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 AUTH. NAME AUTHOR AFFILIATION
 FITZPATRICK, E.E American Electric Power Co., Inc.
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SUBJECT: Submits info re update on bottom mounted instrumentation thimble tubes.

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American Electric Power
1 Riverside Plaza
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July 30, 1996

AEP:NRC:1059F

Docket Nos.: 50-315
50-316

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Donald C. Cook Nuclear Plant Units 1 and 2
BOTTOM MOUNTED INSTRUMENTATION THIMBLE TUBE 1995-6
WEAR INSPECTION RESULTS AND COMMITMENT CHANGE

The purpose of this letter is to provide the NRC with an updated status with regard to flow-induced vibrational wear of bottom mounted instrumentation thimble tubes. Information on this topic was previously provided in our letter AEP:NRC:1059E, dated November 23, 1994.

During the 1992 refueling outages, 15 thimble tubes were replaced in Unit 1 and 22 thimble tubes were replaced in Unit 2. The replacement thimble tubes were chrome plated at axial locations corresponding to the lower core plate and fuel assembly lower nozzle area. During the 1995 Unit 1 and 1996 Unit 2 refueling outages, an eddy current inspection was performed on all thimble tubes. After two cycles of operation for each unit, the chrome plated thimble tubes show no indications of wear on the plated portions of the tubes. Active indications of wear continued to be observed on the other thimble tubes. These results reconfirm our conclusion based on the eddy current inspections during the 1994 refueling outages that the chrome plating is an effective engineered solution to vibration-induced thimble tube wear.

We informed the NRC staff in our November 23, 1994, letter that we intend to implement a design change to replace all present-design thimble tubes with chrome plated tubes. Although less severe, wear indications have also subsequently been observed at axial tube locations corresponding to the lower core support dome and diffuser plate in the lower internals. The new thimble tubes will be chrome plated over a longer length to impede wear from occurring at these additional locations.

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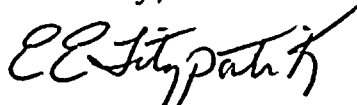
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We had anticipated that this design change will be implemented on both units during the refueling outages scheduled to occur in 1997. However, it is now our plan to implement this change during the 1998 Unit 1 and 1999 Unit 2 refueling outages, thereby postponing implementation for one operating cycle. The reasons for this scheduling change are 1) an analysis of thimble tube wear rates shows that one additional operating cycle may be achieved without significantly increasing the risk of a thimble tube failure and without significant loss of flux mapping locations, and 2) outage planning for other activities which require the lower internals to be removed during the 1997 refueling outages makes implementation of this change less desirable until a later date.

In the interim, we will continue to monitor thimble tube wear. Eddy current inspections will be performed on every thimble tube during each refueling outage to continue to evaluate the effectiveness of the chrome plating and to continue to monitor the wear rates of the non-chrome plated tubes. Until the present-design thimble tubes are replaced, wear indications on worn thimble tubes will be evaluated each refueling outage to determine if interim corrective actions (i.e., shortening of the tube to reposition the wear scar, isolating of the tube to contain a potential through-wall leak, or thimble tube replacement), are necessary.

We will continue to keep the NRC staff informed of developments in this area.

Sincerely,



E. E. Fitzpatrick
Vice President

llg

cc: A. A. Blind
W. Beach
NFEM Section Chief
NRC Resident Inspector - Bridgman
J. R. Padgett