



52-001

**GE Nuclear Energy**

ABWR

7/14/92

Date 7/10/92

Fax No. ---

To Ted Sullivan  
Chet Poslusny // H3

This page plus 31 page(s)

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Subject IST

Message Item B to IST schedule  
to NRC (update code requirements  
in Table 3.2-8).

This is a draft amendment  
to the table.

Sorry, a few days late.

Jack

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Per  
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Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

System Pumps

No.	Qty	Description	Safety Class (a)	Test Param (b)	Test Freq. (f)	SSAR Fig. (g)
C41-C001	2	Standby Liquid Control System pump	2	Pd, Vv, Q	3 mo	9.3-1
E11-C001	3	Residual Heat Removal System Pump	2	Pi, Pd, DF, Q, Vv	3 mo	5.4-10(3,4,6)
E11-C002	3	Residual Heat Removal System fill pump	2	Vv(b)	E10	5.4-10(3,4,6)
E22-C001	2	High Pressure Core Flooder pump	2	Pi, Pd, DP, Q, Vv	3 mo	6.3-7(2)
E51-C001	1	Reactor Core Isolation Cooling pump	2	Pi, Pd, Q, N, DP, Vv	3 mo	5.4-8(1)
P21-C001	6	Reactor Building Cooling Water pump	3	Pi, Pd, Vv, Q	E10	9.2-1(1,4,7)
P25-C001	5	HVAC Emergency Cooling Water Sys pump	3	Pi, Pd, Vv, Q	E10	9.2-3(1,2,3)
P41-C001	6	Reactor Service Water System pump	3	Pi, Pd, Vv, Q	E10	9.2-7(1,2,3)
Y52-C001	6	Standby D/G Fuel Oil Transfer pump	3	Pi, Pd, Q, Dp, Vv	3 mo	9.5-6

Table 3.9-8 (Continued)  
INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES  
B21 Nuclear Boiler System Valves

No.	Qty	Description	Safety Class (a)	Code Cnt. (c)	Valve Func. (d)	Test Pars (e)	Test Freq (f)	SSAR Fig. (g)
F001	2	Feedwater line Motor-Operated Valve (MOV)	2	B	P		E1	5.1-3(4)
F002	2	Upstream (First) FW line check valve	2	C	P	S	E2	5.1-3(4)
F003	2	FW line outboard check valve-Air-Operated (AO)	1	A,C	IA	L,P,S	RO	5.1-3(4)
F004	2	FW line inboard check valve	1	A,C	IA	L,S	RO	5.1-3(4)
F005	2	FW line inboard maintenance valve	1	B	P		E1	5.1-3(4)
F006	2	RWCU (or CUW) System injection line check valve	2	C	P	S	E2	5.1-3(4)
F007	2	RWCU (or CUW) System injection line MOV	2	B	P		E1	5.1-3(4)
F008	4	Inboard Main Steam Iso. Vlv. (MSIV)	1	A	IA	L,P S	RO 3 mo	5.1-3(3)
F009	4	Outboard Main Steam Iso. Vlv. (MSIV)	1	A	IA	L,P S	RO 3 mo	5.1-3(3)
F010	18	Safety/Relief Valve (SRV)	1	A,C	A	L,R S	5 yrs RO	5.1-3(2)
F011	1	MSL bypass/drain line inb. iso. vlv	1	A	IA	L,P S	RO 3 mo	5.1-3(3)
F012	1	MSL bypass/drain line outb. iso. vlv	1	A	IA	L,P S	RO 3 mo	5.1-3(3)
F013	1	MSI warm-up line valve	2	B	P		E1	5.1-3(3)
F016	1	MSL downstream drain line header valve	2	B	P		E1	5.1-3(3)
F017	1	MSL downstream drain line header bypass	2	B	A	P S	RO 3 mo	5.1-3(3)
F018	1	RPV non-condensable gas removal line	1	B	P		E1	5.1-3(2)
F019	1	RPV head vent inboard shutoff valve	1	A	P	P S	RO CS	5.1-3(2)
F020	1	RPV head vent outboard shutoff valve	1	A	P	P S	RO CS	5.1-3(2)
F021	18	SRV discharge line vacuum breaker	3	C	A	S	CS	5.1-3(2)
F022	18	SRV discharge line vacuum breaker	3	C	A	S	CS	5.1-3(2)
F024	4	Inboard MSIV air supply line check valve	3	A,C	A	P S	RO CO	5.1-3(3)
F025	4	Outboard MSIV air supply line check valve	3	A,C	A	L S	RO CS	5.1-3(3)
F026	8	SRV ADS pneumatic supply line check valve	3	A,C	A	L S	RO CS	5.1-3(2)
F029	18	SRV pneumatic supply check valve	3	A,C	A	L S	RO CS	5.1-3(2)
F031	2	Inboard valve on the outb. FW line check valve test line	2	B	P		E1	5.1-3(4)
F033	4	Inboard shutoff valve on the outboard MSIV test line	2	B	P		E1	5.1-3(3)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

B21 Nuclear Boiler System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq (f)	SSAR Fig. (g)
F035	1	Inboard test line valve for the MSL bypass/drain valve	2	B	P		E1	5.1-3(3)
F039	2	Inboard test line valve for the inboard FW line check valve	2	B	P		E1	5.1-3(4)
F040	2	Outboard test line valve for the FW line check valve	2	B	P		E1	5.1-3(4)
F500	2	Inboard drain line test valve for the first F./ line check valve	2	B	P		E1	5.1-3(4)
F503	2	Outboard drain line valve for the FW line check valve	2	B	P		E1	5.1-3(4)
F508	4	Inboard MSIV accumulator A001 vent line vlv	3	B	P		E1	5.1-3(3)
F509	4	Outboard MSIV accumulator A002 vent line valve	3	B	P		E1	5.1-3(3)
F510	8	SRV ADS accumulator A003 vent line valve	3	B	P		E1	5.1-3(2)
F511	18	SRV accumulator A004 vent line valve	3	B	P		E1	5.1-3(2)
F700	4	Manual isolation valve - RPV reference leg water level instrument reference leg line	2	B	P		E1	5.1-3(5,6)
F701	4	Excess flow check valve - RPV reference leg water level instrument reference leg line	2	A,C	I,A	L,S	RO	5.1-3(5,6)
F702	4	Manual isolation valve - RPV narrow range water level instrument sensing line	2	B	P		E1	5.1-3(5,6)
F703	4	Excess flow check valve - RPV narrow range water level instrument sensing line	2	A,C	I,A	L,S	RO	5.1-3(5,6)
F704	4	Manual isolation valve - RPV wide range water level instrument sensing line	2	B	P		E1	5.1-3(5,6)
F705	4	Excess flow check valve - RPV wide range water level instrument sensing line	2	A,C	I,A	L,S	RO	5.1-3(5,6)
F706	1	Root valve - Reactor well water level instrument sensing line	2	B	P		E1	5.1-3(5)
F709	1	Manual isolation valve - RPV shutdown range water level instrument reference leg line	2	B	P		E1	5.1-3(2)
F710	1	Excess flow check valve-RPV shutdown range water level instrument reference leg line	2	A,C	I,A	L,S	RO	5.1-3(2)
F711	1	Manual isolation valve - RPV head seal leakage instrument line	2	B	P		E1	5.1-3(8)
F712	1	Excess flow check valve to RPV head seal leakage instrument line	2	A,C	I,A	L,S	RO	5.1-3(8)
F713	4	Manual isolation valve - RPV above pump deck instrument line	2	B	P		E1	5.1-3(7)
F714	4	Excess flow check valve - RPV above pump deck instrument line	2	A,C	I,A	L,S	RO	5.1-3(7)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

B21 Nuclear Boiler System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F715	4	Manual isolation valve - RPV below pump deck instrument line	2	B	P		E1	5.1-3(7)
F716	4	Excess flow check valve - RPV below pump deck instrument line	2	A,C	IA	L,S	RO	5.1-3(7)
F717	4	Manual isolation valve - RPV above core plate instrument line	2	B	P		E1	5.1-3(7)
F718	4	Excess flow check valve - RPV above core plate instrument line	2	A,C	IA	L,S	RO	5.1-3(7)
F719	4	Manual isolation valve - RPV below core plate instrument line	2	B	P		E1	5.1-3(7)
F720	4	Excess flow check valve - RPV below core plate instrument line	2	A,C	IA	L,S	RO	5.1-3(7)
F723	4	Manual isolation valve - MSL flow restrictor instrument line	2	B	P		E1	5.1-3(2)
F724	4	Excess flow check valve - MSL flow restrictor instrument line	2	A,C	IA	L,S	RO	5.1-3(2)
F725	4	Manual isolation valve - MSL flow restrictor instrument line	2	B	P		E1	5.1-3(2)
F726	4	Excess flow check valve - MSL flow restrictor instrument line	2	A,C	IA	L,S	RO	5.1-3(2)
F727	2	MSL PX instrument line inboard root valve	2	B	P		E1	5.1-3(3)

B31 Reactor Recirculation Internal Pump Valves

F008	10	RIP pump motor purge water line outboard isolation valve	2	A,C	IA	L S	RO 3 mo	5.4-4(2)
F009	10	RIP pump motor purge water line inboard isolation valve	2	A,C	IA	L S	RO 3 mo	5.4-4(2)
F010	10	RIP pump motor purge water supply line valve	3	B	P		E1	5.4-4(1)
F011	10	RIP inflatable pressurized water line inboard valve	3	B	P		E1	5.4-4(1)
F013	10	RIP seal equalizing line valve	3	B	P		E1	5.4-4(1)
F500	10	RIP cooling water HX vent line inboard valve	3	B	P		E1	5.4-4(1)
F502	10	RIP drain line inboard valve	3	B	P		E1	5.4-4(1)
F505	10	RIP cooling water HX shell side drain line inboard valve	3	B	P		E1	5.4-4(1)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

C12 Control Rod Drive System Valves

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F715	4	Root valve charging line header pressure instrument line	2	B	P		E1	4.6-8b
F720	4	Root valve charging line header pressure instrument line	2	B	P		E1	4.6-8b

C41 Standby Liquid Control System Valves

F001	2	SLCS storage tank outlet line MOV	2	B	A	P	RO S 3 mo	9.3-1
F002	2	SLCS pump suction line maintenance valve	2	B	P		E1	9.3-1
F003	2	SLCS pump discharge line relief valve	2	C	A	R	Syrs	9.3-1
F004	2	SLCS pump discharge line check valve	2	C	A	S	3 mo	9.3-1
F005	2	SLCS pump discharge line maintenance valve	2	B	P		E1	9.3-1
F006	2	SLCS pump discharge line MOV	2	A	LA	L, P S	RO 3 mo	9.3-1
F007	1	SLCS injection line outboard check valve	2	B, C	A	LS	RO	9.3-1
F008	1	SLCS injection line inboard check valve	2	A, C	LA	LS	RO	9.3-1
F018	1	SLCS storage tank sample line inboard	2	B	P		E1	9.3-1
F025	1	SLCS injection line test/vent line inboard	2	B	P		E1	9.3-1
F500	1	SLCS pump suction line drain line	2	B	P		E1	9.3-1
F501	2	SLCS pump discharge line drain line valve	2	B	P		E1	9.3-1

C51 Neutron Monitoring (ATIP) System Valves

J004	3	Isolation valve assembly Tip Ball Valve	2	A	LA	L, P S	RO 3 mo	7.6-1(3)
J004	3	Isolation valve assembly Index shear valve	2	A, D	A	X	RO	7.6-1(3)
J011	3	Purge isolation valve	2	A	LA	LS	RO	7.6-1(3)

D23 Containment Atmosphere Monitoring System Valves

F001	2	CAMS drywell pressure instrument line outboard isolation valve	2	A	I, P	L, P	RO	7.6-7(2)
F004	2	CAMS drywell sample line outboard containment isolation valve	2	A	I, P	L, P	RO	7.6-7(2)
F005	2	CAMS drywell return line outboard containment isolation valve	2	A	I, P	L, P	RO	7.6-7(2)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES  
D23 Containment Atmosphere Monitoring System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F006	2	CAMS wetwell sample line outboard containment isolation valve	2	A	I,P	L,P	RO	7.6-7(2)
F007	2	CAMS wetwell return line outboard containment isolation valve	2	A	I,P	L,P	RO	7.6-7(2)
F008	2	CAMS rack drain line outboard containment isolation valve	2	A	I,P	L,P	RO	7.6-7(2)
F009	2	CAMS drywell pressure instrument line outboard valve	2	B	P		E1	7.6-7(2)
F010	2	CAMS drywell sample line outboard valve	2	B	P		E1	7.6-7(2)
F011	2	CAMS drywell return line outboard valve	2	B	P		E1	7.6-7(2)
F012	2	CAMS wetwell sample line outboard valve	2	B	P		E1	7.6-7(2)
F013	2	CAMS wetwell return line outboard valve	2	B	P		E1	7.6-7(2)
F014	2	CAMS rack drain line outboard valve	2	B	P		E1	7.6-7(2)

E11 Residual Heat Removal System Valves

F001	3	Suppression pool suction valve	2	A	I,A	L,P	RO	5.4-10(3,4,6)
						S	3 mo	
F002	3	RHR pump discharge line check valve	2	C	A	S	3 mo	5.4-10(3,4,6)
F003	3	RHR pump discharge line maintenance valve	2	B	P		E1	5.4-10(3,4,6)
F004	3	Heat Exchanger flow control valve	2	B	A	P	2 yrs	5.4-10(3,4,6)
						S	3 mo	
F005	1	RPV injection valve	2	A	A	L,P	RO	5.4-10(3)
						S	CS	
F005	2	RPV injection valve	1	A	I,A	L,P	RO	5.4-10(3,7)
						S	CS	
F006	1	RPV injection line check valve	2	A	A	L,P	RO	5.5-10(3)
						S	3 mo	
F006	2	RPV injection line check valve	1	A	I,A	L,P	RO	5.4-10(3,7)
						S	3 mo	
F007	2	RPV injection line inboard maint. valve	1	B	P		E1	5.4-10(3,7)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES  
E11 Residual Heat Removal System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F008	3	Suppression pool return line MOV	2	A	I,A	L,P S	RO 3 mo	5.4-10(3,4,6)
F009	3	Shutdown Cooling suct. line maint. vlv	1	B	P		E1	5.4-10(2)
F010	3	Shutdown Cooling suct. line inb. iso. vlv	1	A	I,A	L,P S	RO CS	5.4-10(2)
F011	3	Shutdown Cooling suct. line outb. iso. vlv	1	A	I,A	L,P S	RO CS	5.4-10(2)
F012	3	Shutdown Cooling suction line adm. vlv	2	B	A	P S	< yrs 3 mo	5.4-10(3,4,6)
F013	3	Heat exchanger bypass flow control vlv	2	B	A	P S	2 yrs 3 mo	5.4-10(3,4,6)
F014	2	Fuel Pool Cooling return line inb MOV	2	B	P	P,S	RO	5.4-10(5,7)
F015	2	Fuel Pool Cooling return line outb MOV	2	B	P	P,S	RO	5.4-10(5,7)
F016	2	Gate vlv-line from Fuel Pool Clg (FPC)	2	B	P	S	RO	5.4-10(2)
F017	2	Drywell spray line inboard valve	2	A	I,A	L,P S	RO 3 mo	5.4-10(5,7)
F018	2	Drywell spray line outboard valve	2	A	I,A	L,P S	RO 3 mo	5.4-10(5,7)
F019	2	Wetwell spray line MOV	2	A	I,A	L,P S	RO 3 mo	5.4-10(5,7)
F020	3	RHR pump min flow bypass line check vlv	2	C	A	S	3 mo	5.4-10(3,4,6)
F021	3	RHR pump min flow bypass line MOV	2	A	I,A	L,P S	2 yrs 3 mo	5.4-10(3,4,6)
F022	3	Discharge line fill pump suction line valve	2	B	P		E1	5.4-10(3,4,6)
F023	3	Fill pump discharge line check valve	2	C	A	S	3 mo	5.4-10(3,4,6)
F024	3	Fill pump discharge line stop check valve	2	C	A	S	3 mo	5.4-10(3,4,6)
F025	3	Fill pump minimum flow line globe valve	2	B	P	S	E2	5.4-10(3,4,6)
F026	3	RHR pump suction to High Conductivity Waste (HCW)	2	B	P		E1	5.4-10(3,4,6)
F027	3	Bypass line around the check valve MPL E11-F002	2	B	P		E1	5.4-10(3,4,6)
F028	3	Heat exchanger outlet line relief valve	2	C	A	R	5 yrs	5.4-10(3,4,6)
F029	3	Inboard reactor well drain line valve	2	B	P		E1	5.4-10(3,4,6)
F030	3	Drain to radwaste valve	2	B	P		E1	5.4-10(3,4,6)
F031	3	Outb reactor well drain line valve (to SP)	2	A	I,P	L,P	RO	5.4-10(3,4,6)
F032	3	Shutoff valve - line from MUWC	2	B	P		E1	5.4-10(3,6,7)
F033	3	Check valve in the line from MUWC	2	C	A		E1	5.4-10(3,6,7)
F034	3	RPV injection line vent/test line outb vlv	2	B	P		E1	5.4-10(5,7)
F036	1	Press equal valve around chk vlv E11-F006	2	A	P		E1	5.4-10(3)
F036	2	Press equal valve around chk vlv E11-F006	1	A	P		E1	5.4-10(5,7)



Table 3.9-8 (Continued)  
INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES  
E11 Residual Heat Removal System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cbl. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Flg. (g)
F037	3	Shutdown cooling suction line test line	1	A	P		E1	5.4-10(2)
F039	3	Relief vlv around the MOV MPL E11-F011	1	C	A	R	5 yrs	5.4-10(2)
F040	3	Shutoff valve - line from MUWC	2	B	P		E1	5.4-10(2)
F041	3	Check valve - line from Make-Up Water Condenser (MUWC)	2	C	P		E1	5.4-10(2)
F042	3	Shutdown Cooling Mode suction line relief valve	2	C	A	R	5 yrs	5.4-10(3,4,6)
F043	3	HX outlet to the Sampling System (SS) test inboard valve	2	B	P		E1	5.4-10(3,6,7)
F045	1	HX outlet to the PASS - inboard valve	2	B	A	P	2 yrs 3 mo	5.4-10(3)
F046	1	HX outlet to the PASS - outboard valve	2	B	A	P	2 yrs 3 mo	5.4-10(3)
F047	2	Shutoff valve - line from MUWC	2	B	P		E1	5.4-10(5,7)
F048	2	Check valve - line from MUWC	2	C	P		E1	5.4-10(5,7)
F049	2	Drywell spray line vent & test line inboard valve	2	B	P		E1	5.4-10(5,7)
F051	3	Fill pump discharge line relief valve	2	B	A	R	5 yrs	5.4-10(3,4,6)
F052	1	Drain line for the suppression pool	2	B	P		E1	5.4-10(4)
F101	1	AC independent water addition input vlv	2	B	A	S	3 mo	5.4-10(7)
F102	1	AC independent water addition input vlv	2	B	A	S	3 mo	5.4-10(7)
F500	3	Heat exchanger inlet drain line inboard valve	2	B	P		E1	5.4-10(3,4,6)
F502	3	HX outlet line drain line inboard vlv	2	B	P		E1	5.4-10(3,4,6)
F504	3	RPV injection line vent line inb vlv	2	B	P		E1	5.4-10(3,6,7)
F506	1	RPV injection line drain line inb vlv	2	B	P		E1	5.4-10(3)
F506	2	RPV injection line drain line inb vlv	1	B	P		E1	5.4-10(5,7)
F508	3	Shutdown Cooling suct line vent line vlv	2	B	P		E1	5.4-10(2)
F509	2	Vent valve - FPC return line	2	B	P		E1	5.4-10(5,7)
F511	2	Drywell spray line inboard drain line vlv	2	B	P		E1	5.4-10(5,7)
F513	2	Drywell spray line inboard drain line vlv	2	B	P		E1	5.4-10(5,7)
F515	2	Wetwell spray line inboard drain line vlv	2	B	P		E1	5.4-10(5,7)
F517	3	RHR pump suction line drn line inb vlv	2	B	P		E1	5.4-10(3,4,6)
F700	3	RHR pump suction line pressure instr line	2	B	P		E1	5.4-10(3,4,6)
F701	3	RHR pump suction line pressure instr line	2	B	P		E1	5.4-10(3,4,6)
F702	3	RHR pump discharge line press. instr line	2	B	P		E1	5.4-10(3,4,6)
F704	3	RHR pump discharge line press. instr line	2	B	P		E1	5.4-10(3,4,6)
F706	3	RHR pump discharge line press. instr line	2	B	P		E1	5.4-10(3,4,6)
F707	3	RHR pump discharge line press. instr line	2	B	P		E1	5.4-10(3,4,6)
F708	3	FT MPL E11-FT008 instr line inb root vlv	2	B	P		E1	5.4-10(3,4,6)
F709	3	FT MPL E11-FT008 instr line outb root vlv	2	B	P		E1	5.4-10(3,4,6)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

E11 Residual Heat Removal System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cal. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F710	3	FT MPL E11-FT008 instr line inb root vlv	2	B	P		E1	5.4-10(3,4,6)
F711	3	FT MPL E11-FT108 instr line outb root vlv	2	B	P		E1	5.4-10(3,4,6)
F712	3	Shutdown Cooling Mode suction line pressure instrument line	2	B	P		E1	5.4-10(3,4,6)
F713	3	Fill pump suction line instrument line valve	2	B	P		E1	5.4-10(3,4,6)
F714	1	Discharge to radwaste flow instr line	2	B	P		E1	5.4-10(4)
F716	1	Discharge to radwaste flow instr line	2	B	P		E1	5.4-10(4)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

E22 High Pressure Core Flooder System Valves

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F001	2	Condensate Storage Pool (CSP) suction line MOV	2	B	A	P	2 yrs 3 mo	6.3-7(2)
F002	2	CSP suction line check valve	2	C	A	S	3 mo	6.3-7(2)
F003	2	HPCF System injection valve	1	A	I,A	L,F S	RU CS	6.3-7(1)
F004	2	HPCF System inboard check valve	1	A,C	I,A	L,P S	RO 3 mo	6.3-7(1)
F005	2	Pump discharge line inboard maint valve	1	B	P		E1	6.3-7(1)
F006	2	Suppression pool suction line MOV	2	A	I,A	L,P S	RO 3 mo	6.3-7(2)
F007	2	Suppression pool suction line check valve	2	C	A	S	3 mo	6.3-7(2)
F008	2	Test return line inboard valve	2	B	A	P S	2 yrs 3 mo	6.3-7(2)
F009	2	Test return line outboard valve	2	A	I,A	L,P S	RO 3 mo	6.3-7(2)
F010	2	Pump minimum flow bypass line MOV	2	A	I,A	L,P S	RO 3 mo	6.3-7(2)
F011	2	Bypass line shutoff valve around check valve E22-F002	2	B	P		E1	6.3-7(2)
F012	2	HPCI pump suction line drain line to HCW	2	B	P		E1	6.3-7(2)
F014	2	Pump discharge line fill line outboard check vlv	2	C	A	S	RO	6.3-7(1)
F015	2	Pump discharge line fill line inboard check vlv	2	C	A	S	RO	6.3-7(1)
F017	2	Pump discharge line test and vent line inboard valve	1	A	P		E1	6.3-7(1)
F019	2	Pressure equalizing valve around check valve E22-F004	1	A	P		E1	6.3-7(1)
F020	2	Suppression pool suction line relief valve	2	C	A	R	5 yrs	6.3-7(2)
F022	2	Suppression pool suction line test line valve	2	B	P		E1	6.3-7(2)
F023	2	Pump discharge line test line valve	2	B	P		E1	6.3-7(2)
F500	2	Pump discharge line high point vent inboard valve	2	B	P		E1	6.3-7(1)
F502	2	Pump discharge line drywell test line inboard valve	2	B	P		E1	6.3-7(1)
F700	2	Pump suction line pressure instrument line root valve	2	B	P		E1	6.3-7(2)
F701	2	Pump suction line pressure instrument line root valve	2	B	P		E1	6.3-7(2)
F702	2	Pump discharge line pressure instrument line inboard valve	2	B	P		E1	6.3-7(2)
F704	2	Pump discharge line pressure instrument line inboard valve	2	B	P		E1	6.3-7(2)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

E22 High Pressure Core Flooder System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F705	2	Pump discharge line pressure instrument line outboard valve	2	B	P		E1	6.3-7(2)
F706	2	Pump discharge line flow instrument line inboard valve	2	B	P		E1	6.3-7(2)
F707	2	Pump discharge line flow instrument line outboard valve	2	B	P		E1	6.3-7(1)
F708	2	Pump discharge line flow instrument line inboard valve	2	B	P		E1	6.3-7(1)
F709	2	Pump discharge line flow instrument line outboard valve	2	B	P		E1	6.3-7(1)

E31 Leak Detection and Isolation System Valves

F001	1	Drywell fission product monitoring line maintenance valve	2	B	P		E1	5.2-8(9)
F002	1	Drywell fission product monitoring line inboard isolation valve	2	A	I,A	L,P S	RO 3 mo	5.2-8(9)
F003	1	Drywell fission product monitoring line outboard isolation valve	2	A	I,A	L,P S	RO 3 mo	5.2-8(9)
F004	1	Drywell fission product monitoring line outboard isolation valve	2	A	I,A	L,P S	RO 3 mo	5.2-8(9)
F005	1	Drywell fission product monitoring line inboard isolation valve	2	A	I,A	L,P S	RO 3 mo	5.2-8(9)
F006	1	Drywell fission product monitoring line maintenance valve	2	B	P		E1	5.2-8(9)
F009	1	Drywell cooler condensate sampling line vlv	2	A	I,P	L	RO	5.2-8(8)
F010	1	Drywell cooler condensate sampling line vlv	2	A	I,P	L	RO	5.2-8(8)
F701	4	RCIC instrument line manual isolation valve	2	B	P		E1	5.2-8(6)
F702	4	RCIC instrument line excess flow check valve	2	A,C	I,A	L,S	RO	5.2-8(6)
F703	4	RCIC instrument line manual isolation valve	2	B	P		E1	5.2-8(6)
F704	4	RCIC instrument line excess flow check valve	2	A,C	I,A	L,S	RO	5.2-8(6)

E51 Reactor Core Isolation Cooling System Valves

F001	1	Condensate Storage Pool (CSP) suction line MOV	2	B	A	P	2 yrs 3 mo	5.4-8(1)
F002	1	CSP suction line check valve	2	C	A	S	3 mo	5.4-8(1)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

E51 Reactor Core Isolation Cooling System (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F003	1	RCIC pump discharge line check valve	2	C	A	P S	2 yrs 3 mo	5.4-8(1)
F004	1	RCIC System injection valve	2	A	A	L,P S	RO 3 mo	5.4-8(1)
F005	1	RCIC System discharge line testable check valve	2	C	A	L,P S	RO 3 mo	5.4-8(1)
F006	1	Suppression Pool (CSP) suction line MOV	2	A	I,A	L,P S	RO 3 mo	5.4-8(1)
F007	1	Suppression Pool (CSP) suction line check vlv	2	C	A	S	3 mo	5.4-8(1)
F008	1	RCIC Sys suppr pool test return line MOV	2	A	A	P S	2 yrs 3 mo	5.4-8(1)
F009	1	RCIC Sys suppr pool test return line MOV	2	A	I,A	L,P S	RO 3 mo	5.4-8(1)
F010	1	RCIC Sys minimum flow bypass line check vlv	2	C	A	P S	2 yrs 3 mo	5.4-8(1)
F011	1	RCIC Sys minimum flow bypass line MOV	2	A	I,A	L,P S	RO 3 mo	5.4-8(1)
F012	1	RCIC turbine accessories cooling water line MOV	2	B	A	P S	2 yrs 3 mo	5.4-8(3)
F013	1	RCIC turbine accessories cooling water line PCV	2	B	A		E1	5.4-8(3)
F015	1	Barometric condenser condensate pump discharge line valve	2	B	P		E1	5.4-8(3)
F016	1	Barometric condenser condensate pump discharge line check valve	2	C	P	P S	2 yrs 3 mo	5.4-8(3)
F017	1	RCIC pump suction line relief valve	2	C	A	R	5 yrs	5.4-8(1)
F018	1	Valve in the bypass line around check valve E51-F003	2	B	P		E1	5.4-8(1)
F019	1	Pump discharge line test line valve	2	B	P		E1	5.4-8(1)
F020	1	Pump discharge line test line valve	2	B	P		E1	5.4-8(1)
F021	1	Pump discharge line fill line shutoff valve	2	B	P		E1	5.4-8(1)
F022	1	Pump discharge line fill line check valve	2	C	A	S	3 mo	5.4-8(1)
F023	1	Pump discharge line fill line check valve	2	C	A	S	3 mo	5.4-8(1)
F024	1	Pump discharge line test line valve	2	B	P		E1	5.4-8(1)
F025	1	Pump discharge line test line valve	2	B	P		E1	5.4-8(1)
F026	1	Valve in pressure equalizing line around E51-F005	2	B	P		E1	5.4-8(1)
F027	1	Suppression Pool (S/P) suction line test line valve	2	B	P		E1	5.4-8(1)
F028	1	Minimum flow bypass line test line valve	2	B	P		E1	5.4-8(1)
F029	1	Minimum flow bypass line test line valve	2	B	P		E1	5.4-8(1)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

E51 Reactor Core Isolation Cooling System (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para. (e)	Test Freq. (f)	SSAR Fig. (g)
F030	1	Turbine accessories cooling water line relief valve	2	C	A	R	5 yrs	5.4-8(3)
F031	1	Barometric condenser condensate discharge line AOV to HCW	2	B	P		E1	5.4-8(3)
F032	1	Barometric condenser condensate discharge line AOV to HCW	2	B	P		E1	5.4-8(3)
F033	1	Discharge line fill line bypass line shutoff valve	2	B	P		E1	5.4-8(1)
F034	1	Barometric condenser condensate pump discharge line test line valve	2	B	P		E1	5.4-8(3)
F035	1	Steam supply line isolation valve	1	A	IA	L,P S	RO 3 mo	5.4-8(2)
F036	1	Steam supply line isolation valve	1	A	IA	L,P S	RO 3 mo	5.4-8(2)
F037	1	Steam admission valve	2	B	A	P S	2 yrs 3 mo	5.4-8(1)
F038	1	Turbine exhaust line check valve	2	A,C	IA	L S	2 yrs 3 mo	5.4-8(2)
F039	1	Turbine exhaust line MOV	2	A	IA	L,P S	2 yrs 3 mo	5.4-8(1)
F044	1	Steam admission valve bypass line maintenance valve	2	B	P		E1	5.4-8(2)
F045	1	Steam admission valve bypass line MOV	2	B	A	P S	2 yrs 3 mo	5.4-8(2)
F046	1	Barometric condenser vacuum pump discharge line check valve	2	A,C	IA	L S	RO 3 mo	5.4-8(1)
F047	1	Barometric condenser vacuum pump discharge line MOV	2	A	IA	L,P S	RO 3 mo	5.4-8(1)
F048	1	Steam supply line warm-up line valve	1	A	IA	L,P S	RO 3 mo	5.4-8(2)
F049	1	Steam supply line test line valve	2	B	P		E1	5.4-8(2)
F050	1	Steam supply line test line valve	2	B	P		E1	5.4-8(2)
F051	1	Turbine exhaust line drain line valve	2	B	P		E1	5.4-8(3)
F052	1	Turbine exhaust line drain line valve	2	B	P		E1	5.4-8(3)
F053	1	Turbine exhaust line test line valve	2	B	P		E1	5.4-8(1)
F054	1	Turbine exhaust line vacuum breaker	2	C	A	R	RO	5.4-8(1)
F055	1	Turbine exhaust line vacuum breaker	2	C	A	R	RO	5.4-8(1)
F056	1	Steam supply line drain pot drain line test line valve	2	B	P		E1	5.4-8(1)
F057	1	Steam supply line drain pot drain line test line valve	2	B	P		E1	5.4-8(2)
F059	1	Barometric condenser vacuum pump discharge line test line valve	2	B	P		E1	5.4-8(1)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

E51 Reactor Core Isolation Cooling System (Continued)

Nn.	Qty	Description	Safety Class (a)	Code Cnt. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F500	1	Pump discharge line vent line valve	2	B	P		E1	5.4-8(1)
F501	1	Pump discharge line vent line valve	2	B	P		E1	5.4-8(1)
F502	1	Pump discharge line drain line valve	2	B	P		E1	5.4-8(1)
F503	1	Pump discharge line drain line valve	2	B	P		E1	5.4-8(1)
F700	1	Pump suction line pressure instrumentation instrument root valve	2	B	P		E1	5.4-8(1)
F701	1	Pump suction line pressure instrumentation instrument root valve	2	B	P		E1	5.4-8(1)
F702	1	Pump discharge line pressure instrumentation instrument root valve	2	B	P		E1	5.4-8(1)
F703	1	Pump discharge line pressure instrumentation instrument root valve	2	B	P		E1	5.4-8(1)
F704	1	Pump discharge line pressure instrumentation instrument root valve	2	B	P		E1	5.4-8(1)
F705	1	Pump discharge line pressure instrumentation instrument root valve	2	B	P		E1	5.4-8(1)
F706	1	Pump discharge line flow instrument root valve	2	B	P		E1	5.4-8(1)
F707	1	Pump discharge line flow instrument root valve	2	B	P		E1	5.4-8(1)
F708	1	Pump discharge line flow instrument root valve	2	B	P		E1	5.4-8(1)
F709	1	Pump discharge line flow instrument root valve	2	B	P		E1	5.4-8(1)
F710	1	Pump discharge line pressure instrument root valve	2	B	P		E1	5.4-8(1)
F711	1	Pump discharge line pressure instrument root valve	2	B	P		E1	5.4-8(1)
F712	1	Turbine accessories cooling water line instrument root valve	2	B	P		E1	5.4-8(3)
F713	1	Turbine accessories cooling water line instrument root valve	2	B	P		E1	5.4-8(3)
F714	1	Turbine accessories cooling water line instrument root valve	2	B	P		E1	5.4-8(3)
F716	1	Steam supply line pressure instrument root valve	2	B	P		E1	5.4-8(2)
F717	1	Steam supply line pressure instrument root valve	2	B	P		E1	5.4-8(2)
F718	1	Steam supply line drain pot instrument root valve	2	B	P		E1	5.4-8(2)
F719	1	Steam supply line drain pot instrument root valve	2	B	P		E1	5.4-8(2)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

E51 Reactor Core Isolation Cooling System Valves (Continued)

No.	Qty	Description	Safety Code		Valve Func.	Test Para.	Test Freq.	SSAR Fig.
			(a)	(c)				
F720	1	Steam supply line drain pot instrument root valve	2	B	P		E1	5.4-8(2)
F721	1	Steam supply line drain pot instrument root valve	2	B	P		E1	5.4-8(2)
F722	1	Turbine exhaust pressure instrument root valve	2	B	P		E1	5.4-8(3)
F723	1	Turbine exhaust pressure instrument root valve	2	B	P		E1	5.4-8(3)
F724	1	Turbine exhaust pressure between rupture disk instrument root valve	2	B	P		E1	5.4-8(3)
F725	1	Turbine exhaust pressure between rupture disk instrument root valve	2	B	P		E1	5.4-8(3)
D014	1	Turbine exhaust pressure rupture disk	2	D	A	Rplc.	5 yrs	5.4-8(3)
D015	1	Turbine exhaust pressure rupture disk	2	D	A	Rplc.	5 yrs	5.4-8(3)

G31 Reactor Water Cleanup System Valves

F001	1	Line inside containment from RHR system maintenance valve	1	B	P		E1	5.4-12(1)
F002	1	CUW System suction line inboard isolation valve	1	A	I,A	L,P S	RO 3 mo	5.4-12(1)
F003	1	CUW System suction line outboard isolation valve	1	A	I,A	L,P S	RO 3 mo	5.4-12(1)
F017	1	CUW System RPV head spray line outboard isolation valve	1	A	I,A	L,P S	RO 3 mo	5.4-12(1)
F018	1	CUW System RPV head spray line inboard check valve	1	A,C	I,A	L,P S	RO 3 mo	5.4-12(1)
F019	1	CUW Sys bottom head drain line maintenance valve	1	B	P		E1	5.4-12(1)
F050	1	Test line off the suct line outboard isolation valve G31-F003	2	B	P		E1	5.4-12(1)
F058	1	Test line off RPV head spray line outboard isolation valve	2	B	P		E1	5.4-12(1)
F060	1	RPV bottom head drain line sample line test line valve	2	B	P		E1	5.4-12(1)
F070	1	RPV bottom head drain line sample line maintenance valve	2	B	P		E1	5.4-12(1)
F071	1	RPV bottom head drain line sample line inboard valve	2	A	I,A	L,P S	RO 3 mo	5.4-12(1)



Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

G31 Reactor Water Cleanup System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F072	1	RPV bottom head drain line sample line outboard valve	2	A	LA	L,P S	RO 3 mo	5.4-12(1)
F500	1	CUW Sys bottom head drain line drain vlv	2	B	P		E1	5.4-12(1)
F501	1	CUW Sys bottom head drain line drain vlv	2	B	P		E1	5.4-12(1)
F700	2	CUW System suction line FE upstream instrument manual isolation valve	2	B	P		E1	5.4-12(1)
F701	2	CUW System suction line FE downstream instrument manual isolation valve	2	B	P		E1	5.4-12(1)
F702	2	CUW System suction line FE upstream instrument excess flow check valve	2	C	LA	L,S,P	RO	5.4-12(1)
F703	2	CUW System suction line FE downstream instrument excess flow check valve	2	C	LA	L,S,P	RO	5.4-12(1)

G41 Fuel Pool Cooling and Cleanup Valves

F015	2	FPC system heat exchanger outlet line maintenance valve	3	B	P		E1	9.1-1(2)
F016	1	FPC system discharge line to spent fuel pool check valve	3	C	A	S	3 mo	9.1-1(2)
F017	1	FPC system discharge line to spent fuel pool maintenance valve	3	B	P		E1	9.1-1(2)
F018	1	FPC system discharge line to spent fuel pool check valve	3	C	A	S	3 mo	9.1-1(2)
F019	2	FPC system discharge line to spent fuel pool valve	3	B	P		E1	9.1-1(1)
F020	2	FPC system discharge line to spent fuel pool check valve	3	C	A	S	RO	9.1-1(1)
F022	1	FPC system discharge line to reactor well maintenance valve	3	B	P		E1	9.1-1(2)
F023	1	FPC system discharge line to reactor well check valve	3	C	A	S	RO	9.1-1(2)
F091	1	FPC system supply line from SFCU check vlv	3	C	A	S	RO	9.1-1(2)
F093	1	FPC system RHR return line valve to FPC	3	B	P		E1	9.1-1(2)
F094	1	FPC system RHR return line check valve to FPC	3	C	A	S	RO	9.1-1(2)
F095	1	FPC system discharge line to spent fuel pool sample line	3	B	P		E1	9.1-1(2)
F506	1	FPC system line valve from RHR-to-FPC line to LCW	3	B	P		E1	9.1-1(2)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

G51 Suppression Pool Cleanup System Valves

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F001	1	SPCU suction line inboard isolation valve	2	A	I,A	L,P S	RO 3 mo	9.5-1
F002	1	SPCU suction line outboard isolation valve	2	A	I,A	L,P S	RO 3mo	9.5-1
F006	1	SPCU return line isolation valve	2	A	I,A	L,P S	RO 3 m	9.5-1
F007	1	SPCU return line isolation valve	2	A	I,A	L,P S	RO 3 mo	9.5-1

K17 Radwaste System Valves

F003	1	Drywell LCW sump pump inboard disch. line isolation valve	2	A	I,A	L,P S	RO 3 mo	11.2-2(29)
F004	1	Drywell LCW sump pump outboard disch. line isolation valve	2	A	I,A	L,P S	RO 3 mo	11.2-2(29)
F103	1	Drywell HCW sump pump inboard disch line isolation valve	2	A	I,A	L,P S	RO 3 mo	11.2-2(31)
F104	1	Drywell HCW sump pump outboard disch line isolation valve	2	A	I,A	L,P S	RO 3 mo	11.2-2(31)

P11 Makeup Water (Purified) System Valves

F141	1	Outboard isolation valve	2	A	I,P	L	RO	9.2-5(2)
F142	1	Inboard isolation check valve	2	A	I,P	L	RO	9.2-5(2)

P21 Reactor Building Cooling Water System Valves

F001	6	Pump discharge line check valve	3	C	A	S	E1	9.2-1(1,4,7)
F002	6	Pump discharge line maintenance valve	3	B	P		E1	9.2-1(1,4,7)
F003	6	Heat exchanger inlet line valve	3	B	P		E1	9.2-1(1,4,7)
F004	6	Heat exchanger outlet line MOV	3	B	P	P	2 yrs	9.2-1(1,4,7)
F005	3	Cold water line to hot/cold water blender	3	B	P		E1	9.2-1(1,4,7)
F006	3	Hot/cold water blender valve - cold water	3	B	A	S	E2	9.2-1(1,4,7)
F007	3	Hot/cold water blender outlet line valve	3	B	P		E1	9.2-1(1,4,7)
F008	3	Hot/cold water blender cold water byps line	3	B	P		E1	9.2-1(1,4,7)
F009	3	Hot water line to hot/cold water blender	3	B	P		E1	9.2-1(1,4,7)
F010	3	Hot/cold water blender valve - hot water	3	B	A	S	E2	9.2-1(1,4,7)
F011	3	Hot/cold water blender hot water bypass line	3	B	P		E1	9.2-1(1,4,7)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

P21 Reactor Building Cooling Water System Valves (Continued)

No.	Qty Quota	Description	Safety Code		Valve Func.	Test Para	Test Freq.	SSAR Fig.
			(a)	(c)				
F012	3	Cooling water supply line to RHR System maintenance valve	3	B	P		E1	9.2-1(2,5,8)
F013	3	Cooling wtr return line from RHR Sys MOV	3	B	A	P S	2yrs 3 mo	9.2-1b(2,5,8)
F014	3	Cooling water return line from RHR Hx maintenance valve	3	B	P		E1	9.2-1(2,5,8)
F015	6	Pump suction line maintenance valve	3	B	P		E1	9.2-1(1,4,7)
F016	3	Surge tank outlet line to RCW pump suction	3	B	P		E1	9.2-1(2,5,8)
F017	3	Surge tank make-up water line from SPCU	3	B	P		E1	9.2-1(2,5,8)
F018	3	Surge tank make-up water line from SPCU	3	B	P	P	2 yrs	9.2-1(2,5,8)
F019	3	Surge tank make-up from MUWP	3	B	P	P	2 yrs	9.2-1(2,5,8)
F020	3	Surge tank make-up water line from MUWP	3	B	P		E1	9.2-1(2,5,8)
F021	3	Chemical addition tank inlet line valve	3	B	P		E1	9.2-1(1,4,7)
F022	3	Chemical addition tank outlet line valve	3	B	P		E1	9.2-1(1,4,7)
F024	6	Cooling water supply line to HECW refrigerator maintenance valve	3	B	P		E1	9.2-1(2,5,8)
F025	6	Cooling wtr supply line to HECW refig PCV	3	B	A	P S	2 yrs E2	9.2-1(2,5,8)
F026	6	Cooling water supply line to HECW refrigerator maintenance valve	3	B	P		E1	9.2-1(2,5,8)
F027	6	Cooling water line to HECW refrigerator bypass line	3	B	P		E1	9.2-1(2,5,8)
F028	6	Cooling water return line from HECW refig	3	B	P		E1	9.2-1(2,5,8)
F029	2	Cooling water supply line to FPC HX	3	B	P		E1	9.2-1(2,5)
F030	2	Cooling water return line from FPC HX	3	B	P		E1	9.2-1(2,5)
F031	2	Cooling water supply line to FPC pump room air conditioning	3	B	P		E1	9.2-1(2,5)
F032	2	Cooling wtr return line from FPC pump room air conditioner	3	B	P		E1	9.2-1(2,5)
F033	2	Cooling wtr line to PCV Atmos Monit Sys cir	3	B	P		E1	9.2-1(2,5)
F034	2	Return line from PCV Atmos Monit Sys cir	3	B	P		E1	9.2-1(2,5)
F035	2	Cooling wtr supply line to SGTS rm air cond.	3	B	P		E1	9.2-1(2,5)
F036	2	Cooling water return line fr SGTS room air conditioner	3	B	P		E1	9.2-1(2,5)
F037	2	Cooling water supply line to FCS room air conditioner	3	B	P		E1	9.2-1(2,5)
F038	2	Cooling water return line fr FCS room air conditioner	3	B	P		E1	9.2-1(2,5)
F039	3	Cooling water supply line to RHR equipment room air conditioner	3	B	P		E1	9.2-1(2,5,8)
F040	3	Cooling water return line from RHR equipment room air conditioner	3	B	P		E1	9.2-1(2,5,8)
F041	3	Cooling water supply line to RHR pump mtr	3	B	P		E1	9.2-1(2,5,8)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

P21 Reactor Building Cooling Water System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F042	3	Cooling water return line fr RHR pump mtr	3	B	P		E1	9.2-1(2,5,8)
F043	3	Clng wtr sply line to RHR pump mech seals	3	B	P		E1	9.2-1(2,5,8)
F044	3	Clng wtr return line fr RHR pump mech seals	3	B	P		E1	9.2-1(2,5,8)
F045	1	Cooling water supply line to RCIC equipment room air conditioner	3	B	P		E1	9.2-1(2)
F046	1	Cooling water supply line from RCIC equipment room air conditioner	3	B	P		E1	9.2-1(2)
F047	2	Cooling water supply line to HPCF equipment room air conditioner	3	B	P		E1	9.2-1(5,8)
F048	2	Cooling water supply line from HPCF equipment room air conditioner	3	B	P		E1	9.2-1(5,8)
F049	2	Cooling water supply line to HPCF pump motor bearing	3	B	P		E1	9.2-1(5,8)
F050	2	Cooling water return line from HPCF pump motor bearing	3	B	P		E1	9.2-1(5,8)
F051	2	Cooling water supply line to HPCF pump mechanical seals	3	B	P		E1	9.2-1(5,8)
F052	2	Cooling water return from HPCF pump mechanical seals	3	B	P		E1	9.2-1(5,8)
F053	2	Surge tank outlet pipe to HECW System	3	B	P		E1	9.2-1(2,5)
F055	6	Cooling water return line from Emer Diesel Generator	3	B	A	P	2 yrs 3 mo	9.2-1(2,5,8)
F056	3	Cooling water return line from Emer Diesel Generator	3	B	P		E1	9.2-1(2,5,8)
F057	2	Cooling water line to PCV Atmos Monitor System air conditioner	3	B	P		E1	9.2-1(2,5)
F058	2	Return line from PCV Atmos Monitor System air conditioner	3	B	P		E1	9.2-1(2,5)
F061	3	Cooling water line Emer Diesel Generators	3	B	P		E1	9.2-1(2,5,8)
F071	6	Cooling water supply line-to non-essential coolers	3	B	P		E1	9.2-1(2,5,8)
F072	6	Cooling water supply line-to non-essential coolers	3	B	A	P	2 yrs 3 mo	9.2-1(2,5,8)
F075	2	Cooling water supply line to PCV iso valve	2	A	I,A	L,P S	RO RO(j)	9.2-1(3,6)
F076	2	Cooling water supply line to PCV iso valve	2	C	I,A	L,P S	RO RO(k)	9.2-1(3,6)
F080	1	Cooling water return line fr PCV iso valve	2	A	I,A	L,P S	RO RO(j)	9.2-1(3,6)
F081	2	Cooling water return line fr PCV iso valve	2	A	I,A	L,P S	RO RO(j)	9.2-1(3,6)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

P21 Reactor Building Cooling Water System Valves (Continued)

No.	Qty	Description	Safety Class (u)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	Test Fig. (g)	SSAR Fig. (g)
F083	3	Cooling water return line from non-essential coolers	3	C	A	S	RO(m)		9.2-1(2,5,8)
F084	3	Cooling water return line fr contml byps line	3	B	P		E1		9.2-1(2,5,8)
F175	3	Cooling water supply to RHR System HX pressure relief valve	3	C	A	R	5 yrs		9.2-1(2,5,8)
F220	6	Bypass line around RCW Sys util line MOV	3	B	P		E1		9.2-1(1,4,7)
F251	2	Cooling water supply line to PCV test line	2	B	P		E1		9.2-1(3,6)
F252	2	Cooling water return line fr PCV test line	2	B	P		E1		9.2-1(5,6)
F501	9	Heat exchanger shell side vent line	3	B	P		E1		9.2-1(1,4,7)
F502	9	Heat exchanger shell side drain line	3	B	P		E1		9.2-1(1,4,7)
F503	3	Surge tank drain line to SD.	3	B	P		E1		9.2-1(2,5,8)
F601	3	Cooling water supply line to RHR System drain line to SD	3	B	P		E1		9.2-1(2,5,8)
F602	3	Cooling water supply line to RHR System drain line to HCW	3	B	P		E1		9.2-1(2,5,8)
F603	3	Cooling water return line from RHR HX drain line to SD	3	B	P		E1		9.2-1(2,5,8)
F604	3	Cooling water return line from RHR HX drain line to HCW	3	B	P		E1		9.2-1(2,5,8)
F701	6	Pump discharge line press instr line	3	B	P		E1		9.2-1(1,4,7)
F702	9	HX discharge line sample line valve	3	B	P		E1		9.2-1(1,4,7)
F703	3	Cooling water supply line press instr line	3	B	P		E1		9.2-1(1,4,7)
F704	3	Cooling water supply line sample line valve	3	B	P		E1		9.2-1(1,4,7)
F705	3	Cooling water supply line elbow tap instr line	3	B	P		E1		9.2-1(1,4,7)
F706	3	Cooling water supply line elbow tap instr line	3	B	P		E1		9.2-1(1,4,7)
F707	3	Cooling wtr sply line to RHR Sys FT instr line	3	B	P		E1		9.2-1(2,5,8)
F708	3	Cooling wtr sply line to RHR Sys FT instr line	3	B	P		E1		9.2-1(2,5,8)
F709	3	Cooling wtr rtn line fr RHR HX sample line	3	B	P		E1		9.2-1(2,5,8)
F710	9	Pump suction line PX instr line	3	B	P		E1		9.2-1(1,4,7)
F711	9	Pump suction line press instr line	3	B	P		E1		9.2-1(1,4,7)
F712	3	Surge tank level instr root valve	3	B	P		E1		9.2-1(2,5,8)
F713	3	Surge tank level instr line root valve	3	B	P		E1		9.2-1(2,5,8)
F714	3	Surge tank level instr line root valve	3	B	P		E1		9.2-1(2,5,8)
F717	3	Cooling water line to DG instr line	3	B	P		E1		9.2-1(2,5,8)
F718	3	Return water line from DG instr line	3	B	P		E1		9.2-1(2,5,8)
F719	3	Cooling wtr line to DG instr line	3	B	P		E1		9.2-1(2,5,8)
F720	3	Return wtr line from DG instr line	3	B	P		E1		9.2-1(2,5,8)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

P24 HVAC Normal Cooling Water System Valves

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
P053	1	HNCW supply line outboard isolation valve	2	A	I,A	L,P S	RO 3 mo	9.2-2
F054	1	HNCW supply line inboard isolation check valve	2	A,C	I,A	L S	2 yrs 3 mo	9.2-2
F141	1	HNCW return line inboard isolation valve	2	A	I,A	L,P S	RO 3 mo	9.2-2
F142	1	HNCW return line outboard isolation valve	2	A	I,A	L,P S	RO 3 mo	9.2-2

P25 HVAC Emergency Cooling Water System Valves

F001	5	Pump discharge line check valve	3	C	P	S	E2	9.2-3(1,2,3)
F002	5	Pump discharge line maintenance valve	3	B	P		E1	9.2-3(1,2,3)
F003	5	Refrig. outlet line maintenance valve	3	B	P		E1	9.2-3(1,2,3)
F004	2	Maint valve at HECW supply to MCR cooler TCV	3	B	P		E1	9.2-3(1,2,3)
F005	2	HECW supply to MCR cooler Temp Cont Vlv (TCV)	3	B	A	S	E2	9.2-3(1,2,3)
F006	2	Maint valve at HECW supply to MCR cooler TCV	3	B	P		E1	9.2-3(1,2,3)
F007	6	Maint vlv at HECW supply to MCR cooler	3	B	P		E1	9.2-3(1,2,3)
F008	6	Maint vlv at HECW return from MCR cooler	3	B	P		E1	9.2-3(1,2,3)
F009	5	Pump suction line maintenance valve	3	B	P		E1	9.2-3(1,2,3)
F010	2	TCV byp vlv at HECW disch to MCR cooler	3	B	P		E1	9.2-3(1,2,3)
F011	3	Pump suct line/disch line PCV maint vlv	3	B	P		E1	9.2-3(1,2,3)
F012	3	Pump suction line/disch line PCV	3	B	A	S	E2	9.2-3(1,2,3)
F013	3	Pump suction line/disch line PCV maint vlv	3	B	P		E1	9.2-3(1,2,3)
F014	3	Pump suct line/disch line PCV bypass line	3	B	P		E1	9.2-3(1,2,3)
F015	3	Maint vlv at HECW supply to C/B Essential Elec Equip Rm cooler TCV	3	B	P		E1	9.2-3(1,2,3)
F016	3	HECW supply to C/B Essential Elec Equip Rm cooler Temp Cont Vlv	3	B	A	S	E2	9.2-3(1,2,3)
F017	3	Maint vlv at HECW supply to C/B Essential Elec Equip Rm cooler TCV	3	B	P		E1	9.2-3(1,2,3)
F018	6	HECW supply to C/B Essent Elec Equip Rm cooler maint valve	3	B	P		E1	9.2-3(1,2,3)
F019	6	Maint vlv at HECW return from C/B Essent Elec Equip Rm cooler	3	B	P		E1	9.2-3(1,2,3)
F020	3	TCV byp vlv at HECW supply to C/B Essent Elec Equip Rm cooler	3	B	P		E1	9.2-3(1,2,3)
F021	3	Maint vlv at HECW supply to DG zone cooler TCV	3	B	P		E1	9.2-3(1,2,3)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

P25 HVAC Emergency Cooling Water System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F022	3	HECW supply to DG zone cooler Temp Cont Valve	3	B	A	S	E2	9.2-3(1,2,3)
F023	3	Maint vlv at HECW supply to DG zone cooler TCW	3	B	P		E1	9.2-3(1,2,3)
F024	6	Maint vlv at HECW supply to DG zone cooler	3	B	P		E1	9.2-3(1,2,3)
F025	6	Maint vlv at HECW return from DG zone cooler	3	B	P		E1	9.2-3(1,2,3)
F026	3	TCV hyp vlv at HECW supply to DG zone cooler	3	B	P		E1	9.2-3(1,2,3)
F030	3	Chemical addition tank return vlv from HECW	3	B	P		E1	9.2-3(1,2,3)
F031	3	Chemical addition tank feed valve to HECW	3	B	P		E1	9.2-3(1,2,3)
F030	3	Make-up Water Purified (MUWP) line to pump suction check valve	3	C	A	S	E2	9.2-3(1,2,3)
F070	5	Pump disch line drain valve	3	B	P		E1	9.2-3(1,2,3)
F400	5	Pump drain line valve	3	B	P		E1	9.2-3(1,2,3)
F401	5	Pump bearing cooling wtr needle vlv	3	B	P		E1	9.2-3(1,2,3)
F402	3	Refrig outlet line sample vlv	3	B	P		E1	9.2-3(1,2,3)
F700	5	Pump disch pressure instr line root valve	3	B	P		E1	9.2-3(1,2,3)
F701	5	FIS003 upstrm instr line root valve	3	B	P		E1	9.2-3(1,2,3)
F702	5	FIS003 dwnstrm instr line root valve	3	B	P		E1	9.2-3(1,2,3)
F703	5	Pump suction pressure instr line root valve	3	B	P		E1	9.2-3(1,2,3)
F704	6	Pump suct/disch line dpt instr line root vlv	3	B	P		E1	9.2-3(1,2,3)

P41 Reactor Service Water System Valves

F001	6	Pump discharge line check valve	3	C	A	S	E2	9.2-7(1,2,3)
F002	6	Pump discharge line maintenance valve	3	B	P		E1	9.2-7(1,2,3)
F003	9	Service water inlet valve to RCW System heat exchanger	3	B	P	P	2 yrs E2	9.2-7(1,2,3)
F004	6	Service water inlet valve to service water strainer	3	B	P	P	2 yrs E2	9.2-7(1,2,3)
F005	9	Service water outlet valve from RCW heat exchanger	3	B	P	P	2 yrs E2	9.2-7(1,2,3)
F006	6	Service water strainer blowout valve	3	B	P	P	2 yrs E2	9.2-7(1,2,3)
F007	9	Supply line from Domestic water check valve	3	C	P	S	E2	9.2-7(1,2,3)
F008	9	Supply line from Domestic water check valve	3	C	P	S	E2	9.2-7(1,2,3)
F009	9	Supply valve from Domestic Water (DW) Sys	3	B	A	P	2 yrs E2	9.2-7(1,2,3)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

P41 Reactor Service Water System Valves (Continued)

No.	Qty Quoted	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F010	9	RCW HX shell side (service water side) relief valve	3	C	P	R	5 yrs	9.2-7(1,2,3)
F011	9	Bypass line around RCW HX service water outlet valve MOV P41-F005	3	C	P		E1	9.2-7(1,2,3)
F012	9	Service water sampling valve	3	B	P		E2	9.2-7(1,2,3)
F013	6	Service water strainer outlet valve	3	B	A	P	2 yrs	9.2-7(1,2,3)
						S	E2	
F014	3	Common service water strainer outlet valve	3	B	P	P	2 yrs	9.2-7(1,2,3)
						S	E2	
F015	3	Discharge line to discharge canal MOV	3	B	P		E1	9.2-7(1,2,3)
F501	9	RCW HX shell side drain valve to SWSD	3	B	P		E1	9.2-7(1,2,3)
F502	9	RCW HX shell side vent valve to SWSD	3	B	P		E1	9.2-7(1,2,3)
F503	9	RCW HX shell side drain valve to WSD	3	B	P		E1	9.2-7(1,2,3)
F504	9	RCW HX shell side vent valve to WSD	3	B	P		E1	9.2-7(1,2,3)
F701	6	Pump discharge pressure instr root valve	3	B	P		E1	9.2-7(1,2,3)
F702	3	Service water supply pressure instr root valve	3	B	P		E1	9.2-7(1,2,3)
F703	6	Diff P across service water strainer upstream instrument root valve	3	B	P		E1	9.2-7(1,2,3)
F704	6	Diff P across service water strainer downstream instrument root valve	3	B	P		E1	9.2-7(1,2,3)
F705	9	Service water diff P across RCW HX upstream instr root valve	3	B	P		E1	9.2-7(1,2,3)
F706	9	Service water diff P across RCW HX downstream instr root valve	3	B	P		E1	9.2-7(1,2,3)

P51 Station Service Air System Valves

F131	1	Outboard isolation manual valve	2	A	I,P	L	RO	9.3-7
F132	1	Inboard isolation check valve	2	A	I,P	L	RO	9.3-7

P52 Instrument Air System Valves

F276	1	Outboard isolation valve	2	A	I,A	L,P	RO	9.3-6
F277	1	Inboard isolation check valve	2	A,C	I,A	L	2 yrs	9.3-6



Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

P21 High Pressure Nitrogen Gas Supply System Valves

No.	<sup>Safety</sup> <del>Power</del> Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F002	4 Nitrogen bottles N2 supply line valve	3	B	P		E1	6.7-1
F003	2 Nitrogen bottles N2 supply line MOV	3	B	A	P	2 yrs	6.7-1
					S	3 mo	
F004	2 N2 bottle supply line PCV maint valve	3	B	P		E1	6.7-1
F005	2 N2 bottle supply line PCV	3	B	A		E1	6.7-1
F006	2 N2 bottle supply line PCV maint valve	3	B	P		E1	6.7-1
F007	2 Safety grade N2 supply line iso valve	2	A	IA	L,P	RO	6.7-1
					S	3 mo	
F008	2 Safety grade N2 supply line iso chk vlv	2	A,C	IA	L,S	RO	6.7-1
F009	8 Safety grade N2 supply line to SRV	3	B	P		E1	6.7-1
F010	2 Bypass line around the N2 bottle supply line PCV	3	B	P		E1	6.7-1
F011	2 N2 bottle supply line relief valve	3	C	A	R	5 yrs	6.7-1
F012	2 MOV at safety/non-safety boundary	3	B	A	P	2 yrs	6.7-1
					S	3 mo	
F200	1 Non-safety N2 supply line iso valve	2	A	IA	L,P	RO	6.7-1
					S	3 mo	
F209	1 Non-safety N2 supply line iso chk vlv	2	A,C	IA	L,S	RO	6.7-1

T22 Standby Gas Treatment System Valves

F001	2 Fuel handling floor inlet butterfly valve	3	B	A	P	2 yrs	6.5-1
					S	3 mo	
F002	2 Dryer inlet butterfly valve	3	B	A	P	2 yrs	6.5-1
					S	3 mo	
F003	2 Dryer exhaust gravity damper	3	J	A	P	2 yrs	6.5-1
					S	3 mo	
F004	2 Filter train exhaust butterfly valve	3	B	A	P	2 yrs	6.5-1
					S	3 mo	
F006	1 Filter train R112 injection line valve	3	B	P		E1	6.5-1
F007	1 Filter train DOP injection line valve to pre HEPA filter	3	B	P		E1	6.5-1
F008	1 Filter train DOP sampling line valve downstream of pre HEPA	3	B	P		E1	6.5-1
F009	1 Filter train DOP sampling line valve downstream of pre HEPA	3	B	P		E1	6.5-1
F010	1 Filter train DOP injection line valve downstream of charcoal absorbent	3	B	P		E1	6.5-1
F011	1 Filter train DOP sampling line valve downstream of charcoal absorbent	3	B	P		E1	6.5-1

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

T22 Standby Gas Treatment System Valves (Continued)

No.	Qty	Description	Safety Code		Valve Func.	Test Para	Test Freq.	SSAR Fig.
			Class (a)	Cat. (c)				
F012	1	Filter train DOP sampling line valve downstream of after HEPA	3	B	P		E1	6.5-1
F014	1	STG <sup>o</sup> sample line valve	3	B	P		E1	6.5-1
F015	1	PRM discharge to stack valve	3	B	P		E1	6.5-1
F500	2	Dryer unit vent line valve	3	B	P		E1	6.5-1
F501	2	Dryer unit drain line valve	3	B	P		E1	6.5-1
F504	2	Dryer unit vent line valve	3	B	P		E1	6.5-1
F505	2	Exhaust fan vent line valve	3	B	P		E1	6.5-1
F506	1	Filter train vent line valve	3	B	P		E1	6.5-1
F507	1	Filter train vent line valve	3	B	P		E1	6.5-1
F508	1	Filter train vent line valve	3	B	P		E1	6.5-1
F509	1	Filter train vent line valve	3	B	P		E1	6.5-1
F510	1	Filter train vent line valve	3	B	P		E1	6.5-1
F511	1	Exhaust stack drain line valve	3	B	P		E1	6.5-1
F700	2	Dryer unit demister dp instrument line valve	3	B	P		E1	6.5-1
F701	2	Dryer unit demister dp instrument line valve	3	B	P		E1	6.5-1
F705	1	Filter train prefilter dp instrument line valve	3	B	P		E1	6.5-1
F706	1	Filter train prefilter dp instrument line valve	3	B	P		E1	6.5-1
F707	1	Filter train preHEPA dp instrument line valve	3	B	P		E1	6.5-1
F708	1	Filter train preHEPA dp instrument line valve	3	B	P		E1	6.5-1
F709	1	Filter train charcoal absorber dp inst. line vlv	3	B	P		E1	6.5-1
F710	1	Filter train charcoal absorber dp inst line vlv	3	B	P		E1	6.5-1
F711	1	Filter train after HEPA dp inst line valve	3	B	P		E1	6.5-1
F712	1	Filter train after HEPA dp inst line valve	3	B	P		E1	6.5-1
F713	2	Filter train exhaust flow instrument line valve	3	B	P		E1	6.5-1
F714	2	Filter train exhaust flow instrument line valve	3	B	P		E1	6.5-1

T31 Atmospheric Control System Valves

F001	1	N2 supply line from Reactor Building HVAC	2	A	IA	L,P	2 yrs	6.2-39(1)
						S	3 mo	
F002	1	N2 supply line to drywell inboard containment isolation valve	2	A	IA	L,P	2 yrs	6.2-39(1)
						S	3 mo	
F003	1	N2 supply line to wetwell inboard containment isolation valve	2	A	IA	L,P	2 yrs	6.2-39(1)
						S	3 mo	
F004	1	Containment atmosphere exhaust line from drywell isolation valve	2	A	IA	L,P	2 yrs	6.2-39(1)
						S	3 mo	
F005	1	Drywell atmosphere exhaust line valve T31-F004 bypass line	2	A	IA	L,P	2 yrs	6.2-39(1)
						S	3 mo	
F006	1	Containment atmosphere exhaust line from wetwell isolation valve	2	A	IA	L,P	2 yrs	6.2-39(1)
						S	3 mo	
F007	1	Wet well overpressure line valve	2	A	P	L,P	2 yrs	6.2-39(1)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

T31 Atmospheric Control System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para. (e)	Test Freq. (f)	SSAR Fig. (g)
F008	1	Containment atmosphere exhaust line to SGTS	2	A	I,A	L,P S	2 yrs 3 mo	6.2-39(1)
F009	1	Containment atmosphere exhaust line to R/B HVAC	2	A	I,A	L,P S	2 yrs 3 mo	6.2-39(1)
F010	1	Drywell overpressure line valve	2	A	P	L,P	2 yrs	6.2-39(1)
F025	1	N2 supply line from K-5 outboard containment isolation valve	2	A	I,A	L,P S	2 yrs 3 mo	6.2-39(1)
F039	1	N2 supply line from K-5 outboard containment isolation valve	2	A	I,A	L,P S	2 yrs 3 mo	6.2-39(1)
F040	1	N2 supply line from K-5 to drywell inboard isolation valve	2	A	I,A	L,P S	2 yrs 3 mo	6.2-39(1)
F041	1	N2 supply line from K-5 to wetwell inboard isolation valve	2	A	I,A	L,P S	2 yrs 3 mo	6.2-39(1)
F044	8	Drywell/wetwell vacuum breaker valve	2	C	A	P R	RO E3	6.2-39(2)
F050	1	N2 supply line to drywell test line valve	2	B	P		E1	6.2-39(1)
F051	1	Containment atmosphere exhaust line test line valve	2	B	P		E1	6.2-39(1)
F054	1	Drywell personnel air lock hatch test line valve	2	B	P		E1	6.2-39(2)
F055	1	N2 supply line from test line valve	2	B	P		E1	6.2-39(1)
F056	1	Wetwell personnel air lock hatch test line valve	2	B	P		E1	6.2-39(2)
F700	1	N2 supply line to drywell FE upstream instrument line	2	B	P		E1	6.2-39(1)
F701	1	N2 supply line to drywell FE downstream instrument line	2	B	P		E1	6.2-39(1)
F702	1	N2 supply line to wetwell FE upstream instrument line	2	B	P		E1	6.2-39(1)
F703	1	N2 supply line to wetwell FE downstream instrument line	2	B	P		E1	6.2-39(1)
F720	2	DW/WW vacuum breaker valve N2 supply isolation valve	8	A	I,P	L	RC	6.2-39(2)
F730	1	Drywell pressure instrument line isolation valve	2	B	P		E1	6.2-39(2)
F731	1	Drywell pressure instrument line solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F732	2	Drywell pressure instrument line valve	2	B	P		E1	6.2-39(2)
F733	2	Drywell pressure instrument line solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F734	4	Drywell pressure instrument line for NBS valve	2	B	P		E1	6.2-39(2)

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

T31 Atmospheric Control System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cat. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F735	4	Drywell pressure instrument line for NBS solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F736	2	Wetwell pressure instrument line valve	2	B	P		E1	6.2-39(2)
F737	2	Wetwell pressure instrument line solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F738	4	Suppression pool water level reference leg instrument line valve	2	B	P		E1	6.2-39(2)
F739	4	Suppression pool water level reference leg instrument line solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F740	4	Suppression pool water level reference leg instrument line valve	2	B	P		E1	6.2-39(2)
F741	4	Suppression pool water level reference leg instrument line solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F742	2	Suppression pool water level reference leg instrument line valve	2	B	P		E1	6.2-39(2)
F743	2	Suppression pool water level reference leg instrument line solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F744	2	Suppression pool water level instrument line valve	2	B	P		E1	6.2-39(2)
F745	2	Suppression pool water level instrument line solenoid valve	2	A	I,P	L,P	RO	6.2-39(2)
F800	2	Drywell water level instrument line reference leg isolation valve	2	B	P		E1	6.2-39(2)
F801	2	Drywell water level instrument line reference leg solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F802	2	Drywell water level instrument line valve	2	B	P		E1	6.2-39(2)
F803	2	Drywell water level instrument line solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
F804	2	DW/WW differential pressure instrument line valve	2	B	P		E1	6.2-39(2)
F805	2	DW/WW differential pressure instrument solenoid isolation valve	2	A	I,P	L,P	RO	6.2-39(2)
D001	1	Wetwell overpressure rupture disk	2	I,D	P	Rpic.	5 yrs	6.2-39(1)
D002	1	Wetwell overpressure rupture disk	2	I,D	P	Rpic.	5 yrs	6.2-39(1)

T49 Flammability Control System Valves

F001	2	Inlet line from drywell overpressure isolation valve	2	A	I,A	L,P S	2 yrs 3 mo	6.2-40
F002	2	Inlet line from drywell overpressure isolation valve	2	A	I,A	L,P S	2 yrs 3 mo	6.2-40

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

T49 Flammability Control System Valves (Continued)

No.	Qty	Description	Safety Class (a)	Code Cnt. (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
FOC	2	Flow control valve for the FCS inlet line from drywell	3	B	A	P S	2 yrs 3 mo	6.2-40
FO04	2	Blower bypass line flow control valve	3	B	A	P S	2 yrs 3 mo	6.2-40
FO05	2	Blower discharge line to wetwell check valve	3	B	A	P S	2 yrs 3 mo	6.2-40
FO06	2	Discharge line to wetwell outboard isolation valve	2	A	IA	L,P S	2 yrs 3 mo	6.2-40
FO07	2	Discharge line to wetwell inboard isolation valve	2	A	IA	L,P S	2 yrs 3 mo	6.2-40
FO08	2	Cooling water supply line from the RHR System MOV	3	A	A	L,P S	2 yrs 3 mo	6.2-40
FO09	2	Cooling water supply line maintenance valve	3	B	P		E1	6.2-40
FO10	2	Cooling water supply line admission MOV	3	A	A	L,P S	2 yrs 3 mo	6.2-40
FO13	2	Inlet line from drywell drain line valve	3	B	P		E1	6.2-40
FU14	2	Blower drain line valve	3	B	P		E1	6.2-40
FO15	2	Blower discharge line to wetwell pressure relief valve	2	A	P	P	2 yrs	6.2-40
FO16	2	Blower discharge line to wetwell pressure relief line check valve	2	A	A	P	2 yrs	6.2-40
F501	2	Inlet line from drywell test line valve	2	A	P	P	2 yrs	6.2-40
F502	2	Discharge line to wetwell test line valve	2	A	P	P	2 yrs	6.2-40
F504	2	Blower suction line test line valve	3	B	P		E1	6.2-40
F505	2	Blower discharge line test line valve	3	B	P		E1	6.2-40
F506	2	Drain line to Low Conductivity Waste (LCW) valve	3	B	P		E1	6.2-40
F507	2	Cooling water supply line test line valve	3	B	P		E1	6.2-40
F701	2	FE T49-FE002 upstream instrument line root valve	3	B	P		E1	6.2-40
F702	2	FE T49-FE002 downstream instrument line root valve	3	B	P		E1	6.2-40
F703	2	Blower suction line pressure instrument line root valve	3	B	P		E1	6.2-40
F704	2	FE T49-FE004 upstream instrument line root valve	3	B	P		E1	6.2-40
F705	2	FE T49-FE004 downstream instrument line root valve	3	B	P		E1	6.2-40

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

U41 Heating, Ventilating and Air Conditioning System Valves

No.	Qty	Description	Safety Class (a)	Code CAL (c)	Valve Func. (d)	Test Para (e)	Test Freq. (f)	SSAR Fig. (g)
F001	2	Reactor bldg area supply isolation valve	2	B	A	P	2 yrs 3 mo	9.4-3(1)
F002	2	Reactor bldg area exhaust isolation valve	2	B	A	P	2 yrs 3 mo	9.4-3(1)
F003	3	Reactor bldg area divisional HVAC supply isolation valve	2	B	A	P	2 yrs 3 mo	9.4-3(1)
F004	3	Reactor bldg area divisional HVAC exhaust isolation valve	2	B	A	P	2 yrs 3 mo	9.4-3(1)
F007	4	MCR area HVAC bypass line isolation valve	2	B	A	P	2 yrs 3 mo	9.4-1(1,2)
F008	4	MCR area HVAC supply isolation valve	2	B	A	P	2 yrs 3 mo	9.4-1(1,2)
F009	4	MCR area HVAC emergency HVAC supply valves	2	B	A	P	2 yrs 3 mo	9.4-1(1,2)
F010	4	MCR area HVAC exhaust isolation valve	2	B	A	P	2 yrs 3 mo	9.4-1(1,2)

Y52 Oil Storage Transfer System Valves

F001	6	D/G transfer pump discharge line check vlv	3	C	A	S	3 mo	9.5-6
F002	3	D/G transfer pump discharge line relief vlv	3	C	A	R	5 yrs	9.5-6
F003	3	D/G transfer pump discharge line ball (plug) valve	3	B	P		E1	9.5-6
F004	3	D/G fuel oil day tank return to storage tank valve	3	B	P		E1	9.5-6
F501	3	D/G transfer pump discharge line drain vlv	3	B	P		E1	9.5-6
F502	3	D/G transfer pump discharge line vent vlv	3	B	P		E1	9.5-6

Table 3.9-8 (Continued)

INSERVICE TESTING SAFETY-RELATED PUMPS AND VALVES

NOTES:

- (a) 1, 2, or 3 - Safety Classification, Subsection 3.2.3.
- (b) Pump test parameters per ASME OM Code 1990 Subsection ISTB:
- N - Speed
  - DP - Differential Pressure, measured or  $P_d - P_i$
  - Pd - Discharge Pressure
  - Pi - Inlet Pressure
  - Q - Flow Rate
  - Vv - Peak vibration velocity
- (c) A, B, C or D - Valve category per ASME OM Code 1990 Subsection ISTC.
- (d) Valve function:
- I - Primary containment isolation, SSAR Subsection 6.2.4
  - A or P - Active or passive per ASME Code in (c) above (Paragraph 1.3).
- (e) Valve test parameters per ASME Code in (c) above:
- L - Leakage rate (Paragraph 4.3, SSAR Table 6.2.7 for valves with function I in (d) above)
  - P - Local position verification (Paragraph 4.1)
  - R - Relief valve test including visual examination set pressure and seat tightness testing (Paragraph 4.4)
  - S - Stroke exercise Category A or B (Paragraph 4.2.1, 4.2.2)  
Category C (Paragraph 4.5.1, 4.5.2, 4.5.4)
  - X - Explosive charge test (Paragraph 4.6)
- (f) Pump or valve test frequency per ASME Code in (b) or (c) above:
- CS - Cold shutdown
  - RO - Refueling outage and/or no case greater than 2 years.
  - E1 - Used for operating convenience (i.e., passive vent, drain, instrument, test, maintenance valves, or a system control pressure relief valve). Tests are not required (Subsection ISTC, Paragraph 1.2).
  - E2 - In regular use. Test frequency is not required provided the test parameters are analyzed and recorded at an operation interval not exceeding 3 months. Operability test every 6 months, leak test every 2 years (ASME OM Code 1990, Appendix 1.1.3.7).  
Category A or B, Stroke (Subsection ISTC, Paragraph 4.2.5).  
Category C, Stroke (Subsection ISTC, Paragraph 4.5.3).
  - E3 - Operability test every six months. Set pressure and leak test every refueling outage. (ASME OM Code 1990, Appendix 1, 1.1.3.7).
  - E10 - In Regular use. Test frequency is not required provided the test parameters are recorded at least once every 3 months of operation (Subsection ISTB, Paragraph 5.3).
  - E11 - Lacking required fluid inventory. Test shall be performed at least once every 2 years with required fluid inventory provided (Subsection ISTB, Paragraph 5.5).

Table 3.9-8 (Continued)

NOTES (Continued):

- (g) Piping and instrument symbols and abbreviations are defined on Figure 1.7-1.
- (h) Test parameters DP and Q are necessary. The RHR fill pump output pressure head is measured by PTO05 and the alarm of PIS-Z605 indicates the piping is not full. The piping is maintained full by a small fraction of the pump's flow capacity most of which recirculates in a bypass loop.
- (j) Stroke exercise testing is not practicable during plant operation or cold shutdowns because stopping the cooling flow to the Reactor Internal Pumps (RIP) and drywell coolers can result in temperature rises that would signal a plant shutdown. A partial closure of the valve is not recommended because of the added control complications required to provide full stroke position indication and a partial closure mode function to prevent operator error of allowing full closure.
- (k) Stroke exercise testing is not practicable during plant operation or cold shutdowns because stopping the cooling flow to the RIPs and drywell coolers can result in temperature rises that would signal a plant shutdown. Stroke exercise testing requires operator access into the containment which is only available during the refueling outage.
- (m) Stroke exercise testing is not practicable during plant operation or cold shutdowns because maintaining the cooling flow to the non-essential equipment is necessary during all plant operations. During the refueling outage when loads are lower and maintaining divisional separation is not necessary, a temporary cross-tie capability from one division to another can carry the cooling loads while the valve is stroke tested.



< TRANSACTION REPORT >

07-14-1992(TUE) 10:53

[ RECEIVE ]

NO.	DATE	TIME	DESTINATION STATION	PG.	DURATION	MODE	RESULT
4251	7-14	10:39	4089251193	32	0' 13' 48"	NORM.E	OK
				32	0' 13' 48"		