3/4.3.3 EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3 The emergency core cooling system (ECCS) actuation instrumentation channels shown in Table 3.3.3-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.3-2 and with EMERGENCY CORE COOLING SYSTEM RESPONSE TIME as shown in Table 3.3.3-3.

APPLICABILITY: As shown in Table 3.3.3-1.

ACTION:

a. With an ECCS actuation instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.3-2, declare the channel inoperable until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

b. With one or more ECCS actuation instrumentation channels inoperable, take the ACTION required by Table 3.3.3-1.

c. With either ADS trip system "A" or "B" inoperable, restore the inoperable trip system to OPERABLE status:

1. Within 7 days, provided that the HPCS ~~and RCIC~~ systems ~~are~~ is OPERABLE; otherwise,

2. Within 72 hours.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to less than or equal to 128 psig within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each ECCS actuation instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST, and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.3.1-1.

4.3.3.2 LOGIC SYSTEM FUNCTIONAL TESTS and simulated automatic operation of all channels shall be performed at least once per 18 months.

4.3.3.3 The ECCS RESPONSE TIME of each ECCS trip function shown in Table 3.3.3-3 shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one channel per trip system such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific ECCS trip system.

LIMITING CONDITION FOR OPERATION (Continued)

ACTION:

a. For ECCS division 1, provided that ECCS divisions 2 and 3 are OPERABLE:

1. With the LPCS system inoperable, restore the inoperable LPCS system to OPERABLE status within 7 days.

2. With LPCI subsystem "A" inoperable, restore the inoperable LPCI subsystem "A" to OPERABLE status within 7 days.

3. With the LPCS system inoperable and LPCI subsystem "A" inoperable, restore at least the inoperable LPCI subsystem "A" or the inoperable LPCS system to OPERABLE status within 72 hours.

4. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. For ECCS division 2, provided that ECCS divisions 1 and 3 are OPERABLE:

1. With either LPCI subsystem "B" or "C" inoperable, restore the inoperable LPCI subsystem "B" or "C" to OPERABLE status within 7 days.

2. With both LPCI subsystems "B" and "C" inoperable, restore at least the inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.

3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours*.

c. For ECCS division 3, provided that ECCS divisions 1 and 2 ~~and the RCIC system~~ are OPERABLE:

1) With ECCS division 3 inoperable, restore the inoperable division to OPERABLE status within 14 days.

2) Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

d. For ECCS divisions 1 and 2, provided that ECCS division 3 is OPERABLE:

1) With LPCI subsystem "A" and either LPCI subsystem "B" or "C" inoperable, restore at least the inoperable LPCI subsystem "A" or the inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.

*Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.

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TABLE 3.8.4.3-1

MOTOR OPERATED VALVES THERMAL OVERLOAD PROTECTION

	VALVE NUMBER	SYSTEM(S) AFFECTED
a.	CAC-V-2	Containment Atmospheric Control System
	CAC-V-4	
	CAC-V-6	
	CAC-V-8	
	CAC-V-11	
	CAC-V-13	
	CAC-V-15	
	CAC-V-17	
b.	CIA-V-20	Containment Instrument Air System
	CIA-V-30A	
	CIA-V-30B	
c.	FPC-V-149	Fuel Pool Cooling System
	FPC-V-153	
	FPC-V-154	
	FPC-V-156	
	FPC-V-172	
	FPC-V-173	
	FPC-V-175	
	FPC-V-181A	
	FPC-V-181B	
	FPC-V-184	
d.	HPCS-V-1	High Pressure Core Spray System
	HPCS-V-4	
	HPCS-V-10	
	HPCS-V-11	
	HPCS-V-12	
	HPCS-V-15	
	HPCS-V-23	
e.	LPCS-V-1	Low Pressure Core Spray System
	LPCS-V-5	
	LPCS-FCV-11	
	LPCS-V-12	
f.	MS-V-1	Main Steam System
	MS-V-2	
	MS-V-5	
	MS-V-16	
	MS-V-19	
	MS-V-20	
	MS-V-67A	
	MS-V-67B	
	MS-V-67C	
	MS-V-67D	
	MS-V-146	
g.	MSLC-V-1A	Main Steam Isolation Valve Leakage Control System
	MSLC-V-1B	
	MSLC-V-1C	
	MSLC-V-1D	
	MSLC-V-2A	
	MSLC-V-2B	
	MSLC-V-2C	
	MSLC-V-2D	
	MSLC-V-3A	
	MSLC-V-3B	
	MSLC-V-3C	
	MSLC-V-3D	
	MSLC-V-4	
	MSLC-V-5	
	MSLC-V-9	
	MSLC-V-10	
h.	RCC-V-5	Reactor Closed Cooling Water System
	RCC-V-21	
	RCC-V-40	
	RCC-V-104	
	RCC-V-129	
	RCC-V-130	
	RCC-V-131	
i.	~~RCIC-V-1~~	Reactor Core Isolation Cooling System
	RCIC-V-8	
	~~RCIC-V-10~~	
	~~RCIC-V-13~~	
	~~RCIC-V-19~~	
	~~RCIC-V-22~~	
	~~RCIC-V-31~~	

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TABLE 3.8.4.3-1 (Continued)

MOTOR OPERATED VALVES THERMAL OVERLOAD PROTECTION

	VALVE NUMBER	SYSTEM(S) AFFECTED
i.	~~RCIC-V-45~~	Reactor Core Isolation Cooling System
	~~RCIC-V-46~~	
	~~RCIC-V-59~~	
	RCIC-V-63	
	~~RCIC-V-68~~	
	~~RCIC-V-69~~	
	RCIC-V-76	
	~~RCIC-V-110~~	
	~~RCIC-V-113~~	
j.	RFW-V-65A	Reactor Feedwater System
	RFW-V-65B	
k.	RHR-V-3A	Residual Heat Removal System
	RHR-V-3B	
	RHR-V-4A	
	RHR-V-4B	
	RHR-V-4C	
	RHR-V-6A	
	RHR-V-6B	
	RHR-V-8	
	RHR-V-9	
	RHR-V-16A	
	RHR-V-16B	
	RHR-V-17A	
	RHR-V-17B	
	RHR-V-21	
	RHR-V-23	
	RHR-V-24A	
	RHR-V-24B	
	RHR-V-27A	
	RHR-V-27B	
	RHR-V-40	
	RHR-V-42A	
	RHR-V-42B	
	RHR-V-42C	
	RHR-V-47A	
	RHR-V-47B	
	RHR-V-48A	
	RHR-V-48B	
	RHR-V-49	
	RHR-V-53A	
	RHR-V-53B	
	RHR-V-64A	
	RHR-V-64B	
	RHR-V-64C	
	RHR-V-68A	
	RHR-V-68B	
	RHR-V-73A	
	RHR-V-73B	
	RHR-V-74A	
	RHR-V-74B	
	RHR-V-115	
	RHR-V-116	
	RHR-V-123A	
	RHR-V-123B	
	RHR-V-134A	
	RHR-V-134B	
l.	RRC-V-16A	Reactor Recirculation System
	RRC-V-16B	
m.	RWCU-V-1	Reactor Water Cleanup System
	RWCU-V-4	
	RWCU-V-40	

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