

# CATEGORY 1

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SUBJECT: Forwards revised relief request 2 for third ten-year pump in-service test program, per 980113 telcon w/NRC re 970819 relief request. Encl request reflects agreed upon testing method discussed during telcon.

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March 26, 1998

AEP:NRC:0969BL

Docket Nos.: 50-315  
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Gentlemen:

Donald C. Cook Nuclear Plant Units 1 and 2  
RELIEF REQUEST FOR THE THIRD TEN-YEAR PUMP  
IN-SERVICE TEST PROGRAM

References:

1. Letter AEP:NRC:0969AM, "Donald C. Cook Nuclear Plant Units 1 and 2, RELIEF REQUESTS FOR THE THIRD TEN-YEAR PUMP IN-SERVICE TEST PLAN", dated June 12, 1996.
2. Letter, G. H. Marcus, NRC, to E. E. Fitzpatrick, I&M, "EVALUATION OF THIRD TEN-YEAR INTERVAL FOR THE PUMP AND VALVE IN-SERVICE TESTING PROGRAM FOR DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 (TAC NOS. M95721, M95722, M95890, AND M95981)", dated May 27, 1997.
3. Letter AEP:NRC:0969BE, "Donald C. Cook Nuclear Plant Units 1 and 2, RELIEF REQUESTS FOR THE THIRD TEN-YEAR PUMP AND VALVE IN-SERVICE TEST PLANS", dated August 19, 1997.

The third ten year in-service testing program for pumps was submitted in reference 1. As part of that submittal, we submitted relief requests for code requirements that we had determined were impractical to meet. In the NRC response to our relief requests, reference 2, request P-2 (boric acid transfer pump axial vibration measurements) was granted on an interim basis for ninety days. The P-2 relief was revised and resubmitted on August 19, 1997, reference 3, indicating that it was not practical to take pump axial vibration measurements because of personnel safety considerations.

A conversation with members of your staff was held on January 13, 1998, to discuss the August 19, 1997, relief request. As a result of this conversation, we agreed to take axial vibration

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measurements at the outboard motor bearing in lieu of obtaining measurements at the pump bearings. The attached relief request supersedes our previous submittals associated with the P-2 relief and reflects the agreed upon testing method discussed during the teleconference.

Sincerely,



E. E. Fitzpatrick  
Vice President

/vlb

Attachment

c: J. A. Abramson  
A. B. Beach  
MDEQ - DW & RPD  
NRC Resident Inspector  
J. R. Sampson

ATTACHMENT TO AEP:NRC:0969BL

RELIEF REQUEST FOR THE THIRD TEN-YEAR PUMP  
IN-SERVICE TEST PROGRAM

REQUEST NO. 2 - REVISED RELIEF REQUEST  
THIRD TEN-YEAR INTERVAL PUMP IN-SERVICE TEST PLAN

TITLE: Boric Acid Transfer Pump Axial Vibration Measurement

UNIT APPLICABILITY: Units 1 and 2

PUMP NAME: Boric Acid Transfer Pump

PUMP NUMBERS: 1-PP-46-1, 2; 2-PP-46-3, 4

SYSTEM: Chemical and Volume Control System (CVCS) Makeup

FLOW DIAGRAM: 12-5131 ASME CLASS: 2

PUMP FUNCTION: Transfer boric acid solution from the storage tank to the charging pump suction header.

RELIEF TYPE: Compliance with code requirements is impractical.

ASME CODE TEST REQUIREMENT REFERENCE:

Oma-1988, Part 6, Paragraph 4.6.4(a)

CODE REQUIREMENT DESCRIPTION

On centrifugal pumps, measurements shall be taken in a plane approximately perpendicular to the rotating shaft in two orthogonal directions on each accessible pump bearing housing. Measurements also shall be taken in the axial direction on each accessible pump thrust bearing.

BASIS FOR CODE COMPLIANCE REQUIREMENTS BEING IMPRACTICAL

By design, the only accessible point for taking axial vibration measurement is the outboard motor bearing. It is unsafe to monitor the axial direction vibration on the inboard pump bearing due to the proximity of the rotating shaft, and there is no position for monitoring the outboard pump bearing housing because of the presence of heat tracing. Modifications to the coupling shield to allow access were attempted. However, the modified shield did not provide sufficient clearance to allow individuals performing the measurement to safely place their hands near the rotating shaft.

PROPOSED ALTERNATE TESTING

Axial vibration will be measured at the outboard motor bearing. The vibration limits contained in ASME Oma-1988, part 6, table 31, will be applied to the vibration levels monitored at the outboard motor bearing.

BASIS ALTERNATE TESTING YIELDS ACCEPTABLE LEVELS OF QUALITY AND SAFETY

The measurements taken in the axial direction at the outboard motor bearing will be representative of the pump's axial vibration because the axial motion will originate at the pump.

