LIST OF TABLES (Continued)

LIST OF TABLES (Continued)

PRESSURE BOUNDARY LEAKAGE

1.31 PRESSURE BOUNDARY LEAKAGE shall be leakage through a non-isolable fault in a reactor coolant system component body, pipe wall or vessel wall.

PRIMARY CONTAINMENT INTEGRITY - FUEL HANDLING

1.32 PRIMARY CONTAINMENT INTEGRITY - FUEL HANDLING shall exist when:

a. All primary containment penetrations required to be closed during accident conditions are closed by at least one manual valve, blind flange, or deactivated automatic valve secured in its closed position. Up to twelve vent and drain line pathways may be opened under administrative control for the purposes of surveillance testing provided the total calculated flow rate through the open vent and drain line pathways is less than or equal to 70.2 cfm.

b. All primary containment hatches are closed.

c. Each primary containment air lock is in compliance with the requirements of Specification 3.6.1.4.

PRIMARY CONTAINMENT INTEGRITY - OPERATING

1.33 PRIMARY CONTAINMENT INTEGRITY - OPERATING shall exist when:

a. All primary containment penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an OPERABLE containment automatic isolation system, or

2. Closed by at least one manual valve, blind flange, or deactivated automatic valve secured in its closed position, except as provided in Specification 3.6.4.

b. All primary containment equipment hatches are closed and sealed.

c. Each primary containment air lock is in compliance with the requirements of Specification 3.6.1.4.

d. The primary containment leakage rates are within the limits of Specification 3.6.1.3.

e. The suppression pool is in compliance with the requirements of Specification 3.6.3.1.

f. The sealing mechanism associated with each primary containment penetration; e.g., welds, bellows or O-rings, is OPERABLE.

PROCESS CONTROL PROGRAM (PCP)

1.34 The PROCESS CONTROL PROGRAM shall contain the current formula, sampling, analyses, tests, and determinations to be made to ensure that the processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Part 20, 10 CFR Part 61, 10 CFR Part 71 and

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR PROTECTION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the reactor protection system instrumentation channels shown in Table 3.3.1-1 shall be OPERABLE with the REACTOR PROTECTION SYSTEM RESPONSE TIME as shown in Table 3.3.1-2.

APPLICABILITY: As shown in Table 3.3.1-1.

ACTION:

a. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, place the inoperable channel(s) and/or that trip system in the tripped condition* within one hour.

b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, place at least one trip system** in the tripped condition within one hour and take the ACTION required by Table 3.3.1-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each reactor protection system 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 4.3.1.1-1.

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

4.3.1.3 The REACTOR PROTECTION SYSTEM RESPONSE TIME of each reactor trip functional unit shown in Table 3.3.1-2 shall be demonstrated to be within its 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 reactor trip system.

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*An inoperable channel need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 2 hours or the ACTION required by Table 3.3.1-1 for that Trip Function shall be taken.

**The trip system need not be placed in the tripped condition if this would cause the Trip Function to occur. When a trip system can be placed in the tripped condition without causing the Trip Function to occur, place the trip system with the most inoperable channels in the tripped condition; if both systems have the same number of inoperable channels, place either trip system in the tripped condition. The requirement to place a trip system in the tripped condition does not apply to Functional Units 6 and 10 of Table 3.3.1-1.

***Logic System Functional Test period may be extended as identified by note 'p' on Table 4.3.1.1-1.

TABLE 4.3.1.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION[a]	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
1. Intermediate Range Monitors:				
a. Neutron Flux - High	S/U,S,(b) S	S/U[c], W W	R R	2 3, 4, 5
b. Inoperative	NA	W	NA	2, 3, 4, 5
2. Average Power Range Monitor:[f]				
a. Neutron Flux - High, Setdown	S/U,S,(b) S	S/U[c], W W	SA SA	2 3, 4, 5
b. Flow Biased Simulated Thermal Power - High	S,D[h]	S/U[c], W	W[d][e], SA[o], R[l]	1
c. Neutron Flux - High	S	S/U[c], W	W[d], SA	1
d. Inoperative	NA	W	NA	1, 2, 3, 4, 5
3. Reactor Vessel Steam Dome Pressure - High	S	M	R[g]	1, 2[j]
4. Reactor Vessel Water Level - Low, Level 3	S	M	R[g]	1, 2
5. Reactor Vessel Water Level - High, Level 8	S	M	R[g]	1
6. Main Steam Line Isolation Valve - Closure	NA	M	R	1
7. Main Steam Line Radiation - High	S	M	R	1, 2[j]
8. Drywell Pressure - High	S	M	R[g]	1, 2[l]

TABLE 4.3.1.1-1 (Continued)

REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

(f) The LPRMs shall be calibrated at least once per 1000 effective full power hours (EFPH) using the TIP system.
(g) Calibrate Rosemount trip unit setpoint at least once per 31 days.
(h) Verify measured drive flow to be less than or equal to established drive flow at the existing flow control valve position.
(i) This calibration shall consist of verifying the simulated thermal power time constant is within the limits specified in the COLR.
(j) This function is not required to be OPERABLE when the reactor pressure vessel head is removed per Specification 3.10.1.
(k) With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.
(l) This function is not required to be OPERABLE when DRYWELL INTEGRITY is not required per Specification 3.10.1
(m) Verify the Turbine Bypass Valves are closed when THERMAL POWER is greater than or equal to 40% RATED THERMAL POWER.
(n) The CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION shall include the turbine first stage pressure instruments.
(o) The CHANNEL CALIBRATION shall exclude the flow reference transmitters; these transmitters shall be calibrated at least once per 18 months.
~~(p) This period may be extended to the first refueling outage, not to exceed 9-15-87.~~

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each isolation 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 4.3.2.1-1.

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

4.3.2.3 The ISOLATION SYSTEM RESPONSE TIME of each isolation trip function shown in Table 3.3.2-3 shall be demonstrated to be within its 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 isolation trip system.

*Logic System Functional Testing period may be extended as identified by notes C and D on Table 4.3.2.1-1.

TABLE 3.3.2-1

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	VALVE GROUPS OPERATED BY SIGNAL***	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (a)	APPLICABLE OPERATIONAL CONDITION	ACTION
1. PRIMARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level-Low Low, Level 2	1, 7, 8, 9(b)(c)(j) 15, 16	2	1, 2, 3	20
b. Drywell Pressure - High	1, 3, 8(b)(c)(j)	2	1, 2, 3	20
c. Containment Purge Isolation Radiation - High	8	1	1, 2, 3	21
2. MAIN STEAM LINE ISOLATION				
a. Reactor Vessel Water Level-Low Low Low, Level 1	6	2	1, 2, 3	20
b. Main Steam Line Radiation - High	6, 9(d)	2	1, 2, 3	23
c. Main Steam Line Pressure - Low	6	2	1	24
d. Main Steam Line Flow - High	6	2/MSL	1, 2, 3	23
e. Condenser Vacuum - Low	6	2	1, 2**, 3**	23
f. Main Steam Line Tunnel Temperature - High	6	2	1, 2, 3	23
g. Main Steam Line Tunnel Δ Temperature - High	6	2	1, 2, 3	23
h. Main Steam Line Area Temperature High (Turbine Building)	6	2/area	1, 2, 3	23

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	VALVE GROUPS OPERATED BY SIGNAL***	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (a)	APPLICABLE OPERATIONAL CONDITION	ACTION
3. SECONDARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level-Low Low, Level 2	11, 12, 13(b)(c)(e)(h)(i)	2	1, 2, 3	25
b. Drywell Pressure - High	11, 12, 13(b)(c)(e)(h)(i)	2	1, 2, 3	25
c. Fuel Building Ventilation Exhaust Radiation - High	13(e)(h)	1	*	28
d. Reactor Building Annulus Ventilation Exhaust Radiation - High	22(b)(e)(i)	1	1, 2, 3	29
4. REACTOR WATER CLEANUP SYSTEM ISOLATION				
a. Δ Flow - High	7, 15, 16	1	1, 2, 3	27
b. Δ Flow Timer	7, 15, 16	1	1, 2, 3	27
c. Equipment Area Temperature - High	7, 15, 16	1	1, 2, 3	27
d. Equipment Area Δ Temperature - High	7, 15, 16	1	1, 2, 3	27
e. Reactor Vessel Water Level - Low Low, Level 2	7, 15, 16	2	1, 2, 3	27
f. Main Steam Line Tunnel Ambient Temperature - High	7, 15, 16	1	1, 2, 3	27

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	VALVE GROUPS OPERATED BY SIGNAL***	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (a)	APPLICABLE OPERATIONAL CONDITION	ACTION
4. REACTOR WATER CLEANUP SYSTEM ISOLATION (continued)				
g. Main Steam Line Tunnel Δ Temperature - High	7, 15, 16	1	1, 2, 3	27
h. SLCS Initiation	7(f), 16	1(f)	1, 2, 3	27
5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION				
a. RCIC Steam Line Flow - High	2	1	1, 2, 3	27
b. RCIC Steam Line Flow - High Timer	2	1	1, 2, 3	27
c. RCIC Steam Supply Pressure - Low	2	1	1, 2, 3	27
d. RCIC Turbine Exhaust Diaphragm Pressure - High	2	2	1, 2, 3	27
e. RCIC Equipment Room Ambient Temperature - High	2	1	1, 2, 3	27
f. RCIC Equipment Room Δ Temperature - High	2	1	1, 2, 3	27
g. Main Steam Line Tunnel Ambient Temperature - High	2	1	1, 2, 3	27
h. Main Steam Line Tunnel Δ Temperature - High	2	1	1, 2, 3	27

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	VALVE GROUPS OPERATED BY SIGNAL***	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (a)	APPLICABLE OPERATIONAL CONDITION	ACTION
5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION (continued)				
i. Main Steam Line Tunnel Temperature Timer	2	1	1, 2, 3	27
j. RHR Equipment Room Ambient Temperature - High	2	1	1, 2, 3	27
k. RHR Equipment Room Δ Temperature - High	2	1	1, 2, 3	27
l. RHR/RCIC Steam Line Flow - High	2	1	1, 2, 3	27
m. Drywell Pressure - High (g)	3(g)	1	1, 2, 3	27
n. Manual Initiation (k)	2(k)	1	1, 2, 3	26
6. RHR SYSTEM ISOLATION				
a. RHR Equipment Area Ambient Temperature - High	5, 14	2	1, 2, 3	30
b. RHR Equipment Area Δ Temperature - High	5, 14	2	1, 2, 3	30
c. Reactor Vessel Water Level - Low, Level 3	5, 14	2	1, 2, 3	30
d. Reactor Vessel Water Level - Low Low low, Level 1	10	2	1, 2, 3	30

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	VALVE GROUPS OPERATED BY SIGNAL***	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (a)	APPLICABLE OPERATIONAL CONDITION*	ACTION
6. RHR SYSTEM ISOLATION (continued)				
a. Reactor Vessel (RHR Cut-in Permissive) Pressure - High	5	2	1, 2, 3	30
f. Drywell Pressure - High	10, 14	2	1, 2, 3	30
7. MANUAL INITIATION (2)	1(1), 5, 6, 7, 8, 11, 12, 13, 14, 15, 16	2	1, 2, 3	22

TABLE 3.3.2-1 (Continued)
ISOLATION ACTUATION INSTRUMENTATION
ACTION

NOTES

* When handling irradiated fuel in the Fuel Building.
** May be bypassed with reactor mode switch not in Run and all turbine stop valves closed.
~~*** The valve groups listed are designated in Tables 3.6.4-1 and 3.6.5.3-1.~~
(a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition provided at least one other OPERABLE channel in the same trip system is monitoring that parameter.
(b) Also actuates the standby gas treatment system.
(c) Also actuates the main control room air conditioning system in the emergency mode of operation.
(d) Also trips and isolates the air removal pumps.
(e) Also actuates secondary containment ventilation isolation dampers ~~per Table 3.6.5.3-1~~.
(f) Manual initiation of SLCS pump C001B closes 1G33*MOVF001, and manual initiation of SLCS pump C001A closes 1G33*MOVF004.
(g) Requires RCIC system steam supply pressure-low coincident with drywell pressure-high.
(h) Also starts the Fuel Building Exhaust Filter Trains A and B.
(i) Also starts the Annulus Mixing System.
(j) Also actuates the containment hydrogen analyzer/monitor recorder.
(k) Manual initiation isolates the outboard steam supply isolation valve only and only following a manual or automatic initiation of the RCIC system.
(l) Valve 1E22*MOVF023 does not isolate on the manual initiation.

TABLE 3.3.2-3 (Continued)

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
i. Main Steam Line Tunnel Temperature Timer	NA
j. RHR Equipment Room Ambient Temperature - High	NA
k. RHR Equipment Room Δ Temperature - High	NA
l. RHR/RCIC Steam Line Flow - High	NA
m. Drywell Pressure - High	NA
n. Manual Initiation	NA
6. RHR SYSTEM ISOLATION	
a. RHR Equipment Area Ambient Temperature - High	NA
b. RHR Equipment Area Δ Temperature - High	NA
c. Reactor Vessel Water Level - Low Level 3	$\leq 10^{(a)}$
d. Reactor Vessel Water Level - Low Low Low Level 1	$\leq 10^{(a)}$
e. Reactor Vessel (RHR Cut-in Permissive) Pressure - High	NA
f. Drywell Pressure - High	NA
7. MANUAL INITIATION	NA

(a) Isolation system instrumentation response time specified includes the diesel generator starting and sequence loading delays.

ıation detectors are exempt from response time testing. Response time ıll be measured from detector output or the input of the first electronic component in the channel.

*Isolation system instrumentation response time for MSIVs only. No diesel generator delays assumed.

**Isolation system instrumentation response time for associated valves except MSIVs.

#Isolation system instrumentation response time specified for the Trip Function actuating each valve group shall be added to isolation time ~~shown in Tables 3.6.3-2 and 3.6.3-3~~ for valves in each valve group to obtain ISOLATION SYSTEM RESPONSE TIME for each valve.

##Time delay of 45-47 seconds.

###Time delay of 3-13 seconds.

TABLE 4.3.2.1-1

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
1. PRIMARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level - Low Low Level 2	S	M	R(b)	1, 2, 3
b. Drywell Pressure - High	S	M	R(b)	1, 2, 3
c. Containment Purge Isolation Radiation - High	S	M	R	1, 2, 3
2. MAIN STEAM LINE ISOLATION				
a. Reactor Vessel Water Level - Low Low Low Level 1	S	M	R(b)	1, 2, 3
b. Main Steam Line Radiation - High	S	M	R	1, 2, 3
c. Main Steam Line Pressure - Low	S	M	R(b)	1
d. Main Steam Line Flow - High	S	M	R(b)	1, 2, 3
e. Condenser Vacuum - Low	S	M	R(b)	1, 2**, 3**
f. Main Steam Line Tunnel Temperature - High	S	M	R	1, 2, 3
g. Main Steam Line Tunnel Δ Temperature - High	S	M	R	1, 2, 3
h. Main Steam Line Area Temperature-High (Turbine Building)	S	M	R(b)	1, 2, 3

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
3. SECONDARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level - Low Low Level 2	S	M	R(b)	1, 2, 3
b. Drywell Pressure - High	S	M	R(b)	1, 2, 3
c. Fuel Building Ventilation Exhaust Radiation - High	S	M	R	*
d. Reactor Building Annulus Ventilation Exhaust Radiation - High	S	M	R	1, 2, 3
4. REACTOR WATER CLEANUP SYSTEM ISOLATION				
a. Δ Flow - High	S	M	R	1, 2, 3
b. Δ Flow Timer	NA	M	Q	1, 2, 3
c. Equipment Area Temperature - High	S	M	R	1, 2, 3
d. Equipment Area Δ Temperature - High	S	M	R	1, 2, 3
e. Reactor Vessel Water Level - Low Low Level 2	S	M	R(b)	1, 2, 3
f. Main Steam Line Tunnel Ambient Temperature - High	S	M	R	1, 2, 3
g. Main Steam Line Tunnel Δ Temperature - High	S	M	R	1, 2, 3
h. SLCS Initiation	NA	M(a)	NA	1, 2, 3

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
6. RHR SYSTEM ISOLATION				
a. RHR Equipment Area Ambient Temperature - High	S	M	R	1, 2, 3
b. RHR Equipment Area Δ Temperature - High	S	M	R	1, 2, 3
c. Reactor Vessel Water Level - Low Level 3	S	M	R(b)	1, 2, 3
d. Reactor Vessel Water Level - Low Low Low Level 1	S	M	R(b)(d)	1, 2, 3
e. Reactor Vessel (RHR Cut-in Permissive) Pressure - High	S	M	R(b)(d)	1, 2, 3
f. Drywell Pressure - High	S	M	R(b)(d)	1, 2, 3
7. MANUAL INITIATION	NA	M	NA	1, 2, 3

*When handling irradiated fuel in the Fuel Building.
**When the reactor mode switch is in Run and/or any turbine stop valve is open.
(a) Each train or logic channel shall be tested at least every other 31 days.
(b) Calibrate trip unit setpoint at least once per 31 days.
(c) May be extended to the first refueling outage scheduled to begin 9-15-87.
(d) May be extended to the completion of the first refueling outage, scheduled to begin 9-15-87.

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 OPERABLE, or

   2. Within 72 hours, provided either the HPCS or the RCIC system is inoperable.

   Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to less than or equal to 100 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.##

##Logic System Functional and ECCS Response time testing period may be extended as identified by note C on Table 4.3.3.1-1.

3/4.3.3 EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

4.3.3.3 At least once per 18 months##, the ECCS RESPONSE TIME of each ECCS trip function shown in Table 3.3.3-3 shall be demonstrated to be within the limit. 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.

##Logic System Functional and ECCS Response time testing period may be extended as identified by note C on Table 4.3.3.1-1.

TABLE 4.3.3.1-1

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
A. DIVISION I TRIP SYSTEM				
1. RHR-A (LPCI MODE) AND LPCS SYSTEM				
a. Reactor Vessel Water Level - Low Low Low Level 1	S	M	R(a)	1, 2, 3, 4*, 5*
b. Drywell Pressure - High	S	M	R(a)	1, 2, 3
c. LPCS Pump Discharge Flow-Low	S	M	R(a)	1, 2, 3, 4*, 5*
d. Reactor Vessel Pressure-Low (LPCS/LPCI Injection Valve Permissive)	S	M	R(a)	1, 2, 3, 4*, 5*
e. LPCI Pump A Start Time Delay Relay	NA	M	Q	1, 2, 3, 4*, 5*
f. LPCI Pump A Discharge Flow-Low	S	M	R(a)	1, 2, 3, 4*, 5*
g. LPCS Pump Start Time Delay Relay	NA	M	Q	1, 2, 3, 4*, 5*
h. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
2. AUTOMATIC DEPRESSURIZATION SYSTEM TRIP SYSTEM "A"				
a. Reactor Vessel Water Level - Low Low Low Level 1	S	M	R(a)	1, 2, 3
b. Drywell Pressure-High	S	M	R(a)	1, 2, 3
c. ADS Timer	NA	M	Q	1, 2, 3
d. Reactor Vessel Water Level - Low Level 3	S	M	R(a)	1, 2, 3
e. LPCS Pump Discharge Pressure-High	S	M	R(a)	1, 2, 3
f. LPCI Pump A Discharge Pressure-High	S	M	R(a)	1, 2, 3
g. ADS Drywell Pressure Bypass Timer	NA	M	Q	1, 2, 3
h. ADS Manual Inhibit Switch	NA	M	NA	1, 2, 3
i. Manual Initiation	NA	R	NA	1, 2, 3

TABLE 4.3.3.1-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
B. DIVISION II TRIP SYSTEM				
1. RHR B AND C (LPCI MODE)				
a. Reactor Vessel Water Level - Low Low Low Level 1	S	M	R(a)	1, 2, 3, 4*, 5*
b. Drywell Pressure - High	S	M	R(a)	1, 2, 3
c. Reactor Vessel Pressure-Low (LPCI Injection Valve Permissive)	S	M	R(a)	1, 2, 3, 4*, 5*
d. LPCI Pump B Start Time Delay Relay	NA	M	Q	1, 2, 3, 4*, 5*
e. LPCI Pump Discharge Flow-Low	S	M	R(a)	1, 2, 3, 4*, 5*
f. LPCI Pump C Start Time Delay Relay	NA	M	Q	1, 2, 3, 4*, 5*
g. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
2. AUTOMATIC DEPRESSURIZATION SYSTEM TRIP SYSTEM "B"#				
a. Reactor Vessel Water Level - Low Low Low Level 1	S	M	R(a)	1, 2, 3
b. Drywell Pressure-High	S	M	R(a)	1, 2, 3
c. ADS Timer	NA	M	Q	1, 2, 3
d. Reactor Vessel Water Level - Low Level 3	S	M	R(a)	1, 2, 3
e. LPCI Pump B and C Discharge Pressure-High	S	M	R(a)	1, 2, 3
f. ADS Drywell Pressure Bypass Timer	NA	M	Q	1, 2, 3
g. ADS Manual Inhibit Switch	NA	M	NA	1, 2, 3
h. Manual Initiation	NA	R	NA	1, 2, 3

TABLE 4.3.3.1-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
C. DIVISION III TRIP SYSTEM				
1. HPCS SYSTEM				
a. Reactor Vessel Water Level - Low Low Level 2	S	M	R(a)	1, 2, 3, 4*, 5*
b. Drywell Pressure-High	S	M	R(a)	1, 2, 3
c. Reactor Vessel Water Level-High Level 8	S	M	R(a)	1, 2, 3, 4*, 5*
d. Condensate Storage Tank Level - Low	S	M	R(a)	1, 2, 3, 4*, 5*
e. Suppression Pool Water Level - High	S	M	R(a)	1, 2, 3, 4*, 5*
f. Pump Discharge Pressure-High	S	M	R(a)	1, 2, 3, 4*, 5*
g. HPCS System Flow Rate-Low	S	M	R(a)	1, 2, 3, 4*, 5*
h. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
D. LOSS OF POWER				
1. Divisions I and II				
a. 4.16 kv Standby Bus Under-voltage (Sustained Under-voltage)	S	M	R	1, 2, 3, 4**, 5**
b. 4.16 kv Standby Bus Under-voltage (Degraded Voltage)	S	M	R	1, 2, 3, 4**, 5**
2. Division III				
a. 4.16 kv Standby Bus Under-voltage (Sustained Under-voltage)	S	NA	R	1, 2, 3, 4**, 5**
b. 4.16 kv Standby Bus Under-voltage (Degraded Voltage)	S	M	R	1, 2, 3, 4**, 5**

Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 100 psig.
* When the system is required to be OPERABLE per Specification 3.5.2.
** Required when ESF equipment is required to be OPERABLE.
(a) Calibrate trip unit setpoint at least once per 31 days.

3/4.3.9 PLANT SYSTEMS ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.9 The plant systems actuation instrumentation channels shown in Table 3.3.9-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.9-2.

APPLICABILITY: As shown in Table 3.3.9-1.

ACTION:

a. With a plant system actuation instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.9-2, declare the channel inoperable and take the ACTION required by Table 3.3.9-1.

b. With one or more plant systems actuation instrumentation channels inoperable, take the ACTION required by Table 3.3.9-1.

SURVEILLANCE REQUIREMENTS

4.3.9.1 Each plant system 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 4.3.9.1-1.

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

*The specified 18 month interval during the first operating cycle may be extended to coincide with completion of the first refueling outage, scheduled to begin 9-15-87.

TABLE 4.3.9.1-1

PLANT SYSTEMS ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
1. PRIMARY CONTAINMENT VENTILATION SYSTEM - UNIT COOLER A AND B				
a. Drywell Pressure-High	D	M	R(a)	1, 2, 3
b. Containment-to-Annulus ΔP-High	D	M	R(a)	1, 2, 3
c. Reactor Vessel Water Level-Low Low Low Level 1	D	M	R(a)	1, 2, 3
d. Timer	NA	M	R	1, 2, 3
2. FEEDWATER SYSTEM/MAIN TURBINE TRIP SYSTEM				
a. Reactor Vessel Water Level-High Level 8	D	M	R	1

(a) Calibrate trip unit setpoint once per 31 days.

The specified 18 month interval during the first operation cycle may be extended to coincide with completion of the first refueling outage, scheduled to begin 9-15-87.

REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

a. No PRESSURE BOUNDARY LEAKAGE.

b. 5 gpm UNIDENTIFIED LEAKAGE.

c. 25 gpm total leakage (averaged over any 24-hour period).

d. 0.5 gpm per nominal inch of valve size up to a maximum of 5 gpm leakage at a reactor coolant system pressure of 1025 ± 15 psig from any reactor coolant system pressure isolation valve ~~specified in Table 3.4.3.2-1~~.

e. 2 gpm UNIDENTIFIED LEAKAGE increase within any period of 24 hours or less (Applicable in OPERATIONAL CONDITION 1 only).

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

b. With any reactor coolant system leakage greater than the limits in b and/or c, above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

c. With any reactor coolant system pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least two other closed manual, deactivated automatic or check* valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

d. With one or more of the high/low pressure interface valve leakage pressure monitors ~~shown in Table 3.4.3.2-2~~ inoperable, restore the inoperable monitor(s) to OPERABLE status within 7 days or verify the pressure to be less than the alarm point at least once per 12 hours; restore the inoperable monitor(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours. The provisions of Specification 3.0.4 are not applicable.

e. With any reactor coolant system UNIDENTIFIED LEAKAGE increase greater than the limits in e., above, within 4 hours identify the source of leakage as not IGSCC susceptible material or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* Which have been verified not to exceed the allowable leakage limit at the last refueling outage or after the last time the valve was disturbed, whichever is more recent.

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

a. Monitoring the drywell atmospheric particulate radioactivity at least once per 12 hours,

b. Monitoring the sump flow rates at least once per 12 hours,

c. Monitoring the drywell air coolers condensate flow rate at least once per 12 hours, and

d. Monitoring the reactor vessel head flange leak detection system at least once per 24 hours.

4.4.3.2.2 Each reactor coolant system pressure isolation valve [redacted] shall be demonstrated OPERABLE by leak testing pursuant to Specification 4.0.5 including paragraph IWV-3427(B) of the ASME Code and verifying the leakage of each valve to be within the specified limit:

a. At least once per 18 months, and

b. Prior to returning the valve to service following maintenance, repair or replacement work on the valve which could affect its leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 3.

4.4.3.2.3 The high/low pressure interface valve leakage pressure monitors shall be demonstrated OPERABLE ~~with alarm setpoints per Table 3.4.3.2-2~~ by performance of a:

a. CHANNEL FUNCTIONAL TEST at least once per 31 days, and

b. CHANNEL CALIBRATION at least once per 18 months.

TABLE 3.4.3.2-1

REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES

SYSTEM	VALVE NUMBER	FUNCTION
1. LPCS	1E21*AOVF006	LPCS Injection
	1E21*MOVF005	LPCS Injection
2. HPCS	1E22*AOVF008	HPCS Injection
	1E22*MOVF004	HPCS Injection
3. RCIC	1E51*AOVF065	RCIC Head Spray
	1E51*MOVF013	RCIC Head Spray
4. RHR	1E12*MOVF023	RHR Head Spray
	1E12*AOVF041A	LPCI A Injection
	1E12*MOVF042A	LPCI A Injection
	1E12*AOVF041B	LPCI B Injection
	1E12*MOVF042B	LPCI B Injection
	1E12*AOVF041C	LPCI C Injection
	1E12*MOVF042C	LPCI C Injection
	1E12*MOVF009	Shutdown Cooling A & B Suction
	1E12*MOVF008	Shutdown Cooling A & B Suction

TABLE 3.4.3.2-2

REACTOR COOLANT SYSTEM INTERFACE VALVES

LEAKAGE PRESSURE MONITORS

INSTRUMENT NUMBER	FUNCTION	ALARM SETPOINT
1E21*PTN054	LPCS Pump Discharge Pressure High	< 580 psig
1E22*PTN052	HPCS Pump Suction Pressure High	< 80 psig
1E51*PTN052	RCIC Pump Suction Pressure High	< 80 psig
1E12*PTN053A	RHR A Pump Discharge Pressure High	< 480 psig
1E12*PTN053B	RHR B Pump Discharge Pressure High	< 480 psig
1E12*PTN053C	RHR C Pump Discharge Pressure High	< 480 psig
1E12*PTN057	RHR Pump Shutdown Cooling Suction Pressure High	< 180 psig

Tables 3.4.3.2-1 and 3.4.3.2-2 have been deleted.

SURVEILLANCE REQUIREMENTS (Continued)

4.4.6.1.2 The reactor coolant system temperature and pressure shall be determined to be to the right of the criticality limit line of Figure 3.4.6.1-1 curves C and C' within 15 minutes prior to the withdrawal of control rods to bring the reactor to criticality and at least once per 30 minutes during system heatup.

4.4.6.1.3 The reactor vessel material surveillance specimens shall be removed and examined, to determine changes in reactor pressure vessel material properties as required by 10 CFR 50, Appendix H. ~~in accordance with the schedule in Table 4.4.6.1.3-1.~~ The results of these examinations shall be used to update the curves of Figure 3.4.6.1-1.

4.4.6.1.4 The reactor vessel flange and head flange temperature shall be verified to be greater than or equal to 70°F:

a. In OPERATIONAL CONDITION 4 when reactor coolant system temperature is:

   1. $\leq$ 100°F, at least once per 12 hours.

   2. $\leq$ 80°F, at least once per 30 minutes.

b. Within 30 minutes prior to and at least once per 30 minutes during tensioning of the reactor vessel head bolting studs.

TABLE 4.4.6.1.3-1

REACTOR VESSEL MATERIAL SURVEILLANCE PROGRAM-WITHDRAWAL SCHEDULE

CAPSULE NUMBER	VESSEL LOCATION	LEAD FACTOR AT I.D./¼T	WITHDRAWAL TIME (EFPY)
1	3°	0.67/0.89	6
2	177°	0.67/0.89	15
3	183°	0.67/0.89	Standby

Table 4.4.6.1.3-1 has been deleted.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.3 Primary containment leakage rates shall be limited to:

a. An overall integrated leakage rate of less than or equal to La, 0.26 percent by weight of the primary containment air per 24 hours at Pa, 7.6 psig.

b. A combined leakage rate of less than 0.60 La for all penetrations and all valves subject to Type B and C tests when pressurized to Pa, 7.6 psi ~~in accordance with Table 3.6.4-1 of Specification 3.6.4.~~

c. A leakage rate of less than 150 scfh for the valves served by each Division of MS-PLCS and a leakage rate of less than 340 scfh for each of the valve groups identified below when tested in accordance with the surveillance requirements of 4.6.1.3.f.

1. Division I MS-PLCS Valves and Division I PVLCS Valves
2. Division II MS-PLCS Valves and Division II PVLCS Valves
3. Division I MS-PLCS Valves and all first outboard PVLCS Valves

d. A combined leakage rate of less than or equal to 13,500 cc/hr for all penetrations ~~shown in Table 3.6.1.3-1 as~~ that are annulus bypass leakage paths when pressurized to Pa, 7.6 psig.

e. A combined leakage rate of less than or equal to 170,000 cc/hr, for all valves ~~shown in Table 3.6.4-1 to be~~ that are secondary containment bypass leakage paths and equipped with PVLCS, when pressurized to Pa, 7.6 psig.

f. A combined leakage rate of less than or equal to 1 gpm times the total number of containment isolation valves in hydrostatically tested lines ~~per Table 3.6.4-1~~ which penetrate the primary containment, when tested at 1.1 Pa, 8.36 psig.

APPLICABILITY: When PRIMARY CONTAINMENT INTEGRITY-OPERATING is required per Specification 3.6.1.1.

ACTION:

With:

a. The measured overall integrated primary containment leakage rate equaling or exceeding 0.75 La, or

b. The measured combined leakage rate, for all penetrations and all valves subject to Type B and C tests, exceeding 0.60 La, or

c. The measured leakage rate greater than or equal to 150 scfh for the valves served by each Division of MS-PLCS or the measured leakage rate greater than or equal to 340 scfh for each valve grouping identified in 3.6.1.3.c.1, 3.6.1.3.c.2 or 3.6.1.3.c.3, or

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

d. The combined leakage rate, for all penetrations that are ~~shown in Table 3.6.1-2~~ annulus bypass leakage paths, exceeding 13,500 cc/hr, or

e. The combined leakage rate, for all valves that are ~~shown in Table 3.6.1-2~~ secondary containment bypass leakage paths and equipped with PVLCS, exceeding 170,000 cc/hr, or

f. The measured combined leakage rate, for all containment isolation valves in hydrostatically tested lines ~~per Table 3.6.3-1~~ which penetrate the primary containment, exceeding 1 gpm times the total number of such valves,

restore:

a. The overall integrated leakage rate(s) to less than 0.75 La as applicable, and

b. The combined leakage rate, for all penetrations and all valves subject to Type B and C tests, to less than 0.60 La, and

c. The measured leakage rate to less than 150 scfh for the valves served by each Division of MS-PLCS and the measured leakage rate to less than 340 scfh for each of the valve groupings identified in 3.6.1.3.c.1, 3.6.1.3.c.2, and 3.6.1.3.c.3, and

d. The combined leakage rate, for all penetrations that are ~~shown in Table 3.6.1-2~~ annulus bypass leakage paths, to less than or equal to 13,500 cc/hr, and

e. The combined leakage rate, for all valves that are ~~shown in Table 3.6.1-1~~ secondary containment bypass leakage paths and equipped with PVLCS, to less than or equal to 170,000 cc/hr, and

f. The combined leakage rate, for all containment isolation valves in hydrostatically tested lines ~~per Table 3.6.3-1~~ which penetrate the primary containment, to less than or equal to 1 gpm times the total number of such valves,

prior to increasing reactor coolant system temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.3 The primary containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4 (1972):

a. Three Type A Overall Integrated Containment Leakage Rate tests shall be conducted at 40 ± 10 month intervals during shutdown at Pa, 7.6 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.

SURVEILLANCE REQUIREMENTS (Continued)

b. If any periodic Type A test fails to meet 0.75 La, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet 0.75 La, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet 0.75 La, at which time the above test schedule may be resumed.

c. The accuracy of each Type A test shall be verified by a supplemental test which:

1. Confirms the accuracy of the test by verifying that the difference between the supplemental test data and the Type A test data is within 0.25 La. The formula to be used is: [Lo + Lam - 0.25 La] $\leq$ Lc $\leq$ [Lo + Lam + 0.25 La] where Lc = supplemental test results; Lo = superimposed leakage; Lam = measured Type A leakage.

2. Has duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.

3. Requires the quantity of gas, injected into the primary containment or bled from the primary containment during the supplemental test, to be between 0.75 La and 1.25 La.

d. Type B and C tests shall be conducted with gas at Pa, 7.6 psig*, at intervals no greater than 24 months, except for tests involving:

1. Air locks,

2. Main steam positive leakage control system (MS-PLCS) valves and PVLCS valves,

3. Penetrations using continuous leakage monitoring systems,

4. Primary containment isolation valves in hydrostatically tested lines ~~of Table 3.6.4-1~~, which penetrate the primary containment, and

5. Purge supply and exhaust isolation valves with resilient material seals.

e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.4.

f. Total sealing air leakage into the primary containment, at a test pressure of 11.5 psid for MS-PLCS valves and 33 psid for penetration leakage control system sealed valves, shall be determined by test at least once per 18 months.** This leakage may be excluded when determining the combined leakage rate, 0.6 La.

* Unless a hydrostatic test is required ~~of Table 3.6.4-1~~

~~** This test may be performed during the refueling outage following the first cycle, scheduled to begin September 15, 1987.~~

SURVEILLANCE REQUIREMENTS (Continued)

g. Type B tests for electrical penetrations employing a continuous leakage monitoring system shall be conducted at Pa, 7.6 psig, at intervals no greater than once per 3 years.

h. Leakage from isolation valves that are sealed with the PVLCS shall be tested once per 24 months with the valves pressurized to at least Pa, 7.6 psig. This leakage may be excluded when determining the combined leakage rate, 0.6 La.

i. Primary containment isolation valves in hydrostatically tested lines ~~per Table 3.6.4-1~~ which penetrate the primary containment shall be leak tested at least once per 18 months.* This leakage may be excluded when determining the combined leakage rate, 0.6 La.

j. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.9.3.

k. The provisions of Specification 4.0.2 are not applicable to Specifications 4.6.1.3.a, 4.6.1.3.d, 4.6.1.3.g, and 4.6.1.3.h.

*This test may be performed during the refueling outage following the first cycle, scheduled to begin September 15, 1987.

TABLE 3.6.1.3-1

ANNULUS BYPASS LEAKAGE PATHS

1. LEAKAGE PATHS TO THE FUEL BUILDING (6750 cc/hr limit)

PENETRATION	VALVE NO. (DIV. I)	VALVE NO. (DIV. II)
Containment air lock		1JRB*DRA2

2. LEAKAGE PATHS TO THE AUXILIARY BUILDING (6750 cc/hr limit)

PENETRATION	VALVE NO. (DIV. I)	VALVE NO. (DIV. II)
1KJB*Z31	1HVR*AOV165	1HVR*AOV123
1KJB*605E	1CMS*SOV31A	1CMS*SOV35C
1KJB*605F	1CMS*SOV31C	1CMS*SOV35A
1KJB*601B	1SSR*SOV132	1SSR*SOV130
Containment air lock		1JRB*DRA1
CRD removal hatch		--

Table 3.6.1.3-1 has been deleted.

3/4.6.4 PRIMARY CONTAINMENT AND DRYWELL ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.4 Each primary containment and drywell isolation valve shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

With one or more of the primary containment or drywell isolation valves inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and, within 4 hours, either:

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

b. Isolate each affected penetration by use of at least one deactivated automatic valve secured in the isolated position, and declare the associated system inoperable, if applicable, and perform the associated ACTION statements for that system,* or

c. Isolate each affected penetration by use of at least one closed manual valve or blind flange and declare the associated system inoperable, if applicable, and perform the associated ACTION statements for that system.*

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

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each primary containment or drywell isolation valve 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 cycling the valve through at least one complete cycle of full travel and verifying the isolation time.

4.6.4.2 Each automatic primary containment or drywell isolation valve shall be demonstrated OPERABLE during COLD SHUTDOWN or REFUELING at least once per 18 months# by verifying that, on an isolation test signal, each automatic isolation valve actuates to its isolation position.

*Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative controls.

#The specified 18 month interval during the first operating cycle may be extended to coincide with completion of the first refueling outage scheduled to begin 9-15-87 for those items noted on Table 3.6.4-1.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.4.3 The isolation time of each power operated or automatic valve [redacted] shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

TABLE 3.6.4-1

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	VALVE GROUP(1)	MAXIMUM ISOLATION TIME (Seconds)	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
a. Automatic Isolation Valves					
1. Primary Containment(a)					
MSIV	1B21*AOVF022A(b)(g)	1KJB*Z1A	6	5	No
MSIV	1B21*AOVF022B(b)(g)	1KJB*Z1B	6	5	No
MSIV	1B21*AOVF022C(b)(g)	1KJB*Z1C	6	5	No
MSIV	1B21*AOVF022D(b)(g)	1KJB*Z1D	6	5	No
MSIV	1B21*AOVF028A(g)	1KJB*Z1A	6	5	No
MSIV	1B21*AOVF028B(g)	1KJB*Z1B	6	5	No
MSIV	1B21*AOVF028C(g)	1KJB*Z1C	6	5	No
MSIV	1B21*AOVF028D(g)	1KJB*Z1D	6	5	No
Turbine Plant Misc. Drains#	1B21*MOVF067A(g)	1KJB*Z1A	6	17.8	No
Turbine Plant Misc. Drains#	1B21*MOVF067B(g)	1KJB*Z1B	6	16.1	No
Turbine Plant Misc. Drains#	1B21*MOVF067C(g)	1KJB*Z1C	6	15.9	No
Turbine Plant Misc. Drains#	1B21*MOVF067D(g)	1KJB*Z1D	6	19.8	No
Turbine Plant Misc. Drains#	1B21*MOVF016(b)(g)	1KJB*Z2	6	16.5	No
Turbine Plant Misc. Drains#	1B21*MOVF019(g)	1KJB*Z2	6	17.6	No
RHR Return to FW#	1E12*MOVF053A	1KJB*Z3A	5	18.7	No
RHR Return to FW#	1E12*MOVF053B	1KJB*Z3B	5	18.7	No
RHR/RCIC Head Supply#	1E12*MOVF023(b)	1KJB*Z19, 1DRB*Z13	5	36.3	No
RHR Shutdown Cooling Supply	1E12*MOVF008	1KJB*Z20	5	29.7	No
RHR Shutdown Cooling Supply	1E12*MOVF009(b)	1KJB*Z20	5	25.3	No
LPCI A to Reactor#	1E12*MOVF037A	1KJB*Z21A	14	73.7	No
LPCI B to Reactor#	1E12*MOVF037B	1KJB*Z21B	14	74.8	No
MS-PLCS Line	1E33*MOVF008(d)(k)	1KJB*Z1A,B,C,D	4	14.5	No

Table 3.6.4-1 has been deleted.

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	VALVE GROUP(1)	MAXIMUM ISOLATION TIME (Seconds)	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
a. Automatic Isolation Valves					
1. Primary Containment(a) (Continued)					
RWCU Disch. to Condenser#	1G33*MOVF028	1KJB*Z4	15	20.9	Yes(f)
RWCU Return to FW#	1G33*MOVF040	1KJB*Z6	15	24.2	No
RWCU Pump Suction#	1G33*MOVF001(b)	1KJB*Z7	16	19.8	No
RWCU Pump Disch.	1G33*MOVF053	1KJB*Z129	15	5.5	No
RWCU Disch. to Condenser#	1G33*MOVF034	1KJB*Z4	15	20.9	Yes(f)
RWCU Return to FW#	1G33*MOVF039	1KJB*Z6	15	24.2	No
RWCU Pump Suction#	1G33*MOVF004	1KJB*Z7	7	6.6	No
RWCU Pump Disch.	1G33*MOVF054	1KJB*Z129	15	5.5	No
RWCU Backwash Disch.#	1WCS*MOV178	1KJB*Z5	1	12.1	Yes(f)
RWCU Backwash Disch.#	1WCS*MOV172	1KJB*Z5	1	12.6	Yes(f)
HPCS Test Return-Supp. Pool#	1E22*MOVF023(j)	1KJB*Z11	1	50	No
RHR A Return-Supp. Pool#	1E12*MOVF024A(j)	1KJB*Z24A	10	63.8	No
RHR A Hx Dump-Supp. Pool#	1E12*MOVF011A(j)	1KJB*Z24A	10	34.1	No
LPCS Test Return-Supp. Pool#	1E21*MOVF012(j)	1KJB*Z24A	10	57.2	No
RHR B Return-Supp. Pool#	1E12*MOVF024B(j)	1KJB*Z24B	10	63.8	No
RHR B Hx Dump-Supp. Pool#	1E12*MOVF011B(j)	1KJB*Z24B	10	30.8	No
RHR C Return-Supp. Pool#	1E12*MOVF021(j)	1KJB*Z24C	10	97.9	No
Fuel Pool C&C Disch.#	1SFC*MOV119	1KJB*Z26	1	68	No
Fuel Pool C&C Suction#	1SFC*MOV120	1KJB*Z27	1	62.7	No
Fuel Pool C&C Suction#	1SFC*MOV122	1KJB*Z27	1	63.8	No
Fuel Pool Purif. Suction#	1SFC*MOV139	1KJB*Z28	1	39.6	No
Fuel Pool Purif. Suction#	1SFC*MOV121	1KJB*Z28	1	39.6	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	VALVE GROUP(1)	MAXIMUM ISOLATION TIME (Seconds)	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
a. Automatic Isolation Valves					
1. Primary Containment(a) (Continued)					
Floor Drain Disch.#	1DFR*AOV100(b)	1KJB*Z35, 1DRB*Z36	1	N/A	No
Floor Drain Disch.#	1DFR*AOV101(b)	1KJB*Z35, 1DRB*Z36	1	N/A	No
Equip. Drain Disch.#	1DER*AOV127(b)	1KJB*Z38, 1DRB*Z39	1	N/A	No
Equip. Drain Disch.#	1DER*AOV126(b)	1KJB*Z38, 1DRB*Z39	1	N/A	No
Fire Protection Hdr.#	1FPW*MOV221	1KJB*Z41	1	34.1	Yes(f)
Service Air Supply#	1SAS*MOV102	1KJB*Z44	1	22.0	Yes(f)
Instr. Air Supply#	1IAS*MOV106	1KJB*Z46	1	18.7	Yes(f)
RPCCW Supply#	1CCP*MOV138	1KJB*Z48	1	22.0	No
RPCCW Return#	1CCP*MOV158	1KJB*Z49	1	23.1	No
RPCCW Return#	1CCP*MOV159	1KJB*Z49	1	24.2	No
Service Water Return#	1SWP*MOV5A	1KJB*Z53A	1	58.6	No
Service Water Return#	1SWP*MOV5B	1KJB*Z53B	1	53.9	No
Vent. Chilled Water Rtn.#	1HVN*MOV102	1KJB*Z131	1	31.9	Yes(f)
Vent. Chilled Water Rtn.#	1HVN*MOV128	1KJB*Z131	1	28.6	Yes(f)
Vent. Chilled Water Sup.#	1HVN*MOV127	1KJB*Z132	1	27.5	Yes(f)
Condensate Makeup Supply#	1CNS*MOV125	1KJB*Z134	1	22.0	Yes(f)

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	VALVE GROUP(1)	MAXIMUM ISOLATION TIME (Seconds)	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
a. Automatic Isolation Valves					
1. Primary Containment(a) (Continued)					
RHR & RCIC Steam Sup.	1E51*MOVF063(b)	1KJB*Z15	2	9.9	No
RHR & RCIC Steam Sup.	1E51*MOVF076(b)(m)	1KJB*Z15	2	13.4	No
RHR & RCIC Steam Sup.	1E51*MOVF064	1KJB*Z15	2	9.9	No
RCIC Pump Suc.-Supp. Pool	1E51*MOVF031(b)	1KJB*Z16	2	30.5	No
RCIC Turbine Exh.-Supp. Pool	1E51*MOVF077	1KJB*Z17	3	14.2	No
RCIC Turbine Exh. Vac. Brs.	1E51*MOVF078	1KJB*Z18B,C	3	16.5	No
Cont./Drywell Purge Sup.#	1HVR*AOV165	1KJB*Z31	8	3	No
Cont./Drywell Purge Sup.#	1HVR*AOV123	1KJB*Z31	8	3	No
Cont./Drywell Purge Outlet#	1HVR*AOV128	1KJB*Z33	8	3	No
Cont./Drywell Purge Outlet#	1HVR*AOV166	1KJB*Z33	8	3	No
Post-Accident Samp. Sup.#	1SSR*SOV130	1KJB*Z601B	10	3	No
Post-Accident Samp. Sup.#	1SSR*SOV131	1KJB*Z601B	10	3	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	VALVE GROUP(1)	MAXIMUM ISOLATION TIME (Seconds)	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
a. Automatic Isolation Valves					
2. Drywell(k)					
Cont./Drywell Purge Sup.#	1HVR*AOV147	1DR8*Z32	1	3	No
RPCCW Supply#	1CCP*MOV142	1DR8*Z50	1	30	No
RPCCW Return#	1CCP*MOV144	1DR8*Z51	1	30	No
RPCCW Return#	1CCP*MOV143	1DR8*Z51	1	30	No
Service Water Supply#	1SWP*MOV4A	1DR8*Z54	1	52.8	No
Service Water Supply#	1SWP*MOV4B	1DR8*Z54	1	51.7	No
Service Water Return#	1SWP*MOV5A	1DR8*Z55	1	50.6	No
Service Water Return#	1SWP*MOV5B	1DR8*Z55	1	53.9	No
Recirc. Flow Control#	1RCS*MOV58A	1DR8*Z152	1	11.0	No
Recirc. Flow Control#	1RCS*MOV59A	1DR8*Z153	1	10.6	No
Recirc. Flow Control#	1RCS*MOV60A	1DR8*Z154	1	6.3	No
Recirc. Flow Control#	1RCS*MOV61A	1DR8*Z155	1	8.6	No
Recirc. Flow Control#	1RCS*MOV58B	1DR8*Z156	1	10.6	No
Recirc. Flow Control#	1RCS*MOV59B	1DR8*Z157	1	10.8	No
Recirc. Flow Control#	1RCS*MOV60B	1DR8*Z158	1	6.38	No
Recirc. Flow Control#	1RCS*MOV61B	1DR8*Z159	1	8.9	No
Cont./Drywell Purge Sup.#	1HVR*AOV125	1DR8*Z32	1	3	No
Cont./Drywell Purge Rtn.#	1HVR*AOV126	1DR8*Z34	1	3	No
Cont./Drywell Purge Rtn.#	1HVR*AOV148	1DR8*Z34	1	3	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	VALVE GROUP(1)	MAXIMUM ISOLATION TIME (Seconds)	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
a. Automatic Isolation Valves					
2. Drywell(k) (Continued)					
Hydrogen Mixing Line Inlet#	1CPM*MOV2A	1DRB*Z57A	10	33	No
Hydrogen Mixing Line Inlet#	1CPM*MOV4A	1DRB*Z57A	10	33	No
Hydrogen Mixing Line Inlet#	1CPM*MOV2B	1DRB*Z57B	10	33	No
Hydrogen Mixing Line Inlet#	1CPM*MOV4B	1DRB*Z57B	10	33	No
Hydrogen Mixing Line Exhaust#	1CPM*MOV3A	1DRB*Z58A	10	33	No
Hydrogen Mixing Line Exhaust#	1CPM*MOV1A	1DRB*Z58A	10	33	No
Hydrogen Mixing Line Exhaust#	1CPM*MOV3B	1DRB*Z58B	10	33	No
Hydrogen Mixing Line Exhaust#	1CPM*MOV1B	1DRB*Z58B	10	33	No
Reactor Plant Sampling#	1833*AOVF019	1DRB*Z449	9	5	No
Reactor Plant Sampling#	1833*AOVF020	1DRB*Z449	9	5	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
b. Manual Isolation Valves			
1. Primary Containment[a]			
LPCI A to Reactor	1E12*F099A	1KJB*Z21A	No
LPCI B to Reactor	1E12*F099B	1KJB*Z21B	No
Reactor Plant Vent. ΔP Trans.	1HVR*V8[k]	1KJB*Z602A	No
Reactor Plant Vent. ΔP Trans.	1HVR*V10[k]	1KJB*Z602B	No
PVLCS Pressure Transmitter	1LSV*V64[k]	1KJB*Z602D	No
Reactor Plant Vent. ΔP Trans.	1HVR*V12[k]	1KJB*Z602F	No
Cont. Leakage Monitor Press.	1LMS*V14	1KJB*Z603A	No
Cont. Leakage Monitor Press.	1CMS*V12	1KJB*Z603A	No
Cont. Leakage Monitor Press.	1LMS*V7	1KJB*Z603C	No
Cont. Leakage Monitor Press.	1LMS*V16	1KJB*Z603C	No
Cont. Monitor Press. Sensing	1CMS*V2[k]	1KJB*Z605A	No
Cont. Monitor Press. Sensing	1CMS*V3[k]	1KJB*Z605B	No
Reactor Plant Vent. ΔP Trans.	1HVR*V14[k]	1KJB*Z606A	No
Reactor Plant Vent. ΔP Trans.	1HVR*V16[k]	1KJB*Z606B	No
Cont. Monitor Press. Sensing	1CMS*V16[k]	1KJB*Z606C	No
Cont. Monitor Press. Sensing	1CMS*V15[k]	1KJB*Z606D	No
PVLCS Pressure Transmitter	1LSV*V65[k]	1KJB*Z606E	No
Reactor Plant Vent. ΔP Trans.	1HVR*V18[k]	1KJB*Z606F	No
LPCI A to Reactor	1E12*VF044A	1KJB*Z21A	No
LPCI B to Reactor	1E12*VF044B	1KJB*Z21B	No
SW Rtn Vacuum Release	1SWP*SOV522A[e]	1KJB*Z53A	No
SW Rtn Vacuum Release	1SWP*SOV522B[e]	1KJB*Z53B	No
SW Rtn Vacuum Release	1SWP*SOV522C[e]	1KJB*Z53A	No
SW Rtn Vacuum Release	1SWP*SOV522D[e]	1KJB*Z53B	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
b. Manual Isolation Valves			
1. Primary Containment[a] (Continued)			
Feedwater Line	1FWS*MOV7A[e]	1KJB*Z3A	No[f]
Feedwater Line	1FWS*MOV7B[e]	1KJB*Z3B	No[f]
HPCS Pump Suction from Supp. Pool	1E22*MOVF015[e][j]	1KJB*Z8	No
HPCS to Reactor	1E22*MOVF004[b][e]	1KJB*Z9, 1DRB*Z10	No
HPCS Min. Flow Bypass	1E22*MOVF012[e][j]	1KJB*Z11	No
Supp. Pool Pumpback Rtn.	1DFR*MOV146[e][j]	1KJB*Z11	No
LPCS Suction from Supp. Pool	1E21*MOVF001[e][j]	1KJB*Z12	No
LPCS to Reactor	1E21*MOVF005[b][e]	1KJB*Z13, 1DRB*Z14	No
RCIC Turbine Exh. to Supp. Pool	1E51*MOVF068[e]	1KJB*Z17	No
RCIC Min. Flow Bypass	1E51*MOVF019[e][j]	1KJB*Z18A	No
RHR/RCIC Head Spray	1E51*MOVF013[b][e]	1KJB*Z19, 1DRB*Z130	No
LPCI A to Reactor	1E12*MOVF027A[e]	1KJB*Z21A	No
LPCI A to Reactor	1E12*MOVF042A[e]	1KJB*Z21A	No
LPCI B to Reactor	1E12*MOVF027B[e]	1KJB*Z21B	No
LPCI B to Reactor	1E12*MOVF042B[e]	1KJB*Z21B	No
LPCI C to Reactor	1E12*MOVF042C[e]	1KJB*Z21C	No
RHR A Hx V&R to Supp. Pool	1E12*MOVF073A[e][j]	1KJB*Z23A	No
RHR B Hx V&R to Supp. Pool	1E12*MOVF073B[e][j]	1KJB*Z23B	No
RHR A Min. Flow Bypass	1E12*MOVF064A[e][j]	1KJB*Z24A	No
LPCS Min. Flow Bypass	1E21*MOVF011[e][j]	1KJB*Z24A	No
Post-Acc. Sample Return	1SSR*SOV139[e][j]	1KJB*Z23B	No
RHR B Min. Flow Bypass	1E12*MOVF064B[e][j]	1KJB*Z24B	No
RHR C Min. Flow Bypass	1E12*MOVF064C[e][j]	1KJB*Z24C	No
RHR A Suction-Supp. Pool	1E12*MOVF004A[e][j]	1KJB*Z25A	No
RHR B Suction-Supp. Pool	1E12*MOVF004B[e][j]	1KJB*Z25B	No
RHR C Suction-Supp. Pool	1E12*MOVF105[e][j]	1KJB*Z25C	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
b. Manual Isolation Valves			
1. Primary Containment(a) (Continued)			
CRD Hydraulic Sys. Sup.	1C11*MOVF083(e)	1KJB*Z29	No
Cont. Hydrogen Purge Outlet	1CPP*MOV104(e)	1KJB*Z33	No
Cont. Hydrogen Purge Outlet	1CPP*MOV106(e)	1KJB*Z33	No
SW Supply	1SWP*MOV507A(e)	1KJB*Z52A	No
SW Supply	1SWP*MOV507B(e)	1KJB*Z52B	No
SW Return	1SWP*MOV81A(e)	1KJB*Z53A	No
SW Return	1SWP*MOV81B(e)	1KJB*Z53B	No
SW Return	1SWP*MOV503A(e)	1KJB*Z53A	No
SW Return	1SWP*MOV503B(e)	1KJB*Z53B	No
Air Sup. for Main Steam SRV	1SVV*MOV1B(e)	1KJB*Z102	No
Air Sup. for Main Steam SRV	1SVV*MOV1A(e)	1KJB*Z103	No
Cont. Hydrogen Purge Sup.	1CPP*SOV140(e)	1KJB*Z31	No
Hydrogen Sample Sup.	1CMS*SOV35D(e)	1KJB*Z601E	No
Hydrogen Sample Sup.	1CMS*SOV31B(e)	1KJB*Z601E	No
Hydrogen Sample Rtn.	1CMS*SOV35B(e)	1KJB*Z601F	No
Hydrogen Sample Rtn.	1CMS*SOV31D(e)	1KJB*Z601F	No
Hydrogen Sample Sup.	1CMS*SOV35C(e)	1KJB*Z605E	No
Hydrogen Sample Sup.	1CMS*SOV31A(e)	1KJB*Z605E	No
Hydrogen Sample Rtn.	1CMS*SOV35A(e)	1KJB*Z605F	No
Hydrogen Sample Rtn.	1CMS*SOV31C(e)	1KJB*Z605F	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
b. Manual Isolation Valves			
2. Drywell[k]			
Service Air Supply	1SAS*V489	1DRB*Z45	No
Instrument Air Supply	1IAS*V79	1DRB*Z47	No
Service Water Supply	1HVN*V542	1DRB*Z54	No
Service Water Supply	1SWP*V205	1DRB*Z54	No
Service Water Return	1HVN*V543	1DRB*Z55	No
Service Water Return	1SWP*V206	1DRB*Z55	No
Air Sup. for Main Steam SRV	1SVV*V50	1DRB*Z107	No
Air Sup. for Main Steam SRV	1SVV*V53	1DRB*Z112	No
Cont Atmos. Monitor Probe	1CMS*SOV34A[e]	1DRB*Z500	No
Cont Atmos. Monitor Probe	1CMS*SOV34B[e]	1DRB*Z430	No
Cont Atmos. Monitor Probe	1CMS*SOV34C[e]	1DRB*Z499	No
Cont Atmos. Monitor Probe	1CMS*SOV34D[e]	1DRB*Z428	No
Cont Atmos. Monitor Probe	1CMS*SOV32A[e]	1DRB*Z333	No
Cont Atmos. Monitor Probe	1CMS*SOV32G[e]	1DRB*Z335	No
c. Other Isolation Valves			
1. Primary Containment[a]			
Feedwater Line	1B21*AOVF032A[c]	1KJB*Z3A	Yes[f]
Feedwater Line	1B21*VF010A[b]	1KJB*Z3A	Yes[f]
Feedwater Line	1B21*AOVF032B[c]	1KJB*Z3B	Yes[f]
Feedwater Line	1B21*VF010B[b]	1KJB*Z3B	Yes[f]

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
c. Other Isolation Valves			
1. Primary Containment[a] (Continued)			
RWCU Disch. to Condenser	1WCS*RV144	1KJB*Z4	Yes[f]
RWCU Backwash Disch.	1WCS*RV154	1KJB*Z5	Yes[f]
HPCS to Reactor	1E22*A0VF005[b][c]	1KJB*Z9,1DRB*Z10	No
Supp. Pool Pump-Back Return Line	1DFR*V181[j]	1KJB*Z11	No
Supp. Pool Pump-Back Return Line	1DFR*V182[j]	1KJB*Z11	No
HPCS Th. Relief to Supp. Pool	1E22*RVF034[h]	1KJB*Z11	No
HPCS Th. Relief to Supp. Pool	1E22*RVF035[h]	1KJB*Z11	No
HPCS Th. Relief to Supp. Pool	1E22*RVF039[h]	1KJB*Z11	No
LPCS to Reactor	1E21*A0VF006[b][c]	1KJB*Z13,1DRB*Z14	No
RHR/RCIC Head Spray	1E51*A0VF065[b][c]	1KJB*Z19,1DRB*Z130	No
RHR/RCIC Head Spray	1E51*A0VF066[b][c]	1KJB*Z19,1DRB*Z130	No
RHR Shutdown Cooling Sup.	1RHS*V240	1KJB*Z20	No
LPCI C to Reactor	1E12*A0VF041C[b][c]	1KJB*Z21C,1DRB*Z22C	No
RHR A Hx V&R to Supp. Pool	1RHS*RV3A[h]	1KJB*Z23A	No
RHR A Hx V&R to Supp. Pool	1E12*RVF055A[h]	1KJB*Z23A	No
RHR A Hx V&R to Supp. Pool	1E12*RVF025A[h]	1KJB*Z23A	No
RHR A Hx V&R to Supp. Pool	1E12*RVF017A[h]	1KJB*Z23A	No
RHR A Hx V&R to Supp. Pool	1E12*RVF005[h]	1KJB*Z23A	No
LPCS Th. Relief to Supp. Pool	1E21*RVF018[h]	1KJB*Z23A	No
LPCS Th. Relief to Supp. Pool	1E21*RVF031[h]	1KJB*Z23A	No
LPCS Th. Relief to Supp. Pool	1E12*RVF036[h]	1KJB*Z23A	No
RHR B Hx V&R to Supp. Pool	1RHS*RV3B[h]	1KJB*Z23A	No
RHR B Hx V&R to Supp. Pool	1E12*RVF055B[h]	1KJB*Z23B	No
RHR B Hx V&R to Supp. Pool	1E12*RVF025C[h]	1KJB*Z23B	No
		1KJB*Z23B	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER[b]	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
c. Other Isolation Valves			
1. Primary Containment[a] (Continued)			
RHR B Hx V&R to Supp. Pool	1E12*RVF025B[h]	1KJB*Z23B	No
RHR B Hx V&R to Supp. Pool	1E12*RVF030[h]	1KJB*Z23B	No
RHR B Hx V&R to Supp. Pool	1E12*RVF101[h]	1KJB*Z23B	No
RHR B Hx V&R to Supp. Pool	1E12*RVF017B[h]	1KJB*Z23B	No
Fuel Pool C&C Disch.	1SFC*V101	1KJB*Z26	No
Fuel Pool C&C Suction	1SFC*V350	1KJB*Z27	No
Fuel Pool Purif. Suction	1SFC*V351	1KJB*Z28	No
CRD Hyd. Sys. Sup.	1C12*VF122	1KJB*Z29	No
Equip. Drain Disch.	1DER*V4	1KJB*Z38	No
Floor Drain Disch.	1DFR*V180	1KJB*Z35	No
Fire Protection Hdr.	1FPW*V263	1KJB*Z41	Yes[f]
Service Air Supply	1SAS*V486	1KJB*Z44	Yes[f]
Instr. Air Supply	1IAS*V80	1KJB*Z46	Yes[f]
RPCCW Supply	1CCP*V118	1KJB*Z48	No
RPCCW Return	1CCP*V160	1KJB*Z49	No
Service Water Supply	1SWP*V174	1KJB*Z52A	No
Service Water Supply	1SWP*V175	1KJB*Z52B	No
Air Sup. for Main Steam SRV	1SVV*V9	1KJB*Z102	No
Air Sup. for Main Steam SRV	1SVV*V31	1KJB*Z103	No
Vent. Chilled Water Rtn.	1HVN*V1316	1KJB*Z131	Yes[f]
Vent. Chilled Water Sup.	1HVN*V541	1KJB*Z132	Yes[f]
Condensate Makeup Sup.	1CNS*V86	1KJB*Z134	Yes[f]

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
c. Other Isolation Valves			
2. Drywell[k]			
Main Steam SRV Disch.	1B21*RVF047A	1DRB*Z136	No
Main Steam SRV Disch.	1B21*RVF041A	1DRB*Z137	No
Main Steam SRV Disch.	1B21*RVF051G	1DRB*Z138	No
Main Steam SRV Disch.	1B21*RVF041L	1DRB*Z139	No
Main Steam SRV Disch.	1B21*RVF047C	1DRB*Z140	No
Main Steam SRV Disch.	1B21*RVF041G	1DRB*Z141	No
Main Steam SRV Disch.	1B21*RVF051C	1DRB*Z142	No
Main Steam SRV Disch.	1B21*RVF041C	1DRB*Z143	No
Main Steam SRV Disch.	1B21*RVF047B	1DRB*Z144	No
Main Steam SRV Disch.	1B21*RVF041B	1DRB*Z145	No
Main Steam SRV Disch.	1B21*RVF051B	1DRB*Z146	No
Main Steam SRV Disch.	1B21*RVF041F	1DRB*Z147	No
Main Steam SRV Disch.	1B21*RVF047F	1DRB*Z148	No
Main Steam SRV Disch.	1B21*RVF041D	1DRB*Z149	No
Main Steam SRV Disch.	1B21*RVF047D	1DRB*Z150	No
Main Steam SRV Disch.	1B21*RVF051D	1DRB*Z151	No
LPCI A to Reactor	1E12*AOVF041A[c]	1DRB*Z22A	No
LPCI B to Reactor	1E12*AOVF041B[c]	1DRB*Z22B	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
c. Other Isolation Valves			
2. Drywell[k] (Continued)			
Reactor Bldg. Floor Drain Hdr.	1DFR*V4	1DRB*Z37A	No
Reactor Bldg. Floor Drain Hdr.	1DFR*V3	1DRB*Z37A	No
Reactor Bldg. Floor Drain Hdr.	1DFR*V1	1DRB*Z37B	No
Reactor Bldg. Floor Drain Hdr.	1DFR*V2	1DRB*Z37B	No
Reactor Bldg. Equip. Drain Hdr.	1DER*V14	1DRB*Z40A	No
Reactor Bldg. Equip. Drain Hdr.	1DER*V15	1DRB*Z40A	No
Reactor Bldg. Equip. Drain Hdr.	1DER*V16	1DRB*Z40B	No
Reactor Bldg. Equip. Drain Hdr.	1DER*V17	1DRB*Z40B	No
Service Air Supply	1SAS*V487	1DRB*Z45	No
Instr. Air Supply	1IAS*V78	1DRB*Z47	No
RPCCW Supply	1CCP*V119	1DRB*Z50	No
Service Water Supply	1SWP*RV119	1DRB*Z54	No
SLCS Injection	1C41*VEXF004A	1DRB*Z56	No
SLCS Injection	1C41*VEXF004B	1DRB*Z56	No
SLCS Injection	1C41*VF006	1DRB*Z56	No
SLCS Injection	1C41*VF007	1DRB*Z56	No
RPCCW Return	1CCP*V133	1DRB*Z51	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

SYSTEM	VALVE NUMBER	PENETRATION NUMBER	SECONDARY CONTAINMENT BYPASS PATH (Yes/No)
c. Other Isolation Valves			
2. Drywell[k] (Continued)			
Air Sup. for Main Steam SRV	1B21*VF036A	1DRB*Z107	No
Air Sup. for Main Steam SRV	1B21*VF036F	1DRB*Z107	No
Air Sup. for Main Steam SRV	1B21*VF036G	1DRB*Z107	No
Air Sup. for Main Steam SRV	1B21*VF036P	1DRB*Z107	No
Air Sup. for Main Steam SRV	1B21*VF039C	1DRB*Z107	No
Air Sup. for Main Steam SRV	1B21*VF039H	1DRB*Z107	No
Air Sup. for Main Steam SRV	1B21*VF039R	1DRB*Z107	No
Air Sup. for Main Steam SRV	1B21*VF039S	1DRB*Z107	No
Air Sup. for Main Steam SRV	1B21*VF036J	1DRB*Z112	No
Air Sup. for Main Steam SRV	1B21*VF036L	1DRB*Z112	No
Air Sup. for Main Steam SRV	1B21*VF036M	1DRB*Z112	No
Air Sup. for Main Steam SRV	1B21*VF036N	1DRB*Z112	No
Air Sup. for Main Steam SRV	1B21*VF036R	1DRB*Z112	No
Air Sup. for Main Steam SRV	1B21*VF039B	1DRB*Z112	No
Air Sup. for Main Steam SRV	1B21*VF039D	1DRB*Z112	No
Air Sup. for Main Steam SRV	1B21*VF039E	1DRB*Z112	No
Recirc. Pump Seal Water Sup.	1B33*VF013A	1DRB*Z133	No
Recirc. Pump Seal Water Sup.	1B33*VF017A	1DRB*Z133	No
Recirc. Pump Seal Water Sup.	1B33*VF013B	1DRB*Z135	No
Recirc. Pump Seal Water Sup.	1B33*VF017B	1DRB*Z135	No
Cont. Atmos. Monitor Probe	1CMS*V41	1DRB*Z427	No
Cont. Atmos. Monitor Probe	1CMS*V40	1DRB*Z501	No

TABLE 3.6.4-1 (Continued)

CONTAINMENT AND DRYWELL ISOLATION VALVES

NOTES

(a) Subject to a Type C leak rate test at a test pressure of 7.6 psig except as otherwise noted.

(b) Also isolates the drywell.

(c) Testable check valve.

(d) Isolates on MS-PLCS air line high flow or MS-PLCS air line header to Main Steam Line low differential pressure.

(e) Receives a remote manual isolation signal.

(f) This line is sealed by the penetration valve leakage control system (PVLCS). The combined leakage from valves sealed by the PVLCS is not included in 0.60 La Type B and C test total.

(g) This valve sealed by the main steam positive leakage control system (MS-PLCS). Valves sealed by the MS-PLCS are tested in accordance with Surveillance Requirement 4.6.1.3.f to verify that leakage does not exceed the limit specified in Specification 3.6.1.3.c. This leakage is not included in the 0.60 La Type B and C test total.

(h) Not subject to Type C leakage tests. Valve(s) will be included in the Type A test.

(j) Valve is hydrostatically leak tested at a test pressure of 8.36 psig (1.1 Pa). The leakage from hydrostatically tested valves is not included in the 0.60 La Type B and C test total.

(k) Not subject to a Type A, B, or C leak rate test.

(l) Valve groups listed are designated in Table 3.3.2-1.

(m) Value 1E51-MOVF076 is not required to be OPERABLE through October 4, 1986.

#The specified 18 month interval during the first operating cycle may be extended to coincide with completion of the first refueling outage, scheduled to begin 9-15-87.

CONTAINMENT SYSTEMS

SECONDARY CONTAINMENT AUTOMATIC ISOLATION DAMPERS

LIMITING CONDITION FOR OPERATION

3.6.5.3 Each required secondary containment ventilation system automatic isolation dampers shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and ##.

ACTION:

With one or more of the required secondary containment ventilation system automatic isolation dampers inoperable, maintain at least one isolation damper OPERABLE in each affected penetration that is open and, within 8 hours, either:

a. Restore the inoperable damper(s) to OPERABLE status, or

b. Isolate each affected penetration by use of at least one deactivated automatic damper secured in the isolation position and declare the associated system inoperable, if applicable, and perform the associated ACTION statements for that system, or

c. Isolate each affected penetration by use of at least one closed manual valve or blind flange and declare the associated system inoperable, if applicable, and perform the associated ACTION statements for that system.

Otherwise, in OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Otherwise, in Operational Condition ##, suspend handling of irradiated fuel in the Fuel Building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.3 Each required secondary containment ventilation system automatic isolation damper shall be demonstrated OPERABLE:

a. Prior to returning the damper to service after maintenance, repair or replacement work is performed on the damper or its associated actuator, control or power circuit, by cycling the damper through at least one complete cycle of full travel and verifying the isolation time.

##When irradiated fuel is being handled in the Fuel Building.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 18 months###, during COLD SHUTDOWN or REFUELING, by verifying that, on a secondary containment isolation test signal, each secondary containment automatic isolation damper actuates to its isolation position.

c. By verifying the isolation time to be within its limit when tested pursuant to Specification 4.0.5.

###The specified 18 month interval during the first operating cycle may be extended to coincide with completion of the first refueling outage, scheduled to begin 9-15-87.

TABLE 3.6.5.3-1

SECONDARY CONTAINMENT VENTILATION SYSTEM AUTOMATIC ISOLATION DAMPERS

	DAMPER FUNCTION	MAXIMUM ISOLATION TIME (Seconds)	DAMPER GROUP#	APPLICABLE OPERATIONAL CONDITION
1.	Shield Building Annulus Ventilation Exhaust Damper (1HVR*AOD161)	15	12	1, 2, 3.
2.	Shield Building Annulus Ventilation Exhaust Damper (1HVR*AOD23A)	15	12	1, 2, 3
3.	Shield Building Annulus Ventilation Exhaust Damper (1HVR*AOD23B)	15	12	1, 2, 3
4.	Auxiliary Building Ventilation Exhaust Damper (1HVR*AOD214)	15	11	1, 2, 3
5.	Auxiliary Building Ventilation Exhaust Damper (1HVR*AOD262)	15	11	1, 2, 3
6.	Auxiliary Building Ventilation Exhaust Damper (1HVR*AOD249)	15	11	1, 2, 3
7.	Auxiliary Building Ventilation Exhaust Damper (1HVR*AOD10A)	15	11	1, 2, 3
8.	Auxiliary Building Ventilation Exhaust Damper (1HVR*AOD10B)	15	11	1, 2, 3
9.	Auxiliary Building Ventilation Supply Damper (1HVR*AOD143)	15	11	1, 2, 3
10.	Auxiliary Building Ventilation Supply Damper (1HVR*AOD164)	15	11	1, 2, 3
11.	Fuel Building Ventilation Supply Damper (1HVF*AOD122)	15	13	1, 2, 3, ##
12.	Fuel Building Ventilation Supply Damper (1HVF*AOD101)	15	13	1, 2, 3, ##
13.	Fuel Building Ventilation Exhaust Damper (1HVF*AOD104)	15	13	1, 2, 3, ##
14.	Fuel Building Ventilation Exhaust Damper (1HVF*AOD137)	15	13	1, 2, 3, ##

Table 3.6.5.3-1 has been deleted.

TABLE 3.6.5.3-1 (Continued)

	DAMPER FUNCTION	MAXIMUM ISOLATION TIME (Seconds)	DAMPER GROUP#	APPLICABLE OPERATIONAL CONDITION
15.	Fuel Building Ventilation Exhaust Damper (1HVF*AOD102)	15	13	1, 2, 3, ##
16.	Fuel Building Ventilation Exhaust Damper (1HVF*AOD112)	15	13	1, 2, 3, ##

Table 3.6.5.3-1 has been deleted.

#See Table 3.3.2-1.

##When handling irradiated fuel in the Fuel Building.

associated with each primary containment electrical penetration circuit shall be OPERABLE. The scope of these protective devices excludes those circuits for which credible fault currents would not exceed the electrical penetrations' design ratings.

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

PRIMARY CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4.1 ~~All~~ primary containment penetration conductor overcurrent protective devices ~~shown in Table 3.8.4.1-1 shall be OPERABLE.~~ and backup

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

With one or more of the primary containment penetration conductor overcurrent protective devices ~~shown in Table 3.8.4.1-1~~ inoperable, declare the affected system or component inoperable and apply the appropriate ACTION statement for the affected system and:

a. For 4.16 kV circuit breakers, de-energize the 4.16 kV circuit(s) by tripping the associated redundant circuit breaker(s) within 72 hours and verifying, at least once per 7 days thereafter, the redundant circuit breaker to be tripped.

b. For 480 volt circuit breakers, remove the inoperable circuit breaker(s) from service by racking out the breaker within 72 hours and verifying, at least once per 7 days thereafter, the inoperable breaker(s) to be racked out.

c. For 480 volt MCC circuit breaker/fuse combination starters, remove the inoperable starter(s) from service by locking the breakers open and removing the control power fuse within 72 hours and verifying, at least once per 7 days thereafter, the inoperable starter(s) circuit breaker to be locked open with the control power fuse removed.

d. For 120/140 volt molded case circuit breakers, remove the inoperable circuit breaker(s) from service by tripping both 120/140 volt breakers open and locking the upstream 480 volt MCC breaker open within 72 hours and verifying, at least once per 7 days thereafter, the 480 volt MCC breaker(s) to be locked open.

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

4.8.4.1 Each of the primary containment penetration conductor overcurrent protective devices [redacted] shall be demonstrated OPERABLE:

a. At least once per 18 months:

1. By verifying that the medium voltage 4.16 kv circuit breakers are OPERABLE by selecting, on a rotating basis, at least one of the four circuit breakers and performing:

a) A CHANNEL CALIBRATION of the associated protective relays, and

b) An integrated system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and overcurrent control circuits function as designed.

c) For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least one of the four circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.

2. By selecting and functionally testing a representative sample of at least 10% of each type of lower voltage circuit breakers. Circuit breakers selected for functional testing shall be selected on a rotating basis. Testing of these circuit breakers shall consist of injecting currents in excess of the breaker's nominal setpoint and measuring the response time of the long time and short time delay elements and the setpoint of the instantaneous element, as appropriate. The measured data shall be compared to the manufacturer's data to ensure that it is less than or equal to a value specified by the manufacturer. Circuit breakers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.

TABLE 3.8.4.1-1

PRIMARY CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTION DEVICES

A. 4.16 KV Circuit Breakers

	PRIMARY PROTECTION		SECONDARY PROTECTION		
	LOCATION	DEVICE #	LOCATION	DEVICE #	EQUIPMENT ID#
1.	1ENS*SWG4A	ACB 36	1ENS*SWG3A	ACB 35	1B33-C001A
2.	1ENS*SWG4B	ACB 38	1ENS*SWG3B	ACB 37	1B33-C001B

B. 120/140 VAC Molded Case Circuit Breakers

1. Type Square D

PRIMARY PROTECTION	SECONDARY PROTECTION	EQUIP. NO.
Location	Location	
1LAR-BKR1B	1LAR-BKR1A	1LAR-PNL1R1
1LAR-BKR2B	1LAR-BKR2A	1LAR-PNL1R2
1LAR-BKR3B	1LAR-BKR3A	1LAR-PNL1R3
1LAR-BKR4B	1LAR-BKR4A	1LAR-PNL1R4
1LAR-BKR5B	1LAR-BKR5A	1LAR-PNL1R5
1LAR-BKR6B	1LAR-BKR6A	1LAR-PNL1R6
1LAR-BKR7B	1LAR-BKR7A	1LAR-PNL1R7
1LAR-BKR8B	1LAR-BKR8A	1LAR-PNL1R8
1LAR-BKR9B	1LAR-BKR9A	1LAR-PNL1R9
1LAR-BKR10B	1LAR-BKR10A	1LAR-PNL1R10
1LAR-BKR11B	1LAR-BKR11A	1LAR-PNL1R11
1LAR-BKR12B	1LAR-BKR12A	1LAR-PNL1R12
1LAR-BKR13B	1LAR-BKR13A	1LAR-PNL1R13
1LAR-BKR14B	1LAR-BKR14A	1LAR-PNL1R14
1LAR-BKR16B	1LAR-BKR16A	1LAR-PNL1R16
1LAR-BKR17B	1LAR-BKR17A	1LAR-PNL1R17
1LAR-BKR18B	1LAR-BKR18A	1LAR-PNL1R18
1LAR-BKR19B	1LAR-BKR19A	1LAR-PNL1R19
1SCA-BKR2A12	1SCA-BKR2A11	1SCA-PNL2A1
1SCA-BKR2D12	1SCA-BKR2D11	1SCA-PNL2D1
1SCA-BKR2F12	1SCA-BKR2F11	1SCA-PNL2F2
1SCA-BKR2D14	1SCA-BKR2D13	1SCA-PNL2D3
1SCA-BKR8A22	1SCA-BKR8A21	1SCA-PNL8A2
1SCA-BKR8B22	1SCA-BKR8B21	1SCA-PNL8B2

Table 3.8.4.1-1 has been deleted.

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTION DEVICES

C. 480 VAC Molded Case Circuit Breakers

1. Gould Circuit Breaker Type A821 with Gould Starter/Controller Type FVNR Size 1

Location	Cubicle	Equip. No.
1EHS*MCC2A	2B	1CPM*FN1A
1EHS*MCC2B	2B	1CPM*FN1B
1NHS-MCC2A	2A	1C41-D002
1NHS-MCC2A	3C	1DER-P1A
1NHS-MCC2A	3D	1DER-P2A
1NHS-MCC2A	4D	1DFR-P2A
1NHS-MCC2A	4E	1DFR-P1A
1NHS-MCC2A	6E	1HVR-FN1A
1NHS-MCC2B	4B	1DER-P1B
1NHS-MCC2B	5C	1DER-P2B
1NHS-MCC2B	6B	1DFR-P2B
1NHS-MCC2B	6C	1HVR-FN1D
1NHS-MCC2C	1E	1B33-C001AH
1NHS-MCC2D	3B	1B33-C001BH
1NHS-MCC2E	2C	1HVR-FN1C
1NHS-MCC2E	3B	1G36-C001A
1NHS-MCC2E	4D	1WCS-P5A
1NHS-MCC2E	4E	1B33-D003A2
1NHS-MCC2E	6C	1B33-D003A5
1NHS-MCC2E	1C	1G36-A001AG
1NHS-MCC2F	3B	1G36-C001B
1NHS-MCC2F	3C	1HVR-FN1B
1NHS-MCC2F	4A	1DFR-P1B
1NHS-MCC2F	5A	1WCS-P5B
1NHS-MCC2F	5C	1B33-D003B5
1NHS-MCC2F	6B	1B33-D003B2
1NHS-MCC2F	6C	1G36-A002AG
1NHS-MCC8A	2E	1F42-D002
1NHS-MCC8A	3E	1DFR-P6A
1NHS-MCC8B	3C	1DFR-P6B
1NHS-MCC102B	3A	1CPP-FN1

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTION DEVICES

C. 480 VAC Molded Case Circuit Breakers (Continued)

2. Gould Circuit Breaker Type A822 with Gould Starter/Controller Type FVR Size 1

Location	Cubicle	Equip. No.
1EHS*MCC2A	2A	1C41*MOVF001A
1EHS*MCC2A	5A	1SWP*MOV4A
1EHS*MCC2A	5B	1SWP*MOV5B
1EHS*MCC2A	5C	1SWP*MOV502A
1EHS*MCC2A	6A	1RCS*MOV58A
1EHS*MCC2A	6B	1RCS*MOV59A
1EHS*MCC2A	6C	1SWP*MOV503A
1EHS*MCC2B	1B	1SFC*MOV120
1EHS*MCC2B	1D	1SFC*MOV139
1EHS*MCC2B	2A	1C41*MOVF001B
1EHS*MCC2B	5A	1SWP*MOV4B
1EHS*MCC2B	5B	1SWP*MOV5A
1EHS*MCC2B	5C	1SWP*MOV502B
1EHS*MCC2B	6A	1RCS*MOV58B
1EHS*MCC2B	6B	1RCS*MOV59B
1EHS*MCC2B	6C	1SWP*MOV503B
1EHS*MCC2C	1D	1CCP*MOV142
1EHS*MCC2C	2C	1CCP*MOV143
1EHS*MCC2C	2B	1CPM*MOV1A
1EHS*MCC2C	3A	1CPM*MOV2A
1EHS*MCC2C	3B	1CPM*MOV3A
1EHS*MCC2C	3C	1E12*MOVF037A
1EHS*MCC2C	4A	1E12*MOVF042A
1EHS*MCC2C	4B	1HVN*MOV22A
1EHS*MCC2C	4C	1RCS*MOV60A
1EHS*MCC2C	5B	1RCS*MOV61A
1EHS*MCC2C	5C	1CPM*MOV4A
1EHS*MCC2B	1C	1B21*MOVF016
1EHS*MCC2D	1D	1CPM*MOV1B
1EHS*MCC2D	2C	1CPM*MOV2B
1EHS*MCC2D	2D	1CPM*MOV3B
1EHS*MCC2D	3A	1CPM*MOV4B
1EHS*MCC2D	3B	1CPP*MOV104
1EHS*MCC2D	3C	1E51*MOVF063
1EHS*MCC2D	4A	1E51*MOVF076
1EHS*MCC2D	4B	1G33*MOVF001
1EHS*MCC2D	4C	1G33*MOVF028
1EHS*MCC2D	5A	1WCS*MOV178
1EHS*MCC2K	1D	1CCP*MOV144
1EHS*MCC2K	2A	1RCS*MOV60B
1EHS*MCC2K	2B	1RCS*MOV61B
1EHS*MCC2K	2C	1HVN*MOV22B

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTION DEVICES

C. 480 VAC Molded Case Circuit Breakers (Continued)

2. Gould Circuit Breaker Type A822 with Gould Starter/Controller Type FVR Size 1 (Continued)

Location	Cubicle	Equip. No.
1EHS*MCC2K	3D	1E12*MOVF042B
1EHS*MCC2K	4A	1E12*MOVF009
1EHS*MCC2K	4D	1G33*MOVF053
1EHS*MCC2K	5A	1G33*MOVF040
1EHS*MCC2K	6C	1HVN*MOV102
1EHS*MCC2K	6D	1E12*MOVF037B
1EHS*MCC2K	7D	1CCP*MOV158
1NHS-MCC2A	1C	1B21-MOVF001
1NHS-MCC2A	1D	1B33-MOVF023A
1NHS-MCC2A	5C	1G33-MOVF102
1NHS-MCC2A	5D	1B33-MOVF067A
1NHS-MCC2A	7D	1G33-MOVF106
1NHS-MCC2B	3B	1G33-MOVF042
1NHS-MCC2B	3C	1B21-MOVF002
1NHS-MCC2B	4D	1G33-MOVF044
1NHS-MCC2B	5D	1G33-MOVF100
1NHS-MCC2B	6D	1G33-MOVF101
1NHS-MCC2D	2E	1B21-MOVF005
1NHS-MCC2D	3D	1B33-MOVF067B
1NHS-MCC2D	4D	1B33-MOVF023B
1NHS-MCC2E	3A	1G33-MOVF031
1NHS-MCC2E	5E	1G33-MOVF107
1NHS-MCC2F	2D	1G33-MOVF104
1NHS-MCC8A	4E	1C11-MOVF003

3. Gould Circuit Breaker Type HE43

1NHS-MCC2A	2B	1POP-WR2G01
1NHS-MCC2A	2C	1POP-WR2A01
1NHS-MCC2A	2D	1POP-WR2A02
1NHS-MCC2A	3B	1POP-WR2G02
1NHS-MCC2C	1CT	1H22-PNLP008
1NHS-MCC2D	5C	1POP-WR2D01
1NHS-MCC2D	5D	1POP-WR2D02
1NHS-MCC8A	1E	1F15-E006
1NHS-MCC8A	2D	1F15-E005
1NHS-MCC8A	4C	1F11-E012
1NHS-MCC8A	6B	1FNR-P06
1NHS-MCC8A	6C	1FNR-P08
1NHS-MCC8B	2A	1FNR-P07
1NHS-MCC2F	2A	1POP-WR2F01
1NHS-MCC2F	2B	1JRB-EL1A
1NHS-MCC2E	3C	1MHR-CRN2
1NHS-MCC2A	3A	1FNR-P09
1NHS-MCC2A	4A	1FNR-P10
1NHS-MCC2B	1C	1FNR-P11
1NHS-MCC8A	3D	1MHR-CRN3

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTION DEVICES

C. 480 VAC Molded Case Circuit Breakers (Continued)

4. Gould Circuit Breaker Type A80 with Gould Starter/Controller Type FVNR Size 3

Location	Cubicle	Equip. No.
1EHS*MCC2A	2C	1C41*C001A
1EHS*MCC2B	2C	1C41*C001B
1NHS-MCC2B	2D	1C41*D003
1NHS-MCC2E	1D	1B33-D003A1
1NHS-MCC2E	6D	1B33-D003A4
1NHS-MCC2F	4D	1B33-D003B1
1NHS-MCC2F	6D	1B33-D003B4
1NHS-MCC2D	1E	1G36-C002

5. Gould Circuit Breaker Type A80 with Gould Starter/Controller Type 2SP1W Size 4

1NHS-MCC102A	1C	1DRS-UC1A
1NHS-MCC102A	2C	1DRS-UC1C
1NHS-MCC102A	3B	1DRS-UC1E
1NHS-MCC102B	1C	1DRS-UC1B
1NHS-MCC102B	2C	1DRS-UC1D
1NHS-MCC102B	3B	1DRS-UC1F

6. Gould Circuit Breaker with Type A821 Gould Starter/Controller Type FVNR Size 2

1NHS-MCC8B	1D	1F42-C001

D. Air Circuit Breakers - GE Type ARR

Location	Device No.	Location	Device No.	Equip. No.
1EJS*LDC2B	ACB79	1EJS*LDC2B	ACB78	1HVR-UC1C
1EJS*LDC2A	ACB36	1EJS*LDC2A	ACB38	1HVR*UC1A
1EJS*LDC2A	ACB22	1EJS*LDC2A	ACB38	1HVR*RR1C
1EJS*LDC2B	ACB76	1EJS*LDC2B	ACB78	1HVR*UC1B
1EJS*LDC2A	ACB23	1HCS*PWRS1A	Int. Fuse	1HCS*RBNR1A
1EJS*LDC2B	ACB63	1HCS*PWRS1B	Int. Fuse	1HCS*RBNR1B

ELECTRICAL POWER SYSTEMS

OTHER OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4.2 Each required overcurrent protection device shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

With one or more of the overcurrent protective devices inoperable, remove the circuit breaker(s) feeding the control room lighting and/or alternate RPS supply as appropriate from service by opening the breaker(s) within 72 hours and return the overcurrent protection devices to OPERABLE status within 7 days, or verify the appropriate breakers open at least once per 24 hours.*

SURVEILLANCE REQUIREMENTS

4.8.4.2 The overcurrent protective devices shall be demonstrated OPERABLE at least once per 18 months by selecting and testing one-half of each type of circuit breaker on a rotating basis. Testing of these circuit breakers shall consist of injecting currents in excess of the breaker's nominal setpoint and measuring the response time of the long time and short time delay elements and the setpoint of the instantaneous element, as appropriate. The measured data shall be compared to the manufacturer's data to ensure that it is less than or equal to a value specified by the manufacturer.

*Except at least once per 31 days if locked, sealed, or otherwise secured in the open position.

TABLE 3.8.4.2-1

OTHER OVERCURRENT PROTECTIVE DEVICES

TYPE	Protective Device	Primary Protection	Secondary Protection
1. Main Control Room Lighting			
	1EHS*MCC14A	1EHS*MCC14A	1RPS*XRC10A
	1EHS*MCC14B	1EHS*MCC14B	1RPS*XRC10B
2. RPS Alternate Source of Power			

Table 3.8.4.2-1 has been deleted.

ELECTRICAL POWER SYSTEMS

A.C. CIRCUITS INSIDE CONTAINMENT

LIMITING CONDITION FOR OPERATION

3.8.4.4 Each required A.C. circuits inside containment shall be de-energized*.

Equipment ID	Location	Device
1MHR*CRN1	1EJS*LDC2A	ACB022
1F42-PNLP003	1SCA-PNL8C1	Circuit Breaker 1
1F42-D002H	1SCA-PNL8C1	Circuit Breaker 15
1SFT-PNL106	1SCA-PNL8B2	Circuit Breaker 2
2SFT-PNL106	1SCA-PNL8B2	Circuit Breaker 10
1HVR*UC1AH	1SCV*PNL2A2	Circuit Breaker 5
1HVR*UC1BH	1SCV*PNL2B2	Circuit Breaker 12
1HVR-UC1CH	1SCA-PNL2C1	Circuit Breaker 9
1HVR-FN1AH	1SCA-PNL2A2	Circuit Breaker 3
1HVR-FN1BH	1SCA-PNL2F1	Circuit Breaker 6
1HVR-FN1CH	1SCA-PNL2E1	Circuit Breaker 1
1HVR-FN1DH	1SCA-PNL2B1	Circuit Breaker 6
1DRS-UC1AH	1SCA-PNL2E1	Circuit Breaker 2
1DRS-UC1BH	1SCA-PNL2F1	Circuit Breaker 3
1DRS-UC1CH	1SCA-PNL2E1	Circuit Breaker 2
1DRS-UC1DH	1SCA-PNL2F1	Circuit Breaker 3
1DRS-UC1EH	1SCA-PNL2E1	Circuit Breaker 2
1DRS-UC1FH	1SCA-PNL2F1	Circuit Breaker 3
1WCS-P5AH	1SCA-PNL2E1	Circuit Breaker 4
1WCS-P5BH	1SCA-PNL2F1	Circuit Breaker 2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

With any of the required circuits energized, trip the associated circuit breaker(s) in the specified location within 1 hour.

SURVEILLANCE REQUIREMENTS

4.8.4.4 Each of the required A.C. circuits shall be determined to be de-energized by verifying at least once per 24 hours** that the associated circuit breakers are in the tripped condition.

*Except during entry into the containment.
**Except at least once per 31 days if locked, sealed or otherwise secured in the tripped condition.

RESPONSIBILITIES (Continued)

c. Provide written notification within 24 hours to the Senior Vice President - RBNG and the Nuclear Review Board of disagreement between the FRC and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1.

RECORDS

6.5.1.8 The FRC shall maintain written minutes of each FRC meeting that, at a minimum, document the results of all FRC activities performed under the responsibility provisions of these Technical Specifications. Copies shall be provided to the Plant Manager and the NRB.

6.5.2 TECHNICAL REVIEW AND CONTROL

6.5.2.1 Each procedure and program required by Specification 6.8 and other procedures that affect nuclear safety, and changes thereto, is prepared by a qualified individual/organization. Each such procedure, and changes thereto, shall be reviewed by an individual/group other than the individual/group that prepared the procedure, or changes thereto, but who may be from the same organization as the individual/group that prepared the procedure. Each such procedure and program, or changes thereto, shall be approved, prior to implementation, by the Plant Manager, one of the Assistant Plant Managers or the Director - Radiological Programs, or by the manager/department head responsible for the program or the activity described in the procedure, with the exception of the Emergency Plan and implementing procedures which shall be approved by the Manager - Administration, Plant Manager and Senior Vice President - RBNG.

6.5.2.2 Individuals responsible for reviews performed in accordance with Section 6.5.2.1 shall be members of River Bend Nuclear Group supervisory staff, and the reviews shall be performed in accordance with administrative procedures. Each such review shall include a determination of whether or not additional, cross-disciplinary review is necessary and a verification that the proposed actions do not constitute an unreviewed safety question. If deemed necessary, such review shall be performed by the appropriate designated review personnel.

6.5.2.3 The station security program and implementing procedures shall be reviewed at least once per 12 months, and recommended changes approved in accordance with Specification 6.5.2.1.

6.5.2.4 The station emergency plan and implementing procedures and recommended changes shall be approved in accordance with Specification 6.5.2.1.

6.5.2.5 The station fire protection plan and implementing procedures shall be reviewed at least once per 12 months, and recommended changes approved in accordance with Specification 6.5.2.1.

6.5.2.(7)(8) Records documenting each of the activities performed under Specifications 6.5.2.1 through 6.5.2.(7)(8) shall be maintained.

6.5.2.6 The station Technical Requirements Manual and implementing procedures and recommended changes shall be approved in accordance with Specification 6.5.2.1.

PROCEDURES AND PROGRAMS (Continued)

a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978.

b. The applicable procedures required to implement the requirements of NUREG-0737 and supplements thereto.

c. Refueling operations.

d. Surveillance and test activities of safety-related equipment.

e. Security Plan implementation.

f. Emergency Plan implementation.

g. Fire Protection Program implementation.

h. Process Control Program implementation.

i. Offsite Dose Calculation Manual implementation.

j. Quality Assurance Program for effluent and environmental monitoring.

k. Technical Requirements Manual implementation.

6.8.2 Each procedure of Specification 6.8.1, and changes thereto, shall be reviewed and approved in accordance with Specification 6.5.2.1.

6.8.3 Temporary changes to procedures of Specification 6.8.1 may be made provided:

a. The intent of the original procedure is not altered;

b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Operator license on the unit affected; and

c. The change is documented, reviewed by the FRC as required by Specification 6.5.1.6, and approved in accordance with Specification 6.5.2.1 within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, and maintained:

a. Primary Coolant Sources Outside Containment

A program to reduce leakage, from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident, to as low as practicable levels. The systems include the HPCS, LPCS, RHR, RCIC, process sampling, and standb gas treatment systems. The program shall include the following:

1. Preventive maintenance and periodic visual inspection requirements, and