TABLE 5.2-3
(Sheet 1 of 9)

CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

FIGURE NO.	SERVICE AND PENETRATION	VALVE ID or CLOSED SYSTEM	PENET CLASS (1)	VALVE TYPE	OPER. TYPE	PWR. FAIL POSITION	CONT. ISOL. TRIP	POSITION INDIC. CONT. RM	FLUID GAS / WTR.	PENETR. DESIGN (25)	NORM. POSITION	SHUT-DOWN POSITION	POST ACCID. POSITION	POST ACCID. USAGE	SEALING METHOD	MIN. TEST PRESS. (psig)	TEST FLUID (16)
5.2-1	PRESSURIZER RELIEF TANK TO GAS ANALYZER Penetration "V"	RC-AOV-549 RC-AOV-548	1	GLOBE GLOBE	AIR AIR	FC FC	T T	Yes Yes	G	H	C C	O O	C C	No No	Water (A)(4) Water (A)(4)	47	W W
5.2-1	PRESSURIZER RELIEF TANK N_2 SUPPLY Penetration "Y"	RC-518 RC-AOV-550	3	CHECK DIA.	- AIR	- FC	- T	No Yes	G	C	- O	- O	- C	No No	- -	43	G G
5.2-1	PRESSURIZER RELIEF TANK MAKE-UP Penetration "Y"	RC-AOV-552 RC-AOV-519	3	DIA. DIA.	AIR AIR	FC FC	T T	Yes Yes	W	C	C(9) C(9)	C C	C C	No No	Water (A)(4) Water (A)(4)	47	W W
5.2-2	RESIDUAL HEAT REMOVAL RETURN Penetration "J"	AC-741 AC-MOV-744	6	CHECK DDV	- MOTOR	- FAI	- -	No Yes	W	H	- O(8)	- O	- O	No Yes	(5) Nitro(M)(32)	N/A 43 (15)	N/A N
5.2-2	RESID. HEAT REMOVAL LOOP TO SI PUMPS Penetration "QQ"	SI-MOV-888A SI-MOV-888B CS	6	DDV DDV -	MOTOR MOTOR -	FAI FAI -	- - -	Yes Yes	W	H	C(8) C(8)	LC(28) LC(28)	O O	Yes Yes	Nitro(M)(31) Nitro(M)(31)	N/A	N/A N/A
5.2-2	RESID. HEAT REMOVAL LOOP TO SAMPLING SYS. Penetration "QQ"	SP-AOV-958 SP-AOV-959 SP-990C	6	GLOBE GLOBE GLOBE	AIR AIR MANUAL	FC FC -	T T -	Yes Yes No	W	H	C C LC(8)	C(12) C(12) C(12)	C(12) C(12) C(12)	No(12) No(12) No(12)	Nitro(M)(32) Nitro(M)(32) Nitro(M)(32)	50	N N N
5.2-2	RESID. HEAT REMOVAL LOOP TO RHR PUMP MINIFLOW Penetration "QQ"	AC-MOV-1870 AC-MOV-743	6	GLOBE GATE	MOTOR MOTOR	FAI FAI	- -	Yes Yes	W	H	LTh(8) O(8)	LTh O	O O	Yes Yes	Nitro(M)(32) Nitro(M)(32)	50	N N
5.2-2	RESID. HEAT REMOVAL LOOP OUT Penetration "K"	AC-732	6	DDV	MANUAL	-	-	No	W	H	LC(8)	O	C	No	Nitro. (M)(32)	50 (15)	N
5.2-2	CONTAINMENT SUMP RECIRC. LINE Penetration "OO"	SI-MOV-885A SI-MOV-885B	5	DDV(23) DDV(23)	MOTOR MOTOR	FAI FAI	- -	Yes Yes	W	H	C(8) C(8)	C LC(28)	C(18) C(18)	No(18) No(18)	(5) (5)	N/A	N/A N/A
5.2-3	LETDOWN LINE Penetration "X"	CH-AOV-201 CH-AOV-202 CS	1	GLOBE GLOBE -	AIR AIR -	FC FC -	T T -	Yes Yes -	W	H	O O	C(9) C(9)	C C	No No	Water (A)(4) Water (A)(4)	47	W W
5.2-3	CHARGING LINE Penetration "R"	CH-MOV-205 CH-MOV-226 CH-227 CS	3	GATE GATE GLOBE -	MOTOR MOTOR MANUAL -	FAI FAI - -	- - - -	No No No -	W	C	O(8) O(8) LC(8)	C(9) C(9) C	C C C	No No No	Water(M)(4) Water(M)(4) Water(M)(4)	47	W W W
5.2-4	REACTOR COOLANT PUMP SEAL WATER SUPPLY LINES Penetration "Z"	CH-MOV-250A CH-MOV-250B CH-MOV-250C CH-MOV-250D CH-MOV-441 CH-MOV-442 CH-MOV-443 CH-MOV-444	3	GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE	MOTOR MOTOR MOTOR MOTOR MOTOR MOTOR MOTOR MOTOR	FAI FAI FAI FAI FAI FAI FAI FAI	- - - - - - - -	No No No No No No No No	W	C	O(8) O(8) O(8) O(8) O(8) O(8) O(8) O(8)	C(9) C(9) C(9) C(9) C(9) C(9) C(9) C(9)	C(11) C(11) C(11) C(11) C(11) C(11) C(11) C(11)	No(11) No(11) No(11) No(11) No(11) No(11) No(11) No(11)	Water(M)(4) Water M)(4) Water(M)(4) Water(M)(4) Water(M)(4) Water(M)(4) Water(M)(4) Water(M)(4)	47	W W W W W W W W

TABLE 5.2-3
(Sheet 2 of 9)
CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

FIGURE NO.	SERVICE AND PENETRATION	VALVE ID or CLOSED SYSTEM	PENET CLASS (1)	VALVE TYPE	OPER. TYPE	PWR. FAIL POSITION	CONT. ISOL. TRIP	POSITION INDIC. CONT. RM	FLUID GAS / WTR.	PENETR DESIGN (25)	NORM. POSITION	SHUT-DOWN POSITION	POST ACCID. POSITION	POST ACCID. USAGE	SEALING METHOD	MIN. TEST PRESS. (psig)	TEST FLUID (16)
5.2-4	REACTOR COOLANT PUMP SEAL WATER RETURN Penetration "R"	CH-MOV-222	2	DDV	MOTOR	FAI	P	Yes	W	C	O(11)	O	C(11)	No(11)	Water (M)(4)	47	W
5.2-5	REACTOR COOLANT SYSTEM SAMPLE LINES Penetration "W"	SP-AOV-956E SP-AOV-956F	1	GLOBE GLOBE	AIR AIR	FC FC	T T	Yes Yes	W	H	O O	C C	C C	No No	Water (A)(4) Water (A)(4)	47	W
5.2-5	FUEL TRANSFER TUBE Penetration "HH"	-	6	BLIND FLANGE (27)	-	-	-	-	W	H	-	-	-	-	(17)	-	-
5.2-6	CONTAINMENT SPRAY HEADERS Penetrations "GG" and "P"	SI-869A SI-869B SI-867A SI-867B SI-878A SI-878B	3	DDV DDV CHECK CHECK GLOBE GLOBE	MANUAL MANUAL - - MANUAL MANUAL	- - - - - -	- - - - - -	No No No No No No	W	C	LO(8) LO(8) - - LC(8) LC(8)	C C - - C C	O O - - C C	Yes Yes Yes Yes Yes Yes	Water(M)(4) Water(M)(4) - - - -	47 47 43 43 43 43	W W G G G G
5.2-7	SAFETY INJECTION HEADERS Penetrations "Q" and "NN"	SI-MOV-1835A SI-MOV-1835B SI-MOV-851A SI-MOV-850C SI-MOV-850A	3	DDV DDV DDV GATE GATE	MOTOR MOTOR MOTOR MOTOR MOTOR	FAI FAI FAI FAI FAI	S S - - -	Yes Yes Yes Yes Yes	W	H	O(8) O(8) O(8) LO(8) LO(8)	C C C C C	O(19) O(19) O(19) O(19) O(19)	Yes(33) Yes(33) Yes(19) Yes(19) Yes(19)	Nitro.(M)(33) Nitro.(M)(33) Water (M)(4) Water (M)(4) Water (M)(4)	N/A N/A 47 47 47	N/A N/A W W W
5.2-7	SAFETY INJECTION TEST Penetration "Y"	SI-859A SI-859C	5	GLOBE GLOBE	MANUAL MANUAL	- -	- -	No No	W	C	LC(8) LC(8)	C C	C C	No No	Water (A)(4) Water (A)(4)	47 47	W W
5.2-8	ACCUMULATOR NITROGEN SUPPLY Penetration "RR"	NNE-1610 NNE-AOV-863	5	CHECK GLOBE	- AIR	- FC	- T	No Yes	G	C	- C(9)	- C	- C	No No	- -	43 43	G G
5.2-8	ACCUMULATOR SAMPLE Penetration "RR"	SP-AOV-956G SP-AOV-956H	2	GLOBE GLOBE	AIR AIR	FC FC	T T	Yes Yes	W	C	C(12) C(12)	C C	C(12) C(12)	No(12) No(12)	Water (A)(4) Water (A)(4)	47 47	W W
5.2-9	PRIMARY SYSTEM VENT AND NITROGEN SUPPLY Penetration "V"	WD-AOV-1786 WD-AOV-1787 WD-AOV-1610 WD-1616	2 3	DIA DIA DIA. CHECK	AIR AIR AIR -	FC FC FC -	T T T -	Yes Yes Yes No	G	H	O(9) O(9) O -	C C O -	C C C -	No No No -	Water (A)(4) Water (A)(4) - -	47 47 43 43	W W G G
5.2-9	REACTOR COOLANT DRAIN TK. TO GAS ANALYZER Penetration "V"	WD-AOV-1788 WD-AOV-1789	2	DIA. DIA.	AIR AIR	FC FC	T T	Yes Yes	G	H	C(13) C(13)	O C(13)	C C	No No	Water (A)(4) Water (A)(4)	47 47	W W
5.2-9	RCDT PUMP DISCHARGE Penetration "Z"	WD-AOV-1702 WD-AOV-1705	2	DIA. DIA.	AIR AIR	FC FC	T T	Yes Yes	W	C	C(9) C(9)	O O	C C	No No	Water (A)(4) Water (A)(4)	47 47	W W
5.2-10	REACTOR COOLANT PUMP COOLING WATER IN Penetration "N"	AC-MOV-797 AC-MOV-769	3	GATE GATE	MOTOR MOTOR	FAI FAI	P P	Yes Yes	W	C	O(11) O(11)	C(11) C(11)	C(11) C(11)	No(11) No(11)	Water (M)(4) Water (M)(4)	47 47	W W

TABLE 5.2-3
(Sheet 3 of 9)
CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

FIGURE NO.	SERVICE AND PENETRATION	VALVE ID or CLOSED SYSTEM	PENET CLASS (1)	VALVE TYPE	OPER. TYPE	PWR. FAIL POSITION	CONT. ISOL. TRIP	POSITION INDIC. CONT. RM	FLUID GAS / WTR.	PENETR DESIGN (25)	NORM. POSITION	SHUT-DOWN POSITION	POST ACCID. POSITION	POST ACCID. USAGE	SEALING METHOD	MIN. TEST PRESS. (psig)	TEST FLUID (16)
5.2-10	REACTOR COOLANT PUMP COOLING WATER OUT 6" Penetration "O"	AC-MOV-784 AC-MOV-786	2	GATE GATE	MOTOR MOTOR	FAI FAI	P P	Yes Yes	W	C	O(11) O(11)	C(11) C(11)	C(11) C(11)	No(11) No(11)	Water (M)(4) Water (M)(4)	47 47	W W
5.2-10	REACTOR COOLANT PUMP COOLING WATER OUT 3" Penetration "O"	AC-FCV-625 AC-MOV-789	2	GATE GATE	MOTOR MOTOR	FAI FAI	P P	Yes Yes	W	C	O(11) O(11)	C(11) C(11)	C(11) C(11)	No(11) No(11)	Water (M)(4) Water (M)(4)	47 47	W W
5.2-11	RESIDUAL HEAT EXCHANGERS COOLING WATER IN Penetrations "KK" and "VV"	AC-751A AC-751B CS	4	CHECK CHECK -	- - -	- - -	- - -	No No -	W	C	- -	- -	- -	Yes Yes	- -	N/A N/A	N/A N/A
5.2-11	RESIDUAL HEAT EXCHANGERS COOLING WATER RETURN Penetrations "JJ" and "UU"	AC-MOV-822A AC-MOV-822B CS	4	GATE GATE -	MOTOR MOTOR -	FAI FAI -	S S -	Yes Yes -	W	C	C(8) C(8)	O O	O O	Yes Yes	- -	N/A N/A	N/A N/A
5.2-12	RECIRC. PUMP COOLING WATER SUPPLY Penetration "LL"	AC-752F AC-753F CS	4	GLOBE GLOBE -	MANUAL MANUAL -	- - -	- - -	No No -	W	C	O(8) O(8)	O O	O O	Yes Yes	- -	N/A N/A	N/A N/A
5.2-12	RECIRC. PUMP COOLING WATER RETURN Penetration "LL"	AC-752J AC-753J CS	4	GLOBE GLOBE -	MANUAL MANUAL -	- - -	- - -	No No -	W	C	O(8) O(8)	O O	O O	Yes Yes	- -	N/A N/A	N/A N/A
5.2-13	EXCESS LETDOWN HEAT EXCHANGER COOLING WATER IN Penetration "U"	AC-AOV-791 AC-AOV-798	4	DIA. DIA.	AIR AIR	FC FC	T T	Yes Yes	W	C	C(9) C(9)	O O	C C	No No	Water (A)(4) Water (A)(4)	47 47	W W
5.2-13	EXCESS LETDOWN HEAT EXCHANGER COOLING WATER OUT Penetration "R"	AC-AOV-796 AC-AOV-793	4	GLOBE DIA.	AIR AIR	FC FC	T T	Yes Yes	W	C	C(9) C(9)	O O	C C	No No	Water (A)(4) Water (A)(4)	47 47	W W
5.2-13	CONTAINMENT SUMP PUMP DISCHARGE Penetration "Y"	WD-AOV-1728 WD-AOV-1723	2	DIA. DIA.	AIR AIR	FC FC	T T	Yes Yes	W	C	O O	O O	C C	No No	Water (A)(4) Water (A)(4)	47 47	W W
5.2-14	CONTAINMENT AIR SAMPLE IN- RAD. MONITORING SYSTEM Penetration "RR"	VS-PCV-1234 VS-PCV-1235	6	DIA. DIA.	AIR AIR	FC FC	T T	Yes Yes	G	C	O O	O O	C(20) C(20)	No(20) No(20)	Air (A)(7) Air (A)(7)	43 43	G G
5.2-14	CONTAINMENT AIR SAMPLE OUT – RAD. MONITORING SYSTEM Penetration "RR"	VS-PCV-1236 VS-PCV-1237	6	DIA. DIA.	AIR AIR	FC FC	T T	Yes Yes	G	C	O O	O O	C(20) C(20)	No(20) No(20)	Air (A)(7) Air (A)(7)	43 43	G G
5.2-14	AIR EJECTOR DISCHARGE TO CONTAINMENT Penetration "R"	CA-PCV-1229 CA-PCV-1230	6	GLOBE GLOBE	AIR AIR	FC FC	T T	Yes Yes	G	C	C C	C C	C C	No No	Air (A)(7) Air (A)(7)	43 43	G G

TABLE 5.2-3
(Sheet 4 of 9)
CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

FIGURE NO.	SERVICE AND PENETRATION	VALVE ID or CLOSED SYSTEM	PENET CLASS (1)	VALVE TYPE	OPER. TYPE	PWR. FAIL POSITION	CONT. ISOL. TRIP	POSITION INDIC. CONT. RM	FLUID GAS / WTR.	PENETR DESIGN (25)	NORM. POSITION	SHUT-DOWN POSITION	POST ACCID. POSITION	POST ACCID. USAGE	SEALING METHOD	MIN. TEST PRESS. (psig)	TEST FLUID (16)
5.2-15	MAIN STEAM HEADERS Penetrations "A,B,C and D"	CS	7	-	-	-	-	-	G	H	-	-	(22)	Yes(22)	-	-	-
	MAIN STEAM TO AUX. FW PUMP TURBINE	CS	-	-	-	-	-	-	G		-	-	-	Yes	-	-	-
5.2-15	MAIN FEEDWATER HEADERS Penetrations "E,F,G and H"	CS	7	-	-	-	-	-	W	H	-	-	-	Yes	-	-	-
	AUXILIARY FW TURBINE DRIVEN	CS	-	-	-	-	-	-	W		-	-	-	Yes	-	-	-
	AUXILIARY FW MOTOR DRIVEN	CS	-	-	-	-	-	-	W		-	-	-	Yes	-	-	-
5.2-15	STEAM GENERATOR BLOWDOWN Penetrations "AA,BB, CC, and DD"	BD-PCV-1214	2	GLOBE	AIR	FC	T	Yes	W	H	O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1215		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1216		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1217		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1214A		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1215A		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1216A		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1217A		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
5.2-15	STEAM GENERATOR BLOWDOWN SAMPLE Four Lines @ Penetration "W"	BD-PCV-1223	2	GLOBE	AIR	FC	T	Yes	W	H	O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1224		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1225		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1226		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1223A		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1224A		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1225A		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
		BD-PCV-1226A		GLOBE	AIR	FC	T	Yes			O	C	C	No	Water (A)(4)	47	W
5.2-16	VENTILATION SYSTEM COOLING WATER IN Penetrations "La,Lb,Lc, Ld and Le"	SWN-41-1	4	BV	MANUAL	-	-	No	W	C	O(8)	O	O	Yes	(6)	47	W
		SWN-41-2		BV	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-41-3		BV	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-41-4		BV	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-41-5		BV	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-43-1		GATE	MANUAL	-	-	No			C(8)	C	C	No	(6)	47	W
		SWN-43-2		GATE	MANUAL	-	-	No			C(8)	C	C	No	(6)	47	W
		SWN-43-3		GATE	MANUAL	-	-	No			C(8)	C	C	No	(6)	47	W
		SWN-43-4		GATE	MANUAL	-	-	No			C(8)	C	C	No	(6)	47	W
		SWN-43-5		GATE	MANUAL	-	-	No			C(8)	C	C	No	(6)	47	W
		SWN-42-1		RV	-	-	-	No			-	-	-	-	(6)	47	W
		SWN-42-2		RV	-	-	-	No			-	-	-	-	(6)	47	W
		SWN-42-3		RV	-	-	-	No			-	-	-	-	(6)	47	W
		SWN-42-4		RV	-	-	-	No			-	-	-	-	(6)	47	W
		SWN-42-5		RV	-	-	-	No			-	-	-	-	(6)	47	W
		CS		-	-	-	-	-			-	-	-	-			

TABLE 5.2-3
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CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

FIGURE NO.	SERVICE AND PENETRATION	VALVE ID or CLOSED SYSTEM	PENET CLASS (1)	VALVE TYPE	OPER. TYPE	PWR. FAIL POSITION	CONT. ISOL. TRIP	POSITION INDIC. CONT. RM	FLUID GAS / WTR.	PENETR DESIGN (25)	NORM. POSITION	SHUT-DOWN POSITION	POST ACCID. POSITION	POST ACCID. USAGE	SEALING METHOD	MIN. TEST PRESS. (psig)	TEST FLUID (16)
5.2-16	VENTILATION SYSTEM COOLING WATER OUT Penetrations "Ma, Mb, Mc, Md, Me, and SS"	SWN-44-1		BV	MANUAL	-	-	No			LTh(8)	LTh	LTh	Yes	(6)	47	W
		SWN-44-2		BV	MANUAL	-	-	No	W	C	LTh(8)	LTh	LTh	Yes	(6)	47	W
		SWN-44-3		BV	MANUAL	-	-	No			LTh(8)	LTh	LTh	Yes	(6)	47	W
		SWN-44-4		BV	MANUAL	-	-	No			LTh(8)	LTh	LTh	Yes	(6)	47	W
		SWN-44-5		BV	MANUAL	-	-	No			LTh(8)	LTh	LTh	Yes	(6)	47	W
		SWN-51-1		GATE	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-51-2	4	GATE	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-51-3		GATE	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-51-4		GATE	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-51-5		GATE	MANUAL	-	-	No			O(8)	O	O	Yes	(6)	47	W
		SWN-71-1		GLOBE	MANUAL	-	-	No			Th(8)	Th	Th	Yes	(6)	47	W
		SWN-71-2		GLOBE	MANUAL	-	-	No			Th(8)	Th	Th	Yes	(6)	47	W
		SWN-71-3		GLOBE	MANUAL	-	-	No			Th(8)	Th	Th	Yes	(6)	47	W
		SWN-71-4		GLOBE	MANUAL	-	-	No			Th(8)	Th	Th	Yes	(6)	47	W
		SWN-71-5		GLOBE	MANUAL	-	-	No			Th(8)	Th	Th	Yes	(6)	47	W
		CS		-	-	-	-	-									
5.2-17	STATION AIR Penetration "Y"	SA-24-1	3	DIA.	MANUAL	-	-	No	G	C	LC(8)	LC(8)	LC	No	Water (A)(4)	47	W
		SA-24-2		DIA.	MANUAL	-	-	No			LC(8)	LC(8)	LC	No	Water (A)(4)	47	W
5.2-17	WELD CHANNEL PENETRATION PRESSURE SYSTEM Penetration "Y"	PS-PCV-1111-1	4	BALL	MANUAL	-	-	No			LO(8)	LO	LO	Yes	(17)	N/A	N/A
		PS-PCV-1111-2		BALL	MANUAL	-	-	No	G	C	LO(8)	LO	LO	Yes	(17)	N/A	N/A
		CS (inside)		-	-	-	-	-			-	-	-	-			
		CS (outside)		-	-	-	-	-			-	-	-	-			
5.2-19	PURGE SUPPLY DUCT VENTILATION Penetration "EE"	VS-FCV-1170	6	BV	AIR	FC	T (2)	Yes	G	C	C	O	C	No	Air (A)(7)	43	G
		VS-FCV-1171		BV	AIR	FC	T (2)	Yes			C	O	C	No	Air (A)(7)	43	G
5.2-19	PURGE EXHAUST DUCT VENTILATION Penetration "FF"	VS-FCV-1172	6	BV	AIR	FC	T (2)	Yes	G	C	C	O	C	No	Air (A)(7)	43	G
		VS-FCV-1173		BV	AIR	FC	T (2)	Yes			C	O	C	No	Air (A)(7)	43	G
5.2-19	CONTAINMENT PRESSURE RELIEF VENTILATION Penetration "PP"	VS-PCV-1190		BV	AIR	FC	T (2)	Yes	G	C	C(14)	C	C	No	Air (A)(7)	43	G
		VS-PCV-1191	6	BV	AIR	FC	T (2)	Yes			C(14)	C	C	No	Air (A)(7)	43	G
		VS-PCV-1192		BV	AIR	FC	T (2)	Yes			C(14)	C	C	No	Air (A)(7)	43	G
5.2-20	RECIRCULATION PUMP DISCHARGE SAMPLE LINE Penetration "TT"	SP-MOV-990A	6	GATE	MOTOR	FAI	-	No	W	C	LC(8)	C	LC (12)	No	Nitro(M)(32)	50	N
		SP-MOV-990B		GATE	MOTOR	FAI	-	No			LC(8)	C	LC (12)	No	Nitro(M)(32)	50	N
5.2-20	PRESSURIZER STEAM SAMPLE LINE Penetration "W"	SP-AOV-956A	1	GLOBE	AIR	FC	T	Yes	W	H	C	C	C	No	Water (A)(4)	47	W
		SP-AOV-956B		GLOBE	AIR	FC	T	Yes			C	C	C	No	Water (A)(4)	47	W
5.2-20	PRESSURIZER LIQUID SAMPLE LINE Penetration "W"	SP-AOV-956C	1	GLOBE	AIR	FC	T	Yes	W	H	C	C	C	No	Water (A)(4)	47	W
		SP-AOV-956D		GLOBE	AIR	FC	T	Yes			C	C	C	No	Water (A)(4)	47	W

TABLE 5.2-3
(Sheet 6 of 9)
CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

FIGURE NO.	SERVICE AND PENETRATION	VALVE ID or CLOSED SYSTEM	PENET CLASS (1)	VALVE TYPE	OPER. TYPE	PWR. FAIL POSITION	CONT. ISOL. TRIP	POSITION INDIC. CONT. RM	FLUID GAS / WTR.	PENETR DESIGN (25)	NORM. POSITION	SHUT-DOWN POSITION	POST ACCID. POSITION	POST ACCID. USAGE	SEALING METHOD	MIN. TEST PRESS. (psig)	TEST FLUID (16)
5.2-21	CONTAINMENT PRESSURE INSTRUMENTATION LINE Penetration "RR"	SI-1814A CS	6	GLOBE -	MANUAL -	- -	- -	No -	G	C	LO(8)	O	O	Yes	- -	(34)	N/A
5.2-21	CONTAINMENT PRESSURE INSTRUMENTATION LINE Penetration "LL"	SI-1814B CS	6	GLOBE -	MANUAL -	- -	- -	No -	G	C	LO(8)	O	O	Yes	- -	(34)	N/A
5.2-21	CONTAINMENT PRESSURE INSTRUMENTATION LINE Penetration "O"	SI-1814C CS	6	GLOBE -	MANUAL -	- -	- -	No -	G	C	LO(8)	O	O	Yes	- -	(34)	N/A
5.2-22	POST ACCIDENT CONTAINMENT SAMPLING SUPPLY AND RETURN LINES Penetrations "R, TT, LL, Z, and O"	SP-SOV-506 SP-SOV-507 SP-SOV-508 SP-SOV-512 SP-SOV-513 SP-SOV-511 SP-SOV-516 SP-SOV-509 SP-SOV-510 SP-SOV-514 SP-SOV-515	5	GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE GLOBE	SOL. SOL. SOL. SOL. SOL. SOL. SOL. SOL. SOL. SOL. SOL.	FC FC FC FC FC FC FC FC FC FC FC	T(10) T(10) T(10) T(10) T(10) T(10) T(10) T(10) T(10) T(10) T(10)	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	G	C	C(8) C(8) C(8) C(8) C(8) C(8) C(8) C(8) C(8) C(8) C(8)	C C C C C C C C C C C	C(12) C(12) C(12) C(12) C(12) C(12) C(12) C(12) C(12) C(12) C(12)	Yes (12) Yes (12) Yes (12) Yes (12) Yes (12) Yes (12) Yes (12) Yes (12) Yes (12) Yes (12) Yes (12)	Air (A)(7) Air (A)(7) Air (A)(7) Air (A)(7) Air (A)(7) Air (A)(7) Air (A)(7) Air (A)(7) Air (A)(7) Air (A)(7) Air (A)(7)	43 43 43 43 43 43 43 43 43 43 43	G G G G G G G G G G G
-	CONTAINMENT SUMP RECIRCULATION (SPARE) Penetration "O_1 O_1"	CS (3)	6	-	-	-	-	-	-	C	-	-	-	-	(17)	-	-
5.2-25	INSTRUMENT AIR – P. A. VENTING SYSTEM SUPPLY Penetration "Y"	IA-39 IA-PCV-1228	6	CHECK DIA.	- AIR	- FC	- T	No Yes	G	C	- O	- O	- C (24)	No No (24)	- -	43 43	G G
5.2-25	POST ACCIDENT VENTING SYSTEM EXHAUST LINE Penetration "LL" (Retired)	CS(3)	-	-	-	-	-	-	G	C	-	-	-	No	(17)	-	-
5.2-26	CONTAINMENT LEAK TEST INSTRUMENT SENSOR LINE Three lines @ Penetration "RR"	CS (3)	-	-	-	-	-	-	G	C	-	-	-	No	(17)	-	-
5.2-26	CONTAINMENT LEAK TEST AIR LINE Penetrations "XX and YY"	CS (3)	6	-	-	-	-	-	G	C	-	(30)	-	No	(17)	-	-
5.2-27	EQUIPMENT ACCESS	CB-7 CB-8 CB-5 CB-6	6	BALL BALL CHECK(26) CHECK(26)	MANUAL MANUAL - -	- - - -	- - - -	(29)	G	C	C(8) C(8) - -	C C - -	C C – -	No No	(17) (17) - -	43 43 43 43	G G G G
5.2-27A	PERSONNEL AIR LOCK	CB-3 CB-4 CB-1 CB-2	6	BALL BALL CHECK(26) CHECK(26)	MANUAL MANUAL - -	- - - -	- - - -	(29)	G	C	C(8) C(8) - -	C C - -	C C - -	No No	(17) (17) - -	43 43 43 43	G G G G
5.2-28	DEMIN. WTR. INTO CONTAINMENT Penetration "Y"	DW-AOV-1 DW-AOV-2	6	PLUG PLUG	AIR AIR	FC FC	T T	Yes Yes	W	C	C C	C(21) C(21)	C C	No No	Water (A)(4) Water (A)(4)	47 47	W W

TABLE 5.2-3
(Sheet 7 of 9)
CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

ABBREVIATIONS:

A	Automatic
AMB	Ambient
BV	Butterfly Valve
C	Cold
CS	Closed System
COL	Check Off List
DDV	Double Disc Gate Valve
DIA	Diaphragm Valve
FAI	Fail As Is
FC	Fail Closed
FO	Fail Open
G	Gas
H	Hot
LC	Locked Closed
LO	Locked Open
LTh	Locked Throttled
M	Manual
N	Nitrogen
POP	Plant Operating Procedures
P	Containment Isolation Signal Phase B
T	Containment Isolation Signal Phase A
Th	Throttled
RV	Relief Valve
S	Safety Injection Signal (Opens valves on SI signal)
SOP	System Operating Procedures
SOL	Solenoid Operated Valves
W	Water

TABLE 5.2-3
(Sheet 8 of 9)
CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

DEFINITIONS:

NORMAL POSITION: Defined as RCS operation above 200^0F to Full Power. Valve positions as defined by POP's, SOP's, and COL's

SHUTDOWN POSITION: Defined as RCS 200^0F and below, not in refueling and not at reduced inventory. Valve positions as defined by POP's and SOP's.

POST ACCIDENT POSITION: Defined as SI with Phase A and B isolation. Note: valve position may differ based on the accident in progress (i.e. phase B may not be required).

POST ACCIDENT USAGE: Defined as Design Basis Accident valve usage based on position during long term recirculation, assuming no failures. Note: valve position may differ based on the accident in progress, equipment failure, and recommendations during the recovery phase.

NOTES:

1.Penetration class is described in subsection 5.2.2.	**16**. Test Fluid "G" signifying Gas indicates either air or nitrogen as test medium.
2.Also tripped closed by high radiation in containment.	**17**. Seal air via WCCPP, continuously pressurized.
3.Penetration sealed at both ends.	**18.** May be opened Post Accident if normal path from recirc. pumps not available.
4. Sealed by Isolation Valve Seal Water System.	**19.** Valves may be closed Post Accident if not in service.
5. "Sealed" by Residual Heat Removal System or recirculation sump fluid. Not a "seal system" as defined in 10 CFR 50, Appendix J.	**20.** May be opened Post Accident when the containment pressure is below 5 psig.
6. "Sealed" by Service Water System fluid. Not a "seal system" as defined in 10 CFR 50, Appendix J. LLR testing is not required for Appendix J compliance but is required to limit in-leakage to the containment given a postulated breech of SWS integrity during the long-term recovery phase.	**21.** Valves may be opened for maintenance.
7. Sealed by Weld Channel and Containment Penetration Pressurization System.	**22.** Valves outside containment in these lines will automatically isolate for steamline break or Hi-Hi containment pressure.
8.Non-Automatic Containment Isolation Valves open continuously or intermittently for plant operation (under administrative control).	**23.** DDV modified due to press. locking to function as a std.gate valve. 885A upstream disc drilled with 3/16"dia. hole, 885B bonnet connection bypasses downstream disc.
9.Valves may be operated as required to support plant operation.	**24.** Valves may be opened intermittently during Post Accident venting.
10.These series valves have non-redundant phase A automatic signals and therefore are treated as non-automatic containment isolation valves.	**25.** Penetrations identified as H (hot) indicates designed with expansion bellows or expansion coil, C (cold) indicates designed without an expansion bellows or expansion coil.
11.Isolated when Reactor Coolant Pumps are stopped.	**26.** Spring-loaded check valves (pressure relieving).
12.Valves opened intermittently to take samples.	**27.** Flange is double gasketed type, located in refueling canal.
13.Valve opened periodically by the Gas Analyzer.	**28.** Necessary to LC & de-energize if AC-730 & 731 are de-energized open.
14.Opened intermittently for pressure relief.	**29.** Control Rm. Annunciator "Personnel hatches not shut" alarm indication provided.
15. Testable only at Cold Shutdown.	

TABLE 5.2-3
(Sheet 9 of 9)
CONTAINMENT PIPING PENETRATIONS AND VALVING

Numbers shown in brackets () refer to footnotes

NOTES:

30. A Seismic Class I QA Augmented Quality Related temporary fiber optic penetration flange (TFP) may be installed in cold shutdown / refueling conditions to satisfy containment isolation function for refueling operations.	
31. Once opened to facilitate high head or hot leg recirculation, valves would remain open unless closed to isolate a postulated passive failure during the long-term recovery phase. LLR testing is not required.	
32. LLR testing performed to verify adequacy of on-site nitrogen inventory. LLR is not required for Appendix J compliance.	
33. Valves remain open to facilitate high head or hot leg recirculation unless closed to isolate a postulated passive failure during the long-term recovery phase. LLR testing is not required.	
34. LLRT is not required. Valve / penetration is open during Type A ILR test.	