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.

DF01

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 5×10^{-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,

James R. Hall

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

Docket No. 50-298

cc: See next page

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 5×10^{-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

Docket No. 50-298

cc: See next page

DISTRIBUTION:

Docket File	PUBLIC	PD4-1 r/f
J. Roe	C. Hawes	ACRS
OGC (15B18)	J. Dyer, RIV	J. Hall
E. Adensam (EGA1)		

Document Name: C0096954.LTR

OFC	PM/PD4-1	(A)LA/PD4-1
NAME	JHall JRH	CHawes CMH
DATE	1/24/97	1/23/97
COPY	YES/NO	YES/NO

OFFICIAL RECORD COPY

Mr. G. R. Horn
Nebraska Public Power Company

Cooper Nuclear Station

cc:

Mr. John R McPhail, General Counsel
Nebraska Public Power District
P. O. Box 499
Columbus, NE 68602-0499

Nebraska Public Power District
ATTN: Mr. P. D. Graham
Vice President of Nuclear Energy
P. O. Box 98
Brownville, NE 68321

Randolph Wood, Director
Nebraska Department of Environmental Control
P. O. Box 98922
Lincoln, NE 68509-8922

Mr. Larry Bohlken, Chairman
Nemaha County Board of Commissioners
Nemaha County Courthouse
1824 N Street
Auburn, NE 68305

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 218
Brownville, NE 68321

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Ms. Cheryl Rogers, LLRW Program Manager
Division of Radiological Health
Nebraska Department of Health
301 Centennial Mall, South
P. O. Box 95007
Lincoln, NE 68509-5007

Mr. Ronald A. Kucera, Department Director
of Intergovernmental Cooperation
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

Lincoln Electric System
ATTN: Mr. Ron Stoddard
11th & O Streets
Lincoln, NE 68508

Midwest Power
ATTN: Richard J. Singer, Manager-Nuclear
907 Walnut Street
P. O. Box 657
Des Moines, IA 50303

Nebraska Public Power District
ATTN: Mr. B. L. Houston, Nuclear
Licensing & Safety Manager
P. O. Box 98
Brownville, NE 68321