ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION CHANGES

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

(This table number not used)

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the Reactor Trip System instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE, ~~with RESPONSE TIMES as shown in Table 3.3-2.~~

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each Reactor Trip System instrumentation channel and interlock and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

4.3.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each Reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel per function 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 Reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-2

(This table number not used)

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

FUNCTIONAL UNIT		RESPONSE TIME
1.	Manual Reactor Trip	N.A.
2.	Power Range, Neutron Flux	≤ 0.5 second*
3.	Power Range, Neutron Flux, High Positive Rate	N.A.
4.	Power Range, Neutron Flux, High Negative Rate	≤ 0.5 second*
5.	Intermediate Range, Neutron Flux	N.A.
6.	Source Range, Neutron Flux	≤ 0.5 second*
7.	Extended Range, Neutron Flux	N.A.
8.	Overtemperature ΔT	≤ 8.0 seconds*
9.	Overpower ΔT	≤ 8.0 seconds*
10.	Pressurizer Pressure--Low	≤ 2 seconds
11.	Pressurizer Pressure--High	≤ 2 seconds
12.	Pressurizer Water Level--High	≤ 2 seconds

*Neutron detectors are exempt from response time testing. Response time of the neutron flux signal portion of the channel shall be measured from detector output or input of first electronic component in channel.

TABLE 3.3-2 (Continued)

(This table number not used)

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

FUNCTIONAL UNIT	RESPONSE TIME
13. Reactor Coolant Flow--Low	
a. Single Loop (Above P-8)	≤ 1 second
b. Two Loops (Above P-7 and below P-8)	≤ 1 second
14. Steam Generator Water Level--Low-Low	≤ 2 seconds
15. Undervoltage - Reactor Coolant Pumps	≤ 1.5 seconds
16. Underfrequency - Reactor Coolant Pumps	≤ 0.6 second
17. Turbine Trip	
a. Low Emergency Trip Fluid Pressure	N.A.
b. Turbine Stop Valve Closure	N.A.
18. Safety Injection Input from ESFAS	N.A.
19. Reactor Trip System Interlocks	N.A.
20. Reactor Trip Breakers	N.A.
21. Automatic Trip and Interlock Logic	N.A.

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3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The Engineered Safety Features Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their Trip Setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4, ~~and with RESPONSE TIMES as shown in Table 3.3-5~~.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

a. With an ESFAS Instrumentation or Interlock Trip Setpoint trip less conservative than the value shown in the Trip Setpoint column but more conservative than the value shown in the Allowable Value column of Table 3.3-4, adjust the Setpoint consistent with the Trip Setpoint value.

b. With an ESFAS Instrumentation or Interlock Trip Setpoint less conservative than the value shown in the Allowable Value column of Table 3.3-4, either:

1. Adjust the Setpoint consistent with the Trip Setpoint value of Table 3.3-4, and determine within 12 hours that Equation 2.2-1 was satisfied for the affected channel, or

2. Declare the channel inoperable and apply the applicable ACTION statement requirements of Table 3.3-3 until the channel is restored to OPERABLE status with its Setpoint adjusted consistent with the Trip Setpoint value.

Equation 2.2-1 $Z + R + S \leq TA$

Where:

Z = The value from Column Z of Table 3.3-4 for the affected channel,

R = The "as-measured" value (in percent span) of rack error for the affected channel,

S = Either the "as-measured" value (in percent span) of the sensor error, or the value from Column S (Sensor Error) of Table 3.3-4 for the affected channel, and

TA = The value from Column TA (Total Allowance) of Table 3.3-4 for the affected channel.

c. With an ESFAS instrumentation channel or interlock inoperable, take the ACTION shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each ESFAS instrumentation channel and interlock and the automatic actuation logic and relays shall be demonstrated OPERABLE by performance of the ESFAS Instrumentation Surveillance Requirements specified in Table 4.3-2.

4.3.2.2 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one train so that:

a. Each logic train is tested at least once per 36 months,

b. Each actuation train is tested at least once per 54 months*, and

c. One channel per function so that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" column of Table 3.3-3.

*If an ESFAS instrumentation channel is inoperable due to response times exceeding the limits of Table 3.3-5, perform an engineering evaluation to determine if the test failure is a result of degradation of the actuation relays. If degradation of the actuation relays is determined to be the cause, increase the ENGINEERED SAFETY FEATURES RESPONSE TIME surveillance frequency such that all trains are tested at least once per 36 months.

TABLE 3.3-5
(This table number not used)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATION SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
1. Manual Initiation	
a. Safety Injection (ECCS)	N.A.
b. Containment Spray	N.A.
c. Phase "A" Isolation	N.A.
d. Phase "B" Isolation	N.A.
e. Containment Ventilation Isolation	N.A.
f. Steam Line Isolation	N.A.
g. Feedwater Isolation	N.A.
h. Auxiliary Feedwater	N.A.
i. Essential Cooling Water	N.A.
j. Reactor Containment Fan Coolers	N.A.
k. Control Room Ventilation	N.A.
l. Reactor Trip	N.A.
m. Start Diesel Generator	N.A.
2. Containment Pressure--High-1	
a. Safety Injection (ECCS)	$\leq 27^{(1)}/12^{(5)}$
1) Reactor Trip	$\leq 2^{(3)}$
2) Feedwater Isolation	$\leq 12^{(3)}$
3) Phase "A" Isolation	$\leq 33^{(1)}/23^{(2)}$
4) Containment Ventilation Isolation (18-inch lines)	$\leq 23^{(1)}/13^{(2)}$
5) Auxiliary Feedwater	≤ 60
6) Essential Cooling Water	$\leq 62^{(1)}/52^{(2)}$
7) Reactor Containment Fan Coolers	$\leq 38^{(1)}/28^{(2)}$
8) Control Room Ventilation	$\leq 72^{(1)}/62^{(2)}$
9) Start Standby Diesel Generators	≤ 12

TABLE 3.3-5 (Continued)
(This table number not used)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
3. Pressurizer Pressure--Low	
a. Safety Injection (ECCS)	$\leq 27^{(1)}/12^{(5)}$
1) Reactor Trip	$\leq 2^{(3)}$
2) Feedwater Isolation	$\leq 12^{(3)}$
3) Phase "A" Isolation	$\leq 33^{(1)}/23^{(2)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	≤ 60
6) Essential Cooling Water	$\leq 62^{(1)}/52^{(2)}$
7) Reactor Containment Fan Coolers	$\leq 38^{(1)}/28^{(2)}$
8) Control Room Ventilation	$\leq 72^{(1)}/62^{(2)}$
9) Start Standby Diesel Generators	≤ 12
4. Deleted	
5. Compensated Steam Line Pressure--Low	
a. Safety Injection (ECCS)	$\leq 22^{(4)}/12^{(5)}$
1) Reactor Trip	$\leq 2^{(3)}$
2) Feedwater Isolation	$\leq 12^{(3)}$
3) Phase "A" Isolation	$\leq 33^{(1)}/23^{(2)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	≤ 60
6) Essential Cooling Water	$\leq 62^{(1)}/52^{(2)}$
7) Reactor Containment Fan Coolers	$\leq 38^{(1)}/28^{(2)}$
8) Control Room Ventilation	$\leq 72^{(1)}/62^{(2)}$
9) Start Diesel Generators	≤ 12
b. Steam Line Isolation	$\leq 8^{(3)}$

TABLE 3.3-5 (Continued)

(This table number not used)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
6. Containment Pressure--High-3	
a. Containment Spray	$\leq 30^{(1)}/20^{(2)}$
b. Phase "B" Isolation	$\leq 28^{(1)}/18^{(2)}$
7. Containment Pressure--High-2	
Steam Line Isolation	$\leq 7^{(3)}$
8. Steam Line Pressure - Negative Rate--High	
Steam Line Isolation	N.A.
9. Steam Generator Water Level--High-High	
a. Turbine Trip	$\leq 3^{(3)}$
b. Feedwater Isolation	$\leq 12^{(3)}$
10. Steam Generator Water Level--Low-Low	
a. Motor-Driven Auxiliary Feedwater Pumps	≤ 60
b. Turbine-Driven Auxiliary Feedwater Pump	≤ 60
11. RWST Level--Low-Low Coincident with Safety Injection	
Automatic Switchover to Containment Sump	$\leq 32^{(2)}$
12. Loss of Power	
a. 4.16 kV ESF Bus Undervoltage (Loss of Voltage)	≤ 12
b. 4.16 kV ESF Bus Undervoltage (Tolerable Degraded Voltage Coincident with Safety Injection)	≤ 49
c. 4.16 kV ESF Bus Undervoltage (Sustained Degraded Voltage)	≤ 65

TABLE 3.3-5 (Continued)
(This table number not used)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
13. RCB Purge Radioactivity-High	
a. Containment Ventilation Isolation (48-inch lines)	$\leq 73^{(2)}$
b. Containment Ventilation Isolation (18-inch lines)	$\leq 23^{(2)}$
14. Deleted	
15. Deleted	
16. T_{avg} - Low Coincident with Reactor Trip Feedwater Isolation	N.A.
17. Control Room Intake Air Radioactivity - High Control Room Ventilation	$\leq 78^{(2)}$
18. Spent Fuel Pool Exhaust Radioactivity - High FHB HVAC Emergency Startup	$\leq 42^{(2)}$
19. Charging Header Pressure - Low	N.A.

TABLE 3.3-5 (Continued)

(This table number not used)

TABLE NOTATIONS

(1) Diesel generator starting and sequence loading delays included.

(2) Diesel generator starting delay not included, sequence loading delay is included. Offsite power available.

(3) Not dependent upon diesel generator starting or sequence loading delays.

(4) Diesel generator starting and sequence loading delay included. Low Head Safety Injection pumps not included.

(5) Diesel generator starting delays not included, sequence loading delay is included. Low Head Safety Injection pumps not included.

ATTACHMENT 3

PROPOSED UFSAR CHANGES

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CHAPTER 16

TECHNICAL SPECIFICATIONS

LIST OF TABLES

16.1-2

TABLE 3.3-2

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

FUNCTIONAL UNIT		RESPONSE TIME
1.	Manual Reactor Trip	N.A.
2.	Power Range, Neutron Flux	≤ 0.5 second*
3.	Power Range, Neutron Flux, High Positive Rate	N.A.
4.	Power Range, Neutron Flux, High Negative Rate	≤ 0.5 second*
5.	Intermediate Range, Neutron Flux	N.A.
6.	Source Range, Neutron Flux	≤ 0.5 second*
7.	Extended Range, Neutron Flux	N.A.
8.	Overtemperature ΔT	≤ 8.0 seconds*
9.	Overpower ΔT	≤ 8.0 seconds*
10.	Pressurizer Pressure--Low	≤ 2 seconds
11.	Pressurizer Pressure--High	≤ 2 seconds
12.	Pressurizer Water Level--High	≤ 2 seconds

*Neutron detectors are exempt from response time testing. Response time of the neutron flux signal portion of the channel shall be measured from detector output or input of first electronic component in channel.

16.1-2

TABLE 3.3-2 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

FUNCTIONAL UNIT	RESPONSE TIME
13. Reactor Coolant Flow--Low	
a. Single Loop (Above P-8)	≤ 1 second
b. Two Loops (Above P-7 and below P-8)	≤ 1 second
14. Steam Generator Water Level--Low-Low	≤ 2 seconds
15. Undervoltage - Reactor Coolant Pumps	≤ 1.5 seconds
16. Underfrequency - Reactor Coolant Pumps	≤ 0.6 second
17. Turbine Trip	
a. Low Emergency Trip Fluid Pressure	N.A.
b. Turbine Stop Valve Closure	N.A.
18. Safety Injection Input from ESFAS	N.A.
19. Reactor Trip System Interlocks	N.A.
20. Reactor Trip Breakers	N.A.
21. Automatic Trip and Interlock Logic	N.A.

16.1-3

TABLE 3.3-5e

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATION SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
1. Manual Initiation	
a. Safety Injection (ECCS)	N.A.
b. Containment Spray	N.A.
c. Phase "A" Isolation	N.A.
d. Phase "B" Isolation	N.A.
e. Containment Ventilation Isolation	N.A.
f. Steam Line Isolation	N.A.
g. Feedwater Isolation	N.A.
h. Auxiliary Feedwater	N.A.
i. Essential Cooling Water	N.A.
j. Reactor Containment Fan Coolers	N.A.
k. Control Room Ventilation	N.A.
l. Reactor Trip	N.A.
m. Start Diesel Generator	N.A.
2. Containment Pressure--High-1	
a. Safety Injection (ECCS)	$\leq 27^{(1)}/12^{(5)}$
1) Reactor Trip	$\leq 2^{(3)}$
2) Feedwater Isolation	$\leq 12^{(3)}$
3) Phase "A" Isolation	$\leq 33^{(1)}/23^{(2)}$
4) Containment Ventilation Isolation (18-inch lines)	$\leq 23^{(1)}/13^{(2)}$
5) Auxiliary Feedwater	≤ 60
6) Essential Cooling Water	$\leq 62^{(1)}/52^{(2)}$
7) Reactor Containment Fan Coolers	$\leq 38^{(1)}/28^{(2)}$
8) Control Room Ventilation	$\leq 72^{(1)}/62^{(2)}$
9) Start Standby Diesel Generators	≤ 12

16.1-5

TABLE 8.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
3. Pressurizer Pressure--Low	
a. Safety Injection (ECCS)	$\leq 27^{(1)}/12^{(5)}$
1) Reactor Trip	$\leq 2^{(3)}$
2) Feedwater Isolation	$\leq 12^{(3)}$
3) Phase "A" Isolation	$\leq 33^{(1)}/23^{(2)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	≤ 60
6) Essential Cooling Water	$\leq 62^{(1)}/52^{(2)}$
7) Reactor Containment Fan Coolers	$\leq 38^{(1)}/28^{(2)}$
8) Control Room Ventilation	$\leq 72^{(1)}/62^{(2)}$
9) Start Standby Diesel Generators	≤ 12
4. Deleted	
5. Compensated Steam Line Pressure--Low	
a. Safety Injection (ECCS)	$\leq 22^{(4)}/12^{(5)}$
1) Reactor Trip	$\leq 2^{(3)}$
2) Feedwater Isolation	$\leq 12^{(3)}$
3) Phase "A" Isolation	$\leq 33^{(1)}/23^{(2)}$
4) Containment Ventilation Isolation	N.A.
5) Auxiliary Feedwater	≤ 60
6) Essential Cooling Water	$\leq 62^{(1)}/52^{(2)}$
7) Reactor Containment Fan Coolers	$\leq 38^{(1)}/28^{(2)}$
8) Control Room Ventilation	$\leq 72^{(1)}/62^{(2)}$
9) Start Diesel Generators	≤ 12
b. Steam Line Isolation	$\leq 8^{(3)}$

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
6. Containment Pressure--High-3	
a. Containment Spray	$\leq 30^{(1)}/20^{(2)}$
b. Phase "B" Isolation	$\leq 28^{(1)}/18^{(2)}$
7. Containment Pressure--High-2	
Steam Line Isolation	$\leq 7^{(3)}$
8. Steam Line Pressure - Negative Rate--High	
Steam Line Isolation	N.A.
9. Steam Generator Water Level--High-High	
a. Turbine Trip	$\leq 3^{(3)}$
b. Feedwater Isolation	$\leq 12^{(3)}$
10. Steam Generator Water Level--Low-Low	
a. Motor-Driven Auxiliary Feedwater Pumps	≤ 60
b. Turbine-Driven Auxiliary Feedwater Pump	≤ 60
11. RWST Level--Low-Low Coincident with Safety Injection	
Automatic Switchover to Containment Sump	$\leq 32^{(2)}$
12. Loss of Power	
a. 4.16 kV ESF Bus Undervoltage (Loss of Voltage)	≤ 12
b. 4.16 kV ESF Bus Undervoltage (Tolerable Degraded Voltage Coincident with Safety Injection)	≤ 49
c. 4.16 kV ESF Bus Undervoltage (Sustained Degraded Voltage)	≤ 65

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
13. RCB Purge Radioactivity-High	
a. Containment Ventilation Isolation (48-inch lines)	$\leq 73^{(2)}$
b. Containment Ventilation Isolation (18-inch lines)	$\leq 23^{(2)}$
14. Deleted	
15. Deleted	
16. T_{avg} - Low Coincident with Reactor Trip Feedwater Isolation	N.A.
17. Control Room Intake Air Radioactivity - High Control Room Ventilation	$\leq 78^{(2)}$
18. Spent Fuel Pool Exhaust Radioactivity - High FHB HVAC Emergency Startup	$\leq 42^{(2)}$
19. Charging Header Pressure - Low	N.A.

TABLE 3.3-5 (Continued)

TABLE NOTATIONS

(1) Diesel generator starting and sequence loading delays included.

(2) Diesel generator starting delay not included, sequence loading delay is included. Offsite power available.

(3) Not dependent upon diesel generator starting or sequence loading delays.

(4) Diesel generator starting and sequence loading delay included. Low Head Safety Injection pumps not included.

(5) Diesel generator starting delays not included, sequence loading delay is included. Low Head Safety Injection pumps not included.