SALEM NUCLEAR GENERATING STATION

IST PROGRAM (PUMPS AND VALVES)

FOR UNIT NO. 2

SALEM NUCLEAR GENERATING STATION
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1. Part 1 - List of Affected Pages
2. Part 2 - Pump Testing Program
3. Part 3 - Valve Testing Program
4. Part 4 - Pipe Schedules (Classification)

Part 2

PUMP TESTING PROGRAM

The following pumps will be tested in accordance with Article IWP, Section XI of the ASME Boiler and Pressure Vessel Code:

PUMP		DRAWING NUMBER
Auxiliary Feed	21, 22, and 23	205236
Boric Acid Transfer	21 and 22	205228
Charging	23	205228
Charging & Safety Injection	21 and 22	205228 & 205234
Chilled Water	21 and 22	205216
Component Cooling	21, 22, and 23	205231
Containment Spray	21 and 22	205235
Fuel Oil Transfer Pump (See Relief Request)	21 and 22	205249
Lube Oil Pre-Circ Pump (See Relief Request)	2A, 2B, and 2C	205241
Residual Heat Removal	21 and 22	205232
Safety Injection	21 and 22	205234
Service Water	21, 22, 23, 24, 25 and 26	205242

Diesel Engine Auxiliaries Starting Air Motors

The following motors will be operated during the monthly diesel generator checks (per tech. spec.), to verify their ability to start the diesel generators, no additional testing will be done.

Motor		Drawing No.
Diesel Engine 2A Starting Air Motors	1,2,3 & 4	205241
Diesel Engine 2B Starting Air Motors	1,2,3 & 4	205241
Diesel Engine 2C Starting Air Motors	1,2,3 & 4	205241

Part 2

21 AND 22 FUEL OIL TRANSFER PUMPS
RELIEF REQUEST

Class

None

Function

The pumps transfer fuel from four 30,000 gallon storage tanks located on 84 ft. elevation of the auxiliary building to the diesel day tanks. The diesel to day tanks are located on 120 ft. elevation of the auxiliary building.

Test Requirements

ASME Section XI, Article IWP-3000 requires the measurement of inlet pressure, differential pressure, flow rate, vibration amplitude, and bearing temperature.

Basis for Relief

According to ASME Section XI, IWP-2111, a pump inservice test should determine the operational readiness of the pump. These tests are not designed to establish complete pump performance.

After reviewing the function of the pump, operational readiness can be determined by verifying that the pump can fill the day tank in the required time. Degradation of pump operation can be identified by monitoring pressure at the inlet of the day tank and an increase in the time to fill the day tank. Taking the bearing temperature will only verify the temperature of the working fluid.

Alternate Test Requirements

Measurement of inlet pressure on fuel oil transfer pump and discharge pressure at the inlet of day tanks. Flow rate will be determined by draining the tank to 33 inches and measuring time to fill the tank to a full level. Vibration measurements will be taken.

Part 2

2A, 2B, AND 2C LUBE OIL PRE-CIRC PUMPS
RELIEF REQUEST

Class

None

Function

When the diesel engine is not operating, the pump circulates oil to a heater and to engine parts. The coating of the parts with heated oil prevents unnecessary wear of engine parts. Also, the pump provides supplement to the main shaft driven lube oil pump, if main engine lube oil pressure falls below 60 psi.

Test Requirements

ASME Section XI, Article IWP-3000 requires the measurement of inlet pressure, differential pressure, flow rate, vibration amplitude, and bearing temperature. The NRC Safety Evaluation for Salem Unit 1 dated April 12, 1983, permits alternate testing too.

Basis for Relief

According to ASME Section XI, IWP-2111, a pump inservice test should determine the operational readiness of the pump. These tests are not designed to establish complete pump performance. Because the pump normally operates when the diesel engine is not running, the operational readiness of the pump can be determined by monitoring the lube oil header pressure and lube oil temperature. Any degradation of pump operation will be noticed by a decrease in pressure or an increase in oil temperature. Measurement of bearing temperature will only verify temperature of the working fluid. Additional instrumentation or monitoring will not significantly increase the evaluation of pump operational readiness.

Alternate Test Requirements

PSE&G will monitor the lube oil header pressure and lube oil temperature, which will verify proper operation of the pump and insure lubrication of parts. Vibration measurements will be taken.

Part 1

LIST OF AFFECTED PAGES
FOR IST PROGRAM REVISIONS

ITEM	PAGE NUMBER
1. Revision 1 dated 1/26/81	N/A
2. Revision 2 dated 12/18/85	2 - 8

Part 1

Item No. 2

List of Affected Pages
for the IST Revision of 12/18/85

1. All pages have been renumbered.

2. All Category "E" Valves have been deleted.

3. All systems and valves throughout the program were placed in alphabetical and numerical order.

4. Added the Remote position Indicator Verification test requirements No. 6 (Part 3, Page 4 of 105) to the following valves.

   NOTE: This test requirement was added to the IST program to provide a better method of identifying the valves that require this test. This test requirement was never originally included in the IST program.

21-24AF11	21&22CC16	2CC149	21&22CS2	2CV40	21&22CV160
21-24AF21	2CC30	2CC187	2CS16	2CV41	2CV175
21&22AF40	2CC31	2CC190	2CS17	2CV55	2CV181
21-23AF52	2CC113	2CC215	21&22CS36	2CV68	2CV284
	2CC117			2CV69	
21-24BF22	2CC118	2CH30	2CV3	2CV116	2DR29
	2CC131	2CH157	2CV4	2CV131	
21&22CA330	2CC136	2CH252	2CV5	2CV132	2FP147
		2CH253	2CV7	2CV134	

21-24GB4

21-24MS7
21-24MS10
21-24MS18
2MS52
21-24MS167
21-24MS168

2NT25
2NT32

2PR1
2PR2
2PR6
2WL1082PR7
2PR15
2PR17
2PR18

2RC40
2RC41
2RC42
2RC43

2RH1
2RH2
21&22RH4
21&22RH18
21&22RH19
2RH20
2RH26
21&22RH29

2SJ1
2SJ2
2SJ4
2SJ5
2SJ12
2SJ13
21&22SJ33
21&22SJ40
21&22SJ44
21&22SJ45
21&22SJ49
2SJ53
21-24SJ54
2SJ60
2SJ67
2SJ68
2SJ69
2SJ78
2SJ79
21-24SJ93
2SJ108
21&22SJ113
2SJ123
21&22SJ134
2SJ135

2SS27
2SS33
2SS49
2SS64
21-24SS93
21-24SS94
2SS103
2SS104
2SS107
2SS110
21&23SS181
21&23SS182
23SS184
23SS185
21SS188
21SS189

21&22SW17
21-24SW20
21&22SW21
21&22SW22
21&22SW23
2SW26
21-25SW58
21-25SW72

2VC1
2VC2
2VC3
2VC4
2VC5
2VC6
2VC7
2VC8
2VC9
2VC10
2VC11
2VC12
2VC13
2VC14
21&22VC17
21&22VC18
21&22VC19
21&22VC20

2WL12
2WL13
2WL16
2WL17
2WL96
2WL97
2WL98
2WL99

2WR80

5. All coordinates of the valves have been changed to reflect the new P&ID Corrdinates.

6. The following is a list of additional changes within the IST Program.

	Change	New Pg. No.	Old Pg. No.
A.	Added a relief request for the 21 and 22 Fuel Oil Transfer Pumps and 2A, 2B & 2C Lube Oil Pre-Circ. pumps.	Part 1, Pg. 2&3 of 3	N/A
B.	Revised pump testing durations to every three months.	Part 2, Pg. 1-3 of 3	N/A
C.	Added the fuel oil transfer pumps and lube oil pre-circ.	Part 2, Pg. 1 of 3	N/A
D.	Added the diesel engine auxiliaries starting air motors to the testing program.	Part 2, Pg. 1 of 3	N/A
E.	Added the diesel engine auxiliary and diesel gens. fuel oil systems.	Part 3, Pg. 1 & 2 of 105	N/A
F.	Added the valve type abbreviation for air regulating.	Part 3, Pg. 2 of 105	N/A
G.	Revised the key to valve operability test requirements.	Part 3, Pg. 4 of 105	Part 2, Pg. 5 of 94
H.	Added an additional test requirement No. 6 (remote position indicator verification).	Part 3, Pg. 4 of 105	N/A

	Change	New Pg. No.	Old Pg. No.
I.	Revised the Nuclear Class of Valves 21-24AF23 from Class 3 to 2.	Part 3, Pg. 6 of 105	Part 2, Pg. 8 of 94
J.	The following valves were added to the IST Programs auxiliary feed system. 21&22AF40, 21-24AF920, 21-24AF921.	Part 3, Pg. 6 of 105	N/A
K.	Added valves 21CA360, 22CA360, 2CA1714 and 2CA1715. (Engr. Directives)	Part 3, Pg. 12 of 105	N/A
L.	The following valves were added to the IST Programs Component Cooling System 2CC30, 2CC31, 2CC149	Part 3, Pg. 14&15 of 105	N/A
M.	Added fail safe actuator tests to valves 2CC113, 117, 118, 131, 136, 187 and 190.	Part 3, Pg. 14&15 of 105	Part 2, Pg. 25&26 of 94
N.	Added valve 2CC119 to be leak rate tested. (Engr. Directives)	Part 3, Pg. 14 of 105	N/A
O	The following valves were added to the IST Programs chilled water system 2CH61, 2CH232, 2CH216, 2CH252, 2CH218 2CH253, 2CH220 and 2CH260.	Part 3, Pg. 22 of 105	N/A
P.	Valves 21 and 22CS2, Category was changed from "B" to "A". (Engr. Directives)	Part 3, Pg. 23 of 105	Part 2, Pg. 30 of 94

	Change	New Pg. No.	Old Pg. No.
Q.	Valves 21-22CS48 had category "A" added. (Engr. Directives)	Part 3, Pg. 23 of 105	Part 2, Pg. 30 of 94
R.	Added valves 2CS900, 901, 902 and 903. (Engr. Directives)	Part 3, Pg. 23 of 105	N/A
S.	Added fail safe actuator tests to valves 2CV68 and 2CV69.	Part 3, Pg. 28 of 105	Part 2, Pg. 15 of 94
T.	Deleted valves 21-23BR180, due to these valves being tested per PSE&G Engr. Directives, not per ASME Section XI Codes.	N/A	Part 2, Pg. 13 of 94
U.	Added the diesel engine auxiliary system valves.	Part 3, Pg. 40-42 of 105	N/A
V.	Added the diesel gens. fuel oil system valves.	Part 3, Pg. 43 of 105	N/A
W.	Added valve 2DR30. (Engr. Directives)	Part 3, Pg. 44 of 105	N/A
X.	Added valve 2FP148. (Engr. Directives)	Part 3, Pg. 46 of 105	N/A
Y	The following valves were added to the IST Programs Main Steam System 21-24MS10	Part 3, Pg. 50 of 105	N/A
Z.	Added stroke time test requirements to valve 2MS52.	Part 3, Pg. 51 of 105	Part 2, Pg. 43 of 94

Change	New Pg. No.	Old Pg. No.
AA.		
BB. Added valves 2RC40, 41, 42 and 43 due to plant modifications.	Part 3, Pg. 58 of 105	N/A
CC. Deleted valves 2PR47 and 2PR48 per plant modifications.	N/A	Part 2, Pg. 49 of 94
DD. Added relief requests for valves 2RC40, 41, 42 and 43 per NRC letter.	Part 3, Pg. 59 of 105	N/A
EE. Added leak rate testing requirements to valves 2RH1 and 2RH2. (Engr. Directives)	Part 3, Pg. 60 of 105	Part 2, Pg. 51 of 94
FF. The following valves were added to the IST programs residual Heat Removal system 2RH75, 2RH76	Part 3, Pg. 60 of 105	N/A
GG. Added leak rate testing requirements to valves 23RH27 and 24RH27. (Engr. Directives)	Part 3, Pg. 60 of 105	Part 2, Pg. 51 of 94
HH. Added valves 2SA119, 270, 268, 267, 265, 264 and 262. (Engr. Directives)	Part 3, Pg. 63 of 105	N/A
II. Added leak rate testing requirements per Tech. Spec. to the following valves: 21-24SJ17, 21-24SJ43, 21-24SJ55, 21-24SJ56, 21-24SJ139, 21-24SJ144, 2SJ150, 21-24SJ156	Part 3, Pg. 67-70 of 105	Part 2, Pg. 54-58 of 94

Change	New Pg. No.	Old Pg. No.
JJ. Valve 2SJ133 was added to the IST Programs Safety Injection System	Part 3, Pg. 69 of 105	N/A
KK. Added valves 21SS181, 182, 188 and 189 and 23SS181, 182, 184 and 185. (Engr. Directives)	Part 3, Pg. 83 of 105	N/A
LL. The following valves were added to the IST programs service water system 21 and 22SW8	Part 3, Pg. 86 of 105	N/A
MM. Added yes to the relief request column for valves 22SW5 and 24SW5.	Part 3, Pg. 86 of 105	Part 2, Pg. 69 of 94
NN. The following valves were added to the IST programs service water system 2SW26.	Part 3, Pg. 87 of 105	N/A
OO. Added valves 21 and 23SW20, due to oversight in original IST Program.	Part 3, Pg. 87 of 105	N/A
PP. Added relief request for valves 22SW5 and 24SW5.	Part 3, Pg. 92 of 105	N/A
QQ. Added stroke time testing to the following valves: 21-26SW15 21-23SW42 21-26SW24 21&22SW49 2SW28 21-25SW65 21-23SW93 21-25SW223 21SW305 22SW305	Part 3, Pg. 86-91 of 105	Part 2, Pg. 69-75 of 94
RR. Added valves 21 & 22VC17, 21 & 22VC18 21 & 22VC19 and 21 & 22VC20.	Part 3, Pg. 95 of 105	N/A

Part 3

VALVE TESTING PROGRAM

INDEX

Part 3

ITEM 1

ABBREVIATIONS

1. Valve Identification

AF	Auxiliary Feed
BF	Steam Generator Feed
BP	Boric Acid Recovery - Chemical and Volume Control
CA	Control Air
CC	Component Cooling
CH	Chilled Water
CS	Containment Spray
CVC	Chemical and Volume Control
DA	Diesel Engines Auxiliary
DF	Diesel Fuel Oil
DR	Demineralized Water - Restricted Area
FP	Fire Protection
GB	Steam Generator Drain and Blowdown
MS	Main Steam
NT	Nitrogen
RC,PR	Reactor Coolant, Pressurizer Relief
RH	Residual Heat Removal
SA	Station Air (Compressed Air)
SF	Spent Fuel Cooling
SJ	Safety Injection
SS	Sampling
SW	Service Water - Nuclear
VC	Ventilation Containment
WL	Waste Disposal - Liquid
WR	Water Recovery (Chemical and Volume Control)

2. Valve Type

AR	Air Regulating
BFY	Butterfly
CK	Check
DCK	Double Check
DIA	Diaphragm
GA	Gate
GL	Globe
NE	Needle
PL	Plug
REL	Relief
SAF	Safety

2. Valve Type - Con't

SCK	Stop Check
3 Way	

3. Actuator Type

A	Air
H/S	Hydraulic and Steam
HYD	Hydraulic
M	Manual
MO	Motor Operated
SA	Self Actuated
SOL	Solenoid
STM	Steam

4. Normal Position

AUTO	Automatic
C	Closed
COOL	Ported to Coolers
LC	Locked Closed
LO	Locked Open
LTH	Locked Throttled
MOD	Modulating
NC	Normally Closed
O	Open
PER	Stop Check with valve stem backed off
REG	Regulating
TH	Throttled
VCT	Ported to the Volume Control Tank

Part 3

ITEM 2

KEY TO VALVE OPERABILITY TEST REQUIREMENTS

	TEST	APPLICABLE CATEGORIES
1.	Exercise Test	A,B,C,AC
2.	Stroke - Time Test	A,B
3.	Relief Valve Test	C
4.	Seat Leakage Measurement	A,AC
5.	Fail-safe Actuator Test	A,B
6.	Remote Position Indicator Verification	A,B

NOTE: 1. There are no Category "D" valves at Salem 2 that require testing per Section XI.

2. In accordance with the testing requirements of ASME Section XI, 1980 Edition and addenda through the Winter of 1980, all Category "E" valves (locked open or locked closed valves) have been deleted from this program.

Part 3

ITEM 3

OPERATIONAL MODES

MODE	REACTIVITY CONDITION, K_{eff}	% RATED THERMAL POWER*	AVERAGE COOLANT TEMPERATURE
#1. Power Operation	$\geq$ 0.99	> 5%	$\geq$ 350°F
#2. Startup	$\geq$ 0.99	$\leq$ 5%	$\geq$ 350°F
#3. Hot Standby	< 0.99	0	$\geq$ 350°F
#4. Hot Shutdown	< 0.99	0	350°F > T avg > 200°F
5. Cold Shutdown	< 0.99	0	$\leq$ 200°F
6. Refueling **	< 0.95	0	$\leq$ 140°F

NOTES:

\# For purpose of the IST, modes 1-4 shall be grouped together and referred to as Power Operation.

* Excluding decay heat.

** Reactor vessel head unbolted or removed and fuel in the vessel.

SYSTEM: Auxiliary Feed (AF) DRAWING NO.: 205336 PAGE: 6 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21AF4	3	D1, Sheet 1			x			6	CK	SA	C	1	YES	
22AF4	3	D3, Sheet 1			x			6	CK	SA	C	1	YES	
23AF4	3	D7, Sheet 1			x			8	CK	SA	C	1	YES	
21AF8	3	E4, Sheet 1			x			4	CK	SA	C	1	YES	
22AF8	3	E6, Sheet 1			x			4	CK	SA	C	1	YES	
23AF8	3	E9, Sheet 1			x			6	CK	SA	C	1	YES	
21AF11	3	G7, Sheet 1		x				4	PL	A	MOD	1,2,5,6	NO	
22AF11	3	G7, Sheet 1		x				4	PL	A	MOD	1,2,5,6	NO	
23AF11	3	E7, Sheet 1		x				4	PL	A	MOD	1,2,5,6	NO	
24AF11	3	F7, Sheet 1		x				4	PL	A	MOD	1,2,5,6	NO	
21AF21	3	H6, Sheet 1		x				4	GL	A	MOD	1,2,5,6	NO	
22AF21	3	G6, Sheet 1		x				4	GL	A	MOD	1,2,5,6	NO	
23AF21	3	F6, Sheet 1		x				4	GL	A	MOD	1,2,5,6	NO	
24AF21	3	F4, Sheet 1		x				4	GL	A	MOD	1,2,5,6	NO	
21AF23	2	H9, Sheet 1			x			4	SCK	SA/M	PER	1	YES	(Val. Wheel L.O.)
22AF23	2	G10,Sheet 1			x			4	SCK	SA/M	PER	1	YES	(Val. Wheel L.O.)
23AF23	2	F10,Sheet 1			x			4	SCK	SA/M	PER	1	YES	(Val. Wheel L.O.)
24AF23	2	F10,Sheet 1			x			4	SCK	SA/M	PER	1	YES	(Val. Wheel L.O.)
21AF40	3	D4, Sheet 1		x				2	GL	A	0	1,2,5,6	NO	
22AF40	3	D6, Sheet 1		x				2	GL	A	0	1,2,5,6	NO	
21AF52	3	E1, Sheet 1		x				6	PL	A	C	1,2,6	NO	
22AF52	3	E4, Sheet 1		x				6	PL	A	C	1,2,6	NO	
23AF52	3	E7, Sheet 1		x				8	PL	A	C	1,2,6	NO	
21AF53	3	D1, Sheet 1			x			6	CK	SA	C	1	YES	
22AF53	3	D4, Sheet 1			x			6	CK	SA	C	1	YES	
23AF53	3	E7, Sheet 1			x			8	CK	SA	C	1	YES	
2AF99	3	C2, Sheet 1			x			0.75	REL	SA	C	3	NO	
2AF128	3	C9, Sheet 1			x			1.5	REL	SA	C	3	NO	
21AF920	3	H6, Sheet 1			x			4	CK	SA	C	1	No	
22AF920	3	G5, Sheet 1			x			4	CK	SA	C	1	No	
23AF920	3	F6, Sheet 1			x			4	CK	SA	C	1	No	
24AF920	3	F6, Sheet 1			x			4	CK	SA	C	1	No	
21AF921	3	G6, Sheet 1			x			4	CK	SA	C	1	No	
22AF921	3	G7, Sheet 1			x			4	CK	SA	C	1	No	
23AF921	3	E6, Sheet 1			x			4	CK	SA	C	1	No	
24AF921	3	F7, Sheet 1			x			4	CK	SA	C	1	No	

VALVE: 21AF4 and 22AF4
CATEGORY: C (Check)
CLASS: 3

FUNCTION: To ensure proper directional flow through 21 and 22 Auxiliary Feed Pumps.

TEST REQUIREMENT: Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be full stroke exercised during Power Operation without thermal shocking the feed nozzles. The normal feed path to the Steam Generators is the only available full flow path for testing.

ALTERNATE TESTING: These valves are partial stroked exercised through the recirc. path during Power Operation. These valves will be full stroke exercised during each Cold Shutdown per Section XI. In cases of frequent Cold Shutdowns, these valves need not be exercised more often than once every three months.

VALVE: 23AF4
CATEGORY: C (Check)
CLASS: 3

FUNCTION: To ensure proper directional flow through #23 Auxiliary Feed Pump.

TEST REQUIREMENT: Exercise valve every three months.

BASIS FOR RELIEF: This valve cannot be full stroke exercised during Power Operation without thermal shocking the feed nozzles. The normal feed path to the Steam Generators is the only available full flow path. The valve cannot be tested in Cold Shutdown or Refueling because the steam must be available to drive the turbine to operate the #23 Auxiliary Feed Pump to exercise 23AF4.

ALTERNATE TESTING: This valve will be part stroke exercised during Power Operation per Section XI and will receive a manual full stroke exercise during Refuelings.

VALVE: 21AF8 and 22AF8
CATEGORY: C (Check)
CLASS: 3

FUNCTION: Prevent backflow through #21 and #22 Auxiliary Feed Pumps.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be full stroke exercised during Power Operation without thermal shocking the feed nozzles. The normal feed path to the Steam Generators is the only available full flow path for testing.

ALTERNATE TESTING: These valves are partial stroked exercised through the recirc. path during Power Operation. These valves will be full stroke exercised during each Cold Shutdown per Section XI. In cases of frequent Cold Shutdowns these valves need not be exercised more often than once every three months.

VALVE: 23AF8
CATEGORY: C (Check)
GLASS: 3

FUNCTION: Prevent backflow through #23 Auxiliary Feed Pump.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: This valve cannot be exercised during Power Operation without thermal shocking the feed nozzles on the SG's. It cannot be flow tested during Cold Shutdown or Refueling because there is no steam available to drive the #23 Auxiliary Feed Pump Turbine.

ALTERNATE TESTING: This valve will receive a manual full stroke exercise during Refuelings.

VALVE: 21-24AF23 (4 valves)
CATEGORY: C
CLASS: 3

FUNCTION: To prevent backflow of Steam Generator water into the Auxiliary Feed System.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: Same conditions as 21-22AF8.

ALTERNATE TESTING: These valves will be full stroke exercised during Cold Shutdowns per Section XI. In case of frequent Cold Shutdowns these valves need not be exercised more often than once every three months.

VALVE: 21-23AF53 (3 valves)
CATEGORY: C
CLASS: 3

FUNCTION: To prevent water from the normal suction of the Auxiliary Feed Pumps from bypassing the pump and going into the Demineralized Water System.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: The line in which these valves are installed is maintained empty and vented to the atmosphere. We do not fill these lines except in need, as it is routed through a vital relay room and a leak would cause extensive damage and trip the reactor.

ALTERNATE TESTING: These valves will receive a manual full stroke exercising during Refuelings.

SYSTEM: Steam Generator Feed & Condensate (BF) DRAWING NO.: 205302 PAGE: 10 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21BF22	2	F2, Sheet 3			x			14	SCK	SA/M	PER	1,6	YES	(HAND WHEEL L.O.)
22BF22	2	F4, Sheet 3			x			14	SCK	SA/M	PER	1,6	YES	(HAND WHEEL L.O.)
23BF22	2	F6, Sheet 3			x			14	SCK	SA/M	PER	1,6	YES	(HAND WHEEL L.O.)
24BF22	2	F9, Sheet 3			x			14	SCK	SA/M	PER	1,6	YES	(HAND WHEEL L.O.)

VALVE: 21-24BF22 (4 valves)
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow of SG water when Main Feed is secured.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation because 3 loop operation is not permitted. A plant trip would be required to exercise these valves to their safety-related position.

ALTERNATE TESTING: These valves will be full stroke exercised during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns these valves need not be exercised more often than once every three months.

SYSTEM: Control Air (CA) DRAWING NO.: 205347 PAGE: 12 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
21CA330	2	E3, Sheet 1	x					2	GA	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL
22CA330	2	D3, Sheet 1	x					2	GA	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL
21CA360	2	C1, Sheet 3	x		x			2	CK	SA	O	1,4	YES	
22CA360	2	B1, Sheet 3	x		x			2	CK	SA	O	1,4	YES	
2CA1714	2	H3, Sheet 1	x					0.375"	PL	M	C	1,4	YES	
2CA1715	2	H4, Sheet 1	x					0.375"	PL	M	C	1,4	YES	

VALVE: 21 and 22CA330 and 360, 2CA1714 and 2CA1715 (6 valves)
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Containment Control Air Headers.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for the containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

SYSTEM: Component Cooling (CC) DRAWING NO.: 205331 PAGE: 14 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21CC1	3	E5, Sheet 1			x			12	CK	SA	O	1	NO	
22CC1	3	C5, Sheet 1			x			12	CK	SA	O	1	NO	
23CC1	3	D5, Sheet 1			x			12	CK	SA	O	1	NO	
21CC14	3	F9, Sheet 1			x			1	REL	SA	C	3	NO	
22CC14	3	A8, Sheet 1			x			1	REL	SA	C	3	NO	
21CC16	3	F9, Sheet 1		x				12	GA	MO	C	1,2,6	NO	
22CC16	3	A9, Sheet 1		x				12	GA	MO	C	1,2,6	NO	
2CC30	3	C6, Sheet 1		x				16	GA	MO	O	1,2,6	NO	
2CC31	3	C6, Sheet 1		x				16	GA	MO	O	1,2,6	NO	
2CC75	3	G6, Sheet 2			x			0.75	REL	SA	C	3	NO	
2CC113	2	D2, Sheet 3	x					3	GL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CC117	2	C5, Sheet 3	x					6	GA	MO	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CC118	2	C5, Sheet 3	x					6	GA	MO	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CC119	2	F5, Sheet 3	x		x			6	CK	SA	O	1,4	YES	

SYSTEM: Component Cooling (CC) DRAWING NO.: 205331 PAGE: 15 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
2CC131	2	C4, Sheet 3	x					3	GA	MO	O	1,2,4,5,6	YES	≤10 SEC. PH. "B" CONT. ISOL.
2CC136	2	C4, Sheet 3	x					6	GA	MO	O	1,2,4,5,6	YES	≤10 SEC. PH. "B" CONT. ISOL.
2CC138	3	D2, Sheet 1			x			0.75	REL	SA	C	3	NO	
2CC147	3	F1, Sheet 1			x			3	SAF	SA	C	3	NO	
2CC149	3	F2, Sheet 1		x				2	GL	A	O	1,2,5,6	NO	
2CC186	2	E3, Sheet 3	x		x			0.75	CK	SA	O	1,4	YES	
2CC187	2	E4, Sheet 3	x					6	GA	MO	O	1,2,4,5,6	YES	≤10 SEC. PH. "B" CONT. ISOL.
2CC190	2	D4, Sheet 3	x					3	GA	MO	O	1,2,4,5,6	YES	≤10 SEC. PH. "B" CONT. ISOL.
2CC208	2	D4, Sheet 3	x		x			0.75	CK	SA	O	1,4	YES	
2CC215	2	D2, Sheet 3	x					3	PL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CC317	3	D7, Sheet 1			x			1	CK	SA	O	1	NO	
2CC320	3	G6, Sheet 1			x			1	CK	SA	O	1	NO	

VALVE: 2CC113
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation from outlet of Excess Letdown Heat Exchanger.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for Category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CC117 and 2CC118
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Component Cooling to and return from the Reactor Coolant Pumps.

TEST REQUIREMENTS:
a) Stroke Time/Exercise and Fail Safe Test valves every three months.

b) Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF:
a) These valves cannot be exercised during Power Operation because if the valves failed shut, a loss of RCP cooling would occur requiring the RCP to be secured and thus requiring a reactor trip.

b) Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING:
a) These valves will be tested during Cold Shutdowns per Section XI when RCPs can be secured. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CC119
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Containment Component Cooling Headers.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for Category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CC131 and 2CC136
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Component Cooling to and return from the Reactor Coolant Pumps.

TEST REQUIREMENTS: a) Stroke Time/Exercise and Fail Safe test valves every three months.

b) Leak Rate Test less than each 24 months.

BASIS FOR RELIEF: a) These valves cannot be exercised during Power Operations because if the valves failed shut, a loss of RCP cooling would occur requiring the RCP to be secured and thus requiring a reactor trip.

b) Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for Category A valves used for containment isolation.

ALTERNATE TESTING: a) These valves will be tested during Cold Shutdowns per Section XI when RCPs can be secured. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CC186
CATEGORY: A/C (Check)
CLASS: 2

FUNCTION: Overpressure protection for containment isolation piping.

TEST REQUIREMENTS: a) Exercise valve every three months.

b) Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: a) This valve cannot be shut without shutting 2CC187. (See relief request for 2CC187.)

b) Because the safety-related function of this valve is containment isolation, it will be Leak Tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: a) This valve will be full stroke exercised during Cold Shutdowns per Section XI when RCPs can be secured. In cases of frequent Cold Shutdowns, these valves need not be exercised more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CC187 and 2CC190
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Component Cooling to and return from the Reactor Coolant Pump.

TEST REQUIREMENTS:

a) Stroke Time/Exercise and Fail Safe Test valves every three months.

b) Leak Rate Test less than each 24 months.

BASIS FOR RELIEF:

a) These valves cannot be exercised during Power Operations because if the valves failed shut, a loss of RCP cooling would occur requiring the RCP to be secured and thus requiring a reactor trip.

b) Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING:

a) These valves will be tested during Cold Shutdowns per Section XI when RCPs can be secured. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CC208
CATEGORY: A/C (Check)
CLASS: 2

FUNCTION: Overpressure protection for containment isolation piping.

TEST REQUIREMENTS: a) Exercise valve every three months.

b) Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: a) This valve cannot be shut without shutting 2CC190. (See relief request for 2CC190.)

b) Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: a) This valve will be full stroke exercised during Cold Shutdowns per Section XI when RCPs can be secured. In cases of frequent Cold Shutdowns, these valves need not be exercised more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CC215
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation. Inlet to Excess Letdown Heat Exchanger.

TEST REQUIREMENTS: Leak Rate Testing valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

SYSTEM: Chilled Water (CH) DRAWING NO.: 205216 PAGE: 22 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21CH13	3	G9, Sheet 2			x			4	CK	SA	C	1	NO	
22CH13	3	G7, Sheet 2			x			4	CK	SA	C	1	NO	
2CH30	3	H11,Sheet 2		x				3	GL	A	O	1,2,5,6	NO	
2CH61	3	F11,Sheet 2			x			3	CK	SA	C	1	NO	
2CH74	3	D7, Sheet 2		x				3	3-Way	A	Cool	1,2,5	NO	
2CH143	3	E3, Sheet 2			x			0.75	REL	SA	C	3	NO	
2CH151	3	H11,Sheet 2		x				3	GL	A	O	1,2,5,6	NO	
2CH168	3	D4, Sheet 2		x				1.5	PL	A	C	1,2,5	NO	
2CH216	3	E1, Sheet 3		x				2	GL	A	Auto	1,2,5	NO	
2CH218	3	E2, Sheet 3		x				0.75	GL	A	Auto	1,2,5	NO	
2CH220	3	E2, Sheet 3			x			0.75	REL	SA	C	3	NO	
2CH232	3	E1, Sheet 3			x			2	CK	SA	C	1	NO	
2CH252	3	H10,Sheet 2		x				3	GA	A	Auto	1,2,5,6	NO	
2CH253	3	H10,Sheet 2		x				3	GA	A	Auto	1,2,5,6	NO	
2CH260	3	G10,Sheet 2			x			1	CK	SA	C	1	NO	

SYSTEM: Containment Spray (CS) DRAWING NO.: 205335 PAGE: 23 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
21CS2	3	H6, Sheet 1	x					8	GA	MO	C	1,2,4,6	YES	
22CS2	3	E6, Sheet 1	x					8	GA	MO	C	1,2,4,6	YES	
21CS4	2	H8, Sheet 1			x			8	CK	SA	C	1	YES	
22CS4	2	E8, Sheet 1			x			8	CK	SA	C	1	YES	
21CS5	2	G9, Sheet 1			x			0.75	REL	SA	C	3	NO	
22CS5	2	F9, Sheet 1			x			0.75	REL	SA	C	3	NO	
2CS16	3	C7, Sheet 1		x				3	GA	MO	NC	1,2,6	NO	
2CS17	3	C6, Sheet 1		x				3	GA	MO	NC	1,2,6	NO	
21CS21	3	G6, Sheet 1			x			3	CK	SA	C	1	NO	
22CS21	3	F6, Sheet 1			x			3	CK	SA	C	1	NO	
2CS26	3	C4, Sheet 1			x			0.75	REL	SA	C	3	NO	
21CS36	2	H9, Sheet 1		x				8	GA	MO	C	1,2,6	YES	
22CS36	2	E9, Sheet 1		x				8	GA	MO	C	1,2,6	YES	
21CS48	2	H9, Sheet 1	x		x			8	CK	SA	C	1,4	YES	
22CS48	2	E9, Sheet 1	x		x			8	CK	SA	C	1,4	YES	
2CS900	2	G9, Sheet 1	x					0.375	GL	M	LC	4	YES	
2CS901	2	F9, Sheet 1	x					0.375	GL	M	LC	4	YES	
2CS902	2	G8, Sheet 1	x					0.375	GL	M	LC	4	YES	
2CS903	2	F8, Sheet 1	x					0.375	GL	M	LC	4	YES	

VALVE: 21CS2 and 22CS2
CATEGORY: A
CLASS: 2

FUNCTION: Containment spray pump motor operated discharge valves.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for catetory A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 21CS4 and 22CS4
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To provide directional flow of water into the containment spray headers.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation or Cold Shutdown without spraying down the containment, causing equipment and lagging damage requiring extensive clean-up and repair. The full flow test connection is connected to the refueling cavity and can only be used during a Refueling outage.

ALTERNATE TESTING: These valves will be full stroke exercised during Refuelings.

VALVE: 21CS36 and 22CS36
CATEGORY: B
CLASS: 2

FUNCTION: To allow the RHR (LPSI) pumps to pump into the CS System when in recirculation mode.

TEST REQUIREMENTS: Stroke Time/Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation because the 21SJ44 and 22SJ44 must be opened to exercise these valves due to interlocks between them. See relief request 21SJ44 and 22SJ44. These valves cannot be opened when the RHR system is in service without spraying down the containment, causing equipmet and lagging damage requiring extensive clean-up and repair.

ALTERNATE TESTING: These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 21CS48 and 22CS48
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To provide proper directional flow of water into the Containment Spray Headers.

TEST REQUIREMENTS:
a) Exercise valves every three months.

b) Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF:
a) These valves cannot be exercised during Power Operation or Cold Shutdown without spraying down the containment, causing equipment and lagging damage requiring extensive clean-up and repair. The full flow test connection is connected to the refueling cavity and can only be used during a Refueling outage.

b) Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING:
a) These valves will be full stroke exercised during Refuelings.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CS900, 2CS901, 2CS902 and 2CS903
CATEGORY: A
CLASS: 2

FUNCTION: Containment Spray Sample Valves

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specification and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI, for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
2CV3	2	F8, Sheet 2	x					2	PL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CV4	2	F9, Sheet 2	x					2	PL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CV5	2	F9, Sheet 2	x					2	PL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CV6	2	G9, Sheet 2			x			2	REL	SA	C	3	NO	
2CV7	2	G8, Sheet 2	x					2	PL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CV40	2	E9, Sheet 1		x				4	GA	MO	O	1,2,6	YES	
2CV41	2	E9, Sheet 1		x				4	GA	MO	O	1,2,6	YES	
2CV42	2	D9, Sheet 1			x			4	CK	SA	O	1	YES	
2CV43	2	F2, Sheet 2			x			0.75	REL	SA	C	3	NO	
2CV47	2	D5, Sheet 2			x			4	CK	SA	C	1	YES	
2CV52	2	C5, Sheet 2			x			4	CK	SA	C	1	YES	
2CV55	2	B6, Sheet 2		x				3	PL	A	TH	1,2,6	NO	
2CV63	2	A5, Sheet 2			x			3	CK	SA	O	1	NO	
2CV68	1	D8, Sheet 2	x					3	GA	MO	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CV69	1	D8, Sheet 2	x					3	GA	MO	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2CV74	1	E8, Sheet 2	x		x			3	CK	SA	C	1,4	YES	
21CV98	2	H8, Sheet 2	x					1	NE	M	L.TH	4	YES	
22CV98	2	H8, Sheet 2	x					1	NE	M	L.TH	4	YES	
23CV98	2	G7, Sheet 2	x					1	NE	M	L.TH	4	YES	
24CV98	2	G7, Sheet 2	x					1	NE	M	L.TH	4	YES	

SYSTEM: Chemical and Volume Control (CVC-OPS) DRAWING NO.: 205328 PAGE: 29 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
21CV99	2	F3, Sheet 3			x			2	CK	SA	O	1	YES	
22CV99	2	F3, Sheet 3			x			2	CK	SA	O	1	YES	
23CV99	2	C3, Sheet 3			x			2	CK	SA	O	1	YES	
24CV99	2	B3, Sheet 3			x			2	CK	SA	O	1	YES	
2CV116	2	H5, Sheet 2	x					4	GA	MO	O	1,2,4,5,6	YES	$\leq$10 Sec. PH. "A" Cont. Isol.
2CV131	2	B9, Sheet 2		x				1	PL	A	C	1,2,5,6	NO	
2CV132	2	B8, Sheet 2		x				1	PL	A	C	1,2,5,6	NO	
2CV134	2	B8, Sheet 2		x				1	3 WAY	A	VCT	1,2,6	NO	
2CV135	2	E4, Sheet 2			x			2	CK	SA	C	1	NO	
2CV137	2	D4, Sheet 2			x			2	CK	SA	C	1	NO	
2CV139	2	E3, Sheet 2		x				2	GL	MO	O	1,2	NO	
2CV140	2	E3, Sheet 2		x				2	GL	MO	O	1,2	NO	
2CV141	2	A5, Sheet 2			x			0.75	REL	SA	C	3	NO	
2CV147	2	G6, Sheet 1			x			2	CK	SA	C	1	NO	
21CV154	2	F1, Sheet 1			x			2	CK	SA	C	1	NO	
22CV154	2	F3, Sheet 1			x			2	CK	SA	C	1	NO	
21CV156	2	F1, Sheet 1		x				2	DIA	M	C	1	NO	
22CV156	2	F3, Sheet 1		x				2	DIA	M	C	1	NO	

SYSTEM: Chemical and Volume Control (CVC-OPS) DRAWING NO.: 205328 PAGE: 30 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
21CV160	2	G2, Sheet 1		x				2	PL	A	C	1,2,6	NO	
22CV160	2	G3, Sheet 1		x				2	PL	A	C	1,2,6	NO	
2CV172	2	E6, Sheet 1		x				2	PL	A	AUTO	1,2	NO	
2CV173	2	E6, Sheet 1			x			2	CK	SA	C	1	NO	
2CV175	2	F8, Sheet 1		x				2	GL	MO	C	1,2,6	NO	
2CV176	2	F9, Sheet 1			x			2	CK	SA	C	1	YES	
2CV179	2	E7, Sheet 1		x				2	PL	A	AUTO	1,2,	NO	
2CV180	2	E7, Sheet 1			x			2	CK	SA	C	1	NO	
2CV181	2	E8, Sheet 1		x				2	DIA	A	AUTO	1,2,5,6	NO	
2CV185	2	E8, Sheet 1		x				2	DIA	A	AUTO	1,2,5	NO	
2CV196	2	D10, Sheet 1			x			1	CK	SA	O	1	YES	
2CV241	2	H10, Sheet 1			x			3	REL	SA	C	3	NO	
2CV278	2	C9, Sheet 2		x				1	PL	A	C	1,2,5	NO	
2CV284	2	C2, Sheet 3	x					4	GA	MO	O	1,2,4,5,6	YES	$\leq$ 10 SEC. PH "A" CONT. ISOL.
2CV296	2	C2, Sheet 3	x		x			0.75	CK	SA	O	1,4	YES	

VALVE: 2CV3, 2CV4, and 2CV5
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Reactor Coolant Letdown.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specification and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI, for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CV7
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Reactor Coolant Letdown Line.

TEST REQUIREMENTS:
a) Stroke Time/Exercise and Fail Safe Test valve every three months.

b) Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF:
a) This valve cannot be exercised during Power Operation because this would isolate normal letdown flow through the Regenerative Heat Exchanger causing the injection of cold water into the RCS resulting in thermal cycling of injection nozzles and possible cracking damage.

b) Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50 Appendix J. This test meets the intent of the ASME B&PV Code, Section XI, for category A valves used for containment isolation.

ALTERNATE TESTING:
a) This valve will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, this valve need not be tested more often than once every three months.

b) Leak Rate Test Per Technical Specification 4.6.1.2.d.

VALVE: 2CV40, and 2CV41
CATEGORY: B
CLASS: 2

FUNCTION: Volume Control Tank Outlet isolation valves.

TEST REQUIREMENTS: Stroke Time/Exercise Valves every three months.

BASIS FOR RELIEF: Closing these valves during Power Operation requires lining up the alternate source of water from the Refueling Water Storage Tank to the suction of the Charging Pumps. This is 2,000 ppm borated water which would render the reactor subcritical.

ALTERNATE TESTING: These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than every three months.

VALVE: 2CV42
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow into the Volume Control Tank from the suction of the Charging Pumps.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: This valve cannot be exercised during Power Operation. Exercising (closing) would result in a loss of normal make-up to the RCS, Pressurizer Level Control and RCP Seal Flow. This would require a reactor trip. Use of the only alternate suction for the Charging Pumps, the RWST, which is water borated to 2,000 ppm, would result in a Reactor Shutdown.

ALTERNATE TESTING: This valve will be full stroke exercised during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, this valve need not be exercised more often than once every three months.

VALVE: 2CV47, and 2CV52
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow through the #21 and 22 Charging/Safety Injection (HPSI) Pumps.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be full stroke exercised during Power Operation due to limited size of the Letdown Lines.

ALTERNATE TESTING: These valves will be part stroke exercised during Power Operation/Cold Shutdowns and full stroke exercised during Refuelings.

VALVE: 2CV68, and 2CV69
CATEGORY: A
CLASS: 1

FUNCTION: Containment Isolation from Charging Pumps to Regenative Heat Exchanger.

TEST REQUIREMENTS: a) Stroke Time/Exercise and Fail Safe Test valves every three months.

b) Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: a) These valves cannot be exercised during Power Operation. If these valves failed shut during testing, loss of Pressurizer Level Control would result requiring a Reactor Trip.

b) Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: a) These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CV74
CATEGORY: A/C (Check)
CLASS: 1

FUNCTION: To ensure proper direction of flow through the Regenerative Heat Exchanger.

TEST REQUIREMENTS: a) Exercise valve every three months.

b) Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: a) Shutting this valve during Power Operation would cause a loss of Pressurizer Level Control and a Reactor Trip would result.

b) Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI, for category A valves used for containment isolation.

ALTERNATE TESTING: a) This valve will be full stroke exercised during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, this valve need not be exercised more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 21 - 24CV98 (4 Valves)
CATEGORY: A
CLASS: 2

FUNCTION: Throttle Valve for RCP seal flow.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Technical Specification Table 3.6-1 exempts these valves from Leak Rate Testing.

ALTERNATE TESTING: None

VALVE: 21-24CV99 (4 valves)
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To ensure proper flow direction through Reactor Coolant Pump Seals.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation without securing seal water to a RCP resulting in a loss of a RCP requiring a reactor trip.

ALTERNATE TESTING: These valves will be full stroke exercised during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be exercised more often than once every three months.

VALVE: 2CV116
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Reactor Coolant Pump seal water return line.

TEST REQUIREMENT:
a) Stroke Time/Exercise and Fail Safe Test valve every three months.

b) Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF:
a) This valve cannot be exercised during Power Operation. Shutting this valve would cause a RCP trip which would then cause a reactor trip.

b) Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CF50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING:
a) This valve will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, this valve need not be tested more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2CV176
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To ensure proper flow direction in the Rapid Boration Line.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: Testing during Power Operation would cause a loss in Reactor Power due to high boron injection.

ALTERNATE TESTING: This valve will be full stroke exercised during Cold Shutdowns Section XI. In cases of frequent Cold Shutdowns, this valve need not be exercised more often than once every three months.

VALVE: 2CV196
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow of water from the Charging Pump suction into the Chemical Addition Tank.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: This valve is a category C passive valve not required to change position to perform its safety-related function.

ALTERNATE TESTING: None.

VALVE: 2CV284
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation from Reactor Coolant Pump Seal Water Return Line.

TEST REQUIREMENTS: a) Leak Rate Test valve less than each 24 months.

b) Stroke Time/Exercise and Fail Safe Test valve every three months.

BASIS FOR RELIEF: a) Because the safety-related function of this valve is containment isolation, it will be tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

b) Seal return line cannot be isolated during Power Operation without tripping a RCP which will cause a reactor trip.

ALTERNATE TESTING: a) Leak Rate Test per Technical Specification 4.6.1.2.d.

b) This valve will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, this valve need not be tested more often than once every three months.

VALVE: 2CV296
CATEGORY: A/C (Check)
CLASS: 2

FUNCTION: Overpressure protection for Containment Isolation Piping.

TEST REQUIREMENTS:
a) Leak Rate Test valve less than each 24 months.

b) Exercise valve every three months.

BASIS FOR RELIEF:
a) Because the safety-related function of this valve is containment isolation, it will be tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for Category A valves used for containment isolation.

b) This valve cannot be shut without shutting 2CV284. See relief request for 2CV284.

ALTERNATE TESTING:
a) Leak Rate Test per Technical Specification 4.6.1.2.d.

b) This valve will be full stroke exercised during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, this valve need not be exercised more often than once every three months.

SYSTEM: Diesel Engine Auxiliary Systems (DA) DRAWING NO.: 205241 PAGE: 40 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21DA6A	NONE	D4,Sheet 4			x			0.75	CK	SA	C	1	NO	
21DA6B		D4,Sheet 5			x			0.75	CK	SA	C	1	NO	
21DA6C		D4,Sheet 6			x			0.75	CK	SA	C	1	NO	
22DA6A		D5,Sheet 4			x			0.75	CK	SA	C	1	NO	
22DA6B		D5,Sheet 5			x			0.75	CK	SA	C	1	NO	
22DA6C		D5,Sheet 6			x			0.75	CK	SA	C	1	NO	
21DA10A		E4,Sheet 4			x			0.75	REL	SA	C	3	NO	
21DA10B		E4,Sheet 5			x			0.75	REL	SA	C	3	NO	
21DA10C		E4,Sheet 6			x			0.75	REL	SA	C	3	NO	
22DA10A		E5,Sheet 4			x			0.75	REL	SA	C	3	NO	
22DA10B		E5,Sheet 5			x			0.75	REL	SA	C	3	NO	
22DA10C		E5,Sheet 6			x			0.75	REL	SA	C	3	NO	
21DA11A		F4,Sheet 4			x			2	AR	M	REG	1	NO	
21DA11B		F4,Sheet 5			x			2	AR	M	REG	1	NO	
21DA11C		F4,Sheet 6			x			2	AR	M	REG	1	NO	
22DA11A		F5,Sheet 4			x			2	AR	M	REG	1	NO	
22DA11B		F5,Sheet 5			x			2	AR	M	REG	1	NO	
22DA11C		F5,Sheet 6			x			2	AR	M	REG	1	NO	
21DA13A		F5,Sheet 4		x				1.5	GL	SOL	REG	1	NO	
21DA13B		F5,Sheet 5		x				1.5	GL	SOL	REG	1	NO	
21DA13C		F5,Sheet 6		x				1.5	GL	SOL	REG	1	NO	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
22DA13A	NONE	F5, Sheet 4		x				1.5	GL	SOL	REG	1	NO	
22DA13B		F5, Sheet 5		x				1.5	GL	SOL	REG	1	NO	
22DA13C		F5, Sheet 6		x				1.5	GL	SOL	REG	1	NO	
21DA14A		F4, Sheet 4		x				1.5	GL	SOL	REG	1	NO	
21DA14B		F4, Sheet 5		x				1.5	GL	SOL	REG	1	NO	
21DA14C		F4, Sheet 6		x				1.5	GL	SOL	REG	1	NO	
22DA14A		F5, Sheet 4		x				1.5	GL	SOL	REG	1	NO	
22DA14B		F5, Sheet 5		x				1.5	GL	SOL	REG	1	NO	
22DA14C		F5, Sheet 6		x				1.5	GL	SOL	REG	1	NO	
2DA17A		G1, Sheet 4			x			0.75	CK	SA	C	1	NO	
2DA17B		G1, Sheet 5			x			0.75	CK	SA	C	1	NO	
2DA17C		G1, Sheet 6			x			0.75	CK	SA	C	1	NO	
21DA19A		G2, Sheet 4			x			0.75	REL	SA	C	3	NO	
21DA19B		G2, Sheet 5			x			0.75	REL	SA	C	3	NO	
21DA19C		G2, Sheet 6			x			0.75	REL	SA	C	3	NO	
22DA19A		G3, Sheet 4			x			0.75	REL	SA	C	3	NO	
22DA19B		G3, Sheet 5			x			0.75	REL	SA	C	3	NO	
22DA19C		G3, Sheet 6			x			0.75	REL	SA	C	3	NO	
21DA23A		H2, Sheet 4		x				1.5	GL	SOL	REG	1	NO	
21DA23B		H2, Sheet 5		x				1.5	GL	SOL	REG	1	NO	
21DA23C		H2, Sheet 6		x				1.5	GL	SOL	REG	1	NO	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
22DA23A	NONE	H3, Sheet 4		x				1.5	GL	SOL	REG	1	NO	
22DA23B		H3, Sheet 5		x				1.5	GL	SOL	REG	1	NO	
22DA23C		H3, Sheet 6		x				1.5	GL	SOL	REG	1	NO	
2DA24A		D7, Sheet 4		x				4	3-WAY	SA	AUTO	1	NO	
2DA24B		D7, Sheet 5		x				4	3-WAY	SA	AUTO	1	NO	
2DA24C		D7, Sheet 6		x				4	3-WAY	SA	AUTO	1	NO	
2DA26A		D9, Sheet 4			x			2	RE	M	REG	1	NO	
2DA26B		D9, Sheet 5			x			2	REG	M	REG	1	NO	
2DA26C		D9, Sheet 6			x			2	REG	M	REG	1	NO	
2DA36A		C9, Sheet 4			x			0.75	CK	SA	O	1	NO	
2DA36B		C9, Sheet 5			x			0.75	CK	SA	O	1	NO	
2DA36C		C9, Sheet 6			x			0.75	CK	SA	O	1	NO	
2DA49A		G8, Sheet 4		x				4	3-WAY	SA	AUTO	1	NO	
2DA49B		G8, Sheet 5		x				4	3-WAY	SA	AUTO	1	NO	
2DA49C		G8, Sheet 6		x				4	3-WAY	SA	AUTO	1	NO	
2DA70A		E10,Sheet 4			x			-	REL	SA	C	3	NO	
2DA70B		E10,Sheet 5			x			-	REL	SA	C	3	NO	
2DA70C		E10,Sheet 6			x			-	REL	SA	C	3	NO	

SYSTEM: Diesel Generator Fuel Oil System (DF) DRAWING NO.: 205249 PAGE: 43 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21DF36	NONE	A7, Sheet 3			x			-	REL	SA	C	3	NO	
22DF36		A5, Sheet 3			x			-	REL	SA	C	3	NO	
21DF38		A6, Sheet 3			x			2	CK	SA	C	1	NO	
22DF38		B4, Sheet 3			x			2	CK	SA	C	1	NO	
21DF61		H4, Sheet 3			x			2	CK	SA	C	1	NO	
22DF61		H4, Sheet 3			x			2	CK	SA	C	1	NO	
21DF62		G5, Sheet 3			x			2	CK	SA	C	1	NO	
22DF62		F5, Sheet 3			x			2	CK	SA	C	1	NO	
21DF63		D5, Sheet 3			x			2	CK	SA	C	1	NO	
22DF63		E5, Sheet 3			x			2	CK	SA	C	1	NO	
21DF66		G7, Sheet 3			x			0.375	REL	SA	C	3	NO	
22DF66		F7, Sheet 3			x			0.375	REL	SA	C	3	NO	
23DF66		D7, Sheet 3			x			0.375	REL	SA	C	3	NO	

SYSTEM: Demineralized Water - Restricted Area (DR) DRAWING NO.: 205246 PAGE: 44 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
2DR29	2	E4, Sheet 2	x					4	GL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2DR30	2	E3, Sheet 2	x		x			4	CK	SA	C	1,4	YES	

VALVE: 2DR29
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation from Containment Demineralized Water Header.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2DR30
CATEGORY: A/C (Check)
CLASS: 2

FUNCTION: Containment Isolation from Containment Demineralized Water Header.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

SYSTEM: Fire Protection (FP) DRAWING NO.: 205222 PAGE: 46 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
2FP147	2	F5, Sheet 2	x					4	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2FP148	2	F4, Sheet 2	x		x			4	CK	SA	C	1,4	YES	

D-SP-6

VALVE: 2FP147
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Containment Fire Protection Header.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specification and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2FP148
CATEGORY: A/C (Check)
CLASS: 2

FUNCTION: Containment Isolation for Containment Fire Protection Header.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specification and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

SYSTEM: Steam Gen. Drain & Blowdown (GB) DRAWING NO.: 205325 PAGE: 48 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21GB4	2	H9, Sheet 2	x					3	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" Cont. Isol.
22GB4	2	G9, Sheet 2	x					3	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" Cont. Isol.
23GB4	2	F9, Sheet 2	x					3	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" Cont. Isol.
24GB4	2	F9, Sheet 2	x					3	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" Cont.

VALVE: 21-24GB4 (4 Valves)
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation of Steam Generator Drain and Blowdown Lines.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

SYSTEM: Main Steam (MS) DRAWING NO.: 205303 PAGE: 50 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
21MS7	2	E5, Sheet 1		x				2	GA	A	C	1,2,5,6	NO	
22MS7	2	C6, Sheet 2		x				2	GA	A	C	1,2,5,6	NO	
23MS7	2	A5, Sheet 1		x				2	GA	A	C	1,2,5,6	NO	
24MS7	2	F6, Sheet 2		x				2	GA	A	C	1,2,5,6	NO	
21MS10	2	G7, Sheet 1		x				6	GL	A	C	1,2,5,6	NO	
22MS10	2	D6, Sheet 2		x				6	GL	A	C	1,2,5,6	NO	
23MS10	2	D7, Sheet 1		x				6	GL	A	C	1,2,5,6	NO	
24MS10	2	G6, Sheet 2		x				6	GL	A	C	1,2,5,6	NO	
21MS11	2	F4, Sheet 1			x			6	SAF	SA	C	3	NO	
22MS11	2	D3, Sheet 2			x			6	SAF	SA	C	3	NO	
23MS11	2	C3, Sheet 1			x			6	SAF	SA	C	3	NO	
24MS11	2	G3, Sheet 2			x			6	SAF	SA	C	3	NO	
21MS12	2	F4, Sheet 1			x			6	SAF	SA	C	3	NO	
22MS12	2	D4, Sheet 2			x			6	SAF	SA	C	3	NO	
23MS12	2	C4, Sheet 1			x			6	SAF	SA	C	3	NO	
24MS12	2	G4, Sheet 1			x			6	SAF	SA	C	3	NO	
21MS13	2	F5, Sheet 1			x			6	SAF	SA	C	3	NO	
22MS13	2	D5, Sheet 2			x			6	SAF	SA	C	3	NO	
23MS13	2	C5, Sheet 1			x			6	SAF	SA	C	3	NO	
24MS13	2	G4, Sheet 2			x			6	SAF	SA	C	3	NO	
21MS14	2	F5, Sheet 1			x			6	SAF	SA	C	3	NO	
22MS14	2	D5, Sheet 2			x			6	SAF	SA	C	3	NO	
23MS14	2	C6, Sheet 1			x			6	SAF	SA	C	3	NO	
24MS14	2	G5, Sheet 2			x			6	SAF	SA	C	3	NO	
21MS15	2	F6, Sheet 1			x			6	SAF	SA	C	3	NO	
22MS15	2	D6, Sheet 2			x			6	SAF	SA	C	3	NO	

SYSTEM: Main Steam (MS) DRAWING NO.: 205303 PAGE: 51 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
23MS15	2	C6, Sheet 1			x			6	SAF	SA	C	3	NO	
24MS15	2	G6, Sheet 2			x			6	SAF	SA	C	3	NO	
21MS18	2	E4, Sheet 1		x				3	GA	A	C	1,2,5,6	NO	
22MS18	2	C4, Sheet 2		x				3	GA	A	C	1,2,5,6	NO	
23MS18	2	B4, Sheet 1		x				3	GA	A	C	1,2,5,6	NO	
24MS18	2	F4, Sheet 2		x				3	GA	A	C	1,2,5,6	NO	
21MS46	2	H3, Sheet 1			x			6	CK	SA	C	1	YES	
23MS46	2	G3, Sheet 1			x			6	CK	SA	C	1	YES	
2MS52	3	H5, Sheet 1		x				4	BFY	SOL	O	1,2,6	YES	
2MS53	3	H8, Sheet 1		x				4	GA	A	O	1,2	YES	
2MS132	2	H4, Sheet 1		x				6	GA	A	C	1,2,5	NO	
21MS167	2	F7, Sheet 1		x				32	GA	H/S	O	1,2,6	YES	$\leq$5 Sec.
22MS167	2	C7, Sheet 2		x				32	GA	H/S	O	1,2,6	YES	$\leq$5 Sec.
23MS167	2	B7, Sheet 1		x				32	GA	H/S	O	1,2,6	YES	$\leq$5 Sec.
24MS167	2	G7, Sheet 2		x				32	GA	H/S	O	1 2,6	YES	$\leq$5 Sec.
21MS168	NONE	F7, Sheet 1		x				4	3-WAY	SOL	*	1,2,6	YES	*Open to both ports 21-24MS169 & 21-24MS171.
22MS168	NONE	D7, Sheet 2		x				4	3-WAY	SOL	*	1,2,6	YES	
23MS168	NONE	C8, Sheet 1		x				4	3-WAY	SOL	*	1,2,6	YES	
24MS168	NONE	G7, Sheet 2		x				4	3-WAY	SOL	*	1,2,6	YES	
21MS169	2	G7, Sheet 1		x				2	GA	A	C	1,2,5	YES	
22MS169	2	D8, Sheet 2		x				2	GA	A	C	1,2,5	YES	
23MS169	2	C7, Sheet 1		x				2	GA	A	C	1,2,5	YES	
24MS169	2	G8, Sheet 2		x				2	GA	A	C	1,2,5	YES	
21MS171	2	G8, Sheet 1		x				2	GA	A	C	1,2,5	YES	
22MS171	2	D8, Sheet 2		x				2	GA	A	C	1,2,5	YES	
23MS171	2	D8, Sheet 1		x				2	GA	A	C	1,2,5	YES	
24MS171	2	G8, Sheet 2		x				2	GA	A	C	1,2,5	YES	

VALVE: 21MS46 and 23MS46
CATEGORY: C (Check)
CLASS: 2

FUNCTION: Steam supply to the 23AF Pump Turbine Drive.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: This valve cannot be flow tested during Cold Shutdowns or Refuelings because there is no steam available.

ALTERNATE TESTING: These valves will be exercised during Power Operation.

VALVE: 2MS52
CATEGORY: B
CLASS: 2

FUNCTION: Steam shutoff for the 23AF Pump Turbine to drive the pump.

TEST REQUIREMENTS: Stroke Time/Exercise valve every three months.

BASIS FOR RELIEF: This is a passive valve. It is always in the position required to allow the pump to operate during an incident.

ALTERNATE TESTING: None.

VALVE: 2MS53
CATEGORY: B
CLASS: 2

FUNCTION: To regulate the Steam Flow to the 23AF Pump Turbine to maintain a constant pump speed.

TEST REQUIREMENT: Stroke Time/Exercise valve every three months.

BASIS FOR RELIEF: This is a Turbine Governor Valve - stroke time does not provide any data on valve degradation.

ALTERNATE TESTING: Proper system operation during pump monthly testing will verify proper valve operation.

VALVE: 21-24MS167 (4 valves)
CATEGORY: B
CLASS: 2

FUNCTION: Main Steam Isolation Valves.

TEST REQUIREMENTS: Stroke Time/Exercise valve every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation. Shutting one valve will cause a Steam Flow/Feed Flow mismatch in the corresponding SG because the Steam Flow would go to zero. This would cause a reactor trip.

ALTERNATE TESTING: These valves will be tested during the startup following Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 21-24MS168 (4 valves)
CATEGORY: B
CLASS: NONE

FUNCTION: Three way valve used to direct steam in the closing of 21-24MS167 to vent through 21-24MS169 and 21-24MS171.

TEST REQUIREMENTS: Stroke Time/Exercise valves every three months.

BASIS FOR RELIEF: This is a passive valve always maintained in its safety-related position (i.e. open to the MS169s and MS171s).

ALTERNATE TESTING: None.

VALVE: 21-24MS169 and 21-24MS171 (8 valves)
CATEGORY: B
CLASS: 2

FUNCTION: Opening these valves is the back-up method of shutting the Main Steam stop valves (MS167's).

TEST REQUIREMENTS: Stroke Time/Exercise and Fail Safe Test every three months.

BASIS FOR RELIEF: The exercising of these valves will result in the closure of the corresponding Main Steam Stop (21-24MS167). (See relief for 21-24MS167.)

ALTERNATE TESTING: These valves will be tested during startup following Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

SYSTEM: Nitrogen (NT) DRAWING NO.: 205301 and 205334 PAGE: 55 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
2NT25	2	205301 C10, Sheet 1	x					0.75	DA	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" Cont. Isol. (Print #205201, RC System)
2NT26	2	205301 C9, Sheet 1	x		x			0.75	CK	SA	C	1,4	YES	
2NT32	2	205334 H6, Sheet 3	x					1	GL	A	C	1,2,4,5,6	YES	<10 SEC. PH. "A" Cont. Isol. (Print #205234, SJ System)
2NT34	2	205334 H7, Sheet 3	x		x			1	CK	SA	C	1,4	YES	

VALVE: 2NT25
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation of Nitrogen Supply to Pressurize Relief Tank.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2NT26
CATEGORY: A/C
CLASS: 2

FUNCTION: Containment Isolation of Nitrogen Supply to the Pressurizer Relief tank.

TEST REQUIREMENTS:
a) Exercise valve every three months.

b) Leak Rate Test less than each 24 months.

BASIS FOR RELIEF:
a) This valve has no position indication and is located inside the containment. This valve can only be verified shut during Refueling.

b) Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING:
a) This valve will be verified shut during Refueling (leak rate testing).

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2NT32
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation of Nitrogen Supply to the Safety Injection Accumulators.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2NT34
CATEGORY: A/C
CLASS: 2

FUNCTION: Containment Isolation of Nitrogen Supply to Safety Injection Accumulators.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
2PR1	1	F1, Sheet 1		x				3	PL	A	C	1,2,6	NO	
2PR2	1	F2, Sheet 1		x				3	PL	A	C	1,2,6	NO	
2PR3	1	F2, Sheet 1			x			6	REL	SA	C	3	NO	
2PR4	1	F3, Sheet 1			x			6	REL	SA	C	3	NO	
2PR5	1	F5, Sheet 1			x			6	REL	SA	C	3	NO	
2PR6	1	F1, Sheet 1		x				3	GA	MO	O	1,2,6	NO	
2PR7	1	F2, Sheet 1		x				3	GA	MO	O	1,2,6	NO	
2PR15	2	D8, Sheet 1		x				0.75	DIA	A	C	1,2,6	NO	
2PR17	2	D9, Sheet 1	x					0.375	PL	A	AUTO	1,2,4,5,6	YES	$\leq$10 SEC. PH. "A" Cont. $\overline{\text{I}}$sol.
2PR18	2	D10,Sheet 1	x					0.375	PL	A	AUTO	1,2,4,5,6	YES	$\leq$10 SEC. PH. "A" Cont. $\overline{\text{I}}$sol.
2PR25	2	E9, Sheet 1			x			4	CK	SA	C	1	NO	
2RC40	1	H7, Sheet 1		x				.75	GL	SOL	C	1,2,6	YES	
2RC41	1	H7, Sheet 1		x				.75	GL	SOL	C	1,2,6	YES	
2RC42	1	H7, Sheet 1		x				.75	GL	SOL	C	1,2,6	YES	
2RC43	1	H7, Sheet 1		x				.75	GL	SOL	C	1,2,6	YES	

VALVE: 2PR17 and 2PR18
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation Pressurizer Relief Tank to Gas Analyzer Sample Line.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CF50, Appendix J. This test meets the intent of the ASME B&PV Code Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2RC40, 41, 42 and 43 (4 valves)
CATEGORY: B
CLASS: 2

FUNCTION: To vent the reactor vessel head

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: A letter from Mr. Steve Varga (Operating Reactor Branch 1 Division of Licensing), dated Sept. 27, 1983 to Mr. R. A. Uderitz (Vice President - Nuclear)

ALTERNATE TESTING: These valves will be exercised during Cold Shutdowns and refuelings per Section XI. In cases of frequent Cold Shutdowns, these valves need not be exercised more often than once every three months.

SYSTEM: Residual Heat Removal (RHR) DRAWING NO.: 205332 PAGE: 60 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
2RH1	1	G10, Sheet 2	x					14	GA	MO	C	1,2,4,6	YES	
2RH2	1	G10, Sheet 2	x					14	GA	MO	C	1,2,4,6	YES	
2RH3	2	H9, Sheet 2			x			3	REL	SA	C	3	NO	
21RH4	2	E1, Sheet 1		x				14	GA	MO	O	1,2,6	NO	
22RH4	2	E1, Sheet 2		x				14	GA	MO	O	1,2,6	NO	
21RH8	2	F3, Sheet 1			x			8	CK	SA	C	1	YES	
22RH8	2	F3, Sheet 2			x			8	CK	SA	C	1	YES	
21RH18	2	F8, Sheet 1		x				8	BFY	A	TH	1,2,5,6	NO	
22RH18	2	F8, Sheet 2		x				8	BFY	A	TH	1,2,5,6	NO	
21RH19	2	E8, Sheet 1		x				8	GA	MO	O	1,2,6	NO	
22RH19	2	E8, Sheet 2		x				8	GA	MO	O	1,2,6	NO	
2RH20	2	E7, Sheet 1		x				8	BFY	A	C	1,2,5,6	NO	
2RH25	2	H9, Sheet 1			x			0.75	REL	SA	C	3	NO	
2RH26	1	F10, Sheet 1		x				12	GA	MO	C	1,2,6	YES	
23RH27	1	F10, Sheet 1	x		x			8	CK	SA	C	1,4	YES	
24RH27	1	G10, Sheet 1	x		x			8	CK	SA	C	1,4	YES	
21RH29	2	G4, Sheet 1		x				2	GL	MO	AUTO	1,2,6	NO	
22RH29	2	G3, Sheet 2		x				2	GL	MO	AUTO	1,2,6	NO	
2RH75	2	E1, Sheet 1			x			14	CK	SA	C	1	NO	
2RH76	2	E1, Sheet 2			x			14	CK	SA	C	1	NO	

VALVE: 2RH1 and 2RH2
CATEGORY: A
CLASS: 1

FUNCTION: Residual Heat Removal Isolations from the Hotleg on the #21 Loop.

TEST REQUIREMENTS: Stroke Time/Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation because they are pressure interlocked and cannot be opened with RCS > 590 psig.

ALTERNATE TESTING: These valves will be tested during the startup following Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 21RH8 and 22RH8
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow through the RHR (LPSI) pumps.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: These valves can only be part stroke exercised during Power Operation due to the limited size of the recirc. line. To full stroke exercise these valves at Power Operation requires opening the 2RH21. Should this valve fail while open or should an incident occur while testing, too much water would be diverted from the LPSI to provide sufficient cooling.

ALTERNATE TESTING: These valves will be part stroke exercised during Power Operation/Cold Shutdowns and full stroke exercise during Refuelings.

VALVE: 2RH26
CATEGORY: B
CLASS: 1

FUNCTION: Residual Heat Isolation from the Hot Legs on the #23 and #24 Loops.

TEST REQUIREMENTS: Stroke Time/Exercise valve every three months.

BASIS FOR RELIEF: This valve cannot be exercised during Power Operation because valve is shut with power removed (Per Technical Specification 4.5.2) to prevent over-pressurization of the RHR System (low pressure SI system). Also, if the valve failed open, flow would be diverted from the injection flow path.

ALTERNATE TESTING: This valve will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 23RH27 and 24RH27
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent Reactor Coolant Backflow into the Residual Heat Removal System.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: This is a passive valve. During an incident LPSI is through another path, therefore, exercising is not required.

ALTERNATE TESTING: None.

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
2SA118	2	D9, Sheet 2	x					3	GA	M	LC	4	YES	
2SA119	2	D9, Sheet 2	x		x			3	CK	SA	C	1,4	YES	
2SA262	2	B6, Sheet 1	x					1	GA	M	LC	4	YES	
2SA264	2	B7, Sheet 1	x					1	GA	M	LC	4	YES	
2SA265	2	A6, Sheet 1	x					1	GA	M	LC	4	YES	
2SA267	2	A7, Sheet 1	x					1	GA	M	LC	4	YES	
2SA268	2	A6, Sheet 1	x					1	GA	M	LC	4	YES	
2SA270	2	A7, Sheet 1	x					1	GA	M	LC	4	YES	

VALVE: 2SA118, 262, 264, 265, 267, 268, and 270 (7 valves)
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation of Station Air System.

TEST REQUIREMENT: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2SA119
CATEGORY: A/C (Check)
CLASS: 2

FUNCTION: Containment Isolation of Station Air System.

TEST REQUIREMENT: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

SYSTEM: Spent Fuel Cooling (SF) DRAWING NO.: 205333 PAGE: 65 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
2SF22	2	A6, Sheet 1	x					3	DIA	M	LC	4	YES	
2SF36	2	A3, Sheet 1	x					2	DIA	M	LC	4	YES	

VALVE: 2SF22 and 2SF36
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation (outside containment) of Spent Fuel Cooling Lines to Reactor Cavity.

TEST REQUIREMENT: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Technical Specification Table 3.6-1 exempts these valves from Leak Rate Testing.

ALTERNATE TESTING: None.

SYSTEM: Safety Injection (SJ) DRAWING NO.: 205334 PAGE: 67 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
2SJ1	2	F1, Sheet 1		x				8	GA	MO	C	1,2,6	YES	
2SJ2	2	F1, Sheet 1		x				8	GA	MO	C	1,2,6	YES	
2SJ3	2	F1, Sheet 1			x			8	CK	SA	C	1	YES	
2SJ4	2	B4, Sheet 1		x				4	GA	MO	C	1,2,6	YES	
2SJ5	2	C4, Sheet 1		x				4	GA	MO	C	1,2,6	YES	
2SJ10	2	D7, Sheet 1			x			0.75	REL	SA	C	3	NO	
2SJ12	1	C7, Sheet 1		x				4	GA	MO	C	1,2,6	NO	
2SJ13	1	D8, Sheet 1		x				4	GA	MO	C	1,2,6	NO	
21SJ17	1	H7, Sheet 1	x		x			1.5	CK	SA	C	1,4	YES	
22SJ17	1	H8, Sheet 1	x		x			1.5	CK	SA	C	1,4	YES	
23SJ17	1	H9, Sheet 1	x		x			1.5	CK	SA	C	1,4	YES	
24SJ17	1	H10, Sheet 1			x			1.5	CK	SA	C	1,4	YES	
21SJ29	3	G2, Sheet 4			x			1	SAF	SA	C	3	NO	
22SJ29	3	G5, Sheet 4			x			1	SAF	SA	C	3	NO	
23SJ29	3	G7, Sheet 4			x			1	SAF	SA	C	3	NO	
24SJ29	3	G10, Sheet 4			x			1	SAF	SA	C	3	NO	
2SJ30	2	G1, Sheet 2		x				8	GA	MO	O	1,2	YES	
2SJ31	2	G2, Sheet 2			x			8	CK	SA	C	1	YES	
2SJ32	2	G5, Sheet 2			x			0.75	REL	SA	C	3	NO	
21SJ33	2	G2, Sheet 2		x				6	GA	MO	O	1,2,6	NO	
22SJ33	2	G5, Sheet 2		x				6	GA	MO	O	1,2,6	NO	
21SJ34	2	D5, Sheet 2			x			4	CK	SA	C	1	YES	
22SJ34	2	D7, Sheet 2			x			4	CK	SA	C	1	YES	
21SJ39	2	D9, Sheet 2			x			0.75	REL	SA	C	3	NO	
22SJ39	2	D8, Sheet 2			x			0.75	REL	SA	C	3	NO	
21SJ40	1	G9, Sheet 2		x				4	GA	MO	C	1,2,6	NO	
22SJ40	1	G8, Sheet 2		x				4	GA	MO	C	1,2,6	NO	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21SJ43	1	E3, Sheet 4	x		x			6	CK	SA	C	1,4	YES	
22SJ43	1	D5, Sheet 4	x		x			6	CK	SA	C	1,4	YES	
23SJ43	1	D8, Sheet 4	x		x			6	CK	SA	C	1,4	YES	
24SJ43	1	D10,Sheet 4	x		x			6	CK	SA	C	1,4	YES	
21SJ44	2	B3, Sheet 3		x				14	GA	MO	C	1,2,6	YES	
22SJ44	2	B2, Sheet 3		x				14	GA	MO	C	1,2,6	YES	
21SJ45	2	G6, Sheet 2		x				8	GA	MO	C	1,2,6	YES	
22SJ45	2	E3, Sheet 1		x				8	GA	MO	C	1,2,6	YES	
21SJ48	2	G6, Sheet 3			x			2	REL	SA	C	3	NO	
22SJ48	2	D6, Sheet 3			x			2	REL	SA	C	3	NO	
21SJ49	1	G6, Sheet 3		x				8	GA	MO	O	1,2,6	NO	
22SJ49	1	D6, Sheet 3		x				8	GA	MO	O	1,2,6	NO	
2SJ53	1	F10,Sheet 2	x					0.75	GL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT.
21SJ54	1	E2, Sheet 4		x				10	GA	MO	O	1,2,6	YES	
22SJ54	1	E4, Sheet 4		x				10	GA	MO	O	1,2,6	YES	
23SJ54	1	E7, Sheet 4		x				10	GA	MO	O	1,2,6	YES	
24SJ54	1	E10,Sheet 4		x				10	GA	MO	O	1,2,6	YES	
21SJ55	1	D1, Sheet 4	x		x			10	CK	SA	C	1,4	YES	
22SJ55	1	D4, Sheet 4	x		x			10	CK	SA	C	1,4	YES	
23SJ55	1	D7, Sheet 4	x		x			10	CK	SA	C	1,4	YES	
24SJ55	1	D10,Sheet 4	x		x			10	CK	SA	C	1,4	YES	
21SJ56	1	C1, Sheet 4	x		x			10	CK	SA	C	1,4	YES	
22SJ56	1	C4, Sheet 4	x		x			10	CK	SA	C	1,4	YES	
23SJ56	1	C7, Sheet 4	x		x			10	CK	SA	C	1,4	YES	
24SJ56	1	C10,Sheet 4	x		x			10	CK	SA	C	1,4	YES	
2SJ60	1	B4, Sheet 4	x					0.75	GL	A	C	1,2,4,5,6	YES	<10 SEC. PH. "A" CONT.

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21SJ64	2	D4, Sheet 2			x			0.75	CK	SA	C	1	NO	
22SJ64	2	D7, Sheet 2			x			0.75	CK	SA	C	1	NO	
2SJ67	2	C3, Sheet 2		x				2	GL	MO	O	1,2,6	NO	
2SJ68	2	C2, Sheet 2		x				2	GL	MO	O	1,2,6	NO	
2SJ69	2	D1, Sheet 3		x				12	GA	MO	O	1,2,6	YES	
2SJ70	2	E1, Sheet 3			x			12	CK	SA	C	1	YES	
2SJ78	2	E6, Sheet 1		x				1.0	GL	A	O	1,2,6	NO	
2SJ79	2	E6, Sheet 1		x				1.0	GL	A	O	1,2,6	NO	
2SJ87	3	H2, Sheet 1			x			3	CK	SA	C	1	NO	
21SJ93	3	G1, Sheet 4		x				1	GL	A	C	1,2,5,6	NO	
22SJ93	3	G4, Sheet 4		x				1	GL	A	C	1,2,5,6	NO	
23SJ93	3	G7, Sheet 4		x				1	GL	A	C	1,2,5,6	NO	
24SJ93	3	G9, Sheet 4		x				1	GL	A	C	1,2,5,6	NO	
2SJ108	2	B5, Sheet 1		x				1.0	GL	A	O	1,2,5,6	NO	
21SJ113	2	E2, Sheet 1		x				4	GA	MO	C	1,2,6	NO	
22SJ113	2	E3, Sheet 1		x				4	GA	MO	C	1,2,6	NO	
2SJ123	1	B4, Sheet 4	x					0.75	GL	A	C	1,2,4,5,6	YES	<10 SEC. PH. "A" CONT. ISOL.
2SJ133	3	H3, Sheet 1			x			0.75	REL	SA	C	3	NO	
21SJ134	2	F9, Sheet 2		x				4	GA	MO	O	1,2,6	NO	
22SJ134	2	F8, Sheet 2		x				4	GA	MO	O	1,2,6	NO	
2SJ135	1	G9, Sheet 2		x				4	GA	MO	O	1,2,6	YES	

SYSTEM: Safety Injection (SJ) DRAWING NO.: 205334 PAGE: 70 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21SJ139	1	D10,Sheet 3	x		x			2	CK	SA	C	1,4	YES	
22SJ139	1	C11,Sheet 3	x		x			2	CK	SA	C	1,4	YES	
23SJ139	1	G10,Sheet 3	x		x			2	CK	SA	C	1,4	YES	
24SJ139	1	G8, Sheet 3	x		x			2	CK	SA	C	1,4	YES	
21SJ144	1	D3, Sheet 4	x		x			2	CK	SA	C	1,4	YES	
22SJ144	1	F6, Sheet 4	x		x			2	CK	SA	C	1,4	YES	
23SJ144	1	F8, Sheet 4	x		x			2	CK	SA	C	1,4	YES	
24SJ144	1	F11,Sheet 4	x		x			2	CK	SA	C	1,4	YES	
2SJ150	1	F9, Sheet 1	x		x			3	CK	SA	C	1,4	YES	
21SJ156	1	G11,Sheet 3	x		x			6	CK	SA	C	1,4	YES	
22SJ156	1	G11,Sheet 3	x		x			6	CK	SA	C	1,4	YES	
23SJ156	1	H9, Sheet 3	x		x			6	CK	SA	C	1,4	YES	
24SJ156	1	H9, Sheet 3	x		x			6	CK	SA	C	1,4	YES	
2SJ167	2	G8, Sheet 2			x			0.75	REL	SA	C	3	NO	

VALVE: 2SJ1 and 2SJ2
CATEGORY: B
CLASS: 2

FUNCTION: These valves isolate the Refueling Water Storage Tank from the suction of the Charging Pumps.

TEST REQUIREMENTS: Stroke Time/Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation without injecting 2000 ppm boron into the RCS resulting in a reactor shutdown.

ALTERNATE TESTING: These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 2SJ3
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow of the Volume Control System into the Refueling Water Storage Tank.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: In order to test this valve, 2SJ1 or 2SJ2 must be opened. (See the specific relief for opening these valves.)

ALTERNATE TESTING: This valve will be full stroke exercised during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be exercised more often than once every three months.

VALVE: 2SJ4 and 2SJ5
CATEGORY: B
CLASS: 2

FUNCTION: Boron Injection Tank inlet valves.

TEST REQUIREMENTS: Stroke Time/Exercise valve every three months.

BASIS FOR RELIEF: Opening these valves during Power Operation would dilute the BIT below 20,100 ppm boron; the concentration required by Technical Specification 3.5.4.1 to insure safe Plant shutdown of the reactor during an incident.

ALTERNATE TESTING: These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 21-24SJ17 (4 valves)
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent backflow from the RCS Cold Legs into the Safety Injection System.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF:

a) For Power Operation, testing would require pumping 2,000 ppm borated water into the RCS. This would render the reactor subcritical and would also violate Technical Specification LCO 3.5.4.1.

b) For Cold Shutdown, testing would ultimately require significant RCS dilution and boric acid recovery operation. It would also present a possible low-temperature RCS over-pressurization and would violate Technical Specification 3.5.4.1. and certain operating procedures.

ALTERNATE TESTING: This valve will be full stroke exercised during Refuelings.

VALVE: 2SJ30
CATEGORY: B
CLASS: 2

FUNCTION: Isolate S.I. Pump suctions from the Refueling Water Storage Tank.

TEST REQUIREMENTS: Stroke Time/Exercise valve every three months.

BASIS FOR RELIEF: Stroking this valve requires isolating the suctions of both Safety Injection Pumps from the RWST. Failure of this valve would disable both ECCS trains and render the Plant to be shut down by Technical Specifications.

ALTERNATE TESTING: This valve will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 2SJ31
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow into the RWST and to prevent backflow through Safety Injection Pump.

TEST REQUIREMENT: Exercise valve every three months.

BASIS FOR RELIEF: Only partial stroke is possible due to design of the recirculation line. Flow to Loop cannot be done at Power Operation because the RCS pressure is > Safety Injection Pump Shutoff Head.

ALTERNATE TESTING: This valve will be part stroke exercised quarterly and full stroke exercised during Refuelings.

VALVE: 21SJ34 and 22SJ34
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow through Safety Injection Pumps.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: Only partial stroke is possible due to design of the recirculation line. Flow to Loop cannot be done at Power Operation because the RCS pressure is > Safety Injection Pump Shutoff Head.

ALTERNATE TESTING: These valves will be part stroke exercised during Power Operation/Cold Shutdowns and full stroke exercised during Refuelings.

VALVE: 21-24SJ43 (4 valves)
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent backflow of water from the accumulators to the RHR Discharge Piping.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: During Power Operation and Cold Shutdown, RCS pressure is greater than RHR Pump Shutoff Head and flow cannot be established.

ALTERNATE TESTING: These valves will be full stroke exercised during Refuelings.

VALVE: 21SJ44 and 22SJ44
CATEGORY: B
CLASS: 3

FUNCTION: Safety Injection System Containment Sump suction isolation valves.

TEST REQUIREMENT: Stroke Time/Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation because if a valve failed, containment integrity would be breached to initiate a repair to the valve and the reactor would have to be shutdown.

ALTERNATE TESTING: These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 21SJ45 and 22SJ45
CATEGORY: B
CLASS: 2

FUNCTION: Provide suction from the RHR (LPSI) pump discharge to the Safety Injection (IPSI) and Charging (HPSI) pumps.

TEST REQUIREMENT: Stroke Time/Exercise valves every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation because the 21SJ44 and 22SJ44 must be opened to exercise these valves due to interlocks between them. (See relief request for 21SJ44 and 22SJ44.)

ALTERNATE TESTING: These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 2SJ53
CATEGORY: A
CLASS: 1

FUNCTION: Containment Isolation from Safety Injection Test Line.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 21-24SJ54 (4 valves)
CATEGORY: B
CLASS: 1

FUNCTION: Accumulator Outlet to the Cold Legs.

TEST REQUIREMENTS: Stroke Time/Exercise valves every three months.

BASIS FOR RELIEF: Valves cannot be exercised when the accumulators are at normal pressure and the RCS is <1000 psig to prevent a possible Low Temperature Over-pressurization of the RCS.

ALTERNATE TESTING: These valves will be tested while:

a) The accumulators are at normal pressure and RCS >1000 psig.

b) The accumulators are depressurized and the RCS is <1000 psig.

In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 21-24SJ55 (4 valves)
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent backflow from the discharge of the RHR pumps into the accumulators.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: During Power Operation, the RCS pressure is greater than accumulator pressure. During Cold Shutdown, testing of this valve by accumulator discharge could result in low temperature over-pressurization of the RCS.

ALTERNATE TESTING: These valves will be full stroke exercised during Refuelings.

VALVE: 21-24SJ56 (4 Valves)
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent backflow from the RCS Cold Legs into the accumulator and RHR Pump Discharge Lines.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: Flow cannot be established during Power Operation because the RCS pressure is greater than both the RHR Pump shutoff head and the accumulator pressure.

ALTERNATE TESTING: These valves will be full stroke exercised during Refuelings.

VALVE: 2SJ60
CATEGORY: A
CLASS: 1
FUNCTION: Containment Isolation from Safety Injection Test Line.

TEST REQUIREMENTS: Leak Rate Testing less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2SJ69
CATEGORY: B
CLASS: 2

FUNCTION: Provide suction to the RHR (LPSI) pumps.

TEST REQUIREMENTS: Stroke Time/Exercise valve every three months.

BASIS FOR RELIEF: This is a passive valve always maintained in the open position (Technical Specification 4.5.2 requires this valve to be open with the power removed during Power Operation). Failure of this valve in the closed position during testing would render the RHR (LPSI) system inoperable.

ALTERNATE TESTING: This valve will be tested during the startup following Cold Shutdowns. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 2SJ70
CATEGORY: C (Check)
CLASS: 2

FUNCTION: To prevent backflow from the RHR pump suction to the Refueling Water Storage Tank.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF: This valve cannot be exercised during power operation due to arrangement of recirculation line. It would divert too much flow in an accident.

ALTERNATE TESTING: This valve will be full stroke exercised during Refuelings.

VALVE: 2SJ123
CATEGORY: A
CLASS: 1

FUNCTION: Containment Isolation from Safety Injection Test Lines.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2SJ135
CATEGORY: B
CLASS: 1

FUNCTION: Safety Injection (IPSI) Pump Discharge to Cold Legs.

TEST REQUIREMENTS: Stroke Time/Exercise valve every three months.

BASIS FOR RELIEF: This valve cannot be exercised during Power Operation because if it fails shut during testing, Cold Leg Injection would be isolated; thus inoperable, requiring plant shutdown per Technical Specification.

ALTERNATE TESTING: This valve will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

VALVE: 21-24SJ139 (4 valves)
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent backflow from the RCS Hot Legs to the discharge of the Safety Injection Pumps.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: During Power Operation, testing is not possible since RCS pressure is greater than Safety Injection Pump Shut Off Head. During Cold Shutdown, the possibility of a Low Temperature Over-Pressurization of the RCS exists.

ALTERNATE TESTING: These valves will be full stroke exercised during Refuelings.

VALVE: 21-24SJ144 (4 valves)
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent backflow from the RCS Cold Legs to the Safety Injection Pump Discharge Lines.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: During Power Operation testing is not possible since RCS pressure is greater than Safety Injection Pump Shut off head. During Cold Shutdown a low Temperature over-pressurization of the RCS could occur.

ALTERNATE TESTING: These valves will be full stroke exercised during Refuelings.

VALVE: 2SJ150
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent backflow from the RCS Cold Legs into the BIT.

TEST REQUIREMENTS: Exercise valve every three months.

BASIS FOR RELIEF:

a) For Power Operation, testing would require pumping 2,000 ppm borated water into the RCS. This would render the reactor subcritical and would also violate Technical Specification LCO 3.5.4.1.

b) For Cold Shutdown, testing would ultimately require signification RCS dilution and boric acid recovery operation. It would also present a possible low-temperature RCS over pressurization and would violate Technical Specifications 3.5.4.1 and certain operating procedures.

ALTERNATE TESTING: This valve will be full stroke exercised during Refuelings.

VALVE: 21-24SJ156 (4 valves)
CATEGORY: C (Check)
CLASS: 1

FUNCTION: To prevent backflow from the RCS Hot Legs to the Safety Injection Pump Discharge.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: Same conditions for relief as 21-24SJ139.

ALTERNATE TESTING: These valves will be full stroke exercised during Refuelings.

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
2SS27	2	E6, Sheet 1	x					0.375	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2SS33	2	G6, Sheet 1	x					0.375	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2SS49	2	G6, Sheet 1	x					0.375	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2SS64	2	H6, Sheet 1	x					0.375	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
21SS93	2	D8, Sheet 1	x					0.375	GL	A	O	1,2,4,5,6	YES	
22SS93	2	C8, Sheet 1	x					0.375	GL	A	O	1,2,4,5,6	YES	
23SS93	2	B8, Sheet 1	x					0.375	GL	A	O	1,2,4,5,6	YES	
24SS93	2	A8, Sheet 1	x					0.3	GL	A	O	1,2,4,5,6	YES	
21SS94	2	D7, Sheet 1	x					0.5	GL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
22SS94	2	C7, Sheet 1	x					0.5	GL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
23SS94	2	B7, Sheet 1	x					0.5	GL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
24SS94	2	A7, Sheet 1	x					0.5	GL	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2SS103	2	F7, Sheet 1	x					0.375	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2SS104	2	G7, Sheet 1	x					0.375	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2SS107	2	G7, Sheet 1	x					0.375	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.

SYSTEM: Sampling (SS) DRAWING NO.: 205344 PAGE: 83 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
2SS110	2	H7, Sheet 1	x					0.375	PL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
21SS181	2	F6, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
23SS181	2	F6, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
21SS182	2	F7, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
23SS182	2	F7, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
23SS184	2	F7, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
23SS185	2	F6, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
21SS188	2	F7, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
21SS189	2	F6, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
2SS900	1	H6, Sheet 1	x					0.125	NE	M	LC	4	YES	Print 240668
2SS901	1	H6, Sheet 1	x					0.125	NE	M	LC	4	YES	Print 240668

VALVE: 2SS27, 2SS33, 2SS49 and 2SS64
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation Primary Sampling System.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate test per Technical Specification 4.6.1.2.d.

VALVE: 21-24SS93 (4 Valves)
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation from Steam Generator Sampling Lines.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months and stroke timing/exercise every three months.

BASIS FOR RELIEF: Technical Specification Table 3.6-1 exempts this valve from leak rate testing and stroke timing/exercising.

ALTERNATE TESTING: None.

VALVE: 21-24SS94 (4 valves)
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Steam Generator Drain and Blowdown.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2SS103, 2SS104, 2SS107 and 2SS110
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation Primary Sampling System.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2SS900, and 2SS901
CATEGORY: A
CLASS: 1

FUNCTION: Containment Isolation for Pressurizer Dead Weight Test.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Technical Specification Table 3.6-1 exempts these valves from Leak Rate Testing.

ALTERNATE TESTING: None.

VALVE: 2SS181, 182, 188 and 189/23SS181, 182, 184 and 185 (8 valves)
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation of the Primary Samping System.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21SW2	3	C7, Sheet 1			x			20	DCK	SA	O	1	NO	
22SW2	3	E7, Sheet 1			x			20	DCK	SA	O	1	NO	
23SW2	3	G7, Sheet 1			x			20	DCK	SA	O	1	NO	
24SW2	3	C7, Sheet 2			x			20	DCK	SA	O	1	NO	
25SW2	3	E7, Sheet 2			x			20	DCK	SA	O	1	NO	
26SW2	3	G7, Sheet 2			x			20	DCK	SA	O	1	NO	
21SW5	3	F10, Sheet 2			x			30	DCK	SA	O	1	NO	
22SW5	3	C8, Sheet 1			x			24	DCK	SA	O	1	YES	
23SW5	3	G8, Sheet 2			x			30	DCK	SA	O	1	NO	
24SW5	3	F8, Sheet 2			x			24	DCK	SA	O	1	YES	
21SW8	3	H5, Sheet 1		x				1.5	GL	A	AUTO	1,2,5	NO	
22SW8	3	H5, Sheet 2		x				1.5	GL	A	AUTO	1,2,5	NO	
21SW13	3	C4, Sheet 1			x			0.75	CK	SA	O	1	NO	
22SW13	3	E4, Sheet 1			x			0.75	CK	SA	O	1	NO	
23SW13	3	G4, Sheet 1			x			0.75	CK	SA	O	1	NO	
24SW13	3	C4, Sheet 2			x			0.75	CK	SA	O	1	NO	
25SW13	3	E4, Sheet 2			x			0.75	CK	SA	O	1	NO	
26SW13	3	G4, Sheet 2			x			0.75	CK	SA	O	1	NO	
21SW15	3	C2, Sheet 1		x				2	GL	A	AUTO	1,2	NO	
22SW15	3	E2, Sheet 1		x				2	GL	A	AUTO	1,2	NO	
23SW15	3	G2, Sheet 1		x				2	GL	A	AUTO	1,2	NO	
24SW15	3	C2, Sheet 2		x				2	GL	A	AUTO	1,2	NO	
25SW15	3	E2, Sheet 2		x				2	GL	A	AUTO	1,2	NO	
26SW15	3	G2, Sheet 2		x				2	GL	A	AUTO	1,2	NO	

SYSTEM: Service Water - Nuc. (SW) DRAWING NO.: 205342 PAGE: 87 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
21SW17	3	G7, Sheet 1		x				30	BFY	MO	O	1,2,6	NO	
22SW17	3	C7, Sheet 2		x				30	BFY	MO	O	1,2,6	NO	
21SW20	3	F8, Sheet 1		x				24	BFY	MO	O	1,2,6	NO	
22SW20	3	D8, Sheet 1		x				24	BFY	MO	O	1,2,6	NO	
23SW20	3	G7, Sheet 2		x				24	BFY	MO	O	1,2,6	NO	
24SW20	3	F7, Sheet 2		x				24	BFY	MO	O	1,2,6	NO	
21SW21	3	G6, Sheet 3		x				8	BFY	MO	O	1,2,6	NO	
22SW21	3	G6, Sheet 3		x				8	BFY	MO	O	1,2,6	NO	
21SW22	3	F5, Sheet 3		x				24	BFY	MO	O	1,2,6	NO	
22SW22	3	F5, Sheet 3		x				24	BFY	MO	O	1,2,6	NO	
21SW23	3	F5, Sheet 3		x				24	BFY	MO	O	1,2,6	NO	
22SW23	3	F6, Sheet 3		x				24	BFY	MO	O	1,2,6	NO	
21SW24	3	C6, Sheet 1		x				4	DIA	A	AUTO	1,2	NO	
22SW24	3	E6, Sheet 1		x				4	DIA	A	AUTO	1,2	NO	
23SW24	3	G6, Sheet 1		x				4	DIA	A	AUTO	1,2	NO	
24SW24	3	C6, Sheet 2		x				4	DIA	A	AUTO	1,2	NO	
25SW24	3	E6, Sheet 2		x				4	DIA	A	AUTO	1,2	NO	
26SW24	3	G6, Sheet 2		x				4	DIA	A	AUTO	1,2	NO	
2SW26	3	G10, Sheet 2		x				30	BFY	MO	AUTO	1,2	NO	
2SW28	3	H10, Sheet 2		x				3	GL	A	AUTO	1,2	NO	
21SW34	3	G7, Sheet 3			x			6	DCK	SA	C	1	NO	
22SW34	3	G7, Sheet 3			x			6	DCK	SA	C	1	NO	
21SW36	3	G7, Sheet 3			x			6	DCK	SA	C	1	NO	
22SW36	3	F7, Sheet 3			x			6	DCK	SA	C	1	NO	
21SW38	3	F7, Sheet 3			x			6	DCK	SA	C	1	NO	

SYSTEM: Service Water - Nuc. (SW) DRAWING NO.: 205342 PAGE: 88 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
22SW38	3	F7, Sheet 3			x			6	DCK	SA	C	1	NO	
21SW39	3	G8, Sheet 3		x				6	PL	A	C	1,2,5	NO	
22SW39	3	G8, Sheet 3		x				6	PL	A	C	1,2,5	NO	
23SW39	3	F8, Sheet 3		x				6	PL	A	C	1,2,5	NO	
21SW42	3	E8, Sheet 3		x				6	BFY	A	AUTO	1,2	NO	
22SW42	3	D8, Sheet 3		x				6	BFY	A	AUTO	1,2	NO	
23SW42	3	C8, Sheet 3		x				6	BFY	A	AUTO	1,2	NO	
21SW44	3	E9, Sheet 3			x			6	DCK	SA	C	1	NO	
22SW44	3	D9, Sheet 3			x			6	DCK	SA	C	1	NO	
23SW44	3	C9, Sheet 3			x			6	DCK	SA	C	1	NO	
21SW47	3	E9, Sheet 3			x			8	DCK	SA	C	1	NO	
22SW47	3	D9, Sheet 3			x			8	DCK	SA	C	1	NO	
21SW49	3	B9, Sheet 3		x				8	PL	A	AUTO	1,2	NO	
22SW49	3	B9, Sheet 3		x				8	PL	A	AUTO	1,2	NO	
21SW51	3	H1, Sheet 6			x			16	DCK	SA	O	1	YES	
22SW51	3	G3, Sheet 5			x			16	DCK	SA	O	1	YES	
21SW53	3	E1, Sheet 6			x			10	DCK	SA	O	1	NO	
22SW53	3	D1, Sheet 6			x			10	DCK	SA	O	1	NO	
21SW57	3	H2, Sheet 6		x				10	BFY	A	O	1	NO	
22SW57	3	F2, Sheet 6		x				10	BFY	A	O	1	NO	

SYSTEM: Service Water - Nuc. (SW) DRAWING NO.: 205342 PAGE: 89 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
23SW57	3	E2, Sheet 6		x				10	BFY	A	O	1	NO	
24SW57	3	C2, Sheet 6		x				10	BFY	A	O	1	NO	
25SW57	3	B2, Sheet 6		x				10	BFY	A	O	1	NO	
21SW58	2	H3, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
22SW58	2	F3, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
23SW58	2	E3, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
24SW58	2	C3, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
25SW58	2	B3, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
21SW65	3	H7, Sheet 6		x				10	BFY	A	AUTO	1,2	NO	
22SW65	3	F7, Sheet 6		x				10	BFY	A	AUTO	1,2	NO	
23SW65	3	E7, Sheet 6		x				10	BFY	A	AUTO	1,2	NO	
24SW65	3	C7, Sheet 6		x				10	BFY	A	AUTO	1,2	NO	
25SW65	3	B7, Sheet 6		x				10	BFY	A	AUTO	1,2	NO	
21SW72	2	H8, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
22SW72	2	F8, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
23SW72	2	E8, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
24SW72	2	C8, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
25SW72	2	B8, Sheet 6		x				10	BFY	A	O	1,2,5,6	NO	
21SW77	3	E10, Sheet 6			x			10	DCK	SA	O	1	NO	
22SW77	3	D10, Sheet 6			x			10	DCK	SA	O	1	NO	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
21SW79	3	C11, Sheet 3			x			24	DCK	SA	O	1	YES	
22SW79	3	C10, Sheet 3			x			24	DCK	SA	O	1	YES	
21SW92	3	F4, Sheet 5		x				4	GL	A	AUTO	1,2	NO	
22SW92	3	E4, Sheet 5		x				4	GL	A	AUTO	1,2	NO	
23SW92	3	D4, Sheet 5		x				4	GL	A	AUTO	1,2	NO	
21SW93	3	F4, Sheet 5		x				4	GL	A	AUTO	1,2	NO	
22SW93	3	D4, Sheet 5		x				4	GL	A	AUTO	1,2	NO	
23SW93	3	C4, Sheet 5		x				4	GL	A	AUTO	1,2	NO	
21SW99	3	E6, Sheet 5			x			4	DCK	SA	O	1	NO	
22SW99	3	D6, Sheet 5			x			4	DCK	SA	O	1	NO	
23SW99	3	C6, Sheet 5			x			4	DCK	SA	O	1	NO	
21SW102	3	F8, Sheet 5		x				4	PL	A	AUTO	1,2	NO	
22SW102	3	E8, Sheet 5		x				4	PL	A	AUTO	1,2	NO	
23SW102	3	D9, Sheet 5		x				4	PL	A	AUTO	1,2	NO	
21SW122	3	B3, Sheet 3		x				20	BFY	A	TH	1,2,5	NO	
22SW122	3	H6, Sheet 4		x				20	BFY	A	TH	1,2,5	NO	
21SW127	3	B1, Sheet 3		x				20	PL	A	AUTO	1,2	NO	
22SW127	3	G4, Sheet 4		x				20	PL	A	AUTO	1,2	NO	
21SW129	3	C4, Sheet 3		x				1.5	GL	A	AUTO	1,2,5	NO	
22SW129	3	G6, Sheet 4		x				2	GL	A	AUTO	1,2,5	NO	
21SW134	3	C2, Sheet 3		x				1.5	PL	A	AUTO	1,2	NO	
22SW134	3	G3, Sheet 4		x				1.5	PL	A	AUTO	1,2	NO	
2SW137	3	C4, Sheet 3		x				2	GL	A	AUTO	1,2,5	NO	
2SW142	3	C1, Sheet 3		x				2	PL	A	AUTO	1,2	NO	
21SW145	3	D4, Sheet 3		x				1.5	GL	A	AUTO	1,2,5	NO	
[illegible]SW145	3	B7, Sheet 4		x				1.5	GL	A	AUTO	1,2,5	NO	
21SW150	3	D1, Sheet 3		x				1.5	PL	A	AUTO	1,2	NO	
22SW150	3	B3, Sheet 4		x				1.5	PL	A	AUTO	1,2	NO	

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
21SW153	3	G4, Sheet 3		x				1.5	GA	A	AUTO	1,2,5	NO	
22SW153	3	F7, Sheet 4		x				1.5	GA	A	AUTO	1,2,5	NO	
21SW158	3	G1, Sheet 3		x				1.5	GL	A	AUTO	1,2	NO	
22SW158	3	F4, Sheet 4		x				1.5	PL	A	AUTO	1,2	NO	
2SW163	3	G4, Sheet 3		x				1.5	GL	A	AUTO	1,2,5	NO	
2SW168	3	G1, Sheet 3		x				1	PL	A	AUTO	1,2	NO	
2SW169	3	C7, Sheet 4		x				1.5	GL	A	AUTO	1,2,5	NO	
2SW174	3	C3, Sheet 4		x				1.5	PL	A	AUTO	1,2	NO	
2SW175	3	C7, Sheet 4		x				2	GL	A	AUTO	1,2,5	NO	
2SW180	3	C3, Sheet 4		x				2	PL	A	AUTO	1,2	NO	
2SW185	3	D7, Sheet 4		x				1.5	GL	A	AUTO	1,2,5	NO	
2SW190	3	D4, Sheet 4		x				1.5	PL	A	AUTO	1,2	NO	
2SW191	3	D7, Sheet 4		x				2	GL	A	AUTO	1,2,5	NO	
2SW196	3	D3, Sheet 4		x				1.5	PL	A	AUTO	1,2	NO	
2SW199	3	E4, Sheet 3		x				1.5	GA	A	AUTO	1,2,5	NO	
2SW204	3	E1, Sheet 3		x				1.5	PL	A	AUTO	1,2	NO	
2SW205	3	E4, Sheet 3		x				2	GL	A	AUTO	1,2,5	NO	
2SW210	3	E1, Sheet 3		x				1.5	PL	A	AUTO	1,2	NO	
2SW213	3	B7, Sheet 4		x				1.5	GL	A	AUTO	1,2,5	NO	
2SW218	3	B3, Sheet 4		x				1.5	PL	A	AUTO	1,2	NO	
21SW223	3	H9, Sheet 6		x				10	PL	A	AUTO	1,2	NO	
22SW223	3	F9, Sheet 6		x				10	PL	A	AUTO	1,2	NO	
23SW223	3	E9, Sheet 6		x				10	PL	A	AUTO	1,2	NO	
24SW223	3	C9, Sheet 6		x				10	PL	A	AUTO	1,2	NO	
25SW223	3	B9, Sheet 6		x				10	PL	A	AUTO	1,2	NO	
21SW305	3	B8, Sheet 3		x				8	PL	A	AUTO	1,2	NO	
22SW305	3	C8, Sheet 3		x				8	PL	A	AUTO	1,2	NO	
2SW308	3	B6, Sheet 1		x				8	PL	A	AUTO	1,2	NO	
2SW311	3	H4, Sheet 2		x				8	PL	A	AUTO	1,2	NO	

VALVE: 22SW5 and 24SW5
CATEGORY: C
CLASS: 3

FUNCTION: To prevent backflow from the Nuclear Service Water Header into the Service Water Bays.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: To full stroke exercise these valves at normal operations, one (1) header has to be shut down to supply adequate flow. This causes large fluctuations in the outlet temperature of the Component Cooling Water Heat Exchanger.

ALTERNATE TESTING: These valves will be part stroke excercise during Power Operation and full stroke exercise during Cold Shutdowns and Refuelings.

VALVE: 21SW51 and 22SW51
CATEGORY: C (Check)
CLASS: 3

FUNCTION: To prevent backflow from the Containment Fan Coil Units into the Nuclear Service Water Header.

TEST REQUIREMENTS: Exercise valves every three months.

BASIS FOR RELIEF: Testing these valves requires isolating service water to 2 Fan Coil Units. This places the Plant in a limiting condition for operation (Technical Specification 3.6.2.3.).

ALTERNATE TESTING: These valves will be full stroke exercised during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be exercised more often than once every three months.

VALVE: 21SW79 and 22SW79
CATEGORY: C (Check)
CLASS: 3

FUNCTION: Service Water over-load discharge check valves.

TEST REQUIREMENTS: Excercise valves every three months.

BASIS FOR RELIEF: These valves cannot be exercised during Power Operation because both Nuclear Headers are required (Technical Specification 3.7.4.1.). If the valve were to fail shut, the plant would have to shutdown.

ALTERNATE TESTING: These valves will be full stroke exercised during Cold Shutdown per Section XI. In cases of frequent Cold Shutdowns, these valves need not be exercised more often than once every three months.

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
2VC1	2	D3, Sheet 2	x					36	BFY	A	C	1,2,4,5,6	YES	≤2 SEC. CONT. PURGE
2VC2	2	D2, Sheet 2	x					36	BFY	A	C	1,2,4,5,6	YES	
2VC3	2	E2, Sheet 2	x					36	BFY	A	C	1,2,4,5,6	YES	
2VC4	2	E3, Sheet 2	x					36	BFY	A	C	1,2,4,5,6	YES	≤2 SEC. CONT. PURGE
2VC5	2	D3, Sheet 2	x					10	BFY	A	C	1,2,4,5,6	YES	≤2 SEC. CONT. PRESS/ VAC. RELIEF
2VC6	2	D2, Sheet 2	x					10	BFY	A	C	1,2,4,5,6	YES	
2VC7	2	H6, Sheet 1	x					0.75	GL	A	AUTO	1,2,4,5,6	YES	≤10 SEC. CONT. ATMOS. SAMPLE
2VC8	2	H5, Sheet 1	x					0.75	GL	A	AUTO	1,2,4,5,6	YES	≤10 SEC. CONT. ATMOS. SAMPLE
2VC9	2	H6, Sheet 1	x					0.75	GL	A	C	1,2,4,5,6	YES	
2VC10	2	H5, Sheet 1	x					0.75	GL	A	C	1,2,4,5,6	YES	
2VC11	2	G6, Sheet 1	x					0.75	GL	A	AUTO	1,2,4,5,6	YES	≤10 SEC. CONT. ATMOS. SAMPLE
2VC12	2	G5, Sheet 1	x					0.75	GL	A	AUTO	1,2,4,5,6	YES	≤10 SEC. CONT. ATMOS. SAMPLE
2VC13	2	G6, Sheet 1	x					0.75	GL	A	C	1,2,4,6	YES	
2VC14	2	G5, Sheet 1	x					0.75	GL	A	C	1,2,4,6	YES	

SYSTEM: Ventilation Containment (VC) DRAWING NO.: 600061 PAGE: 95 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
21VC17	2	D2, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
22VC17	2	C2, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
21VC18	2	D2, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
22VC18	2	C2, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
21VC19	2	D1, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
22VC19	2	C1, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
21VC20	2	D1, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	
22VC20	2	C1, Sheet 1	x					0.75	PL	A	C	1,2,4,6	YES	

VALVE: 2VC1 and 2VC4
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation (Outside Containment) for Containment Purge.

TEST REQUIREMENT:

a) Stroke Time/Exercise and Fail Safe Test valves every three months.

b) Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF:

a) Valves are passive during Power Operation. These valves cannot be opened during Power Operation per Technical Specification 3.6.1.7.

b) Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING:

a) These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

b) Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2VC2 and 2VC3
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation (inside containment) for Containment Purge.

TEST REQUIREMENTS: a) Stroke Time/Exercise and Fail Safe Test valves every three months.

b) Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: a) These valves are passive during Power Operation. They cannot be opened per Technical Specification 3.6.1.7.

b) Due to the physical arrangement of these valves, a test in the direction of accident flow is not possible. Also, because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: a) These valves will be tested during Cold Shutdowns per Section XI. In cases of frequent Cold Shutdowns, these valves need not be tested more often than once every three months.

b) They will be tested in the opposite direction of flow when the 2VC1 and 2VC4 are tested in accordance with Technical Specification 4.6.1.2.d.

VALVE: 2VC5
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation (Outside of Containment) for Containment Pressure/Vacuum Relief.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2VC6
CATEGORY: A
CLASS: 2

FUNCTION: Containment isolation (inside containment) for Containment Pressure/Vacuum Relief.

TEST REQUIREMENTS: Leak Rate Test valve less than 24 months.

BASIS FOR RELIEF: Due to the physical arrangement of this valve, a test in the direction of accident flow is not possible. Also, because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for Category A valves used for containment isolation.

ALTERNATE TESTING: This valve will be leak rate tested in the opposite direction of flow when the 2VC5 is tested in accordance with Technical Specification 4.6.1.2.d.

VALVE: 2VC7, 2VC8, 2VC11 and 2VC12
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Containment Atmospheric Sampling.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2VC9, 2VC10, 2VC13 and 2VC14
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Containment Atmospheric Sampling.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: These valves are normally closed and are only opened under administrative control in the event of an accident for containment atmospheric sampling. Table 3.6-1 excludes these valves from type C leakage tests.

ALTERNATE TESTING: None.

VALVE: 21VC17, 18, 19 and 20/22VC17, 18, 19, and 20 (8 valves)
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Containment Atmospheric Sampling.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY					SIZE (INCHES)	VALVE TYPE	ACTU-ATOR TYPE	NORMAL POSI-TION	TEST REQUIRE-MENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
			A	B	C	D	E							
2WL12	2	B7, Sheet 3	x					3	DIA	A	AUTO	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL13	2	B7, Sheet 3	x					3	DIA	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL16	2	B7, Sheet 3	x					3	GL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL17	2	B8, Sheet 3	x					3	GL	A	C	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL96	2	E7, Sheet 3	x					0.75	DIA	A	AUTO	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL97	2	E8, Sheet 3	x					0.75	DIA	A	AUTO	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL98	2	F7, Sheet 3	x					1	DIA	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL99	2	F9, Sheet 3	x					1	DIA	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL108	2	G9, Sheet 3	x					1	DIA	A	O	1,2,4,5,6	YES	≤10 SEC. PH. "A" CONT. ISOL.
2WL190	2	F3, Sheet 3	x					3	DIA	M	LC	4	YES	
2WL191	2	E2, Sheet 3	x					3	DIA	M	LC	4	YES	

VALVE: 2WL12 and 2WL13
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation from Reactor Drain Tank Pumps to Waste Holdup Tanks.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2WL16 and 2WL17
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation from Containment Sump Pumps to Waste Holdup Tanks.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2WL96 and 2WL97
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation from Reactor Coolant Drain Tank to Gas Analyzer.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2WL98, 2WL99 and 2WL108
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation from/to Pressurizer Relief Tank to Waste Gas Header and from Nitrogen Header.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of these valves is containment isolation, they will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2WL190 and 2WL191
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation (inside containment) of Lines from Reactor Cavity to Spent Fuel Cooling Pump.

TEST REQUIREMENTS: Leak Rate Test valves less than each 24 months.

BASIS FOR RELIEF: Technical Specification Table 3.6-1 exempts this valve from Leak Rate Test.

ALTERNATE TESTING: None

SYSTEM: Water Recovery (WR-CVC) DRAWING NO.: 205301/205328 PAGE: 104 of 105

VALVE NUMBER	CLASS	COORDINATES	VALVE CATEGORY A	B	C	D	E	SIZE (INCHES)	VALVE TYPE	ACTUATOR TYPE	NORMAL POSITION	TEST REQUIREMENT	RELIEF REQUEST	REMARKS (NOT TO BE USED FOR RELIEF BASIS)
2WR80	2	C10, Sheet 1	x					3	DIA	A	O	1,2,4,5,6	YES	$\leq$10 SEC. PH. "A" CONT. ISOL.
2WR81	2	C9, Sheet 1	x		x			3	CK	SA	C	1,4	YES	

D-SP-6

VALVE: 2WR80
CATEGORY: A
CLASS: 2

FUNCTION: Containment Isolation for Water to Pressurizer Relief Tank and Reactor Coolant Pump Seal Head Tanks.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves used for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

VALVE: 2WR81
CATEGORY: A/C
CLASS: 2

FUNCTION: Containment Isolation for Water to Pressurizer Relief Tank and Reactor Coolant Pump Seal Head Tanks.

TEST REQUIREMENTS: Leak Rate Test valve less than each 24 months.

BASIS FOR RELIEF: Because the safety-related function of this valve is containment isolation, it will be leak tested in accordance with Technical Specifications and 10CFR50, Appendix J. This test meets the intent of the ASME B&PV Code, Section XI for category A valves for containment isolation.

ALTERNATE TESTING: Leak Rate Test per Technical Specification 4.6.1.2.d.

Part 4
PIPE SCHEDULES (CLASSIFICATION)

SCHED.	CLASS
AF	
54A	3
54B	NONE
54C	3
54D	3
54E	3
BF	
16A	2
16B	NONE
BR, CVC & WR	
48A	2
48B	2
48C	2
48D	2
48E	2
48F	2
48G	2
48H	2
48I	2
48J	2
48K	2
48L	2
48M	2
48N	2
48O	2
48P	3
48R	2
48S	2
CH	
27A	2
27B	3
27C	3
27D	NONE
27E	NONE
CC	
52A	3
52B	2
52C	3
52D	2

SCHED.	CLASS
CS	
50A	3
50B	3
50C	2
50D	3
CA	
38A	2
38B	3
38C	NONE
38D	NONE
DR & NT	
20A	2
20B	2
FP	
27A	2
27B	3
27C	3
27D	NONE
27E	NONE
GB	
59A	2
59B	NONE
59C	NONE
59D	NONE
59E	NONE
59F	NONE
MS	
12A	2
12B	NONE
12C	3
12D	3
RC, PR	
44A	1
44B	1
44C	2
44D	2
44E	2

SCHED.	CLASS
RHR	
51A	2
51B	2
SJ	
49A	3
49B	2
49C	2
49D	3
49E	2
49F	2
49G	2
49H	2
SS	
56A	2
56B	3
56C	2
56D	3
56E	2
SW	
27A	2
27B	3
27C	3
27D	NONE
27E	NONE
SF	
55A	3
55B	3
55C	2
SA	
32A	2
32B	NONE
32C	NONE
32D	NONE

SCHED.	CLASS
WL & WG	
53A	3
53B	3
53C	3
53D	3
53E	3
53F	3
53G	3
53H	2
53J	2
53K	3
53L	3
53M	2
53N	3
53O	3