



50-298

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

January 24, 1997

Mr. G. R. Horn  
Sr. Vice President of Energy Supply  
Nebraska Public Power District  
1414 15th Street  
Columbus, NE 68601

SUBJECT: REQUEST FOR DEFERRAL OF SECOND CORE SHROUD INSPECTION FOR COOPER  
NUCLEAR STATION (TAC NO. M96954)

Dear Mr. Horn:

By letter dated October 22, 1996, the Nebraska Public Power District (NPPD) requested Nuclear Regulatory Commission (NRC) staff approval for deferral of the second series of planned inspections of the core shroud at the Cooper Nuclear Station (CNS). NPPD performed initial inspections of the core shroud in accordance with NRC Generic Letter 94-03, "Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors (BWR)," during Refueling Outage (RFO) 16 in late 1995. Based on our review of the results of those inspections, in our letter of June 27, 1996, the NRC staff concluded that the plant could be safely operated for the duration of the current 18-month operating cycle without the need to implement repairs to the shroud.

In your October 22, 1996, request, you stated that the BWR Vessel and Internals Project (BWRVIP) had developed revised inspection guidance for core shrouds, and that application of that guidance would indicate that the CNS core shroud need not be reinspected for 8 years. However, recognizing that the NRC staff has not yet completed its review of that guidance, your specific request was to defer the next core shroud inspections until RFO 18, currently scheduled for the Fall of 1998.

The core shroud inspection during the 1995 refueling outage found cracking in four welds. The H3 weld was cracked the worst with 79.9% of the H3 weld inspected and the total length of the indications 66 inches (14.9% of the inspected length). The remaining three welds were cracked considerably less (4.4% of the inspected length or less). Your evaluation showed that all of the welds met the applicable limit load and/or linear elastic fracture mechanics (LEFM) screening criteria and no further evaluation or non-destructive examination characterization was deemed necessary. In your limit load analysis, you determined the allowable through-wall circumferential flaw length for each of the eight core shroud welds. These lengths ranged from 323 inches to 423 inches. For the H3 weld, the weld with the longest indications, the allowable crack length was 393 inches.

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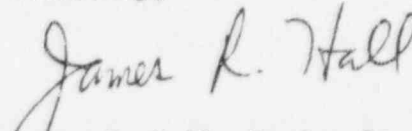
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Mr. G. R. Horn

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On the basis of the large margin available between the actual and allowable crack lengths and allowing for crack growth at a bounding rate of  $5 \times 10^{-5}$  inch/hour, the staff finds that the structural integrity of the shroud is capable of being maintained for at least another fuel cycle. Therefore, the staff finds your request for deferral of the core shroud inspection for another fuel cycle acceptable.

Sincerely,

A handwritten signature in cursive script that reads "James R. Hall".

James R. Hall, Senior Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

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cc: See next page

Mr. G. R. Horn

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On the basis of the large margin available between the actual and allowable crack lengths and allowing for crack growth at a bounding rate of  $5 \times 10^{-5}$  inch/hour, the staff finds that the structural integrity of the shroud is capable of being maintained for at least another fuel cycle. Therefore, the staff finds your request for deferral of the core shroud inspection for another fuel cycle acceptable.

Sincerely,

ORIGINAL SIGNED BY:

James R. Hall, Senior Project Manager  
Project Directorate IV-1  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

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cc: See next page

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COPY	YES/NO	YES/NO

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Mr. G. R. Horn  
Nebraska Public Power Company

Cooper Nuclear Station

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