

SUSQUEHANNA STEAM ELECTRIC STATION

UNIT 2

INSERVICE INSPECTION PROGRAM PLAN

FOR

PUMP AND VALVE OPERATIONAL TESTING

Rev.	Description	Prepared by:	Approved by:	Date
4	Compliance with NRC Generic Letter 89-04	Signatures on File		
5	Responses to NRC Comments	Signatures on File		
6	Addition of Water Level Backfill Valves	Signatures on File		
7	10 Year ASME Code Update	Signatures on File		
8	Corrections to Valve Tables	Signatures on File		
9	Addition of Fuel Pool Cooling Valves	<i>Becky Ball</i>	<i>m.m. Holden</i>	5/12/95

SUSQUEHANNA STEAM ELECTRIC STATION
 UNIT 2
 PUMP AND VALVE INSERVICE INSPECTION
 TESTING PROGRAM

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REFUELING OUTAGE TEST JUSTIFICATION NUMBER 21

System	P&ID	Valve Number	Class
RHR	M-2151	251060	2
RHR	M-2151	251070	2
FPC	M-2153	253001	3
FPC	M-2153	253021	3
FPC	M-2153	253070A	3
FPC	M-2153	253070B	3
ESW	M-2153	253090A	3
ESW	M-2153	253090B	3
ESW	M-2153	253091A	3
ESW	M-2153	253091B	3
ESW	M-2153	253500	3
ESW	M-2153	253501	3
FPC	M-2153	253018A	3
FPC	M-2153	253018B	3

Category: B

Function: Supply cooling water and makeup water to Spent Fuel Pool following loss of normal Fuel Pool Cooling.

Impractical Test Requirement: Exercise valves once per 92 days.

Basis For Deferment: Refueling period frequency exercise testing is considered appropriate for these valves because:

- (1) Exercising once each refueling period provides an acceptable level of quality and safety; and
- (2) Exercising each 92 days would result in hardship without a compensating increase in the level of quality and safety for those valves in ESW system; and

REFUELING OUTAGE TEST JUSTIFICATION NUMBER 21 (Cont'd.)

- (3) Exercising each 92 days would result in hardship without a compensating increase in the level of quality and safety for those valves in the Fuel Pool Cooling (FPC) System. The system has to be shutdown completely to stroke valve 253001 closed and is placed in a restricted flow configuration by stroking of either valve 253018A or B; and
- (4) Exercising each 92 days would result in unusual difficulty without a compensating increase in the level of quality and safety for some of those valves in the RHR System. Exercise testing of the 251070, RHR to FPC return valve, may cause the RHR Division 1 System to depressurize. The Division 1 of RHR might have to be removed from service while refilling and venting of the discharge LPCI injection lines is accomplished.

Each RHR Fuel Pool Cooling Assist Line (1 line per unit) contains six (6) manual valves (251060, 251070, 253001, 253021, and 253070A/B). Each of the ESW Fuel Pool Makeup Lines (2 lines per unit) contains three (3) manual valves (253090A/B, 253091A/B, 253500 and 253501). Each of the Fuel Pool Cooling normal supply lines to the fuel storage pool contains one (1) manual isolation valve (253018A/B). The accidents defined in the FSAR do not consider these manual valves or the tie between the RHR or the ESW and Fuel Pool Cooling and Cleanup systems. The accidents defined in the FSAR are consistent with the guidance given in Regulatory Guide 1.70 and the Standard Review Plan. The FSAR does state that the ESW system provides a Seismic Category I source of makeup water to the spent fuel pool; therefore, these valves are important to safety and should be tested periodically. An exercise testing frequency of once each fuel cycle for each of the manual valves mentioned in the RHR, ESW and FPC systems is considered to be commensurate with their importance to safety. Manual stroking of these valves any more frequently than that would be wasteful of resources and personnel radiation exposure.

Additionally, though not explicitly stated, periodic exercising (opening and closing) of many of these manual valves in the ESW Fuel Pool Makeup Lines has been accomplished previously at a frequency of at least once each 3 or 4 years during the Code Period in the course of performing the Fuel Pool Cooling System Pressure Test and the ESW System Pressure Test. This exercising frequency is considered to be commensurate with the safety functions to be performed by the manual valves and is considered to be sufficient for valves of such simplicity and high reliability.

REFUELING OUTAGE TEST JUSTIFICATION NUMBER 21 (Cont'd.)

Since the beginning of plant operation, the manual valves have proven to be highly reliable. No difficulty has ever been observed with their operation or maintenance, and no significant maintenance has been required. The only maintenance ever needed for any of these manual valves in ESW System (12 total between the two units) was the repacking of the stem of one valve (253091B) in 1990. From this experience we conclude that these valves have a very low likelihood of failure, as had been confirmed by their historical exercising. Additionally these valves will continue to be exercised during the Fuel Pool Cooling System Pressure Tests and the ESW System Pressure Tests that are independent of the IST Program.

Alternative Testing: Exercise each manual valve at least once during each refueling period.

FUEL POOL COOLING & CLEANUP M-2153 Sheet 1

Valve Number	P&ID Coordinates	ASME Class	ASME Category	Active/Passive	Valve Size (inches)	Valve Type	Actuator Type	Remote Position Indication	Safety Position	Tests Required	Tests Performed	Test Frequency	CS/RO Justification	Relief Request(s)	Remarks
253001	C-3	3	B	A	10	GT	MA	--	C	FS	FS	Q	RJ21	--	
253018A	A-4	3	B	A	6	GB	MA	--	C	FS	FS	Q	RJ21	--	
253018B	A-5	3	B	A	6	GB	MA	--	C	FS	FS	Q	RJ21	--	
253021	C-2	3	B	A	16	GT	MA	--	O/C	FS	FS	Q	RJ21	--	
253070A	A-7	3	B	A	8	GB	MA	--	O/C	FS	FS	Q	RJ21	--	
253070B	A-7	3	B	A	8	GB	MA	--	O/C	FS	FS	Q	RJ21	--	
253071A	B-5	3	C	A	8	CK	SA	--	O	FS FS	PS FS	O SD	--	RR09 RR20	Open test only.
253071B	B-6	3	C	A	8	CK	SA	--	O	FS FS	PS FS	O SD	--	RR09 RR20	Open test only.
253090A	A-6	3	B	A	2	GB	MA	--	O	FS	FS	Q	RJ21	--	
253090B	A-5	3	B	A	2	GB	MA	--	O	FS	FS	Q	RJ21	--	
253091A	A-6	3	B	A	2	GT	MA	--	O	FS	FS	Q	RJ21	--	
253091B	A-5	3	B	A	2	GB	MA	--	O	FS	FS	Q	RJ21	--	
253500	A-7	3	B	A	2	GB	MA	--	O	FS	FS	Q	RJ21	--	
253501	A-5	3	B	A	2	GB	MA	--	O	FS	FS	Q	RJ21	--	

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