes the analysis provided in Reference 3 and performance of the following alternative examinations:

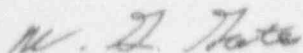
1. VT-2 visual examination of the RCPs during the Reactor Coolant System leakage test performed in accordance with Item B15.10 of Table IWB-2500-1 of Reference 2 each refueling outage.
2. VT-3 visual examination of the interior surfaces of the RCP to the extent practical whenever a pump is disassembled for maintenance.

U. S. Nuclear Regulatory Commission  
LIC-92-074R  
Page 3

Approval of this relief request is requested by July 1, 1993. This will allow implementation prior to the currently scheduled Fall 1993 Refueling Outage.

If you should have any questions, please contact me.

Sincerely



W. G. Gates  
Division Manager  
Nuclear Operations

WGG/sel

c: LeBoeuf, Lamb, Leiby & MacRae  
D. L. Wigginton, NRC Senior Project Manager  
S. D. Bloom, NRC Project Engineer  
R. D. Martin, NRC Regional Administrator, Region IV  
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