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ALEXICH,M.P. Indiana & Michigan Electric Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Responds to DL Wigginton 850326 ltr,Relief requested from Section XI of ASME Boiler & Pressure Vessel Code for certain valve & testing requirements,Rev 1 to valve summary sheets for inservice testing program encl.

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May 10, 1985
AEP:NRC:0730G

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
INSERVICE TESTING PROGRAM-CODE RELIEFS

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: 1) Letter from Mr. David L. Wigginton, NRC, dated March 26, 1985

2) Our Letter No. AEP:NRC:0730F dated May 10, 1985

Dear Mr. Denton:

This letter and its Attachments are in response to the above referenced letter from Mr. D. L. Wigginton of your staff and provide the revised pages for the Inservice Testing Program (IST) for the Donald C. Cook Nuclear Plant. This submittal is made pursuant to 10 CFR Section 50.55a(g)(6)(i) and requests code relief from section XI of the ASME Boiler and Pressure Vessel Code for certain valve and pump testing requirements. Attachment 1 to this letter is a complete revision to the IST Pump Program for the D. C. Cook Nuclear Plant. The code relief requests discussed at the March 6 and 7, 1985 meeting between our staff and the NRC are detailed in Tables B, D and E. Attachments 2 and 3 contain the request for code relief for the valve testing programs for Units 1 and 2 respectively. For your convenience these attachments are submitted as revised pages to the IST Valve Program which was submitted in our earlier letter AEP:NRC:0730C dated October 2, 1984. For your information those code reliefs which were discussed at the March meeting are marked as "C-1" in the margin. In addition, the revised pages include valve program changes that were agreed upon between the NRC and our staff at that meeting. These revisions are marked as "M-1" in the margin. Other changes identified by us during the preparation of this submittal, which are either minor or editorial in nature, are marked as "E-1".

Attachments 1, 2 and 3 replace the corresponding pages of the IST program submitted in our earlier letter no. AEP:NRC:0730C dated October 2, 1984.

This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,

M. P. Alexich
Vice President

cm

Attachments

cc: John E. Dolan (w/o attachment)
W. G. Smith, Jr. - Bridgman (w/attachment)
R. C. Callen (w/o attachment)
G. Bruchmann (w/o attachment)
G. Charnoff (w/o attachment)
NRC Resident Inspector - Bridgman (w/attachment)
R. Lyon - EG&G

ATTACHMENT NO. 1
TO
AEP:NRC:0730G

DONALD C. COOK NUCLEAR PLANT - UNITS NO. 1 AND 2

ASME B & PV CODE SECTION XI

PUMP INSERVICE TEST PROGRAM

A. The pump test program shall be conducted in accordance with Subsection IWP of Section XI of the 1974 Edition of the ASME Boiler and Pressure Vessel Code through Summer 1975 Addenda, except for specific relief requested in accordance with 10 CFR 50.55a(g)(5)(iii) which is identified in Tables B, C, D and E.

B. The period for which the pump inservice test program is applicable is the period beginning December 23, 1978 for Unit 1 and the period beginning July 1, 1978 for Unit 2.

C. The pump test program was developed employing the classification guidelines contained in Regulatory Guide 1.26, Revision 2 for Quality Groups B and C, and the definition of the reactor coolant system boundary contained in 10 CFR 50.2 (v) for Group A. (Quality Groups A, B, and C are the same as ASME Class 1, 2, and 3, respectively). Using these guidelines and IWP-1100, the pump list attached as Table A was developed. Table A identifies the following:

i. The pump number and service it performs along with the drawing identification number on which it is found.

ii. The applicable test parameters:

1. Speed

2. Inlet Pressure

3. Differential Pressure
   Determined as the difference between measured discharge and suction pressures

4. Flow Rate

5. Vibration Amplitude

6. Bearing Temperature

iii. The test frequency required.

DONALD C. COOK NUCLEAR PLANT - UNITS NO. 1 AND 2
PUMP INSERVICE TEST PROGRAM
TABLE A
PROGRAM SUMMARY

PUMP SERVICE DWG. NO.	PUMP NUMBER	TEST PARAMETERS: SPEED N	INLET PRESSURE P_i	DIFFERENTIAL PRESSURE P	FLOW RATE Q	VIBRATION AMPLITUBE V (4)	BEARING TEMPERATURE T_b	TEST FREQUENCY (1)
AUXILIARY	PP-3W	NO	YES	YES	YES*	YES	YES	MONTHLY
FEEDWATER	PP-3E	NO	YES	YES	YES*	YES	YES	MONTHLY
(5106A)	PP-4	YES	YES	YES	YES*	YES	YES	MONTHLY
ESSENTIAL	PP-7W	NO	YES (3)	YES	YES	YES	YES (5)	MONTHLY
SERVICE	PP-7E	NO	YES (3)	YES	YES	YES	YES (5)	MONTHLY
WATER (5113)								
CENTRIFUGAL	PP-50W	NO	YES	YES	NO**	YES	YES	MONTHLY
CHARGING	PP-50E	NO	YES	YES	NO**	YES	YES	MONTHLY
(5129)								
BORIC ACID	PP-46-1	NO	YES (3)	YES	NO*	YES	YES	MONTHLY
TRANSFER	PP-46-2	NO	YES (3)	YES	NO*	YES	YES	MONTHLY
(5131)	PP-46-3	NO	YES (3)	YES	NO*	YES	YES	MONTHLY
	PP-46-4	NO	YES (3)	YES	NO*	YES	YES	MONTHLY
COMPONENT	PP-10W	NO	YES	YES	YES	YES	YES	MONTHLY
COOLING	PP-10E	NO	YES	YES	YES	YES	YES	MONTHLY
WATER (5135A)								
SAFETY	PP-26N	NO	YES	YES	NO**	YES	YES	MONTHLY
INJECTION	PP-26S	NO	YES	YES	NO**	YES	YES	MONTHLY
(5142)								
RESIDUAL	PP-35W	NO	YES	YES	YES*	YES	YES	MONTHLY
HEAT REMOVAL	PP-35E	NO	YES	YES	YES*	YES	YES	MONTHLY
(5143)								
CONTAINMENT	PP-9W	NO	YES	YES	YES*	YES	YES	MONTHLY
SPRAY (5144)	PP-9E	NO	YES	YES	YES*	YES	YES	MONTHLY
DIESEL FUEL OIL	QT-106 AB1	NO	YES	YES	YES (6)	YES	NO (5)	QUARTERLY (2
TRANSFER PUMPS	QT-106 AB2	NO	YES	YES	YES (6)	YES	NO (5)	QUARTERLY (2
(5151)	QT-106 CD1	NO	YES	YES	YES (6)	YES	NO (5)	QUARTERLY (2
	QT-106 CD2	NO	YES	YES	YES (6)	YES	NO (5)	QUARTERLY (2

(1) Bearing Temperature will be measured annually - per Section XI Code Subarticle IWP - 3300, except for the Diesel Fuel Oil Transfer Pumps.
(2) Refer to TABLE B.
(3) Inlet Pressure Measurement is in Head of Liquid.
(4) Refer to TABLE C.
(5) Refer to TABLE D.
(6) Refer to TABLE E

ATTACHMENT NO. 1
AEP:NRC:0730G

TABLE A
(CONTINUED)

PROGRAM SUMMARY

* Pumps are tested on by-pass (test) loops since it is impractical to test in regular circuits - per Section XI Code Subarticle IWP - 1400

** Pumps are tested on recirculation (minimum flow) paths to prevent unsafe operating conditions (impractical to align system for full flow test) - per Section XI Code Subarticle IWP - 1400

DONALD C. COOK NUCLEAR PLANT - UNITS NO. 1 AND 2

PUMP INSERVICE TEST PROGRAM

TABLE B

CODE RELIEF REQUEST

Test Frequency

Request that frequency of testing for the Diesel Fuel Oil Transfer Pumps be established on a quarterly basis. *

Operation of both pumps during a monthly test is restricted by the limited capacity of the diesel generator fuel oil day tank. Two pump testing will cause excessive and unnecessary operation of the emergency diesel generators in order to keep the level in the tank from overflowing. Constant draining of the tank to maintain tank level without running the diesel generators is a potential fire and utility hazard. A potential for overflowing the tank is present in either case.

Single pump testing will be conducted during monthly emergency diesel generator operation. Each pump will be tested on a staggered basis (every other month) during a quarterly period.

* Note: This quarterly test frequency is in accordance with the 1980 Edition of Section XI, Subarticle IWP-3400.

DONALD C. COOK NUCLEAR PLANT- UNITS NO. 1 AND 2

PUMP INSERVICE TEST PROGRAM

TABLE C

CODE RELIEF REQUEST

Vibration Measurement

Request that vibration amplitude, as specified in Section XI Subarticle IWP-4510, be measured in terms of velocity, inches per second peak instead of peak to peak displacement.

The major characteristics of vibration are displacement and frequency. Velocity provides a better indication of vibration severity because it includes both displacement and the frequency of displacement.

Since velocity is directly related to displacement, the velocity acceptance criteria for vibration amplitude is consistant to the acceptance criteria for displacement as specified in Table IWP - 3100-2.

DONALD C. COOK NUCLEAR PLANT - UNITS NO. 1 AND 2

PUMP INSERVICE TEST PROGRAM

TABLE D

CODE RELIEF REQUEST

Bearing Temperature Measurement

a. Request that the pump bearing temperature requirements, per Section XI Subarticle IWP-4310, be amended for the Essential Service Water Pumps.

   Except for one bearing assembly located within the motor stand, the remaining shaft bearings are located below the main pump flange and are inaccessible.

   In addition to measuring the pump bearing, temperatures will be measured on the motor bearing blocks.

b. Request that the Diesel Fuel Oil Transfer Pumps be exempt from bearing temperature requirements as stated Section XI Subarticle IWP-3300.

   The inboard and outboard sleeve bearings on these 2 HP gear pumps are lubricated and cooled by the pumped fluid. Temperature readings are therefore inconclusive since bearing measurement points are not responsive to the changes in bearing temperature.

   Bearing problems on gear pumps can be more readily identified by degradation of pump capacity. Flow rate deterioration indicates the existence of excessive clearances due to bearing wear and problems.

   In addition, the code required pump running time for yearly bearing temperature measurement can not be met due to the limited capacity of the diesel generator fuel oil day tank.

DONALD C. COOK NUCLEAR PLANT - UNITS NO. 1 AND 2
PUMP INSERVICE TEST PROGRAM

TABLE E

CODE RELIEF REQUEST

Request that the duration of pump operation for testing, per Section XI Subarticle IWP-3500, be amended for the Diesel Fuel Oil Transfer Pumps.

These pumps supply the diesel generator fuel oil day tank. A conservative level is maintained in the tank to meet the minimum capacity per Technical Specification requirements. Due to the limited capacity of this tank, the pump operating test range is restricted. It is requested to record test parameters immediately after pump operation has stabilized.