

ATTACHMENT NO. 2

TO

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3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that:
 1. All penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except as provided in Table 3.6-1 of Specification 3.6.3.1, and
 2. All equipment hatches are closed and sealed,
- b. By verifying that each containment air lock is OPERABLE per Specification 3.6.1.3.

*Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT SYSTEMS

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. The ACTION statement of T/S 3/4.6.3 is not applicable to the containment purge supply and exhaust isolation valves, VCR-101 through 106 and VCR-201 through 206, listed in Table 3.6-1. The Limiting Condition for Operation and its associated ACTION statement for these valves is given in Technical Specification 3/4.6.1.7.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) specified in Table 3.6-1 inoperable, either:

- 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.

CONTAINMENT SYSTEMS

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 Containment Purge and Exhaust isolation test signal, each Purge and Exhaust valve actuates to its isolation position.

4.6.3.1.3 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.

TABLE 3.6-1

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>A. PHASE "A" ISOLATION</u>		
1. CCR-455	CCW to Reactor Supports	10
2. CCR-456	CCW from Reactor Supports	10
3. CCR-457	CCW from Reactor Supports	10
4. CCR-460	CCW from Excess ltdn. Hx.	10
5. CCR-462	CCW to Excess ltdn. Hx.	10
6. DCR-201	R.C. Drain Tank to Vent. Hdr.	10
7. DCR-202	R.C. Drain Tank to Gas Analyzer	10
8. DCR-203	R.C. Drain Tank to Vent. Hdr.	10
9. DCR-204	R.C. Drain Tank to Gas Analyzer	10
10. DCR-205	R.C. Drain Pump Suction Isolation	10
11. DCR-206	R.C. Drain Pump Suction Isolation	10
12. DCR-207	N ₂ Supply to R.C. Drain Tank	10
13. DCR-301	Steam Generator Blowdown Sample #1	10
14. DCR-302	Steam Generator Blowdown Sample #2	10
15. DCR-303	Steam Generator Blowdown Sample #3	10
16. DCR-304	Steam Generator Blowdown Sample #4	10
17. DCR-310	Steam Generator Blowdown Lines #1	10
18. DCR-320	Steam Generator Blowdown Lines #2	10
19. DCR-330	Steam Generator Blowdown Lines #3	10
20. DCR-340	Steam Generator Blowdown Lines #4	10
21. DCR-600	Containment Sump to Waste Holdup	10
22. DCR-601	Containment Sump to Waste Holdup	10
23. DCR-610	Ice Condenser Drain to Drain Hdr.	10
24. DCR-611	Ice Condenser Drain to Drain Hdr.	10
25. DCR-620	Continuous Ventilation Drain to Holdup	10
26. DCR-621	Continuous Ventilation Drain to Holdup	10

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TABLE 3.6-1 (continued)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>A. PHASE "A" ISOLATION (Continued)</u>		
63. NCR-107	PRZ Liquid Sample	10
64. NCR-108	PRZ Liquid Sample	10
65. NCR-109	PRZ Steam Sample	10
66. NCR-110	PRZ Steam Sample	10
67. NCR-252	Primary Water to Pressure Relief Tank	10
68. QCM-250	RCP Seal Water Discharge	15
69. QCM-350	RCP Seal Water Discharge	15
70. QCR-300	Letdown to Letdown Hx.	10
71. QCR-301	Letdown to Letdown Hx.	10
72. QCR-919	Demineralized Water Supply for Refueling Cavity	10
73. QCR-920	Demineralized Water Supply for Refueling Cavity	10
74. RCR-100	PRZ Relief Tank to Gas Anal.	10
75. RCR-101	PRZ Relief Tank to Gas Anal.	10
76. VCR-10	Glycol Supply to Fan Cooler	10
77. VCR-11	Glycol Supply to Fan Cooler	10
78. VCR-20	Glycol Supply from Fan Cooler	10
79. VCR-21	Glycol Supply from Fan Cooler	10
80. XCR-100	Control Air to Containment	10
81. XCR-101	Control Air to Containment Isolation	10
82. XCR-102	Control Air to Containment Isolation	10
83. XCR-103	Control Air to Containment	10
<u>B. PHASE "B" ISOLATION</u>		
1. CCM-451	CCW from RCP Oil Coolers	60
2. CCM-452	CCW from RCP Oil Coolers	60
3. CCM-453	CCW from RCP Thermal Barrier	30
4. CCM-454	CCW from RCP Thermal Barrier	30
5. CCM-458	CCW to RCP Oil Coolers & Thermal Barrier	60
6. CCM-459	CCW to RCP Oil Coolers & Thermal Barrier	60
7. ECR-31	Containment Airborne Radiation Monitor	10
8. ECR-32	Containment Airborne Radiation Monitor	10
9. ECR-33	Containment Airborne Radiation Monitor	10
10. ECR-35	Containment Airborne Radiation Monitor	10
11. ECR-36	Containment Airborne Radiation Monitor	10

TABLE 3.6-1 (Continued)

		<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>B. PHASE "R" ISOLATION (Continued)</u>				
D. C. COOK UNIT 1 3/4 6-19	12.	WCR-901	NESW to Low Containment Vent #1	10
	13.	WCR-903	NESW from Low Containment Vent #1	10
	14.	WCR-905	NESW to Low Containment Vent #2	10
	15.	WCR-907	NESW from Low Containment Vent #2	10
	16.	WCR-909	NESW to Low Containment Vent #3	10
	17.	WCR-911	NESW from Low Containment Vent #3	10
	18.	WCR-913	NESW to Low Containment Vent #4	10
	19.	WCR-915	NESW from Low Containment Vent #4	10
	20.	WCR-921	NESW to Up Containment Vent #1	10
	21.	WCR-923	NESW from Up Containment Vent #1	10
	22.	WCR-925	NESW to Up Containment Vent #2	10
	23.	WCR-927	NESW from Up Containment Vent #2	10
	24.	WCR-929	NESW to Up Containment Vent #3	10
	25.	WCR-931	NESW from Up Containment Vent #3	10
	26.	WCR-933	NESW to Up Containment Vent #4	10
	27.	WCR-935	NESW from Up Containment Vent #4	10
	28.	WCR-941	NESW to RCP Motor Air Cooler	10
	29.	WCR-942	NESW to RCP Motor Air Cooler	10
	30.	WCR-943	NESW to RCP Motor Air Cooler	10
	31.	WCR-944	NESW to RCP Motor Air Cooler	10
	32.	WCR-945	NESW from RCP Motor Air Cooler	10
	33.	WCR-946	NESW from RCP Motor Air Cooler	10
	34.	WCR-947	NESW from RCP Motor Air Cooler	10
	35.	WCR-948	NESW from RCP Motor Air Cooler	10
	36.	WCR-951	NESW to RCP Motor Air Cooler Vent #1	10
	37.	WCR-952	NESW to RCP Motor Air Cooler Vent #2	10
	38.	WCR-953	NESW to RCP Motor Air Cooler Vent #3	10
	39.	WCR-954	NESW to RCP Motor Air Cooler Vent #4	10
	40.	WCR-955	NESW from RCP Motor Air Cooler Vent #1	10
	41.	WCR-956	NESW from RCP Motor Air Cooler Vent #2	10
	42.	WCR-957	NESW from RCP Motor Air Cooler Vent #3	10
	43.	WCR-958	NESW from RCP Motor Air Cooler Vent #4	10

TABLE 3.6-1 (Continued)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>C. CONTAINMENT PURGE EXHAUST (Continued) **</u>		
12. VCR-205	Upper Comp. Purge Air Inlet	5
13. VCR-206	Upper Comp. Purge Air Outlet	5
14. VCR-207*	Cont. Press Relief Fan Isolation	5
<u>D. MANUAL ISOLATION VALVES (1)</u>		
1. ICM-111	RHR to RC Cold Legs	NA
2. ICM-129	RHR Inlet to Pumps	NA
3. ICM-250	Boron Injection Inlet	NA
4. ICM-251	Boron Injection Inlet	NA
5. ICM-260	Safety Injection Inlet	NA
6. ICM-265	Safety Injection Inlet	NA
7. ICM-305	RHR Suction from Sump	NA
8. ICM-306	RHR Suction from Sump	NA
9. ICM-311	RHR to RC Hot Legs	NA
10. ICM-321	RHR to RC Hot Legs	NA
11. NPX 151 VI	Dead Weight Tester	NA
12. PA 145	Containment Service Air	NA
13. SF-151	Refueling Water Supply	NA
14. SF-153	Refueling Water Supply	NA
15. SF-159	Refueling Cavity Drain to Purification System	NA
16. SF-160	Refueling Cavity Drain to Purification System	NA
17. SI-171	Safety Injection Test Line	NA
18. SI-172	Accumulator Test Line	NA

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
A. <u>PHASE "A" ISOLATION</u> (Continued)		
25. DCR-620	Continuous Ventilation Drain to Holdup	≤ 10
26. DCR-621	Continuous Ventilation Drain to Holdup	≤ 10
27. ECR-10	Cont. H ₂ Sample Return	≤ 10
28. ECR-11	Cont. H ₂ Sample - Air to Rec. E	≤ 10
29. ECR-12	Cont. H ₂ Sample - Air From Rec. E	≤ 10
30. ECR-13	Cont. H ₂ Sample - Low. Cont. Vol.	≤ 10
31. ECR-14	Cont. H ₂ Sample - Low. Cont. Vol.	≤ 10
32. ECR-15	Cont. H ₂ Sample - Up. Cont. Vol.	≤ 10
33. ECR-16	Cont. H ₂ Sample - Up. Cont. Vol.	≤ 10
34. ECR-17	Cont. H ₂ Sample - Air to Rec. W	≤ 10
35. ECR-18	Cont. H ₂ Sample - Air from Rec. W	≤ 10
36. ECR-19	Cont. H ₂ Sample - Cont. Dome Vol.	≤ 10

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TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
A. <u>PHASE "A" ISOLATION (Continued)</u>		
37. ECR-20	Cont. H ₂ Sample-Return	≤10
38. ECR-21	Cont. H ₂ Sample - Air to Rec. E.	≤10
39. ECR-22	Cont. H ₂ Sample - Air Fr. Rec. E.	≤10
40. ECR-23	Cont. H ₂ Sample - Low. Cont. Vol.	≤10
41. ECR-24	Cont. H ₂ Sample - Low. Cont. Vol.	≤10
42. ECR-25	Cont. H ₂ Sample - Up. Cont. Vol.	≤10
43. ECR-26	Cont. H ₂ Sample - Up. Cont. Vol.	≤10
44. ECR-27	Cont. H ₂ Sample - Air to Rec. W.	≤10
45. ECR-28	Cont. H ₂ Sample - Air Fr. Rec. W.	≤10
46. ECR-29	Cont. H ₂ Sample - Cont. Dome Vol.	≤10
47. ECR-416	PAS Containment Sump Sample	≤10
48. ECR-417	PAS Containment Sump Sample	≤10
49. ECR-496	PAS Waste Liquid and Gas Return	≤10
50. ECR-497	PAS Waste Liquid and Gas Return	≤10
51. ECR-535	PAS Containment Gas Sample	≤10
52. ECR-536	PAS Containment Gas Sample	≤10
53. GCR-301	H ₂ Supply to Pressurizer Relief Tank	≤10
54. GCR-314	H ₂ Supply to Accumulators	≤10

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TABLE 3.6-1 (Continued)
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
A. <u>PHASE "A" ISOLATION (Continued)</u>		
55. 1CR-5	Accumulators Sample	≤ 10
56. 1CR-6	Accumulators Sample	≤ 10
57. HCR-251#	Sample Line from Steam Gen. Outlet #1	≤ 10
58. HCR-252#	Sample Line from Steam Gen. Outlet #1	≤ 10
59. HCR-253#	Sample Line from Steam Gen. Outlet #3	≤ 10
60. HCR-254#	Sample Line from Steam Gen. Outlet #4	≤ 10
61. HCR-105	Hot Leg Sample	≤ 10
62. HCR-106	Hot Leg Sample	≤ 10
63. HCR-107	PRZ Liquid Sample	≤ 10
64. HCR-108	PRZ Liquid Sample	≤ 10
65. HCR-109	PRZ Steam Sample	≤ 10
66. HCR-110	PRZ Steam Sample	≤ 10

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

D. C. COOK UNIT 2 3/4 6-22	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
	<u>B. PHASE "B" ISOLATION (Continued)</u>		
	12. WCR-901	NESW to Low. Containment Vent #1	≤10
	13. WCR-903	NESW from Low. Containment Vent #1	≤10
	14. WCR-905	NESW to Low. Containment Vent #2	≤10
	15. WCR-907	NESW from Low. Containment Vent #2	≤10
	16. WCR-909	NESW to Low. Containment Vent #3	≤10
	17. WCR-911	NESW from Low. Containment Vent #3	≤10
	18. WCR-913	NESW to Low. Containment Vent #4	≤10
	19. WCR-915	NESW from Low Containment Vent #4	≤10
	20. WCR-921	NESW to Up. Containment Vent #1	≤10
	21. WCR-923	NESW from Up. Containment Vent #1	≤10
	22. WCR-925	NESW to Up. to Containment Vent #2	≤10
	23. WCR-927	NESW from Up. Containment Vent #2	≤10

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>B. PHASE "B" ISOLATION (Continued)</u>		
24. WCR-929	NESW to Up. Containment Vent #3	≤10
25. WCR-931	NESW from Up. Containment Vent #3	≤10
26. WCR-933	NESW to Up. Containment Vent #4	≤10
27. WCR-935	NESW from Up. Containment Vent #4	≤10
28. WCR-941	NESW to RCP Motor Air Cooler	≤10
29. WCR-942	NESW to RCP Motor Air Cooler	≤10
30. WCR-943	NESW to RCP Motor Air Cooler	≤10
31. WCR-944	NESW to RCP Motor Air Cooler	≤10
32. WCR-945	NESW from RCP Motor Air Cooler	≤10
33. WCR-946	NESW from RCP Motor Air Cooler	≤10
34. WCR-947	NESW from RCP Motor Air Cooler	≤10
35. WCR-948	NESW from RCP Motor Air Cooler	≤10
36. WCR-951	NESW to RCP Motor Air Cooler Vent #1	≤10
37. WCR-952	NESW to RCP Motor Air Cooler Vent #2	≤10
38. WCR-953	NESW to RCP Motor Air Cooler Vent #3	≤10
39. WCR-954	NESW to RCP Motor Air Cooler Vent #4	≤10

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TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>		<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>B. PHASE "B" ISOLATION (Continued)</u>			
D. C. COOK UNIT 2	40. WCR-955	NESW from RCP Motor Air Cooler Vent #1	≤10
	41. WCR-956	NESW from RCP Motor Air Cooler Vent #2	≤10
	42. WCR-957	NESW from RCP Motor Air Cooler Vent #3	≤10
	43. WCR-958	NESW from RCP Motor Air Cooler Vent #4	≤10
	44. WCR-961	NESW to Instr. Rm. East Vent	≤10
	45. WCR-963	NESW from Instr. Rm. West Vent	≤10
	46. WCR-965	NESW to Instr. Rm. East Vent	≤10
	47. WCR-967	NESW from Instr. Rm. West Vent	≤10
	48. WCR-900	NESW to RCP Lower Containment Vent #1	≤10
	49. WCR-902	NESW from Lower Containment Vent #1	≤10
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	51. WCR-906	NESW from Lower Containment Vent #2	≤10
	52. WCR-908	NESW to RCP Lower Containment Vent #3	≤10
	53. WCR-910	NESW from Lower Containment Vent #3	≤10
	54. WCR-912	NESW to RCP Lower Containment Vent #4	≤10
	55. WCR-914	NESW from Lower Containment Vent #4	≤10

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TABLE 3.6-1 (Continued)
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>E. OTHER (Continued)</u>		
5. SI-189	R. C. Relief Valve Vent Hole	NA
6. PA-342	Service Air to Containment	NA
7. NPX-151 VI	Dead Weight Calibrator	NA
8. N-160	N ₂ to R. C. Drain Tank	NA
9. SM-1	Air Particle/Radio Gas Detect Return	NA
10. N-102	N ₂ To Accumulators	NA
11. SI-171	Safety Injection Test Line	NA
12. SI-172	Safety Injection Test Line	NA
13. SI-194	Safety Injection Test Line	NA
14. PW-275	Primary Wtr. to Pre. Relief Tank	NA
15. CS-321	R.C.S. Charging	NA

TABLE 3.6-1 (Continued)
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>E. OTHER (Continued)</u>		
16. SF-152	Refueling Wtr. to Refuel Cavity	NA
17. SF-154	Refueling Wtr. to Refuel Cavity	NA
18. SF-159	Refueling Cavity Drain	NA
19. SF-160	Refueling Cavity Drain	NA
20. N-159	N ₂ to Prz. Relief Tank	NA
21. CCW-135	CCW to Reactor Supports	NA
22. CA-181-N	Weld Channel Supply Air	NA
23. CA-181-S	Weld Channel Supply Air	NA
24. SM-8*	Upper Cont. Grab Sample	NA
25. SM-10*	Upper Cont. Grab Sample	NA

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TABLE 3.6-1 (Continued)
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>ISOLATION TIME IN SECONDS</u>
<u>E. OTHER (Continued)</u>		
26. PPP-300	Instrument Penetration	NA
27. PPP-301	Instrument Penetration	NA
28. PPP-302	Instrument Penetration	NA
29. PPP-303	Instrument Penetration	NA
30. PPA-310 and PPA-311	Instrument Penetration	NA
31. PPA-312 and PPA-313	Instrument Penetration	NA
32. Blind Flange	Fuel Transfer Penetration	NA
33. Blind Flange	Ice Condenser Ice Supply	NA
34. Blind Flange	Ice Condenser Ice Return	NA
35. Blind Flange	In-Core Flux Thimble Access	NA