

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 Table B.
- B. The period for which the pump inservice test program is applicable is the period beginning December 23, 1978 for Unit 1 (second third, first inspection interval) and the period beginning July 1, 1978 for Unit 2 (first third, first inspection interval).

The revision to the program, proposed herein by the Code Relief Request, dated 11/30/82, shall be implemented only upon approval by the NRC.

- C. The pump test program was developed employing the classification guidelines contained in 10 CRF 50.2 (v) for Quality Group A and Regulatory Guide 1.26, Revision 2 for Quality Groups B and C. (Quality Group A is the same as ASME Class 1. Group B is 2, and Group C is 3). 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.

Revision 1  
11/30/82



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

PUMP SERVICE DWG. NO.	PUMP NUMBER	TEST PARAMETERS						TEST FREQUENCY	
		SPEED N	INLET PRESSURE $P_i$	DIFFERENTIAL PRESSURE $\Delta P$	FLOW RATE Q	VIBRATION AMPLITUDE V	BEARING TEMPERATURE $T_b$ (1)	(1)	(2)
AUXILIARY FEEDWATER (5106A)	PP-3W	NO	YES	YES	YES*	YES	YES	QUARTERLY	
	PP-3E	NO	YES	YES	YES*	YES	YES	QUARTERLY	
	PP-4	YES	YES	YES	YES*	YES	YES	QUARTERLY	
ESSENTIAL SERVICE WATER (5113)	PP-7W	NO	YES (3)	YES	YES	YES	YES	QUARTERLY	
	PP-7E	NO	YES (3)	YES	YES	YES	YES	QUARTERLY	
CENTRIFUGAL CHARGING (5129)	PP-50W	NO	YES	YES	NO**	YES	YES	QUARTERLY	
	PP-50E	NO	YES	YES	NO**	YES	YES	QUARTERLY	
BORIC ACID TRANSFER (5131)	PP-46-1	} U-1	NO	YES (3)	YES	NO*	YES	YES	QUARTERLY
	PP-46-2		NO	YES (3)	YES	NO*	YES	YES	QUARTERLY
	PP-46-3	} U-2	NO	YES (3)	YES	NO*	YES	YES	QUARTERLY
	PP-46-4		NO	YES (3)	YES	NO*	YES	YES	QUARTERLY
COMPONENT COOLING WATER (5135A)	PP-10W	NO	YES	YES	YES	YES	YES	QUARTERLY	
	PP-10E	NO	YES	YES	YES	YES	YES	QUARTERLY	
SAFETY INJECTION (5142)	PP-26N	NO	YES	YES	NO**	YES	YES	QUARTERLY	
	PP-26S	NO	YES	YES	NO**	YES	YES	QUARTERLY	
RESIDUAL HEAT REMOVAL (5143)	PP-35W	NO	YES	YES	YES*	YES	YES	QUARTERLY	
	PP-35E	NO	YES	YES	YES*	YES	YES	QUARTERLY	
CONTAINMENT SPRAY (5144)	PP-9W	NO	YES	YES	YES*	YES	YES	QUARTERLY	
	PP-9E	NO	YES	YES	YES*	YES	YES	QUARTERLY	

(1) Bearing Temperature will be measured annually - per the Code.

(2) Refer to TABLE B.

(3) Inlet Pressure Measurement is Head of Liquid.

\*Pumps are tested on by-pass (test) loops since it is impractical to test in regular circuits - per the Code.

\*\*Pumps are tested on recirculation (minimum flow) paths to prevent unsafe operating conditions (impractical to align system for full flow test) - per the Code.

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TABLE B - PUMP INSERVICE TEST PROGRAM

CODE RELIEF REQUEST

Test Frequency

- a. Request that frequency of testing be changed from monthly to quarterly for the following pumps:\*

Auxiliary Feedwater Pumps  
Centrifugal Charging Pumps  
Containment Spray Pumps  
Residual Heat Removal Pumps  
Safety Injection Pumps

The requirement of the testing of the pumps at monthly intervals causes unnecessary operation of safeguards equipment which could be detrimental to the availability, operability and useful service life of the equipment.

- b. Request that frequency of testing be changed from monthly to quarterly for the following pumps:\*

Boric Acid Transfer Pumps  
Component Cooling Water Pumps  
Essential Service Water Pumps

One or more of each of these pumps are generally in operation. However to provide a uniform test program, the frequency of testing should be the same for all pumps involved in the program.

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



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