TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
8. AUXILIARY FEEDWATER					
a. Automatic Actuation Logic**	2	1	2	1, 2, 3	20
b. Stm. Gen. Water Level-Low-Low					
i. Start Motor Driven Pumps	3/stm. gen	2/stm. gen. any stm. gen.	2 stm. gen.	1, 2, 3	14*
ii. Start Turbine-Driven Pumps	3/stm. gen.	2/stm. gen. any 2 stm. gen.	2 stm. gen.	1, 2, 3	14*
c. Undervoltage-RCP Start Turbine-Driven Pump	4-1/bus	1/2 x 2	3	1, 2	19
d. S.I. Start Motor-Driven Pumps	See 1 above (All S.I. initiating functions and requirements)				

**Applies to items b. and c.

add this page

TABLE 3.3-3 (Continued)

ACTION 17 - With less than the Minimum Channels OPERABLE, operation may continue provided the containment purge and exhaust valves are maintained closed.

ACTION 18 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 19 - With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 1 hour.

b. The Minimum Channels OPERABLE requirements is met; however, one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.

ENGINEERED SAFETY FEATURES INTERLOCKS

DESIGNATION	CONDITION AND SETPOINT	FUNCTION
P-11	With 2 of 3 pressurizer pressure channels ≥ 1925 psig.	P-11 prevents or defeats manual block of safety injection actuation on low pressurizer pressure.
P-12	With 3 of 4 T_{avg} channels ≥ 545°F.	P-12 prevents or defeats manual block of safety injection actuation high steam line flow and low steam line pressure.
	With 2 of 4 T_{avg} channels < 541°F.	Allows manual block of safety injection actuation on high steam line flow and low steam line pressure. Causes steam line isolation on high steam flow. Affects steam dump blocks.

ACTION 20 - With the number of OPERABLE channels one less than the Total Number of Channels, be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 1 hour for surveillance testing.

add ACTIONS 19 & 20 and move ESF INTLKS chart to follow ACTION 19.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
5. TURBINE TRIP AND FEEDWATER ISOLATION		
a. Steam Generator Water Level--High-High	< 67% of narrow range instrument span each steam generator	< 68% of narrow range instrument span each steam generator
6. UNDERVOLTAGE, VITAL BUS	≥ 70% of bus voltage	≥ 65% of bus voltage

MODIFY TO AGREE WITH ATTACHED PAGE

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
5. TURBINE TRIP AND FEEDWATER ISOLATION		
a. Steam Generator Water Level--High-High	< 67% of narrow range Instrument span each steam generator	< 68% of narrow range Instrument span each steam generator
6. SAFEGUARDS EQUIPMENT CONTROL SYSTEM (SEC)	Not Applicable	Not Applicable
7. UNDERVOLTAGE, VITAL BUS		
a. Loss of Voltage	≥ 70%	≥ 65%
8. AUXILIARY FEEDWATER		
a. Automatic Actuation Logic	Not Applicable	Not Applicable
b. Steam Generator Water Level-low-low	> 18% of narrow range Instrument span each steam generator	> 17% of narrow range Instrument span each steam generator
c. Undervoltage - RCP	≥ 70% RCP bus voltage	≥ 65% RCP bus voltage
d. S.I.	See 1 Above (All S.I. setpoints)	

TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION		RESPONSE TIME IN SECONDS
1. Manual		
a.	Safety Injection (ECCS)	Not Applicable
	Feedwater Isolation	Not Applicable
	Reactor Trip (SI)	Not Applicable
	Containment Isolation-Phase "A"	Not Applicable
	Containment Ventilation Isolation	Not Applicable
	Auxiliary Feedwater Pumps	Not Applicable
	Service Water System	Not Applicable
	Containment Fan Cooler	Not Applicable
b.	Containment Spray	Not Applicable
	Containment Isolation-Phase "B"	Not Applicable
	Containment Ventilation Isolation	Not applicable
c.	Containment Isolation-Phase "A"	Not Applicable
	Containment Ventilation Isolation	Not Applicable
d.	Steam Line Isolation	Not Applicable
2. Containment Pressure-High		
a.	Safety Injection (ECCS)	≤ 27.0*
b.	Reactor Trip (from SI)	~~≤ 3.0~~ ≤ 2.0
c.	Feedwater Isolation	~~≤ 8.0~~ ≤ 7.0
d.	Containment Isolation-Phase "A"	~~$\leq 18.0^{\#}/28.0^{\#\#}$~~ $\leq 17.0^{\#}/27.0^{\#\#}$
e.	Containment Ventilation Isolation	Not Applicable
f.	Auxiliary Feedwater Pumps	Not Applicable
g.	Service Water System	$\leq 13.0^{\#}/48.0^{\#\#}$

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
3. Pressurizer Pressure-Low	12.0#
a. Safety Injection (ECCS)	≤ 27.0*/~~23.0#~~
b. Reactor Trip (from SI)	≤ ~~3.0~~ 2.0
c. Feedwater Isolation	≤ ~~8.0~~ 7.0
d. Containment Isolation-Phase "A"	≤ 18.0#
e. Containment Ventilation Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Service Water System	~~≤ 48.0*~~/13.0# ≤ 49.0*/
4. Differential Pressure Between Steam Lines-High	
a. Safety Injection (ECCS)	≤ ~~13.0#/23.0##~~ ≤ 12.0#/22.0##
b. Reactor Trip (from SI)	≤ ~~2.0~~ 2.0
c. Feedwater Isolation	≤ ~~8.0~~ 7.0
d. Containment Isolation-Phase "A"	≤ ~~18.0#/28.0##~~ ≤ 17.0#/27.0##
e. Containment Ventilation Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Service Water System	≤ 13.0#/48.0##
5. Steam Flow in Two Steam Lines - High Coincident with T_{avg}--Low-Low	
a. Safety Injection (ECCS)	≤ ~~15.0#/25.0##~~ 14.0#/24.0##
b. Reactor Trip (from SI)	≤ ~~5.0~~ 4.0
c. Feedwater Isolation	≤ ~~10.0~~ 9.0
d. Containment Isolation-Phase "A"	≤ ~~20.0#/30.0##~~ 19.0#/29.0##
e. Containment Ventilation Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Service Water System	≤ ~~15.0#/50.0##~~ 14.0#/49.0##
h. Steam Line Isolation	≤ ~~10.0~~ 9.0

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
6. Steam Flow in Two Steam Lines-High Coincident with Steam Line Pressure-Low	
a. Safety Injection (ECCS)	≤ ~~12.0#/22.0##~~ 12.0#/22.0##
b. Reactor Trip (from SI)	≤ ~~2.0~~ 2.0
c. Feedwater Isolation	≤ ~~8.0~~ 7.0
d. Containment Isolation-Phase "A"	≤ ~~18.0#/28.0##~~ 17.0#/27.0##
e. Containment Ventilation Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Service Water System	≤ 14.0#/48.0##
h. Steam Line Isolation	≤ 8.0
7. Containment Pressure--High-High	
a. Containment Spray	≤ 45.0
b. Containment Isolation-Phase "B"	Not Applicable
c. Steam Line Isolation	≤ 7.0
d. Containment Fan Cooler	≤ 40.0
8. Steam Generator Water Level--High-High	
a. Turbine Trip-Reactor Trip	≤ 2.5
b. Feedwater Isolation	≤ 11.0
9. Steam Generator Water Level --Low-Low	
a. Motor-Driven Auxiliary Feedwater Pumps ~~#~~##	≤ 60.0
b. Turbine-Driven Auxiliary Feedwater Pumps **	≤ 60.0

ADD

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
10. Undervoltage RCP Bus	
a. Turbine-Driven Auxiliary Feedwater Pumps	≤ 60.0
11. Containment Radioactivity - High	
a. Purge and Exhaust Isolation	≤15.0 ***
12. Undervoltage, Vital Bus	
a. Loss of Voltage	≤ 4.0

Note: Response time for Motor-driven Auxiliary Feedwater Pumps on all S.I. signal starts ≤ 60.0

ADD THIS PAGE

TABLE 3.3-5 (Continued)

TABLE NOTATION

* Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps, SI and RHR pumps.

\# Diesel generator starting and sequence loading delays not included. Offsite power available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps.

\## Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps.

On 2/3 in any steam generator.

** On 2/3 in 2/4 steam generators.

*** RADIATION DETECTORS ARE EXEMPT FROM RESPONSE TIME TESTING. RESPONSE TIME OF THE RADIATION FIELD SIGNAL PORTION OF THE CHANNEL SHALL BE MEASURED FROM THE DETECTOR OUTPUT OR FROM THE INPUT OF THE FIRST ELECTRONIC COMPONENT IN THAT CHANNEL

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
3. CONTAINMENT ISOLATION				
a. Phase "A" Isolation				
1) Manual	N.A.	N.A.	R	1, 2, 3, 4
2) From Safety Injection Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
b. Phase "B" Isolation				
1) Manual	N.A.	N.A.	R	1, 2, 3, 4
2) Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
3) Containment Pressure--High-High	S	R	M(3)	1, 2, 3
c. Containment Ventilation Isolation				
1) Manual	N.A.	N.A.	R	1, 2, 3, 4
add → 2) Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
& renumber → (3) Containment Radioactivity-High	S	R	M	1, 2, 3, 4

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
4. STEAM LINE ISOLATION				
a. Manual	N.A.	N.A.	R	1, 2, 3
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3
c. Containment Pressure--High-High	S	R	M(3)	1, 2, 3
d. Steam Flow in Two Steam Lines--High Coincident with T_{avg} -- Low or Steam Line Pressure--Low	S	R	M	1, 2, 3
5. TURBINE TRIP AND FEEDWATER ISOLATION				
a. Steam Generator Water Level--High-High	S	R	M	1, 2, 3
6. SAFEGUARDS EQUIPMENT CONTROL SYSTEM (SEC) LOGIC				
a. Inputs	N.A.	N.A.	M	1, 2, 3, 4
b. Logic, Timing and Outputs	N.A.	N.A.	M(1)	1, 2, 3, 4
7. UNDERVOLTAGE, VITAL BUS	S	R	M	1, 2, 3, 4 add]

SALEM - UNIT 1

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
8. AUXILIARY FEEDWATER				
a. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3
b. Steam Generator Water Level-Low-Low	S	R	M	1, 2, 3
c. Undervoltage - RCP	S	R	N.A.	1, 2
d. S.I.	See 1 above (All S.I. surveillance requirements)			

add this page

TABLE 4.3-2 (Continued)

TABLE NOTATION

(1) Each logic channel shall be tested at least once per 62 days on a STAGGERED TEST BASIS. The CHANNEL FUNCTION TEST of each logic channel shall verify that its associated diesel generator automatic load sequence timer is OPERABLE with the interval between each load block within ~~±10%~~ ±1 second of its design interval.

(2) Each train or logic channel shall be tested at least every ~~31~~ 62 days on a STAGGERED TEST BASIS.

(3) The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter.

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.7 The accident monitoring instrumentation channels shown in Table 3.3-11a and Table 3.3-11b shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. As shown in Table 3.3-11a and Table 3.3-11b

b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.7 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-11.

add this page

SALEM - UNIT 1

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TABLE 3.3-11a

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	REQUIRED NO. OF CHANNELS	ACTION
1. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	4 (1/loop)	2	1
2. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	4 (1/loop)	2	1
3. Reactor Coolant Pressure - Wide Range	2	2	1
4. Pressurizer Water Level	3 (hot)	2	1
5. Steam Line Pressure	3/Stm.Gen.	2/Stm.Gen.	1
6. Steam Generator Water Level - Narrow Range	3/Stm.Gen.	1/Stm.Gen.	1
7. Steam Generator Water Level - Wide Range	4 (1/Stm.Gen.)	4 (1/Stm.Gen.)	1
8. Refueling Water Storage Tank Water Level	2	2	1
9. Boric Acid Tank Solution Level	1/tank (2 tanks)	1/tank	3
10. Auxiliary Feedwater Flow Rate	4 (1/Stm.Gen.)	4 (1/Stm.Gen.)	4
11. Reactor Coolant System Subcooling Margin Monitor	1	1	5
12. PORV Position Indicator	1/valve	N.A.	
13 PORV Block Valve Position Indicator	1/valve	N.A.	
14. Safety Valve Position Indicator	1/valve	N.A.	

add this page

SALEM - UNIT 1

TABLE 3.3-11b

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE	ACTION
1. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	4 (1/loop)	1	2
2. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	4 (1/loop)	1	2
3. Reactor Coolant Pressure - Wide Range	2	1	2
4. Pressurizer Water Level	3 (hot)	1	2
5. Steam Line Pressure	3/Stm.Gen.	1/Stm.Gen.	2
6. Steam Generator Water Level - Narrow Range	3/Stm.Gen.	1/Stm.Gen.	2
7. Steam Generator Water Level - Wide Range	4 (1/Stm.Gen.)	N.A.	
8. Refueling Water Storage Tank Water Level	2	1	2
9. Boric Acid Tank Solution Level	1/tank (2 tanks)	1	3
10. Auxiliary Feedwater Flow Rate	4 (1/Stm.Gen.)	3	4
11. Reactor Coolant System Subcooling Margin Monitor	1	1	5
12. PORV Position Indicator	1/valve	N.A.	
13 PORV Block Valve Position Indicator	1/valve	N.A.	
14. Safety Valve Position Indicator	1/valve	N.A.	

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add this page

TABLE 3.3-11a&b (continued)

TABLE NOTATION

ACTION 1 — With the number of OPERABLE accident monitoring channels less than the Required Number of Channels shown in Table 3.3-11a, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.

ACTION 2 — With the number of OPERABLE accident monitoring channels less than the Minimum Channels OPERABLE requirements of Table 3.3-11b, restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

ACTION 3 — With the number of OPERABLE channels less than the Total Number of Channels shown in Tables 3.3-11a&b, operation may proceed provided that the Boric Acid Tank associated with the OPERABLE channel satisfies the requirements of Specification 3.1.2.8.a.

ACTION 4 — With the number of OPERABLE channels less than the Total Number of Channels shown in Tables 3.3-11a&b, operation may proceed provided that an OPERABLE Steam Generator level channel is available as an alternate means of indication for the Steam Generator with no OPERABLE Auxiliary Feedwater Flow Rate channel.

ACTION 5 — With the number of OPERABLE channels less than the Total Number of Channels shown in Tables 3.3-11a&b, operation may proceed provided that the following Required Channels shown on Table 3.3-11a are OPERABLE to provide an alternate means of calculating Reactor Coolant System subcooling margin*:

a. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)

b. Reactor Coolant Pressure - Wide Range

* Steam Tables available in Control Room

add this page

TABLE 4.3-11

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	FUNCTIONAL TEST
1. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R	N.A.
2. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R	N.A.
3. Reactor Coolant Pressure - Wide Range	M	R	N.A.
4. Pressurizer Water Level	M	R	N.A.
5. Steam Line Pressure	M	R	N.A.
6. Steam Generator Water Level - Narrow Range	M	R	N.A.
7. Steam Generator Water Level - Wide Range	M	R	N.A.
8. Refueling Water Storage Tank Water Level	M	R	N.A.
9. Boric Acid Tank Solution Level	M	R	N.A.
10. Auxiliary Feedwater Flow Rate	N.A.	R	N.A.
11. Reactor Coolant System Subcooling Margin Monitor	M	R	N.A.
12. PORV Position Indicator	N.A.	N.A.	Q
13. PORV Block Valve Position Indicator	N.A.	N.A.	Q
14. Safety Valve Position Indicator	Q	N.A.	R

add this page

REACTOR COOLANT SYSTEM

3/4.4.2 SAFETY VALVES

SAFETY VALVES - SHUTDOWN

change as shown

LIMITING CONDITION FOR OPERATION

3.4.2.1 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2485 psig ± 1%.*

add asterisk and note at bottom

APPLICABILITY: MODES 4 and 5.

ACTION:

With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE RHR loop into operation in the shutdown cooling mode.

SURVEILLANCE REQUIREMENTS

add

4.4.2.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

add

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

REACTOR COOLANT SYSTEM

3/4.4.2 SAFETY VALVES

SAFETY VALVES - OPERATING } change as shown

LIMITING CONDITION FOR OPERATION

change

3.4.2.2 All pressurizer code safety valves shall be OPERABLE with a lift setting of 2485 psig ± 1%.* ← add asterisk and note at bottom

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

change

4.4.2.2 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

REACTOR COOLANT SYSTEM

3/4.4.3 RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.4.3 Two power relief valves (PORVs) and their associated block valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one or more PORV(s) inoperable, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s) and remove power from the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one or more block valve(s) inoperable, within 1 hour either restore the block valve(s) to OPERABLE status or close the block valve(s) and remove power from the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.3.1 In addition to the requirements of Specification 4.0.5, each PORV shall be demonstrated OPERABLE at least once per 18 months by performance of a CHANNEL CALIBRATION and operating the valve through one complete cycle of full travel.

4.4.3.2 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel.

(ADD THIS PAGE)

REACTOR COOLANT SYSTEM

PRESSURIZER

LIMITING CONDITION FOR OPERATION

3.4.4 The pressurizer shall be OPERABLE with a steam bubble.

APPLICABILITY: MODES 1 and 2

ACTION:

With the pressurizer inoperable, be in at least HOT STANDBY with the reactor trip breakers open within 6 hours.

MODIFY TO AGREE WITH ATTACHED PAGE

SURVEILLANCE REQUIREMENTS

4.4.4 No additional Surveillance Requirements other than those required by Specification 4.0.5.

PRESSURIZER

LIMITING CONDITION FOR OPERATION

3.4.4 The pressurizer shall be OPERABLE with at least 150 kw of pressurizer heaters and a water volume of less than or equal to 1650 cubic feet (92% indicated level).

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With the pressurizer inoperable due to an inoperable emergency power supply to the pressurizer heaters either restore the inoperable emergency power supply within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With the pressurizer otherwise inoperable, be in at least HOT STANDBY with the reactor trip breakers open within 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.4. The pressurizer water volume shall be determined to be within its limit at least once per 12 hours.

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3.1 The containment isolation valves specified in Table 3.6-1 shall be OPERABLE with isolation times as shown in Table 3.6-1.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) specified in Table 3.6-1 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

add this phrase

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1.1 The isolation valves specified in Table 3.6-1 shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test and verification of isolation time.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each isolation valve specified in Table 3.6-1 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Verifying that on a feedwater isolation test signal, each feedwater isolation valve isolates to its isolation position.

d. Verifying that on a Containment Purge and Pressure-Vacuum Relief isolation test signal, each Purge and Pressure-Vacuum Relief valve actuates to its isolation position.

4.6.3.1.3 At least once per 18 months, verify that on a main steam isolation test signal, each main steam isolation valve specified in Table 3.6-1 actuates to its isolation position.

add

4.6.3.1.4 The isolation time of each power operated or automatic valve of Table 3.6-1 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

4.6.3.1.5 Each containment purge isolation valve shall be demonstrated OPERABLE within 24 hours after each closing of the valve, except when the valve is being used for multiple cyclings; then at least once per 72 hours, by verifying that when the measured leakage rate is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than or equal to $0.60L_a$.

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	ISOLATION TIME
F. MANUAL		
1. (2 valves)#	Pressurizer Dead-Weight Calibrator	Not Applicable
2. 11 CV 98#	CVCS - RCP Seals	Not Applicable
3. 12 CV 98#	CVCS - RCP Seals	Not Applicable
4. 13 CV 98#	CVCS - RCP Seals	Not Applicable
5. 14 CV 98#	CVCS - RCP Seals	Not Applicable
6. 1 SJ 71#	CVCS Flushing Connection	Not Applicable
7. 11 SS 93*#	Steam Generator Sampling	Not Applicable
8. 12 SS 93*#	Steam Generator Sampling	Not Applicable
9. 13 SS 93*#	Steam Generator Sampling	Not Applicable
10. 14 SS 93*#	Steam Generator Sampling	Not Applicable
11. 1 SA 118#	Compressed Air Supply	Not Applicable
12. 1 WL 190#	Refueling Canal Supply	Not Applicable
13. 1 SF 36#	Refueling Canal Supply	Not Applicable
14. 1 WL 191#	Refueling Canal Discharge	Not Applicable
15. 1 SF 22#	Refueling Canal Discharge	Not Applicable
16. 1 VC 9*#	Containment Radiation Sampling	Not Applicable
17. 1 VC 10*#	Containment Radiation Sampling	Not Applicable
18. 1 VC 13*#	Containment Radiation Sampling	Not Applicable
19. 1 VC 14*#	Containment Radiation Sampling	Not Applicable
20. - #	Fuel Transfer Tube	Not Applicable

INSERT VALVE NUMBERS → AND RE-NUMBER COLUMN AS ON ATTACHED PAGE

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	ISOLATION TIME (Seconds)
F. MANUAL		
1. 1SS900#	Pressurizer Dead-Weight Calibrator	Not Applicable
2. 1SS901#	Pressurizer Dead-Weight Calibrator	Not Applicable
3. 11 CV 98#	CVCS - RCP Seals	Not Applicable
4. 12 CV 98#	CVCS - RCP Seals	Not Applicable
5. 13 CV 98#	CVCS - RCP Seals	Not Applicable
6. 14 CV 98#	CVCS - RCP Seals	Not Applicable
7. 1 SJ 71#	CVCS Flushing Connection	Not Applicable
8. 11 SS 93*#	Steam Generator Sampling	Not Applicable
9. 12 SS 93*#	Steam Generator Sampling	Not Applicable
10. 13 SS 93*#	Steam Generator Sampling	Not Applicable
11. 14 SS 93*#	Steam Generator Sampling	Not Applicable
12. 1 SA 118#	Compressed Air Supply	Not Applicable
13. 1 WL 190#	Refueling Canal Supply	Not Applicable
14. 1 SF 36#	Refueling Canal Supply	Not Applicable
15. 1 WL 191#	Refueling Canal Discharge	Not Applicable
16. 1 SF 22#	Refueling Canal Discharge	Not Applicable
17. 1 VC 9*#	Containment Radiation Sampling	Not Applicable
18. 1 VC 10*#	Containment Radiation Sampling	Not Applicable
19. 1 VC 13*#	Containment Radiation Sampling	Not Applicable
20. 1 VC 14*#	Containment Radiation Sampling	Not Applicable
21. - #	Fuel Transfer Tube	Not Applicable

MODIFY TO AGREE WITH ATTACHED PAGE

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

a. Two feedwater pumps, each capable of being powered from separate vital busses, and

b. One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With one auxiliary feedwater pump inoperable, restore at least three auxiliary feedwater pumps (two capable of being powered from separate vital busses and one capable of being powered by an OPERABLE steam supply system) to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying that the steam turbine driven pump develops a discharge pressure of $\geq$ 1500 psig on recirculation flow when the secondary steam supply pressure is greater than 750 psig.

2. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed or otherwise secured in position, is in its correct position.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated manual activation switches in the control room and flow paths shall be OPERABLE with:

a. Two feedwater pumps, each capable of being powered from separate vital busses, and

b. One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one auxiliary feedwater pump inoperable, restore the required auxiliary feedwater pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With two auxiliary feedwater pumps inoperable be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying that each motor-driven pump develops a discharge pressure of greater than or equal to 1275 psig on recirculation flow.

2. Verifying that the steam turbine-driven pump develops a discharge pressure of greater than or equal to 1500 psig on recirculation flow when the secondary steam supply pressure is greater than 750 psig. The provisions of Specification 4.0.4 are not applicable.

3. Verifying that each non-automatic valve in the flow path that is not locked, sealed or otherwise secured in position, is in its correct position.

MODIFY TO AGREE WITH ATTACHED PAGE

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 18 months during shutdown by:

1. Verifying that each automatic valve in the motor driven pump flow path actuates to its correct position on a pump discharge pressure test signal.

2. Verifying that each motor driven pump starts automatically upon receipt of each of the following test signals:

   a) Loss of main feedwater pumps.

   b) Safeguards sequence signal.

   c) Steam Generator Water Level -- Low-Low from one steam generator.

3. Verifying that the steam turbine driven pump starts automatically upon receipt of each of the following test signals:

   a) Loss of offsite power.

   b) Steam Generator Water Level -- Low-Low from two steam generators.

SURVEILLANCE REQUIREMENTS (Continued)

4. Verify that valves 11AF3, 12AF3, 13AF3, 11AF20, 12AF20, 13AF20, 14AF20, 11AF22, 12AF22, 13AF22, 14AF22, 11AF10, 12AF10, 13AF10, 14AF10, 11AF86, 12AF86, 13AF86, and 14AF86 are locked open.

b. At least once per 18 months during shutdown by:

1. Verifying that each automatic valve in the motor driven pump flow path actuates to its correct position on a pump discharge pressure test signal.

2. Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of each auxiliary feedwater actuation test signal.

c. The auxiliary feedwater system shall be demonstrated OPERABLE prior to entry into Mode 3 following each COLD SHUTDOWN by performing a flow test to verify the normal flow paths from the Auxiliary Feedwater Storage Tank to each of the steam generators.

3/4.3.3.6 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

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3/4.3.3.7 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the Recommendations of Regulator Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following and Accident," December 1975.]

MODIFY TO AGREE WITH ATTACHED PAGE

3/4.4 REACTOR COOLANT SYSTEM

BASES

3/4.4.2 and 3/4.4.3 SAFETY VALVES

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2735 psig. Each safety valve is designed to relieve 420,000 lbs per hour of saturated steam at the valve set point. The relief capacity of a single safety valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operated relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code.

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Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code.

3/4.4.3 RELIEF VALVES

The power operated relief valves and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. Operation of the power operated relief valves minimizes the undesirable opening of the spring-loaded pressurizer code safety valves. Each power operated relief valve has a remotely operated block valve to provide positive shutoff capability should a relief valve become inoperable.

3/4.4.4 PRESSURIZER

MODIFY AS ATTACHED PAGE

~~A steam bubble in the pressurizer ensures that the RCS is not a hydraulically solid system and is capable of accommodating pressure surges during operation. The steam bubble also protects the pressurizer code safety valves and power operated relief valves against water relief. The power operated relief valves and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. Operation of the power operated relief valves minimizes the undesirable opening of the spring-loaded pressurizer code safety valves.~~

3/4.4.5 STEAM GENERATORS

The Surveillance Requirements for inspection of the steam generator tubes ensure that the structural integrity of this portion of the RCS will be maintained. The program for inservice inspection of steam generator tubes is based on a modification of Regulatory Guide 1.83, Revision 1. Inservice inspection of steam generator tubing is essential in order to maintain surveillance of the conditions of the tubes in the event that there is evidence of mechanical damage or progressive degradation due to design, manufacturing errors, or inservice conditions that lead to corrosion. Inservice inspection of steam generator tubing also provides a means of characterizing the nature and cause of any tube degradation so that corrective measures can be taken.

The plant is expected to be operated in a manner such that the secondary coolant will be maintained within those chemistry limits found to result in negligible corrosion of the steam generator tubes. If the secondary coolant chemistry is not maintained within these limits, localized corrosion may likely result in stress corrosion cracking. The extent of cracking during plant operation would be limited by the limitation of steam generator tube leakage between the primary coolant system and the secondary coolant system (primary-to-secondary leakage = 500 gallons per day per steam generator). Cracks having a primary-to-secondary leakage less than this limit during operation will have an adequate margin of safety to withstand the loads imposed during normal operation and by postulated accidents. Operating plants have demonstrated that primary-to-secondary leakage of 500 gallons per day per steam generator can readily be detected by radiation monitors of steam generator blowdown. Leakage in excess of this limit will require plant shutdown and an unscheduled inspection, during which the leaking tubes will be located and plugged.

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3/4.4.4 PRESSURIZER

The limit on the maximum water volume in the pressurizer assures that the parameter is maintained within the normal steady-state envelope of operation assumed in the SAR. The limit is consistent with the initial SAR assumptions. The 12 hour periodic surveillance is sufficient to ensure that the parameter is restored to within its limit following expected transient operation. The maximum water volume also ensures that a steam bubble is formed and thus the RCS is not a hydraulically solid system. The requirement that a minimum number of pressurizer heaters be OPERABLE assures that the plant will be able to establish natural circulation.

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CONDITIONS FOR LICENSE
TO BE ADDED TO
FACILITY OPERATING LICENSE
DPR-70

The following License Conditions shall be added to conform with NRC letter to all PWR licensees dated July 2, 1980:

A. Systems Integrity

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and

2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

B. Iodine Monitoring

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,

2. Procedures for monitoring, and

3. Provisions for maintenance of sampling and analysis equipment.

C. Backup Method for Determining Subcooling Margin

The licensee shall implement a program which will ensure the capability to accurately monitor the Reactor Coolant System subcooling margin. This program shall include the following:

1. Training of personnel, and

2. Procedures for monitoring.