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TABLE 3.6-1  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
A. PHASE "A" ISOLATION		
1. MOV-2380	Reactor Coolant Pump Seal Water Return	10
2. MOV-2381	Reactor Coolant Pump Seal Water Return	10
3. HCV-2200A	Reactor Coolant Letdown Line	10
4. HCV-2200B	Reactor Coolant Letdown Line	10
5. HCV-2200C	Reactor Coolant Letdown Line	10
6. TV-2204	Reactor Coolant Letdown Line	10
7. TV-SI200	Nitrogen to Pressurizer Relief Tank and SI Accumulators	60
8. TV-DG200A	Primary Drains Transfer Tank Pump Discharge	60
9. TV-DG200B	Primary Drains Transfer Tank Pump Discharge	60
10. TV-DA200A	Containment Sump Pump Discharge to Waste Drain Tanks	60
11. TV-DA200B	Containment Sump Pump Discharge to Waste Drain Tanks	60
12. TV-BD200A	Steam Generator Blowdown	60
13. TV-BD200B	Steam Generator Blowdown	60
14. TV-BD200C	Steam Generator Blowdown	60

TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
15. TV-BD200D	Steam Generator Blowdown	60
16. TV-BD200E	Steam Generator Blowdown	60
17. TV-BD200F	Steam Generator Blowdown	60
18. TV-RM200A	Air Radiation Monitor Return	60
19. TV-RM200D#	Air Radiation Monitor Return	60
20. TV-RM200B	Air Radiation Monitor Supply	60
21. TV-RM200C	Air Radiation Monitor Supply	60
22. TV-2519A	Primary Grade Water	10
23. TV-VG200A	Primary Vent Header	60
24. TV-VG200B	Primary Vent Header	60
25. TV-SI201	Safety Injection Accumulators to Waste Gas Charcoal Filters	60
26. HCV-2936	Safety Injection Accumulators to Waste Gas Charcoal Filters	10
27. TV-SS204A	Pressurizer Relief Tank Sample	60
28. TV-SS204B	Pressurizer Relief Tank Sample	60
29. TV-SS200A	Pressurizer Liquid Space Sample	60
30. TV-SS200B	Pressurizer Liquid Space Sample	60
31. TV-SS206A	Primary Coolant Hot Leg Sample	60
32. TV-SS206B	Primary Coolant Hot Leg Sample	60

TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
33. TV-SS202A	Primary Coolant Cold Leg Sample	60
34. TV-SS202B	Primary Coolant Cold Leg Sample	60
35. TV-LM200A	Reactor Containment Leakage Monitoring Lines to Open Pressure Taps	60
36. TV-LM200B	Reactor Containment Leakage Monitoring Lines to Open Pressure Taps	60
37. TV-LM200C	Reactor Containment Leakage Monitoring Lines to Open Pressure Taps	60
38. TV-LM200D	Reactor Containment Leakage Monitoring Lines to Open Pressure Taps	60
39. TV-LM200E	Reactor Containment Leakage Monitoring Lines to Open Pressure Taps	60
40. TV-LM200F	Reactor Containment Leakage Monitoring Lines to Open Pressure Taps	60
41. TV-LM200G	Reactor Containment Leakage Monitoring Lines to Open Pressure Taps	60
42. TV-LM200H	Reactor Containment Leakage Monitoring Lines to Open Pressure Taps	60
43. TV-SS201A	Pressurizer Vapor Space Sample	60
44. TV-SS201B	Pressurizer Vapor Space Sample	60
45. TV-SV202-1#	Condenser Air Ejector Vent	60
46. TV-SV203	Condenser Air Ejector Vent	60

TABLE 3.6-1 (Cont.)

	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
47.	TV-CV250A	Containment Vacuum Pump Suction	60
48.	TV-CV250B	Containment Vacuum Pump Suction	60
49.	TV-CV250C	Containment Vacuum Pump Suction	60
50.	TV-CV250D	Containment Vacuum Pump Suction	60
51.	TV-SS203A	Residual Heat Removal System Sample Lines	60
52.	TV-SS203B	Residual Heat Removal System Sample Lines	60
53.	TV-LM201A	Reactor Containment Leakage Monitoring Lines to Reference System	60
54.	TV-LM201B	Reactor Containment Leakage Monitoring Lines to Reference System	60
55.	TV-LM201C	Reactor Containment Leakage Monitoring Lines to Reference System	60
56.	TV-LM201D	Reactor Containment Leakage Monitoring Lines to Reference System	60
57.	TV-2859	Safety Injection Test Line	10
58.	TV-2842	Safety Injection Test Line	10
59.	TV-SS212A	Steam Generator Surface Sample	60
60.	TV-SS212B	Steam Generator Surface Sample	60
61.	TV-MS209#	Main Steam Drains to Condenser	60
62.	TV-MS210#	Main Steam to Blowdown	60
63.	TV-SV202-2#	Condenser Air Ejector Vent	60
64.	FCV-AS200A#	Condenser Air Ejector Steam Supply	60
65.	FCV-AS200B#	Condenser Air Ejector Steam Supply	60

TABLE 3.6-1 (Cont.)

	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC)</u>
66.	TV-IA201A	Containment Instrument Air Supply	60
67.	TV-IA201B	Containment Instrument Air Supply	60
68.	TV-IA202A	Containment Instrument Air Return	60
69.	TV-IA202B#	Containment Instrument Air Return	60
70.	TV-DA203A	Post Accident Sample System Containment Return Line	60
71.	TV-DA203B	Post Accident Sample System Containment Return Line	60
B. PHASE "B" ISOLATION			
1.	TV-CC203A	Component Cooling Water from RHR System and Excess Letdown Heat Exchanger	60
2.	TV-CC203B	Component Cooling Water From RHR System and Excess Letdown Heat Exchanger	60
3.	TV-CC201A	Reactor Coolant Pump Thermal Barrier Cooling Water Return	60
4.	TV-CC201B	Reactor Coolant Pump Thermal Barrier Cooling Water Return	60

TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
5. TV-CC200A	Chilled Water From Containment Air Recirculation Coils	60
6. TV-CC200B	Chilled Water From Containment Air Recirculation Coils	60
7. TV-CC200C	Chilled Water From Containment Air Recirculation Coils	60
8. TV-CC205A	Chilled Water From Containment Air Recirculation Coils	60
9. TV-CC205B	Chilled Water From Containment Air Recirculation Coils	60
10. TV-CC205C	Chilled Water From Containment Air Recirculation Coils	60
11. TV-CC204A	Reactor Coolant Pumps, Cooling Water In	60
12. TV-CC204B	Reactor Coolant Pumps, Cooling Water In	60
13. TV-CC204C	Reactor Coolant Pumps, Cooling Water In	60
14. TV-CC202A	Reactor Coolant Pumps and Shroud Cooling Cooling Water Out	60
15. TV-CC202B	Reactor Coolant Pumps and Shroud Cooling, Cooling Water Out	60
16. TV-CC202C	Reactor Coolant Pumps and Shroud Cooling, Cooling Water Out	60

TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
17. TV-CC202D	Reactor Coolant Pumps and Shroud Cooling, Cooling Water Out	60
18. TV-CC202E	Reactor Coolant Pumps and Shroud Cooling, Cooling Water Out	60
19. TV-CC202F	Reactor Coolant Pumps and Shroud Cooling, Cooling Water Out	60
20. TV-BD200A	Steam Generator Blowdown	60
21. TV-BD200B	Steam Generator Blowdown	60
22. TV-BD200C	Steam Generator Blowdown	60
23. TV-BD200D	Steam Generator Blowdown	60
24. TV-BD200E	Steam Generator Blowdown	60
25. TV-BD200F	Steam Generator Blowdown	60
C. CONTAINMENT PURGE AND EXHAUST (VENTILATION DUCTS)		
1. MOV-HV200A*	Purge Supply	NA
2. MOV-HV200B*	Purge Supply	NA
3. MOV-HV202*	Alternate Supply	NA
4. MOV-HV200C*	Purge Exhaust	NA
5. MOV-HV200D*	Purge Exhaust	NA
6. MOV-HV201*	Bypass	NA

TABLE 3.6-1 (cont.)

	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
D.	MANUAL		
1.	2-SI-47*	Safety Injection Accumulator Make Up	NA
2.	2-RH-38*	Residual Heat Removal System to Refueling Water Storage Tank	NA
3.	2-RH-37*	Residual Heat Removal System to Refueling Water Storage Tank	NA
4.		(Deleted)	
5.		(Deleted)	
6.		(Deleted)	
7.		(Deleted)	
8.	2-DA-7*	Primary Vent Pot Vent	NA
9.	2-DA-9*	Primary Vent Pot Vent	NA
10.	2-CH-233#*	Reactor Coolant Pump Seal Water Supply	NA
11.	2-CH-237#*	Reactor Coolant Pump Seal Water Supply	NA



TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
12. 2-CH-241#*	Reactor Coolant Pump Seal Water Supply	NA
13. 2-SA-65*	Service Air	NA
14. 2-SA-123*	Service Air	NA
15. (Deleted)		
16. NA*#	Fuel Transfer Tube (Penetration #65)	NA
17. 2-CV-4*	Air Ejector Suction	NA
18. 2-RC-143*	Dead Weight Pressure Calibrator	NA
19. 2-RC-145*	Dead Weight Pressure Calibrator	NA
20. 1-RP-84*	Refueling Purification Outlet	NA
21. 2-RP-7*	Refueling Purification Outlet	NA
22. 2-RP-6*	Refueling Purification Inlet	NA
23. 1-RP-50*	Refueling Purification Inlet	NA
24. (Deleted)		
25. (Deleted)		
26. (Deleted)		
27. 2-WT-437*	Steam Generator Wet Layup	NA
28. 2-WT-438*	Steam Generator Wet Layup	NA
29. 2-WT-439*	Steam Generator Wet Layup	NA
30. 2-WT-446*	Steam Generator Wet Layup	NA

TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
31. 2-WT-447*	Steam Generator Wet Layup	NA
32. 2-WT-448*	Steam Generator Wet Layup	NA
33. 2-SI-83*	High Head Safety Injection, (Boron Injection Tank Bypass)	NA
34. NA*	Fire Protection Supply (Penetration 34)	NA
E. REMOTE MANUAL		
1. MOV-QS201A*	Quench Spray Pump Discharge	NA
2. MOV-QS201B*	Quench Spray Pump Discharge	NA
3. MOV-RS255A#*	Recirc. Spray Pump Suction	NA
4. MOV-RS255B#*	Recirc. Spray Pump Suction	NA
5. MOV-2860A#*	LHSI Pump Suction From Containment Sump	NA
6. MOV-2860B#*	LHSI Pump Suction From Containment Sump	NA
7. MOV-RS256A*	Recirculation Spray Pump Discharge	NA
8. MOV-RS256B*	Recirculation Spray Pump Discharge	NA
9. MOV-SW203A*	Service Water to Recirculation Spray Coolers	NA
10. MOV-SW203B*	Service Water to Recirculation Spary Coolers	NA
11. MOV-SW203C*	Service Water to Recirculation Spray Coolers	NA
12. MOV-SW203D*	Service Water to Recirculation Spray Coolers	NA
13. MOV-SW204A*	Service Water from Recirculation Spray Coolers	NA

TABLE 3.6-1 (Cont.)

	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
14.	MOV-SW204B*	Service Water from Recirculation Spray Coolers	NA
15.	MOV-SW204C*	Service Water from Recirculation Spray Coolers	NA
16.	MOV-SW204D*	Service Water from Recirculation Spray Coolers	NA
17.	TV-CV200*	Containment Air Ejector Suction	NA
18.	MOV-2869A*	High Head Safety Injection to RCS Except Boron Injection Line	NA
19.	MOV-2836*	High Head Safety Injection to RCS Except Boron Injection Line	NA
20.	MOV-2869B*	High Head Safety Injection to RCS Except Boron Injection Line	NA
21.	HCV-2142*	Reactor Coolant Letdown Line From RHR System	NA
22.		(Deleted)	
23.		(Deleted)	
24.	MOV-2890A*	LHSI Pump Discharge to Reactor Coolant System Hot Legs	NA
25.	MOV-2890B*	LHSI Pump Discharge to Reactor Coolant System Hot Legs	NA
26.	MOV-2890C*	LHSI Pump Discharge to Reactor Coolant System Cold Legs	NA

TABLE 3.6-1 (Cont.)

	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
27.	MOV-2890D*	LHSI Pump Discharge to Reactor Coolant System Cold Legs	NA
28.	FCV-2160*	Loop Fill Header	NA
29.	MOV-2289A*	Charging Line	NA
30.	MOV-2867C*	High Head Safety Injection, Boron Injection Tank	NA
31.	MOV-2867D*	High Head Safety Injection, Boron Injection Tank	NA
32.	MOV-RS-200A*	Casing Cooling to Outside Recirculation Spray Pump	NA
33.	MOV-RS-200B*	Casing Cooling to Outside Recirculation Spray Pump	NA
34.	MOV-RS-201A*	Casing Cooling to Outside Recirculation Spray Pump	NA
35.	MOV-RS-201B*	Casing Cooling to Outside Recirculation Spray Pump	NA
36.	TV-HC-208A	Containment Atmosphere Sample Line	NA
37.	TV-HC-208B	Containment Atmosphere Sample Line	NA
38.	TV-HC-200A	Suction Hydrogen Analyzer	NA
39.	TV-HC-200B	Suction Hydrogen Analyzer	NA
40.	TV-HC-201A	Discharge Hydrogen Analyzer	NA
41.	TV-HC-201B	Discharge Hydrogen Analyzer	NA
42.	TV-HC-202A	Suction Hydrogen Analyzer	NA
43.	TV-HC-202B	Suction Hydrogen Analyzer	NA
44.	TV-HC-203A	Discharge Hydrogen Analyzer	NA

TABLE 3.6-1 (Cont.)

	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
45.	TV-HC-203B	Discharge Hydrogen Analyzer	NA
46.	TV-HC-204A	Suction Hydrogen Recombiner	NA
47.	TV-HC-204B	Suction Hydrogen Recombiner	NA
48.	TV-HC-205A	Discharge Hydrogen Recombiner	NA
49.	TV-HC-205B	Discharge Hydrogen Recombiner	NA
50.	TV-HC-206A	Suction Hydrogen Recombiner	NA
51.	TV-HC-206B	Suction Hydrogen Recombiner	NA
52.	TV-HC-207A	Discharge Hydrogen Recombiner	NA
53.	TV-HC-207B	Discharge Hydrogen Recombiner	NA
F. CHECK			
1.	2-CC-194	Component Cooling Water to RHR System and Excess Letdown Heat Exchanger	NA
2.	2-CC-199	Component Cooling Water to RHR System and Excess Letdown Heat Exchanger	NA
3.	2-SI-93	High Head Safety Injection, Boron Injection to RCS	NA
4.	2-CC-302	Component Cooling Water to Containment Air Recirculation Coils	NA
5.	2-CC-289	Component Cooling Water to Containment Air Recirculation Coils	NA

TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
6. 2-CC-276	Component Cooling Water to Containment Air Recirculation Coils	NA
7. 2-CH-335	Charging Line	NA
8. 2-CC-152	Component Cooling Water to Reactor Coolant Pumps	NA
9. 2-CC-115	Component Cooling Water to Reactor Coolant Pumps	NA
10. 2-CC-78	Component Cooling Water to Reactor Coolant Pumps	NA
11. 2-CH-331	Reactor Coolant Pumps, Seal Water Return	NA
12. 2-SI-136	Safety Injection Accumulator Make Up	NA
13. 2-SI-85	High Head Safety Injection to RCS except Boron Injection Line	NA
14. 2-HC-20	Discharge From Containment Atmosphere Clean-up System	NA
15. 2-HC-15	Discharge From Containment Atmosphere Clean-up System	NA
16. 2-CH-308#	Reactor Coolant Pump Seal Water Supply	NA
17. 2-CH-260#	Reactor Coolant Pump Seal Water Supply	NA
18. 2-CH-284#	Reactor Coolant Pump Seal Water Supply	NA
19. 2-IA-428	Air Radiation Monitor Return	NA
20. 2-RC-162	Primary Grade Water	NA
21. 2-CH-332	Loop Fill Header	NA
22. 2-IA-250	Containment Instrument Air Return	NA

TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
23. 2-SI-132	Nitrogen to Pressurizer Relief Tank and SI Accumulators	NA
24. 2-SI-126	LHSI Pump Discharge to Reactor Coolant System Hot Legs	NA
25. 2-SI-128	LHSI Pump Discharge to Reactor Coolant System Hot Legs	NA
26. 2-SI-91	LHSI Pump Discharge to Reactor Coolant System Cold Legs	NA
27. 2-SI-99	LHSI Pump Discharge to Reactor Coolant System Cold Legs	NA
28. 2-SI-105	LHSI Pump Discharge to Reactor Coolant System Cold Legs	NA
29. 2-QS-2 <sup>9</sup> **	Quench Spray Pump Discharge	NA
30. 2-QS-11**	Quench Spray Pump Discharge	NA
31. 2-RS-30**	Recirculation Spray Pump Discharge	NA
32. 2-RS-20**	Recirculation Spray Pump Discharge	NA
33. 2-VP-24	Air Ejector Vent	NA
34. 2-SI-119	High Head Safety Injection to RCS Except Boron Injection Line	NA
35. 2-SI-107	High Head Safety Injection to RCS Except Boron Injection Line	NA
36. 2-FW-62#	Feedwater to Steam Generators	NA



TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
37. 2-FW-94#	Feedwater to Steam Generators	NA
38. 2-FW-126#	Feedwater to Steam Generators	NA
39. 2-WT-41#	Chemical Feed Lines	NA
40. 2-WT-53#	Chemical Feed Lines	NA
41. 2-WT-69#	Chemical Feed Lines	NA
42. 2-FW-70#	Auxiliary Feedwater to Steam Generator	NA
43. 2-FW-102#	Auxiliary Feedwater to Steam Generator	NA
44. 2-FW-134#	Auxiliary Feedwater to Steam Generator	NA
45. 2-RS-103#	Casing Cooling to Outside Recirculation Spray Pump	NA
46. 2-RS-118#	Casing Cooling to Outside Recirculation Spray Pump	NA
47. NA	Fire Protection Supply (Penetration 34)	NA



TABLE 3.6-1 (Cont.)

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC.)</u>
G. STEAM LINE ISOLATION		
1. TV-MS201A#	Main Steam Line Trip Valve	5
2. TV-MS201B#	Main Steam Line Trip Valve	5
3. TV-MS201C#	Main Steam Line Trip Valve	5
H. RELIEF		
1. RV-2203	Letdown Line Relief Valve	NA

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# Valve not subject to Type "C" leakage test.

\* Valve position maintained by administrative control

NA - Not applicable

\*\* Weight loaded check valve

ATTACHMENT 2

## DISCUSSION OF PROPOSED TECHNICAL SPECIFICATION CHANGE

The proposed Technical Specification Change reflects a revision to Technical Specification 3/4.6.3.1, Table 3.6-1 to reflect the addition and deletion of containment isolation valves.

The addition of one direct-acting solenoid valve (TV-SS203A) is being used to replace two air-operated trip valves (TV-SS207A and TV-SS207B) to improve post-accident sampling capabilities. The double isolation direct-acting solenoid valve is being installed to insure more reliable operation during accident conditions.

The addition of two air-operated trip valves (TV-DA203A and TV-DA203B) are being installed on the sample return line for the Post-Accident Sampling System in order to reduce radiation levels outside the containment when post-accident samples are being withdrawn from the reactor coolant system and containment sump. These valves will be normally closed and receive a Phase A signal to assure they are tripped closed on a safety injection signal.

The replacement of four manual valves (2-HC-13, 2-HC-29, 2-HC-18 and 2-HC-33) with sixteen remote operated manual valves (HC series valves) and the addition of remote manually operated double barrier isolation valves decreases personnel exposure to put the hydrogen analyzer and hydrogen recombiner into service and it also provides the capability of double isolation between containment atmosphere and all other systems.

The probability of occurrence or the consequences of a malfunction of equipment important to safety and previously evaluated in the FSAR is not increased because sampling system valve additions are designed consistent with codes and standards of the existing system and the replacement of containment isolation valves and the addition of double barrier isolation valves will maintain containment isolation capabilities.

The possibility of a different type of accident or malfunction than was previously evaluated in the FSAR has not been created because the sampling system valve additions do not change the characteristics of any system in operation during reactor operation and the containment atmospheric cleanup system is designed to Seismic Class 1 and single failure criteria.

The margin of safety as described in the BASIS section of any part of the Technical Specifications is not reduced because the upgrade and installation of containment isolation valves satisfies the seismic design criteria for safety related systems and continues to provide containment isolation integrity.