

NORTHERN STATES POWER COMPANY

DOCKET NUMBERS 50-282 AND 50-306

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

UNIT 1 AND 2

INSERVICE TESTING PROGRAM MANUAL

This manual contains a description of our program of inservice testing of Unit 1 and common components and Unit 2 components at Prairie Island Nuclear Generating Plant. This program conforms to the requirements of 10 CFR 50, Section 50.55a as published in the Federal Register on December 31, 1992.

The manual has been revised for the third 10 year interval. It has been prepared, reviewed and approved as indicated below.

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PI IST
3rd 10 Year Program
Rev. 0 6/16/93

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DATE

REMARKS

6/16/93

3RD 10 Year IST Program Submittal

1.2 ASME SECTION XI PUMP TESTING PROGRAM - UNIT NO. 1 AND COMMON COMPONENTS

ASME Code Edition and Addenda: 1989 Edition

Program Period: December 16, 1993 to December 16, 2003

The attached sheet identifies the Unit 1 and common system pumps that are subject to the testing requirements of Section XI, ASME/ANSI OMA-1988 part 6.

LEGEND

Test Frequency

- M = monthly
- Q = quarterly
- C = cold shutdown
- Y = 12 months
- R = Refueling

Test Parameter

- PI = inlet pressure
- Vv = vibration velocity
- Q = flowrate
- Pd = discharge pressure
- N = speed

ASME CODE PUMPS- Unit 1

PUMP DESCRIPTION	FLOW DIAGRAM	CLASS DWG	TEST PROC	TEST PARAMETER					TEST FREQ	REQUEST FOR RELIEF
				PI	Vv	Q	Pd	N		
11 Safety Injection	X-H-1-45	9	SP-1088	X	X		X		Q	#1
			SP-1092A	X	X	X	X		R	
12 Safety Injection	X-H-1-45	9	SP-1088	X	X		X		Q	#1
			SP-1092A	X	X	X	X		R	
12 Diesel Cooling Water	NF-39216	14	SP-1106A	X	X	X	X	X	Q	#1, #2, #4, #5
22 Diesel Cooling Water	NF-39216	14	SP-1106B	X	X	X	X	X	Q	#1, #2, #4, #5
121 MD Cooling Water	NF-39216	14	SP-1106C	X	X	X	X		Q	#4, #5
11 Turbine Aux Feedwater	NF-39222	16	SP-1102	X	X		X	X	Q	#1
			SP-1103	X	X	X	X	X	R	
12 Motor Aux Feedwater	NF-39222	16	SP-1100	X	X		X		Q	#1
			SP-1101	X	X	X	X		R	
11 Containment Spray	NF-39237	19	SP-1090	X	X		X		Q	#1, #10
12 Containment Spray	NF-39237	19	SP-1090	X	X		X		Q	#1, #10
11 Component Cooling	NF-39245	23	SP-1155	X	X	X	X		Q	#1, #2
12 Component Cooling	NF-39245	23	SP-1155	X	X	X	X		Q	#1, #2
121 Cntrl Rm Chill Water	NF-39603-3	28	SP-1161	X	X	X	X		Q	
122 Cntrl Rm Chill Water	NF-39603-3	28	SP-1161	X	X	X	X		Q	
11 Residual Heat Removal	X-H-1-31	3	SP-1089	X	X	X	X		Q	#1, #4
12 Residual Heat Removal	X-H-1-31	3	SP-1089	X	X	X	X		Q	#1, #4

1.3 ASME SECTION XI VALVE TESTING PROGRAM - UNIT NO. 1 AND COMMON COMPONENTS

ASME Code Edition and Addenda: 1989 Edition
Program Period: December 16, 1993 to December 16, 2003

NOTES:

1. The following sheets identify the Unit 1 and common system valves that are subject to the testing requirements of Section XI, Subsection IWV. Valves in Code Class 1, 2, and 3 systems have been categorized in accordance with ASME/ANSI OMa-10, 1988, using the following criteria.
 - a) The program has been limited to those Code Class 1, 2, and 3 valves that must function to prevent the occurrence of or mitigate the consequences of an analyzed accident contained in the USAR and to take the reactor to safe shutdown.
 - b) Containment Isolation valves are considered category A valves and are leak tested in accordance with the Plant Technical Specification. Category A valves are exercised in accordance with OM-10 except where relief is requested.

2. LEGEND

TEST TYPE:

E = exercise
SP = relief valve
LT = leak test
I = inspection
PV = position verification
2 y = every other year

TEST FREQUENCY:

D = daily
M = monthly
Q = quarterly
R = refueling
Y = yearly
AR = as required (See note 4)

CS = Cold shutdown
S = startup
CU = core unload
5y = 5 year
10y = 10 years

1.3 ASME SECTION XI VALVE TESTING PROGRAM - UNIT NO. 1 AND COMMON COMPONENTS (CONT'D)

3. Inservice valve testing at cold shutdown is defined as: Testing is required if not done in the previous 90 days. Valve testing should commence not later than 48 hours after shutdown and continue until complete or plant is ready to return to power. Completion of all valve testing is not a prerequisite to return to power. Any testing not completed at one cold shutdown should be performed during the subsequent cold shut-downs to meet the code specified testing frequency.
4. Containment Inservice Purge Supply and Exhaust Valves are normally blind flange out-of service during operation. In event that valves are required for containment integrity they will be exercised and leak rate tested prior to being placed inservice.
5. For all control and motor valve exercise (stroke timing) tests, the base stroke time from which the Code allowable time increase and decrease is figured will be a time established by one of the following methods:
 - a) Original preoperational testing.
 - b) Post maintenance testing.
 - c) The first running of the test.
6. The column titled "Valve Function" describes the valve function as defined by the ASME Code (active or passive). In addition, for active valves the valve position required for accident mitigation is included. For example, an active valve that is required to open for accident mitigation is listed as "act-open". For an active valve that is required to open and close for accident mitigation is "act-both".

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
AF-13-1	AF	12 & 21 AUX FW PUMPS DISCHARGE X-CONN	NF-39222	16	B	ACT-BOTH	SP-1730	E	CS	
AF-14-1	AF	11 AUX FW PUMP SUCT CHK	NF-39222	16	C	ACT-OPEN		E	CS	
AF-14-3	AF	12 AUX FW PUMP SUCT CHK	NF-39222	16	C	ACT-OPEN		E	CS	
AF-15-1	AF	AUX FW TO STM GEN 11 CHK	NF-39222	16	C	ACT-BOTH		E	CS	
AF-15-2	AF	AUX FW TO STM GEN 12 CHK	NF-39222	16	C	ACT-BOTH		E	CS	
AF-15-3	AF	AUX FW TO STM GEN 11CHK	NF-39222	16	C	ACT-BOTH		E	CS	
AF-15-4	AF	AUX FW TO STM GEN 12 CHK	NF-39222	16	C	ACT-BOTH		E	CS	
AF-15-9	AF	11 AUX FW PUMP DISCH CHK	NF-39222	16	C	ACT-BOTH		E	CS	
AF-15-10	AF	12 AUX FW PUMP DISCH CHK	NF-39222	16	C	ACT-BOTH		E	CS	
AF-16-1	AF	AUX FW AT STM GEN 11CHK	NF-39222	16	C	ACT-BOTH		E	CS	
AF-16-2	AF	AUX FW AT STM GEN 12 CHK	NF-39222	16	C	ACT-BOTH		E	CS	
AF-28-1	AF	11 AUX FW PUMP RECIRC LINE CHECK	NF-39222	16	C	ACT-OPEN		E	Q	
AF-28-2	AF	12 AUX FW PUMP RECIRC LINE CHECK	NF-39222	16	C	ACT-OPEN		E	Q	
AF-29-1	AF	11 AUX FD PUMP SUCT RELIEF	NF-39222	16	C	ACT-BOTH	P3120-1-11A	SP	10Y	
AF-29-2	AF	12 AUX FD PUMP SUCT RELIEF	NF-39222	16	C	ACT-BOTH	P3120-1-12A	SP	10Y	
CV31153	AF	11 TD AFWP RECIRC/LUBE OIL CLG CV	NF-39222	16	B	ACT-OPEN	SP-1102	E	Q	
CV31154	AF	12 MD AFWP RECIRC/LUBE OIL CLG CV	NF-39222	16	B	ACT-OPEN	SP-1100	E	Q	
MV32238	AF	AUX FDWTR TO STM GEN #11	NF-39222	16	B	ACT-BOTH	SP-1102	E	Q	
MV32239	AF	AUX FDWTR TO STM GEN #12	NF-39222	16	B	ACT-BOTH	SP-1102	E	Q	
MV32242	AF	AUX FDWTR TO STM GEN #11	NF-39222	16	B	PAS-OPEN		PV	2Y	
MV32243	AF	AUX FDWTR TO STM GEN #12	NF-39222	16	B	PAS-OPEN		PV	2Y	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32333	AF	11 AUX FDWTR PUMP SUCT	NF-39222	16	B	ACT-BOTH	SP-1100	E	Q	
MV32335	AF	12 AUX FDWTR PUMP SUCT	NF-39222	16	B	ACT-BOTH	SP-1102	E	Q	
MV32381	AF	AUX FW TO STM GEN #11	NF-39222	16	B	ACT-BOTH	SP-1100	E	Q	
MV32382	AF	AUX FW TO STM GEN #12	NF-39222	16	B	ACT-BOTH	SP-1100	E	Q	
CA-11-1	CA	CAUSTIC ADDITION TO 11 & 12 CS PUMPS	NF-39252	18	C	ACT-BOTH		E	R	
CV31938	CA	12 CS SUCT PUMP FROM NaOH STDPIPE ISOL	NF-39252	18	B	ACT-OPEN	SP-1090	E	Q	
CV31941	CA	11 CS PUMP SUCT FROM NaOH STDPIPE ISOL	NF-39252	18	B	ACT-OPEN	SP-1090	E	Q	
CC-14-5	CC	11 RCP BRG CLG WTR RETURN CHK	NF-39245-1	23	C	ACT-BOTH		E	CS	
CC-14-6	CC	12 RCP BRG CLG WTR RETURN CHK	NF-39245-1	23	C	ACT-BOTH		E	CS	
CC-18-1	CC	12 RCP BRG WTR SUPPLY CHK	NF-39245-1	23	C	ACT-BOTH		E	CS	
CC-18-2	CC	11 RCP BRG WTR SUPPLY CHK	NF-39245-1	23	C	ACT-BOTH		E	CS	
CC-23-1	CC	11 EXCESS LETDOWN HT EXCH INLET CHK	NF-39245-1	23	C	ACT-CLOSE		E	CS	
CC-24-1	CC	EXCESS LTDN OUTLT CHK	NF-39245-1	23	C	ACT-CLOSE		E	CS	
CC-29-1	CC	12 RCP BRG WTR SUPPLY CHK	NF-39245-1	23	C	ACT-OPEN		E	Q	
CC-29-2	CC	11 RCP BRG WTR SUPPLY CHK	NF-39245-1	23	C	ACT-OPEN		E	Q	
CC-3-1	CC	11 COMPONENT COOLING PUMP DISCH CHK	NF-39245-1	23	C	ACT-OPEN	SP-1155	E	Q	
CC-3-2	CC	12 COMPONENT COOLING PUMP DISCH CHK	NF-39245-1	23	C	ACT-OPEN	SP-1155	E	Q	
CC-3-3	CC	RETURN LINE TO 11 COMP COOLING PUMP CHK	NF-39245-1	23	C	ACT-BOTH		E	CS	
CC-3-4	CC	RETURN LINE TO 12 COMP COOLING PUMP CHK	NF-39245-1	23	C	ACT-BOTH		E	CS	
CC-5-1	CC	RETURN LINE TO 11 COMP COOLING PUMP CHK	NF-39245	23	C	ACT-BOTH		E	CS	
CC-5-2	CC	RETURN LINE TO 12 COMP COOLING PUMP CHK	NF-39245	23	C	ACT-BOTH		E	CS	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
CC-61-1	CC	EMERG SUPPLY TO 11/12 RCP BRG CLL CHK	NF-39245	23	C	ACT-BOTH		E	CS	
CC-61-2	CC	EMERG SUPPLY TO 11/12 RCP BRG CLG CHK	NF-39245	23	C	ACT-BOTH		E	CS	
CV31252	CC	11 EXCS LTDWN HT EXCH OUTLET	NF-39245	23	B	ACT-CLOSE		E	Q	
MV32089	CC	11 REACT CLNT PUMP - BRG CLG WTR SUPPLY	NF-39245	23	B	PAS-OPEN		PV	2Y	
MV32090	CC	11 REACT CLNT PUMP - BRG CLG WTR RETURN	NF-39245	23	B	PAS-OPEN		PV	2Y	
MV32091	CC	12 REACT CLNT PUMP - BRG CLG WTR SUPPLY	NF-39245	23	B	PAS-OPEN		PV	2Y	
MV32092	CC	12 REACT CLNT PUMP - BRG CLG WTR RETURN	NF-39245	23	B	PAS-OPEN		PV	2Y	
MV32093	CC	11 RSDL HT EXGR COMP CLNT INLT MV	NF-39245	23	B	ACT-BOTH	SP-1155	E	Q	
MV32094	CC	12 RSDL HT EXGR COMP CLNT INLT MV	NF-39245	23	B	ACT-BOTH	SP-1155	E	Q	
MV32095	CC	11 EXCESS LET-DOWN HT EXCH SUPPLY	NF-39245	23	B	ACT-CLOSE		E	Q	
MV32115	CC	121 & 122 SPENT FUEL PIT HT EXCHANGERS	NF-39245	23	B	ACT-CLOSE	SP-1155	E	Q	
MV32117	CC	121 & 122 SPENT FUEL PIT HT EXCHANGERS	NF-39245	23	B	ACT-CLOSE	SP-1155	E	Q	
MV32120	CC	COMP CLG WTR SUPPLY HEADER	NF-39245	23	B	ACT-CLOSE	SP-1163	E	R	
MV32121	CC	COMP CLG WTR SUPPLY HEADER	NF-39245	23	B	ACT-CLOSE	SP-1163	E	R	
MV32200	CC	11 COMP CLG PMP SUCT MV	NF-39245	23	B	ACT-BOTH	SP-1155	E	Q	
MV32201	CC	12 COMP CLG PMP SUCT MV	NF-39245	23	B	ACT-BOTH	SP-1155	E	Q	
MV32266	CC	11/12 RCP COMP CLG INLT ISOL MV A	NF-39245	23	B	ACT-BOTH	SP-1163	E	R	
MV32267	CC	11/12 RCP COMP CLG INLT ISOL MV B	NF-39245	23	B	ACT-BOTH	SP-1163	E	R	
CL-43-1	CL	11 COOLING WATER PUMP DISCHARGE	NF-39216	14	C	ACT-CLOSE	SP-1106A	E	Q	
CL-43-2	CL	12 COOLING WATER PUMP DISCHARGE	NF-39216	14	C	ACT-BOTH	SP-1106A	E	Q	
CL-43-3	CL	121 COOLING WATER PUMP DISCHARGE	NF-39217	14	C	ACT-BOTH	SP-1240	E	Q	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
CW-12-1	CL	11 CNTMT FCU CLG WTR INLET CHECK	NF-39216-4	14	C	ACT-OPEN		E	Q	
CW-12-2	CL	13 CNTMT FCU CLG WTR INLET CHECK	NF-39216-4	14	C	ACT-OPEN		E	Q	
CW-12-3	CL	12 CNTMT FCU CLG WTR INLET CHECK	NF-39216-4	14	C	ACT-OPEN		E	Q	
CW-12-4	CL	14 CNTMT FCU CLG WTR INLET CHECK	NF-39216-4	14	C	ACT-OPEN		E	Q	
CV31423	CL	12 DD CLP JACKET CLT OUT	NF-39216	14	B	ACT-OPEN	SP-1106A	E	Q	
CV39201	CL	11/13FCU CLG WATER RTN ORIFICE B-P VLV	NF-39216	14	B	ACT-OPEN	SP-1158	E	Q	
CV39203	CL	12/14FCU CLG WATER RTN ORIFICE B-P VLV	NF-39216	14	B	ACT-OPEN	SP-1158	E	Q	
MV32025	CL	11 TD AFW PUMP SUCT CLG WTR SUPPLY MV	NF-39216	14	B	ACT-OPEN	SP-1193	E	CS	
MV32027	CL	12 MD AFW PUMP SUCT CLG WTR SUPPLY MV	NF-39216	14	B	ACT-OPEN	SP-1193	E	CS	
MV32031	CL	1 TURB BLDG CLG WTR HDR MV	NF-39216	14	B	ACT-CLOSE	SP-1100	E	Q	
MV32036	CL	COOLING WTR PUMPS-CROSS-OVER	NF-39216	14	B	ACT-CLOSE	SP-1158	E	Q	
MV32037	CL	COOLING WTR PUMPS-CROSS-OVER	NF-39216	14	B	ACT-CLOSE	SP-1158	E	Q	
MV32038	CL	20 IN EMERGENCY DUMP TO GRADE	NF-39216	14	B	ACT-OPEN	SP-1158	E	Q	
MV32132	CL	11 CONTAINMENT FAN COIL OUTLET	NF-39216-4	14	B	ACT-BOTH	SP-1158	E	Q	
MV32133	CL	11 CONTAINMENT FAN COIL OUTLET	NF-39216-3	14	B	ACT-BOTH	SP-1158	E	Q	
MV32135	CL	12 CONTAINMENT FAN COIL OUTLET	NF-39216-4	14	B	ACT-BOTH	SP-1158	E	Q	
MV32136	CL	12 CONTAINMENT FAN COIL OUTLET	NF-39216-3	14	B	ACT-BOTH	SP-1158	E	Q	
MV32138	CL	13 CONTAINMENT FAN COIL OUTLET	NF-39216-4	14	B	ACT-BOTH	SP-1158	E	Q	
MV32139	CL	13 CONTAINMENT FAN COIL OUTLET	NF-39216-3	14	B	ACT-BOTH	SP-1158	E	Q	
MV32141	CL	14 CONTAINMENT FAN COIL OUTLET	NF-39216-4	14	B	ACT-BOTH	SP-1158	E	Q	
MV32142	CL	14 CONTAINMENT FAN COIL OUTLET	NF-39216-3	14	B	ACT-BOTH	SP-1158	E	Q	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32144	CL	LOOP A/B CLG WTR HDR XOVR MV A	NF-39216	14	B	ACT-CLOSE	SP-1158	E	Q	
MV32145	CL	11 COMP CLG HT EXGR CLG WTR MV	NF-39216	14	B	ACT-OPEN	SP-1155	E	Q	
MV32146	CL	12 COMP CLG HT EXGR CLG WTR MV	NF-39216	14	B	ACT-OPEN	SP-1155	E	Q	
MV32322	CL	24 " CLG WTR RETURN UNIT 1	NF-39216	14	B	ACT-OPEN	SP-1158	E	Q	
MV32332	CL	24 " CLG WTR RETURN UNIT 1	NF-39216	14	B	PAS-OPEN		PV	2Y	
MV32377	CL	11 CONTAINMENT FAN COIL INLET	NF-39216	14	B	ACT-BOTH	SP-1158	E	Q	
MV32378	CL	13 CONTAINMENT FAN COIL INLET	NF-39216	14	B	ACT-BOTH	SP-1158	E	Q	
MV32379	CL	12 CONTAINMENT FAN COIL INLET	NF-39216	14	B	ACT-BOTH	SP-1158	E	Q	
MV32380	CL	14 CONTAINMENT FAN COIL INLET	NF-39216	14	B	ACT-BOTH	SP-1158	E	Q	
SV33133	CL	CL TO 121 SFGRDS TRVLNG SCRNM	NF-39216	14	B	PAS-CLOSE		PV	2Y	
SV33134	CL	CL TO 122 SFGRDS TRVLNG SCRNM	NF-39216	14	B	PAS-CLOSE		PV	2Y	
CS-16	CS	11 CONT SPRAY PUMP SUCT CHK	NF-39237	19	C	ACT-BOTH		E	R	
CS-17	CS	12 CONT SPRAY PUMP SUCT CHK	NF-39237	19	C	ACT-BOTH		E	R	
CS-18	CS	11 CONT SPRAY PUMP DISCH CHK VLV	NF-39237	19	A, C	ACT-BOTH		E	R	
							SP-1072.29B	LT	R	
CS-19	CS	12 CONT SPRAY PUMP DISCH CHK VLV	NF-39237	19	A, C	ACT-BOTH		E	R	
							SP-1072.29A	LT	R	
CS-22-1	CS	11 CONT SPRAY PUMP SUCT RELIEF	NF-39237	19	C	ACT-BOTH	P3120-14-11A	SP	10Y	
CS-22-2	CS	12 CONT SPRAY PUMP SUCT RELIEF	NF-39237	19	C	ACT-BOTH	P3120-14-12A	SP	10Y	
MV32096	CS	11 CONT SPRAY PUMP SUCT	NF-39237	19	B	ACT-OPEN	SP-1137	E	R	
MV32097	CS	12 CONT SPRAY PUMP SUCT	NF-39237	19	B	ACT-OPEN	SP-1137	E	R	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32098	CS	11 CONT SPRAY PUMP SUCT	NF-39237	19	B	ACT-BOTH	SP-1137	E	R	
MV32099	CS	12 CONT SPRAY PUMP SUCT	NF-39237	19	B	ACT-BOTH	SP-1137	E	R	
MV32103	CS	11 CONT SPRAY PUMP DISCH	NF-39237	19	A	ACT-BOTH	SP-1241/1137	E	CS	
							SP-1072.29B	LT	R	
MV32105	CS	12 CONT SPRAY PUMP DISCH	NF-39237	19	A	ACT-BOTH	SP-1241/1137	E	CS	
							SP-1072.29A	LT	R	
F-8-1	FW	FEEDWATER TO #11 STEAM GENERATOR CHK	NF-39222	16	C	ACT-CLOSE		E	CS	
F-8-2	FW	FEEDWATER TO #12 STEAM GENERATOR CHK	NF-39222	16	C	ACT-CLOSE		E	CS	
MV32023	FW	FDWTR TO #11 STM GEN	NF-39222	16	B	ACT-CLOSE		E	CS	
MV32024	FW	FDWTR TO #12 STM GEN	NF-39222	16	B	ACT-CLOSE		E	CS	
HC-1-3	HC	INST AIR SUPPLY TO CNTMT VESSEL	NF-39251	25	B	ACT-OPEN	SP-1157	E	CS	
HC-1-4	HC	INST AIR SUPPLY TO CNTMT VESSEL	NF-39251	25	B	ACT-OPEN	SP-1157	E	CS	
HC-1-5	HC	EMERGENCY AIR SUPPLY TO CNTMT VESSEL	NF-39251	25	B	ACT-OPEN	SP-1157	E	CS	
HC-1-6	HC	INST AIR SUPPLY TO CNTMT VESSEL	NF-39251	25	B	ACT-OPEN	SP-1157	E	CS	
HC-2-1	HC	INST & EMERG AIR TO INSIDE CNTMT VESSEL CK	NF-39251	25	A, C	ACT-BOTH		E	CS	
							SP-1072.50	LT	R	
HC-2-2	HC	INST & EMERG AIR TO INSIDE CNTMT VESSEL CK	NF-39251	25	A, C	ACT-BOTH		E	CS	
							SP-1072.42A	LT	R	
CV31923	HC	POST LOCA TO FI ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-1072.50	LT	R	
CV31925	HC	POST LOCA TO GA ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Viv Category	Viv Function	Test Proc	Test Type	Test Freq	Relief Request
							SP-1072.50	LT	R	
CV31927	HC	POST LOCA TO GA ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-1072.42A	LT	R	
CV31929	HC	POST LOCA TO FI ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-1072.42A	LT	R	
MV32271	HC	POST LOCA VENT ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-1072.50	LT	R	
MV32273	HC	POST LOCA VENT ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-1072.42A	LT	R	
MV32274	HC	POST LOCA SUPPLY ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-1072.50	LT	R	
MV32276	HC	POST LOCA SUPPLY ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-1072.42A	LT	R	
RS-15-1	MS	FROM #12 STM GEN TO #11 AUX FDWTR PUMP CHK	NF-39218	15	C	ACT-BOTH		E	CS	
RS-15-2	MS	FROM #11 STM GEN TO #11 AUX FDWTR PUMP CHK	NF-39218	15	C	ACT-BOTH		E	CS	
RS-19-1	MS	STM GEN 11 OUTLET CHECK	NF-39218	15	C	ACT-CLOSE		E	CS	
RS-19-2	MS	STM GEN 12 OUTLET CHECK	NF-39218	15	C	ACT-CLOSE		E	CS	
RS-21-1	MS	11 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
RS-21-10	MS	12 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
RS-21-2	MS	11 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
RS-21-3	MS	11 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
RS-21-4	MS	11 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
RS-21-5	MS	11 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
RS-21-6	MS	12 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
RS-21-7	MS	12 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
RS-21-8	MS	12 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
RS-21-9	MS	12 STM RELIEF HDR	NF-39218	15	C	ACT-BOTH	P3120-52-1	SP	10Y	
CV31098	MS	11 LOOP A MN STM HDR ISOL	NF-39218	15	B	ACT-CLOSE	SP-1099	E	CS	
CV31099	MS	12 LOOP B MN STM HDR ISOL	NF-39218	15	B	ACT-CLOSE	SP-1099	E	CS	
CV31998	MS	11 TD AFWP MN STM SUPPLY	NF-39218	15	B	ACT-OPEN	SP-1102	E	Q	
MV32016	MS	LOOP A MN STM TO 11 TD AFWP MV	NF-39218	15	B	PAS-OPEN		PV	2Y	
MV32017	MS	LOOP B MN STM TO 11 TD AFWP MV	NF-39218	15	B	PAS-OPEN		PV	2Y	
MV32045	MS	1 LOOP A MN STM HDR EQLZG MV	NF-39218	15	B	PAS-CLOSE		PV	2Y	
MV32047	MS	1 LOOP B MN STM HDR EQLZG MV	NF-39218	15	B	PAS-CLOSE		PV	2Y	
RUPT DISC	MS	AF EXH	NF-39218	15	D	PASSIVE		SP	5Y	
RC-10-1	RC	PRESSURIZER RELIEF VALVE	HIAW 1-7	2	C	ACT-BOTH	P3120-57-1A	SP	5Y	
RC-10-2	RC	PRESSURIZER RELIEF VALVE	HIAW 1-7	2	C	ACT-BOTH	P3120-57-1B	SP	5Y	
RC-3-1	RC	REACTOR MAKEUP WATER TO PRZR RELIEF TANK	HIAW 1-7	2	A, C	ACT-CLOSE		E	CS	
							SP-1072.45	LT	R	
RC-5-1	RC	NITROGEN SUPPLY LINE TO PRZR RELIEF TANK	HIAW 1-7	2	A, C	ACT-CLOSE		E	CS	
							SP-1072.2	LT	R	
CV31221	RC	PRT N2 SUPPLY ISOL	HIAW 1-7	2	A	ACT-CLOSE	SP-1272	E	Q	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
						SP-1072.2	LT	R	
CV31231	RC PRESSURIZER OUTLET TO PRZR RLF TNK A	HIAW 1-7	2	B	ACT-BOTH	SP-1291	E	CS	
CV31232	RC PRESSURIZER OUTLET TO PRZR RLF TNK B	HIAW 1-7	2	B	ACT-BOTH	SP-1291	E	CS	
CV31318	RC PRT SAMPLE TO GA	HIAW 1-7	2	A	ACT-CLOSE	SP-1246	E	Q	
						SP-1072.1	LT	R	
CV31319	RC PRT SAMPLE TO GA	HIAW 1-7	2	A	ACT-CLOSE	SP-1246	E	Q	
						SP-1072.1	LT	R	
CV31321	RC RTR M/U WATER TO PRT ISOL	HIAW 1-7	2	A	ACT-CLOSE	SP-1272	E	Q	
						SP-1072.45	LT	R	
MV32195	RC PRESSURIZER OUTLET TO PRZR RLF TNK A	HIAW 1-7	2	B	ACT-BOTH	SP-1265	E	Q	
MV32196	RC PRESSURIZER OUTLET TO PRZR RLF TNK B	HIAW 1-7	2	B	ACT-BOTH	SP-1265	E	Q	
SV37035	RC PRESSURIZER VENT VALVE A	HIAW 1-7	2	B	ACT-BOTH	SP-1248	E	R	
SV37036	RC PRESSURIZER VENT VALVE B	HIAW 1-7	2	B	ACT-BOTH	SP-1248	E	R	
SV37037	RC RTR HEAD VENT VALVE A	HIAW 1-7	2	B	ACT-BOTH	SP-1248	E	R	
SV37038	RC RTR HEAD VENT VALVE B	HIAW 1-7	2	B	ACT-BOTH	SP-1248	E	R	
SV37039	RC VENT TO PRT VALVE A	HIAW 1-7	2	B	ACT-BOTH	SP-1248	E	R	
SV37040	RC VENT TO CNTMT ATMOSPHERE	HIAW 1-7	2	B	ACT-BOTH	SP-1248	E	R	
CV31019	RD RAD MON 2R-11 & 2R-12 SMPL RTN	NF-39790-3	N/A	A	ACT-CLOSE	SP-1244	E	Q	
						SP-1072.23	LT	R	
CV31022	RD RAD MON 2R-11 & 2R-12 SMPL RTN	NF-39790-3	N/A	A	ACT-CLOSE	SP-1244	E	Q	
						SP-1072.22	LT	R	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
CV31092	RD	RAD MON 2R-11 & 2R-12 SMPL INLET	NF-39790-3	N/A	A	ACT-CLOSE	SP-1244	E	Q	
							SP-1072.22	LT	R	
CV31750	RD	RAD MON 2R-11 & 2R-12 SMPL INLET	NF-39790-3	N/A	A	ACT-CLOSE	SP-1244	E	Q	
							SP-1072.23	LT	R	
RH-3-1	RH	RHR PUMP #12 SUCT LINE CHECK	HIAW 1-31	3	C	ACT-CLOSE		E	R	
RH-3-2	RH	RHR PUMP #11 SUCT LINE CHECK	HIAW 1-31	3	C	ACT-CLOSE		E	R	
RH-3-3	RH	RHR PUMP #12 DISCH LINE CHECK	HIAW 1-31	3	C	ACT-OPEN		E	CS	
RH-3-4	RH	RHR PUMP #11 DISCH LINE CHECK	HIAW 1-31	3	C	ACT-OPEN		E	CS	
RH-6-1	RH	2 IN LETDOWN LINE BY-PASS CHK	HIAW 1-31	3	C	ACT-OPEN		E	CS	
RH-8-1	RH	RHR PUMP #11 & #12 SUCTION RELIEF	HIAW 1-31	3	C	ACT-BOTH	P3120-59-1A	SP	10Y	
CV31235	RH	RH EXCH #11 OUTLET	HIAW 1-31	3	B	PAS-OPEN		PV	2Y	
CV31236	RH	RH EXCH #12 OUTLET	HIAW 1-31	3	B	PAS-OPEN		PV	2Y	
MV32066	RH	DOWNSTREAM OF CV-31236	HIAW 1-31	3	A	PAS-CLOSE	SP-1273	PV	2Y	
							SP-1070	LT	R	
MV32164	RH	1 REAC LOOP A RSDL HT RMVL ISOL MV A	HIAW 1-31	3	A	PAS-CLOSE	SP-1273	PV	2Y	
							SP-1070	LT	R	
MV32165	RH	1 REAC LOOP A RSDL HT RMVL ISOL MV B	HIAW 1-31	3	A	PAS-CLOSE	SP-1273	PV	2Y	
							SP-1070	LT	R	
MV32230	RH	1 REAC LOOP B RSDL HT RMVL ISOL MV A	HIAW 1-31	3	A	PAS-CLOSE	SP-1273	PV	2Y	
							SP-1070	LT	R	
MV32231	RH	1 REAC LOOP B RSDL HT RMVL ISOL MV B	HIAW 1-31	3	A	PAS-CLOSE	SP-1273	PV	2Y	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
							SP-1070	LT	R	
CV31740	SA	1 CNTMT INST AIR ISOL VLV A	NF-39244	N/A	A	ACT-CLOSE		E	R	
							SP-1072.20	LT	R	
CV31741	SA	1 CNTMT INST AIR ISOL VLV B	NF-39244	N/A	A	ACT-CLOSE		E	R	
							SP-1072.20	LT	R	
MV32040	SB	11 SGB ISOL MV	NF-88740	24	B	ACT-CLOSE	SP-1267	E	Q	
MV32043	SB	12 SGB ISOL MV	NF-88740	24	B	ACT-CLOSE	SP-1267	E	Q	
MV32044	SB	11 SGB ISOL MV	NF-88740	24	B	ACT-CLOSE	SP-1267	E	Q	
MV32058	SB	12 SGB ISOL MV	NF-88740	24	B	ACT-CLOSE	SP-1267	E	Q	
SI-10-1	SI	SAFETY INJECTION PUMP 11 DISCH CHK	HIAW 1-45	9	C	ACT-OPEN	SP-1092A	E	R	
					C	ACT-CLOSE	SP-1070	E	R	
SI-10-2	SI	SAFETY INJECTION PUMP 12 DISCH CHK	HIAW 1-45	9	C	ACT-OPEN	SP-1092A	E	R	
					C	ACT-CLOSE	SP-1070	E	R	
SI-16-1	SI	FROM SI PUMP 11 DISCH TO TEST LINE	HIAW 1-45	9	C	ACT-OPEN	SP-1088	E	Q	
SI-16-2	SI	FROM SI PUMP 12 DISCH TO TEST LINE	HIAW 1-45	9	C	ACT-OPEN	SP-1088	E	Q	
SI-16-3	SI	FR RWST OUTLET LINE TO SI PUMP SUCT	HIAW 1-45	9	C	ACT-OPEN	SP-1088	E	Q	
SI-16-4	SI	COLD LEG INJECTION LINE TO LOOP B COLD LEG	HIAW 1-44	8	C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	E	R	
SI-16-5	SI	COLD LEG INJECTION LINE TO LOOP A COLD LEG	HIAW 1-44	8	C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	E	R	
SI-16-6	SI	REACTOR VESSEL INJ LINE TO REACTOR VESSEL	HIAW 1-44	8	C	ACT-OPEN	SP-1092A	E	R	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Viv Category	Viv Function	Test Proc	Test Type	Test Freq	Relief Request
						ACT-CLOSE	SP-1070	E	R	
SI-16-7	SI	REACTOR VESSEL INJ LINE TO REACTOR VESSEL	HIAW 1-44	8	C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	E	R	
SI-25-1	SI	ACCUMULATOR 11 RELIEF	HIAW 1-44	8	C	ACT-BOTH	P3120-69-11B	SP	10Y	
SI-25-2	SI	ACCUMULATOR 12 RELIEF	HIAW 1-44	8	C	ACT-BOTH	P3120-69-12B	SP	10Y	
SI-26-1	SI	LD HEAD TO REAC VSL RELIEF	HIAW 1-44	8	C	ACT-BOTH	P3120-69-1A	SP	10Y	
SI-4-1	SI	11 SI PUMP SUCT LINE RELIEF	HIAW 1-45	9	C	ACT-BOTH	P3120-69-11A	SP	10Y	
SI-4-2	SI	12 SI PUMP SUCT LINE RELIEF	HIAW 1-45	9	C	ACT-BOTH	P3120-69-12A	SP	10Y	
SI-6-1	SI	ACC #12 OUTLET TO LOOP B COLD LEG CHECK	HIAW 1-44	8	A, C	ACT-OPEN	SP-1092C	E	R	
						ACT-CLOSE	SP-1070	LT	R	
SI-6-2	SI	DOWNSTREAM OF CHECK SI-6-1	HIAW 1-44	8	A, C	ACT-OPEN	SP-1092C	E	R	
						ACT-CLOSE	SP-1269	LT	R	
SI-6-3	SI	ACC #11 12 OUTLET TO LOOP A COLD LEG CHK	HIAW 1-44	8	A, C	ACT-OPEN	SP-1092C	E	R	
						ACT-CLOSE	SP-1070	LT	R	
SI-6-4	SI	DOWNSTREAM OF CHECK SI-6-3	HIAW 1-44	8	A, C	ACT-OPEN	SP-1092C	E	R	
						ACT-CLOSE	SP-1269	LT	R	
SI-7-1	SI	FR REFUELING WTR STR TK TO RHR PUMP SUCT	HIAW 1-45	9	C	ACT-OPEN	SP-1092B	E	R	
						ACT-CLOSE		E	R	
SI-7-2	SI	FR REFUELING WTR STR TK TO RHR PUMP SUCT	HIAW 1-45	9	C	ACT-OPEN	SP-1092B	E	R	
						ACT-CLOSE		E	R	
SI-8-1	SI	FROM BORIC ACID TNKS TO SI PUMPS	HIAW 1-45	9	B	PAS-OPEN		PV	2Y	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
SI-8-2	SI	FROM BORIC ACID TNKS TO SI PUMPS	HIAW 1-45	9	B	PAS-CLOSE		PV	2Y	
SI-9-1	SI	COLD LEG INJ LINE TO LOOP B COLD LEG CHK	HIAW 1-44	8	C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	E	R	
SI-9-2	SI	COLD LEG INJ LINE TO LOOP A COLD LEG CHK	HIAW 1-44	8	C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	E	R	
SI-9-3	SI	FROM RESIDUAL HT EXCH TO Rx VESSEL CHK	HIAW 1-44	8	A, C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	LT	R	
SI-9-4	SI	FROM RESIDUAL HT EXCH TO Rx VESSEL CHK	HIAW 1-44	8	A, C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	LT	R	
SI-9-5	SI	FROM RH EXCH TO REACTOR VESSEL CHK	HIAW 1-44	8	A, C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	LT	R	
SI-9-6	SI	FROM RH EXCH TO REACTOR VESSEL CHK	HIAW 1-44	8	A, C	ACT-OPEN	SP-1092A	E	R	
						ACT-CLOSE	SP-1070	LT	R	
CV31242	SI	N2 SUPPLY TO ACC HCV	HIAW 1-44	8	A	PAS-CLOSE		PV	2Y	
							SP-1072.31	LT	R	
CV31440	SI	N2 SUPPLY TO ACC CONTMNT ISOL	HIAW 1-44	8	A	ACT-CLOSE		E	Q	
							SP-1072.31	LT	R	
CV31441	SI	N2 SUPPLY TO 11 ACC ISOL	HIAW 1-44	8	A	ACT-CLOSE		E	CS	
							SP-1072.31	LT	R	
CV31443	SI	ACC TO RCDT	HIAW 1-44	8	B	ACT-CLOSE		E	CS	
CV31444	SI	N2 SUPPLY TO 12 ACC ISOL	HIAW 1-44	8	A	ACT-CLOSE		E	CS	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
							SP-1072.31	LT	R	
CV31446	SI	ACC TO RCDT	HIAW 1-44	8	B	ACT-CLOSE		E	CS	
CV31447	SI	ACC AFTER CK TEST VLV	HIAW 1-44	8	B	PAS-CLOSE	SP-1070	PV	2Y	
CV31449	SI	ACC AFTER CK TEST VLV	HIAW 1-44	8	B	PAS-CLOSE	SP-1070	PV	2Y	
MV32064	SI	FR RH EXCH TO REACTOR VESSEL	HIAW 1-44	8	B	PAS-OPEN		PV	2Y	
MV32065	SI	FR RH EXCH TO REACTOR VESSEL	HIAW 1-44	8	B	PAS-OPEN		PV	2Y	
MV32067	SI	1 SAF INJ REAC VSL INJ ISOL MV B	HIAW 1-44	8	B	ACT-OPEN	SP-1236	E	CS	
MV32068	SI	1 SAF INJ LOOP B COLD LEG ISOL MV	HIAW 1-44	8	B	PAS-OPEN		PV	2Y	
MV32069	SI	1 SAF INJ REAC VSL INJ ISOL MV A	HIAW 1-44	8	B	ACT-OPEN	SP-1236	E	CS	
MV32070	SI	1 SAF INJ LOOP A COLD LEG ISOL MV	HIAW 1-44	8	B	PAS-OPEN		PV	2Y	
MV32071	SI	ACCUMULATOR 11 12 IN OUTLET	HIAW 1-44	8	B	PAS-OPEN		PV	2Y	
MV32072	SI	ACCUMULATOR 12 12 IN OUTLET	HIAW 1-44	8	B	PAS-OPEN		PV	2Y	
MV32073	SI	1 SAF INJ COLD LEG INJ ISOL MV	HIAW 1-44	8	B	PAS-OPEN		PV	2Y	
MV32074	SI	1 SAF INJ REAC VSL INJ ISOL MV	HIAW 1-44	8	B	PAS-OPEN		PV	2Y	
MV32075	SI	11 CONTM SMP B ISOL MV A1	HIAW 1-44	8	A	ACT-BOTH	SP-1137	E	R	#3
							SP-1072.30A	LT	R	
MV32076	SI	11 CONTM SMP B ISOL MV A2	HIAW 1-44	8	A	ACT-BOTH	SP-1137	E	R	#3
							SP-1072.30B	LT	R	
MV32077	SI	11 CONTM SMP B ISOL MV B1	HIAW 1-44	8	B	ACT-BOTH	SP-1137	E	R	
MV32078	SI	11 CONTM SMP B ISOL MV B2	HIAW 1-44	8	B	ACT-BOTH	SP-1137	E	R	
MV32079	SI	REF WTR STR TK OUTLET	HIAW 1-45	9	B	ACT-OPEN	SP-1088	E	Q	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32080	SI	REF WTR STR TK OUTLET	HIAW 1-45	9	B	ACT-OPEN	SP-1088	E	Q	
MV32081	SI	BAST TO 11 & 12 SI PUMP SUCTION MV A	HIAW 1-45	9	B	ACT-BOTH	SP-1088	E	Q	
MV32082	SI	BAST TO 11 & 12 SI PUMP SUCTION MV B	HIAW 1-45	9	B	ACT-BOTH	SP-1088	E	Q	
MV32083	SI	BAST TO 11 & 12 SI PUMP SUCTION MV C	HIAW 1-45	9	B	PAS-OPEN		PV	2Y	
MV32084	SI	RFLG WTR TO 11 RSDL HT RMVL PMP ISOL MV	HIAW 1-45	9	B	PAS-OPEN		PV	2Y	
MV32085	SI	RFLG WTR TO 12 RSDL HT RMVL PMP ISOL MV	HIAW 1-45	9	B	PAS-OPEN		PV	2Y	
MV32162	SI	SI PUMP 11 SUCTION LINE	HIAW 1-45	9	B	ACT-BOTH	SP-1236	E	CS	
MV32163	SI	SI PUMP 12 SUCTION LINE	HIAW 1-45	9	B	ACT-BOTH	SP-1236	E	CS	
MV32202	SI	SAF INJ TEST TO 11 RFLG WTR STOR TNK MV A	HIAW 1-45	9	B	ACT-BOTH	SP-1236	E	CS	
MV32203	SI	SAF INJ TEST TO 11 RFLG WTR STOR TNK MV B	HIAW 1-45	9	B	ACT-BOTH	SP-1236	E	CS	
MV32206	SI	FR RH EXCH TO SI PUMP 11 SUCT	HIAW 1-45	9	B	ACT-OPEN	SP-1137	E	R	
MV32207	SI	FR RH EXCH TO SI PUMP 12 SUCT	HIAW 1-45	9	B	ACT-OPEN	SP-1137	E	R	
CV31402	SS	1A SGB SAMPLE # SM-35 (OUTSIDE CNTMT)	NF-39238	20	B	ACT-CLOSE		E	Q	
CV31403	SS	1B SGB SAMPLE # SM-36(OUTSIDE CNTMT)	NF-39238	20	B	ACT-CLOSE		E	Q	
CV31637	SS	1A SGB SAMPLE # SM-35 (INSIDE CNTMT)	NF-39238	20	B	ACT-CLOSE		E	Q	
CV31638	SS	1B SGB SAMPLE # SM-36 (INSIDE CNTMT)	NF-39238	20	B	ACT-CLOSE		E	Q	
MV32400	SS	PRZR STEAM SPACE SAMPLE VLV A	NF-39238	20	A	ACT-CLOSE	SP-1242	E	Q	
							SP-1072.15	LT	R	
MV32401	SS	PRZR STEAM SPACE SAMPLE VLV B	NF-39238	20	A	ACT-CLOSE	SP-1242	E	Q	
							SP-1072.15	LT	R	
MV32402	SS	PRZR LIQ SAMPLE VLV A	NF-39238	20	A	ACT-CLOSE	SP-1242	E	Q	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
							SP-1072.16	LT	R	
MV32403	SS	PRZR LIQ SAMPLE VLV B	NF-39238	20	A	ACT-CLOSE	SP-1242	E	Q	
							SP-1072.16	LT	R	
MV32404	SS	LOOP B HOT LEG SMPL	NF-39238	20	A	ACT-CLOSE	SP-1242	E	Q	
							SP-1072.17	LT	R	
MV32405	SS	LOOP B HOT LEG SMPL	NF-39238	20	A	ACT-CLOSE	SP-1242	E	Q	
							SP-1072.17	LT	R	
SM-10-1	VC	SAMPLE RET LINE TO VOL CONTR TANK	NF-39238	5	C	ACT-CLOSE		E	R	
VC-13-1	VC	VOLUME CONTROL TANK INLET CHK	HIAW 1-39	5	C	ACT-CLOSE		E	R	
VC-13-2	VC	CHEM MIX TK #11 OUTLET TO VCT OUTLET CHK	HIAW 1-39	5	C	ACT-CLOSE		E	CS	
VC-14-1	VC	SEAL WTR INJECT FILTERS TO RC PUMP #11 CHK	HIAW 1-38	4	A	ACT-CLOSE	SP-1279	E	CS	
							SP-1072.13A	LT	R	
VC-14-2	VC	SEAL WTR INJECT FILTERS TO RC PUMP #12 CHK	HIAW 1-38	4	A	ACT-CLOSE	SP-1279	E	CS	
							SP-1072.13B	LT	R	
VC-17-1	VC	CHARGING LINE CV-31328 BY-PASS CHK	HIAW 1-38	4	C	ACT-CLOSE		E	CS	
VC-24-1	VC	VOLUME CONTROL TANK #11 RELIEF	HIAW 1-39	5	C	ACT-BOTH	P3120-75-1A	SP	10Y	
VC-25-1	VC	RCP DISCH LINE TO SEAL WTR FILTER RELIEF	HIAW 1-38	4	C	ACT-BOTH	P3120-75-1B	SP	10Y	
VC-26-1	VC	REGEN HEAT EXCH #11 LETDOWN LINE OUT RELIEF	HIAW 1-38	4	C	ACT-BOTH	P3120-75-1C	SP	10Y	
VC-28-1	VC	11 CHG PUMP DISCH RELIEF	HIAW 1-39	5	C	ACT-BOTH	P3120-75-11A	SP	10Y	
VC-28-2	VC	12 CHG PUMP DISCH RELIEF	HIAW 1-39	5	C	ACT-BOTH	P3120-75-12A	SP	10Y	
VC-28-3	VC	13 CHG PUMP DISCH RELIEF	HIAW 1-39	5	C	ACT-BOTH	P3120-75-13A	SP	10Y	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys Description	P&ID	Codc Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
VC-7-10	VC 1-HCV-142 BY-PASS	HIAW 1-39	5	A	PAS-CLOSE		PV	2Y	
	VC					SP-1072.12	LT	R	
VC-7-11	VC DOWNSTREAM OF 1-HCV-142	HIAW 1-39	5	A	ACT-CLOSE		E	CS	
						SP-1072.12	LT	R	
VC-8-1	VC UPSTREAM OF REGENERATIVE HEAT EXCH #11	HIAW 1-38	4	A, C	ACT-CLOSE		E	CS	
						SP-1072.12	LT	R	
VC-8-10	VC DOWNSTREAM OF 1-LCV-112A	HIAW 1-39	5	C	ACT-CLOSE		E	CS	
VC-8-11	VC BORIC ACID BLENDER SUCTION	HIAW 1-39	5	C	ACT-CLOSE		E	CS	
VC-8-14	VC RMW TO CHARGING PUMP SUCT	HIAW 1-39	5	C	ACT-CLOSE		E	CS	
VC-8-2	VC DWNSTRM OF REGENERATIVE HEAT EXCH #11	HIAW 1-38	4	C	ACT-CLOSE	SP-1237	E	CS	
VC-8-3	VC 11 REGEN HX AUX SPRY TO 11 PRZR CV31329	HIAW 1-38	4	C	ACT-CLOSE		E	CS	
VC-8-4	VC RC PUMP #12 SUCTION	HIAW 1-38	4	A, C	ACT-CLOSE	SP-1166	E	R	
						SP-1072.13B	LT	R	
VC-8-5	VC RC PUMP #11 SUCTION	HIAW 1-38	4	A, C	ACT-CLOSE	SP-1166	E	R	
						SP-1072.13A	LT	R	
VC-8-6	VC RC PUMP #12 SUCTION	HIAW 1-38	4	C	ACT-CLOSE	SP-1166	E	R	
VC-8-7	VC RC PUMP #11 SUCTION	HIAW 1-38	4	C	ACT-CLOSE	SP-1166	E	R	
CV31198	VC CHG LINE HCV	HIAW 1-39	5	A	ACT-CLOSE		E	CS	
						SP-1072.12	LT	R	
CV31210	VC EXCESS LETDOWN HEAT EXCH OUTLET	HIAW 1-38	4	B	ACT-CLOSE		E	CS	
CV31226	VC 1 REAC CLNT LOOP PZR LTDN LM ISOL	HIAW 1-7	2	B	ACT-CLOSE	SP-1162	E	CS	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
CV31255	VC	1 REAC CLNT LOOP PZR LTDN LN ISOL	HIAW 1-7	2	B	ACT-CLOSE	SP-1162	E	CS	
CV31325	VC	LETDOWN ORIFICE ISOL	HIAW 1-38	4	A	ACT-CLOSE	SP-1162	E	CS	
							SP-1072.11	LT	R	
CV31326	VC	LETDOWN ORIFICE ISOL	HIAW 1-38	4	A	ACT-CLOSE	SP-1162	E	CS	
							SP-1072.11	LT	R	
CV31327	VC	LETDOWN ORIFICE ISOL	HIAW 1-38	4	A	ACT-CLOSE	SP-1162	E	CS	
							SP-1072.11	LT	R	
CV31330	VC	EXCESS LETDOWN HEAT EXCH INLET	HIAW 1-38	4	B	ACT-CLOSE		E	CS	
CV31333	VC	EXCESS LETDOWN HEAT EXCH TO SL WTR FILTR	HIAW 1-38	4	B	PAS-NOTE 2		PV	2Y	
CV31339	VC	LETDOWN CNTMT ISOL	HIAW 1-38	4	A	ACT-CLOSE	SP-1162	E	CS	
							SP-1072.11	LT	R	
MV32166	VC	SEAL RETURN CONT ISOL	HIAW 1-38	4	A	ACT-CLOSE	SP-1280	E	CS	
							SP-1072.14	LT	R	
MV32199	VC	SEAL RETURN CONT ISOL	HIAW 1-38	4	A	ACT-CLOSE	SP-1280	E	CS	
							SP-1072.14	LT	R	
CV31434	WL	RCDT TO VENT HDR CNTMT ISOL VLV A	HIAW 1-123	N/A	A	ACT-CLOSE	SP-1284	E	Q	
							SP-1072.4	LT	R	
CV31435	WL	RCDT TO VENT HDR CNTMT ISOL VLV B	HIAW 1-123	N/A	A	ACT-CLOSE	SP-1284	E	Q	
							SP-1072.4	LT	R	
CV31436	WL	RCDT DISCH CNTMT ISOL VLV A	HIAW 1-123	N/A	A	ACT-CLOSE	SP-1284	E	Q	
							SP-1072.5	LT	R	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	Tag ID	Code Dwg	Viv Category	Viv Function	Test Proc	Test Type	Test Freq	Relief Request
CV31437	WL	RCDT DISCH CNTMT ISOL VLV B	HIAW 1-123	N/A	A	ACT-CLOSE	SP-1284	E	Q	
							SP-1072.5	LT	R	
CV31438	WL	SUMP A DISCH CNTMT ISOL VLV A	HIAW 1-123	N/A	A	ACT-CLOSE	SP-1284	E	Q	
							SP-1072.26	LT	R	
CV31439	WL	SUMP A DISCH CNTMT ISOL VLV B	HIAW 1-123	N/A	A	ACT-CLOSE	SP-1284	E	Q	
							SP-1072.26	LT	R	
CV31545	WL	RCDT TO GA CNTMT ISOL VLV A	HIAW 1-123	N/A	A	ACT-CLOSE	SP-1284	E	Q	
							SP-1072.21	LT	R	
CV31546	WL	RCDT TO GA CNTMT ISOL VLV B	HIAW 1-123	N/A	A	ACT-CLOSE	SP-1284	E	Q	
							SP-1072.21	LT	R	
ZH-2-1	ZH	121 CHILL WATER PUMP DISCHARGE	NF-39603-3	28	C	ACT-OPEN	SP-1161	E	Q	
ZH-2-2	ZH	122 CHILL WATER PUMP DISCHARGE	NF-39603-3	28	C	ACT-OPEN	SP-1161	E	Q	
ZH-23-1	ZH	LOOP A CW SUPPLY HDRS - CROSS-CONN	NF-39603-3	28	C	ACT-OPEN	SP-1161	E	Q	
ZH-23-2	ZH	LOOP B CW SUPPLY HDRS - CROSS-CONN	-39603-3	28	C	ACT-OPEN	SP-1161	E	Q	
CV31837	ZH	121/122 CNTRL RM WTR CHLLR OUTLET X-OVER	NF-39603-3	28	B	ACT-CLOSE	SP-1160	E	Q	
CV31838	ZH	121/122 CNTRL RM WTR CHLLR INLET X-OVER	NF-39603-3	28	B	ACT-CLOSE	SP-1160	E	Q	
SV33728	ZH	121 CONTROL ROOM WTR CHLLR MTR CLR	NF-39603-4	28	B	ACT-OPEN	SP-1161	E	Q	
SV33766	ZH	122 CONTROL ROOM WTR CHLLR MTR CLR	NF-39603-4	28	B	ACT-OPEN	SP-1161	E	Q	
CV31310	ZP	INSERVICE PURGE EXH ISOL B	NF-39601-1	N/A	A	ACT-CLOSE		E	AR	
								LT	R	
CV31311	ZP	INSERVICE PURGE EXH ISOL A	NF-39601-1	N/A	A	ACT-CLOSE		E	AR	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
								LT	R	
CV31621	ZP	CNTMT VAC BRKR PWR OP	NF-39602-1	N/A	A	ACT-BOTH	SP-1130	E	Q	
							SP-1072.41A	LT	R	
CV31622	ZP	CNTMT VAC BRKR PWR OP	NF-39602-1	N/A	A	ACT-BOTH	SP-1130	E	Q	
							SP-1072.41B	LT	R	
CV31624	ZP	CNTMT VAC BRKR GRAV OP	NF-39602-1	N/A	A, C	ACT-BOTH	SP-1130	E	Q	
							SP-1072.41A	LT	R	
CV31625	ZP	CNTMT VAC BRKR GRAV OP	NF-39602-1	N/A	A, C	ACT-BOTH	SP-1130	E	Q	
							SP-1072.41B	LT	R	
CV31633	ZP	INSERVICE PURGE SUPPLY ISOL B	NF-39601-1	N/A	A	ACT-CLOSE		E	AR	
								LT	R	
CV31634	ZP	INSERVICE PURGE SUPPLY ISOL A	NF-39601-1	N/A	A	ACT-CLOSE		E	AR	
								LT	R	
CV39401	ZX	COOLING WATER TO 11 & 13 FCU	NF-86172-2	41	B	ACT-OPEN	SP-1245	E	Q	
CV39402	ZX	11& 13 FCU CHILLED WATER SUPPLY CV	NF-86172-2	41	B	ACT-CLOSE	SP-1245	E	Q	
CV39403	ZX	COOLING WATER TO 12 & 14 FCU	NF-86172-2	41	B	ACT-OPEN	SP-1245	E	Q	
CV39404	ZX	12& 14 FCU CHILLED WATER SUPPLY CV	NF-86172-2	41	B	ACT-CLOSE	SP-1245	E	Q	
CV39405	ZX	11 SHROUD CLG COILS TR A CW SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-1245	E	Q	
CV39406	ZX	12 SHROUD CLG COILS TR B CW SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-1245	E	Q	
CV39407	ZX	11 SHROUD CLG COILS TR A CW SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-1245	E	Q	
CV39408	ZX	12 SHROUD CLG COILS TR B CW SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-1245	E	Q	

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Viv Category	Viv Function	Test Proc	Test Type	Test Freq	Relief Request
CV39409	ZX	COOLING WATER FROM 11 & 13 FCU	NF-86172-2	41	B	ACT-OPEN	SP-1245	E	Q	
CV39410	ZX	12& 14 FCU CHILLED WATER SUPPLY CV	NF-86172-2	41	B	ACT-CLOSE	SP-1245	E	Q	
CV39411	ZX	COOLING WATER FROM 12 & 14 FCU	NF-86172-2	41	B	ACT-OPEN	SP-1245	E	Q	
CV39412	ZX	11& 13 FCU CHILLED WATER SUPPLY CV	NF-86172-2	41	B	ACT-CLOSE	SP-1245	E	Q	

SECTION 1.4 REQUESTS FOR RELIEF FROM ASME CODE SECTION XI
REQUIREMENTS DETERMINED TO BE IMPRACTICAL

UNIT NO 1 AND COMMON COMPONENTS

This section contains a tabulation of the requirements contained in Section XI of the ASME Code that we have determined are impractical on Unit 1 and common components.

The Requests for Relief included in the program for Unit 1 are listed below.

<u>REQUEST FOR RELIEF NO.</u>	<u>SUBJECT</u>
1	Pump Vibration
2	Flow Instrumentation Accuracy
3	Visual Verification of Valves
4	Pump Vibration Sensor Locations
5	Pump Hydraulic Measurement
6	Unused
7	Unused
8	Unused
9	Unused
10	Containment Spray Minimum Flow Line

The following Requests for Relief were not used for Unit 1: 6-9.

1. REQUEST FOR RELIEF

COMPONENT	FUNCTION	ASME Code Class	ASME Viv Cat
11, 12 Safety Injection Pump	Deliver cooling water to the reactor core in the event of a loss of coolant accident.	2	---
11, 12 Containment Spray Pump	Provide sufficient heat removal capability to maintain the post accident containment pressure below the design pressure.	2	---
11, 12 Component Cooling Pump	Remove heat from components associated with removal of reactor core decay heat under accident conditions	3	---
12, 22 Diesel Cooling Water Pump	Remove heat from components that must function during accident conditions	3	---

CODE REQUIREMENT

Relief is requested from OMa 1988, part 6 Table 3 which requires vibration alert limits for centrifugal pumps to be $>2.5V_r$ to $6 V_r$ or > 0.325 in/sec.

ALTERNATE TESTING

Alert limits will be set using pump vibration history. Limits will be established per the Code unless the value becomes > 0.325 inches/sec. In those cases the alert limit will be set at $V_r + 0.2$ inches/sec.

1. REQUEST FOR RELIEF (CONT'D)

ALTERNATE TESTING (CONT'D)

11, 12 SI Pumps

Alert limits at locations on the pump which are above Code value will be compared with alert limits on the pump which are within Code acceptable values. Subsequent data will be evaluated based on pump vibration trending and history.

In addition to quarterly miniflow test data, full flow vibration data will be taken and analyzed once per refueling.

11, 12 CS Pumps

Alert limits at locations on the pump which are above Code value will be compared with alert limits on the pump which are within Code acceptable values. Subsequent data will be evaluated based on pump vibration trending and history.

11, 12 CC Pumps

Vibration limits depend on sensor location and pump flow. Limits will be established based on these variables.

12, 22 Diesel Cooling Water Pumps

Vibration limits depend on sensor location and pump flow. Limits will be established based on these variables. Speed will be held constant while taking vibration data during all tests.

1. REQUEST FOR RELIEF (COND'T)

BASIS FOR REQUESTING RELIEF

11, 12 SI Pumps

The Code alert limits will not be met based on the higher vibration levels at minimum flow. The higher vibration levels are at higher frequencies which can be accounted for by internal hydraulic forces (i.e. vane passing frequencies). Trending of vibration data at both minimum flow and full flow will adequately reflect changes in pump conditions.

11,12 CS Pumps

The Code alert limits will not be met based on the higher vibration levels at minimum flow. A second contributing factor is the effect of piping configuration. Trending of vibration data will adequately reflect changes in pump condition.

11, 12 CC Pumps

The component cooling system resistance cannot be adjusted to achieve a standard reference point during a test. Per the Code, flow and pressure readings will be taken and compared to reference values. These reference values will be based on pump performance and history when it was in good mechanical condition. Certain vibration points are sensitive to flow conditions, particularly low flows. Vibration readings will be correlated to pressure/flow readings. The outboard pump bearing is very load sensitive and vibration varies by as much as 100%.

12,22 CL Pumps

Vibration values and limits are flow, speed and sensor location dependent. System resistance cannot be adjusted to achieve a standard reference point. Per the Code, flow and pressure readings will be taken and compared to reference values. These reference values will be based on pump performance and history when it was in good mechanical condition. Vibration readings will be correlated to pressure/flow readings.

JUSTIFICATION

All pumps have a detailed vibration history which is trended and available to the engineering staff. Operating history and availability of these pumps has been excellent with no failures. The pump manufacturers are in agreement that pump degradation can be monitored by trending vibration levels from a reference point properly established. Alternate acceptance criteria established as described above will give adequate indications of pump degradation.

2. REQUEST FOR RELIEF

COMPONENTS	FUNCTION	ASME Code Class	ASME Code Class
11, 12 Component Cooling Pump	Remove heat from components associated with removal of reactor core decay heat under accident conditions.	3	---

CODE REQUIREMENTS

OMa 1988 Part 6, Section 4.6 requires flow instrumentation be accurate within $\pm 2\%$.

ALTERNATE TESTING

Presently installed instrumentation is accurate to $\pm 3\%$. This accuracy is sufficient to allow measurement of flow changes.

BASIS FOR REQUESTING RELIEF

The addition of a more accurate flowmeter would require a plant modification with little increase in safety.

JUSTIFICATION

During each surveillance test the pump differential pressure vs. flow is compared to an acceptance curve based on the code. The component cooling water flow indicators have accuracy which is sufficient to measure change in flow and pump degradation.

In addition, the pump acceptance curves will be reduced by 1% of normal flow to account for the higher instrument inaccuracy.

3. REQUEST FOR RELIEF

COMPONENT		FUNCTION	ASME Code class	ASME Vlv Cat
MV-32075	Containment Sump B Isolation Valve A1	Open to provide for ECC during recirculation phase, close for Containment Isolation.	2	A
MV-32076	Containment Sump B Isolation Valve A2	Open to provide for ECC during recirculation phase, close for Containment Isolation.	2	A

CODE REQUIREMENT

OMA-1988 Part 10, Section 4.1 requires valves with remote position indicators to be observed locally at least once every two years to verify valve operation is accurately indicated.

ALTERNATE TESTING

System characteristics and/or visual observation will be used to determine obturator movement. The valves are enclosed by valve enclosures which are part of the containment barrier. It is not considered practical to disassemble these enclosures to verify correct position indication. The valves are leak tested in the closed position each refueling outage and will be visually verified to stroke whenever the cover is removed.

BASIS FOR REQUESTING RELIEF

Valve design does not allow for easy access to valves for inspection of position. Removing the valve cover would be a hardship with no equivalent increase in safety.

JUSTIFICATION

These valves are full stroked and timed both open and closed each refueling outage. Any change in the position indication system would be reflected in the timing. This stroking plus periodic inspection whenever the cover is removed gives adequate indication that the valve is operable.

4. REQUEST FOR RELIEF

COMPONENT	FUNCTION	ASME CODE CLASS	ASME VLV. CAT.
12, 22 Diesel Driven Cooling Water Pump	Remove heat from components that must function during accident conditions.	3	---
121 Motor Driven Cooling Water Pump	Remove heat from components that must function during accident conditions.	3	---
11, 12 Residual Heat Removal Pump	Deliver cooling water to the reactor core in the event of a loss of coolant accident.	2	---

CODE REQUIREMENT

On vertical line shaft pumps, vibration measurements shall be taken on the upper motor bearing housing in three orthogonal directions, one of which is the axial direction.

ALTERNATE TESTING

12, 22 Diesel Driven Cooling Water Pumps - Vibration measurements will be taken on the right angle drive in three orthogonal directions, one of which will be axial. In addition, one vibration measurement will be taken on the diesel engine.

121 Motor Driven Cooling Water Pump - Vibration measurement will be taken on the motor housing in three orthogonal directions, one of which is axial. The axial reading will be on the side of the housing, midway between the upper and lower bearing.

11, 12 Residual Heat Removal Pumps - Two existing installed probes which measure vibration in two orthogonal directions will be used.

4. REQUEST FOR RELIEF (CONT'D)

BASIS FOR REQUESTING RELIEF

12, 22 Diesel Driven Cooling Water Pumps - The driver for the DDCWP is a diesel engine coupled to a right angle drive. The pump bearing is inaccessible for vibration measurements.

121 Motor Drive Cooling Water Pump - The design of the MDCWP prevents access to the upper thrust bearing housing to take an axial vibration reading with a portable instrument while the pump is running. A modification to add a permanent transducer would be costly with no commensurate additional benefit. To climb on top of the motor while it is running is a personnel hazard.

11, 12 Residual Heat Removal Pumps - The upper motor thrust bearing housing is inaccessible for an axial measurement. Portable instrumentation would be difficult to use due to a domed cover over the pump housing which limits access and would tend to amplify any readings. The addition of a permanent probe would be costly with no commensurate benefit to safety.

JUSTIFICATION

12, 22 Diesel Driven Cooling Water Pumps - Pump and driver thrust is transmitted to the right angle drive. Monitoring vibration levels at this point will give an acceptable indication of performance. Vibration acceptance criteria developed from historical and engineering data has been established and will give indication of any pump degradation.

121 Motor Driven Cooling Water Pumps - The readings taken on the pump housing give an acceptable indication of performance. Any axial vibrations will be transmitted to the motor housing and would be indicated on the portable meter.

11, 12 Residual Heat Removal Pumps - The thrust bearing on this pump would transfer a component of the axial vibration to the radial probes.

5. REQUEST FOR RELIEF

COMPONENT	FUNCTION	ASME CODE CLASS	ASME VLV CAT
12, 22 Diesel Driven Cooling Water Pump	Remove heat from components that must function during accident conditions.	3	—
121 Motor driven Cooling Water Pump	Remove heat from components that must function during accident conditions.	3	—

CODE REQUIREMENT

In measuring hydraulic performance where system resistance cannot be varied, flow rate and pressure shall be determined and compared to their respective reference values. Alert range is 0.93 to $<0.95 \Delta Pr$ and required action range low is $<0.93 \Delta Pr$ and high is $> 1.10 \Delta Pr$.

ALTERNATE TESTING

Pump flow and pump suction and discharge pressure are recorded. The pump differential pressure is then plotted against flow to determine a "point" on the pump curve. This point is then compared to acceptance criteria. The acceptable range will be between 90% and 103% of the pump curve. The alert ranges will be from 80% to 90% of reference (low value) to 103% to 106% (high value). The required action range will be for values less than 80% or greater than 106% of the pump curve.

Curves will be developed using the following methods:

- A) Curves will be developed when the pumps are known to be operating properly. If the pump is repaired or replaced, the curve will be validated or redrawn.
- B) The reference points used to develop the curve will be measured with instruments that meet code accuracy, and the points will be sufficient in number (minimum of 5). The points used will include points close to design flow.
- C) Acceptance criteria based on curves will not conflict with Technical Specifications or USAR operability criteria for flow rate and differential pressure.

5. REQUEST FOR RELIEF (CONT'D)

BASIS FOR REQUESTING RELIEF

System design does not allow performance of hydraulic tests at specific reference points. Because of the numerous system loading combinations possible, it is not practical to reestablish the exact reference point for the pump test. Because a repeatable reference point cannot be reestablished for each test, the inaccuracies in determining the pumps' hydraulic conditions and code allowable variances in these conditions (flow and dp) compound the allowable ranges of operation when both flow and dp are compared together.

JUSTIFICATION

The pump curves for acceptance criteria were developed from vendor supplied performance and preoperational test data. A pump that operates within the established curves will meet all design, Technical Specification and accident conditions. Flow/pressure data which falls within the acceptance criteria range described above is a valid indicator of pump operability.

10. REQUEST FOR RELIEF

COMPONENT	FUNCTION	ASME CODE CLASS
11, 12 Containment Spray Pumps	Provide sufficient heat removal capability to maintain the post accident containment pressure below the design pressure.	2

CODE REQUIREMENT

A bypass test loop may be used for pump testing, provided the bypass is designed to recognize the pump manufacturers' operating conditions for minimum flow operation. Generic Letter 89-04 requires that a pump that cannot be full flow tested have an instrumented minimum flow line.

ALTERNATE TESTING

The containment spray pumps will continue to be tested on a code frequency using the non instrumented minimum flow line.

BASIS FOR REQUESTING RELIEF

The installation of a minimum flow line meter requires Unit 1 to be at cold shutdown. The next refueling outage for Unit 1 is scheduled for 1994. The instrumentation will be installed at that time.

JUSTIFICATION

The continued use of the non instrumented minimum flow line is acceptable because it provides a standard hydraulic resistance to the pumps during regular testing. Any pump degradation would be noticed by trending differential pressure.

2.2 ASME Section XI Pump Testing Program - Unit No. 2 Components

ASME Code Edition and Addenda: 1989 Edition

Program Period: December 21, 1994 to December 21, 2004

The attached sheet identifies the Unit 2 system pumps that are subject to the testing requirements of Section XI, ASME/ANSI OMA-1988 part 6.

LEGEND

Test Frequency

- M = monthly
- Q = quarterly
- C = cold shutdown
- Y = 12 months
- R = Refueling

Test Parameter

- Pi = inlet pressure
- Vv = vibration velocity
- Q = flowrate
- Pd = discharge pressure
- N = speed

ASME CODE PUMPS - Unit 2

PUMP DESCRIPTION	FLOW DIAGRAM	CLASS DWG	TEST PROC	TEST PARAMETER					TEST Freq.	REQUEST FOR RELIEF
				Pi	Vv	Q	Pd	N		
21 Safety Injection	X-H-1001-7	34	SP-2088	X	X		X		Q	#1
			SP-2092A	X	X	X	X		R	
22 Safety Injection	X-H-1001-7	34	SP-2088	X	X		X		Q	#1
			SP-2092A	X	X	X	X		R	
22 Turbine Aux Feedwater	NF-39223	16	SP-2102	X	X		X	X	Q	#1
			SP-2103	X	X	X	X	X		
21 Motor Aux Feedwater	NF-39223	16	SP-2100	X	X		X		Q	#1
			SP-2101	X	X	X	X		R	
21 Containment Spray	NF-39237	19	SP-2090	X	X	X	X		Q	#1
22 Containment Spray	NF-39237	19	SP-2090	X	X	X	X		Q	#1
21 Component Cooling	NF-39246	39	SP-2155	X	X	X	X		Q	#1, #2
22 Component Cooling	NF-39246	39	SP-2155	X	X	X	X		Q	#1, #2
21 Residual Heat Removal	X-H-1001-8	35	SP-2089	X	X	X	X		Q	#1, #4
22 Residual Heat Removal	X-H-1001-8	35	SP-2089	X	X	X	X		Q	#1, #4

2.3 ASME Section XI Valve Testing Program - Unit No. 2 Components

ASME Code Edition and Addenda: 1989 Edition
Program Period: December 16, 1993 to December 16, 2003

NOTES:

1. The following sheets identify the Unit 2 and common system valves that are subject to the testing requirements of Section XI, Subsection IWV. Valves in Code Class 1, 2, and 3 systems have been categorized in accordance with ASME/ANSI OMa-10, 1988, using the following criteria.

- a) The program has been limited to those Code Class 1, 2, and 3 valves that must function to prevent the occurrence of or mitigate the consequences of an analyzed accident contained in the USAR and to take the reactor to safe shutdown.
- b) Containment isolation valves are considered category A valves and are leak tested in accordance with the Plant Technical Specification. Category A valves are exercised in accordance with OM-10 except where relief is requested.

2. LEGEND

TEST TYPE:

E = exercise
SP = relief valve
LT = leak test
I = inspection
PV = position verification
2 y = every other year

TEST FREQUENCY:

D = daily
M = monthly
Q = quarterly
R = refueling
Y = yearly
AR = as required (See note 4)

CS = Cold shutdown
S = startup
CU = core unload
5y = 5 year
10y = 10 years

ASME Section XI Valve Testing Program - Unit No. 2 Components (Cont'd)

2.3 ASME SECTION XI VALVE TESTING PROGRAM - UNIT NO. 2 COMPONENTS (CONT'D)

3. Inservice valve testing at cold shutdown is defined as: Testing is required if not done in the previous 90 days. Valve testing should commence not later than 48 hours after shutdown and continue until complete or plant is ready to return to power. Completion of all valve testing is not a prerequisite to return to power. Any testing not completed at one cold shutdown should be performed during the subsequent cold shut-downs to meet the code specified testing frequency.
4. Containment Inservice Purge Supply and Exhaust Valves are normally blind flange out-of service during operation. In event that valves are required for containment integrity they will be exercised and leak rate tested prior to being placed inservice.
5. For all control and motor valve exercise (stroke timing) tests, the base stroke time from which the Code allowable time increase and decrease is figured will be a time established by one of the following methods:
 - a) Original preoperational testing.
 - b) Post maintenance testing.
 - c) The first running of the test.
6. The column titled "Valve Function" describes the valve function as defined by the ASME Code (active or passive). In addition, for active valves the valve position required for accident mitigation is included. For example, an active valve that is required to open for accident mitigation is listed as "act-open". For an active valve that is required to open and close for accident mitigation is "act-both".

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Viv Category	Viv Function	Test Proc	Test Type	Test Freq	Relief Request
2AF-13-1	2AF	12 & 21 AUX FW PUMPS DISCH X - CONN	NF-39223	38	B	ACT-BOTH	SP-1730	E	CS	
2AF-29-1	2AF	21 AUX FD PUMP SUCT RELIEF	NF-39223	38	C	ACT-BOTH	P3120-1-21A	SP	10Y	
2AF-29-2	2AF	22 AUX FD PUMP SUCT RELIEF	NF-39223	38	C	ACT-BOTH	P3120-1-22A	SP	10Y	
AF-14-5	2AF	21 AUX FW PUMP SUCTION CHECK	NF-39223	38	C	ACT-OPEN		E	CS	
AF-14-7	2AF	22 AUX FW PUMP SUCTION CHECK	NF-39223	38	C	ACT-OPEN		E	CS	
AF-15-11	2AF	21 AUX FW PUMP DISCH CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-12	2AF	22 AUX FW PUMP DISCH CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-5	2AF	AUX FW TO STM GEN 22 CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-6	2AF	AUX FW TO STM GEN 22 CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-7	2AF	AUX FW TO STM GEN 21 CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-8	2AF	AUX FW TO STM GEN 21 CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-16-3	2AF	AUX FW TO 22 STM GEN ISOL CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-16-4	2AF	AUX FW AT 21 STM GEN ISOL CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-28-3	2AF	21 AUX FW PUMP RECIRC LINE CHECK	NF-39223	38	C	ACT-OPEN		E	Q	
AF-28-4	2AF	22 AUX FW PUMP RECIRC LINE CHECK	NF-39223	38	C	ACT-OPEN		E	Q	
CV31418	2AF	21 TO AFWP RECIRC/LUBE OIL CLG CV	NF-39223	38	B	ACT-OPEN	SP-2100	E	Q	
CV31419	2AF	22 MD AFWP RECIRC/LUBE OIL CLG CV	NF-39223	38	B	ACT-OPEN	SP-2102	E	Q	
MV32246	2AF	AUX FW TO #21 STM GEN	NF-39223	38	B	ACT-BOTH	SP-2102	E	Q	
MV32247	2AF	AUX FW TO #22 STM GEN	NF-39223	38	B	ACT-BOTH	SP-2102	E	Q	
MV32248	2AF	AUX FW TO 21 STM GEN ISOL MV	NF-39223	38	B	PAS-OPEN		PV	2Y	
MV32249	2AF	AUX FW TO 22 STM GEN ISOL MV	NF-39223	38	B	PAS-OPEN		PV	2Y	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Viv Category	Viv Function	Test Proc	Test Type	Test Freq	Relief Request
2AF-13-1	2AF	12 & 21 AUX FW PUMPS DISCH X - CONN	NF-39223	38	B	ACT-BOTH	SP-1730	E	CS	
2AF-29-1	2AF	21 AUX FD PUMP SUCT RELIEF	NF-39223	38	C	ACT-BOTH	P3120-1-21A	SP	10Y	
2AF-29-2	2AF	22 AUX FD PUMP SUCT RELIEF	NF-39223	38	C	ACT-BOTH	P3120-1-22A	SP	10Y	
AF-14-5	2AF	21 AUX FW PUMP SUCTION CHECK	NF-39223	38	C	ACT-OPEN		E	CS	
AF-14-7	2AF	22 AUX FW PUMP SUCTION CHECK	NF-39223	38	C	ACT-OPEN		E	CS	
AF-15-11	2AF	21 AUX FW PUMP DISCH CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-12	2AF	22 AUX FW PUMP DISCH CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-5	2AF	AUX FW TO STM GEN 22 CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-6	2AF	AUX FW TO STM GEN 22 CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-7	2AF	AUX FW TO STM GEN 21 CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-15-8	2AF	AUX FW TO STM GEN 21 CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-16-3	2AF	AUX FW TO 22 STM GEN ISOL CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-16-4	2AF	AUX FW AT 21 STM GEN ISOL CHECK	NF-39223	38	C	ACT-BOTH		E	CS	
AF-28-3	2AF	21 AUX FW PUMP RECIRC LINE CHECK	NF-39223	38	C	ACT-OPEN		E	Q	
AF-28-4	2AF	22 AUX FW PUMP RECIRC LINE CHECK	NF-39223	38	C	ACT-OPEN		E	Q	
CV31418	2AF	21 TO AFWP RECIRC/LUBE OIL CLG CV	NF-39223	38	B	ACT-OPEN	SP-2100	E	Q	
CV31419	2AF	22 MD AFWP RECIRC/LUBE OIL CLG CV	NF-39223	38	B	ACT-OPEN	SP-2102	E	Q	
MV32246	2AF	AUX FW TO #21 STM GEN	NF-39223	38	B	ACT-BOTH	SP-2102	E	Q	
MV32247	2AF	AUX FW TO #22 STM GEN	NF-39223	38	B	ACT-BOTH	SP-2102	E	Q	
MV32248	2AF	AUX FW TO 21 STM GEN ISOL MV	NF-39223	38	B	PAS-OPEN		PV	2Y	
MV32249	2AF	AUX FW TO 22 STM GEN ISOL MV	NF-39223	38	B	PAS-OPEN		PV	2Y	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32336	2AF	21 AUX FW PUMP SUCTION	NF-39223	38	B	ACT-BOTH	SP-2100	E	q	
MV32345	2AF	22 AUX FW PUMP SUCTION	NF-39223	38	B	ACT-BOTH	SP-2102	E	q	
MV32383	2AF	AUX FW TO 21 STM GEN	NF-39223	38	B	ACT-BOTH	SP-2100	E	q	
MV32384	2AF	AUX FW TO 22 STM GEN	NF-39223	38	B	ACT-BOTH	SP-2100	E	q	
2CA-11-1	2CA	CAUSTIC ADDITON TO #21 & #22 CS PUMPS	CHK	NF-39252	18	C	ACT-BOTH	E	R	
CV31939	2CA	22 CS SUCT PUMP FROM NaOH STDPIPE	ISOL	NF-39252	18	B	ACT-OPEN	SP-2090	E	q
CV31940	2CA	21 CS PUMP SUCT FROM NaOH STDPIPE	ISOL	NF-39252	18	B	ACT-OPEN	SP-2090	E	q
2CC-14-5	2CC	21 RCP BRG CLG WTR RETURN	CHK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-14-6	2CC	22 RCP BRG CLG WTR RETURN	CHK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-18-1	2CC	22 REACT CLNT PUMP BRG CLG WTR RET	CHK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-18-2	2CC	21 REACT CLNT PUMP BRG CLG WTR RET	CHK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-23-1	2CC	21 EXCESS LETDOWN HT EXCH INLET	CHK	NF-39246-1	39	C	ACT-CLOSE	E	CS	
2CC-24-1	2CC	21 EXCESS LTDN OUTLT CHECK		NF-39246-1	39	C	ACT-CLOSE	E	CS	
2CC-3-1	2CC	21 COMP COOLING PUMP DISCH	CHK	NF-39246-1	39	C	ACT-OPEN	SP-2155	E	q
2CC-3-2	2CC	22 COMP COOLING PUMP DISCH	CHK	NF-39246-1	39	C	ACT-OPEN	SP-2155	E	q
2CC-3-3	2CC	RET LINE TO #21 COMP COOLING PUMP	CHK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-3-4	2CC	RET LINE TO #22 COMP COOLING PUMP	CHK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-5-1	2CC	RET LINE TO #21 COMP COOLING PUMP	CHECK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-5-2	2CC	RET LINE TO #22 COMP COOLING PUMP	CHECK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-61-1	2CC	EMG SUPPLY TO 21 & 22 RC PUMPS BRG CLG	CHK	NF-39246-1	39	C	ACT-BOTH	E	CS	
2CC-61-2	2CC	EMG SUPPLY TO 21 & 22 RC PUMPS BRG CLG	CHK	NF-39246-1	39	C	ACT-BOTH	E	CS	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
2CC-73-1	2CC	21 RCP BRG WTR SUPPLY CHK	NF-39246-1	39	C	ACT-OPEN		E	Q	
2CC-73-2	2CC	22 RCP BRG WTR SUPPLY CHK	NF-39246-1	39	C	ACT-OPEN		E	Q	
CV31253	2CC	21 EXCS LTDWN HT EXCH OUTLET	NF-39246-1	39	B	ACT-CLOSE		E	Q	
HV32122	2CC	COMP COOLING WTR SUPPLY HEADER	NF-39246-1	39	B	ACT-CLOSE	SP-2163	E	R	
HV32123	2CC	COMP COOLING WTR SUPPLY HEADER	NF-39246-1	39	B	ACT-CLOSE	SP-2163	E	R	
HV32124	2CC	21 REACT CLNT PUMP BRG CLG WTR SUPPLY	NF-39246-1	39	B	PAS-OPEN		PV	2Y	
HV32125	2CC	21 REACT CLNT PUMP BRG CLG WTR RETURN	NF-39246-1	39	B	PAS-OPEN		PV	2Y	
HV32126	2CC	22 REACT CLNT PUMP BRG CLG WTR SUPPLY	NF-39246-1	39	B	PAS-OPEN		PV	2Y	
HV32127	2CC	22 REACT CLNT PUMP BRG CLG WTR RETURN	NF-39246-1	39	B	PAS-OPEN		PV	2Y	
HV32128	2CC	21 RSDL HT EXGR COMP CLNT INLT MV	NF-39246-1	39	B	ACT-BOTH	SP-2155	E	Q	
HV32129	2CC	22 RSDL HT EXGR COMP CLNT INLT MV	NF-39246-1	39	B	ACT-BOTH	SP-2155	E	Q	
HV32130	2CC	21 EXCESS LETDOWN HT EXCH SUPPLY	NF-39246-1	39	B	ACT-CLOSE		E	Q	
HV32211	2CC	21 COMP CLG PMP SUCT MV	NF-39246-1	39	B	ACT-BOTH	SP-2155	E	Q	
HV32212	2CC	22 COMP CLG PMP SUCT MV	NF-39246-1	39	B	ACT-BOTH	SP-2155	E	Q	
HV32268	2CC	21/22 RCP COMP CLG INLT ISOL MV B	NF-39246-1	39	B	ACT-BOTH	SP-2163	E	R	
HV32269	2CC	21/22 RCP COMP CLG INLT ISOL MV A	NF-39246-1	39	B	ACT-BOTH	SP-2163	E	R	
2CL-12-1	2CL	21 CONTAINMENT FAN COILS-SUPPLY	NF-39217-3	36	C	ACT-OPEN		E	Q	
2CL-12-2	2CL	23 CONTAINMENT FAN COILS-SUPPLY	NF-39217-3	36	C	ACT-OPEN		E	Q	
2CL-12-3	2CL	22 CONTAINMENT FAN COILS-SUPPLY	NF-39217-3	36	C	ACT-OPEN		E	Q	
2CL-12-4	2CL	24 CONTAINMENT FAN COILS-SUPPLY	NF-39217-3	36	C	ACT-OPEN		E	Q	
2CL-43-1	2CL	21 CLG WTR PUMP DISCH	NF-39216	36	C	ACT-CLOSE	SP-11068	E	Q	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
2CL-43-2	2CL	22 CLG WTR PUMP DISCH	NF-39216	36	C	ACT-BOTH	SP-1106B	E	Q	
CV31457	2CL	22 DD CLWP DSL JCKT CLG OUTLT	NF-39217	36	B	ACT-OPEN	SP-1106B	E	Q	
CV39200	2CL	21/23 FCU CLG WATER RTN ORIFICE B-P VLV	NF-39217	36	B	ACT-OPEN	SP-2158	E	Q	
CV39202	2CL	22/24 FCU CLG WATER RTN ORIFICE B-P VLV	NF-39217	36	B	ACT-OPEN	SP-2158	E	Q	
MV32026	2CL	21 MD AFW PUMP SUCT CLG WTR SUPPLY MV	NF-39216	36	B	ACT-OPEN	SP-2193	E	CS	
MV32030	2CL	22 TD AFW PUMP SUCT CLG WTR SUPPLY MV	NF-39216	36	B	ACT-OPEN	SP-2193	E	CS	
MV32033	2CL	2 TURB BLDG CLG WTR HDR MV	NF-39217-1	36	B	ACT-CLOSE	SP-1110	E	Q	
MV32034	2CL	COOLING WTR PUMPS-CROSS-OVER	NF-39216	36	B	ACT-CLOSE	SP-2158	E	Q	
MV32035	2CL	COOLING WTR PUMPS-CROSS-OVER	NF-39216	36	B	ACT-CLOSE	SP-2158	E	Q	
MV32147	2CL	21 CONTAINMENT FAN COIL OUTLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32148	2CL	21 CONTAINMENT FAN COIL OUTLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32150	2CL	22 CONTAINMENT FAN COIL OUTLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32151	2CL	22 CONTAINMENT FAN COIL OUTLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32153	2CL	23 CONTAINMENT FAN COIL OUTLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32154	2CL	23 CONTAINMENT FAN COIL OUTLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32156	2CL	24 CONTAINMENT FAN COIL OUTLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32157	2CL	24 CONTAINMENT FAN COIL OUTLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32159	2CL	LOOP A/B CLG WTR HDR XOVR MV B	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32160	2CL	21 COMP CLG HT EXGR CLG WTR MV	NF-39217	36	B	ACT-OPEN	SP-2155	E	Q	
MV32161	2CL	22 COMP CLG HT EXGR CLG WTR MV	NF-39217	36	B	ACT-OPEN	SP-2155	E	Q	
MV32329	2CL	24 " CLG WTR RETURN UNIT 2	NF-39217	36	B	ACT-OPEN	SP-1158	E	Q	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32334	ZCL	24 " CLG WTR RETURN UNIT 2	NF-39217	36	B	PAS-OPEN		PV	2Y	
MV32386	ZCL	21 CONTAINMENT FAN COIL INLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32387	ZCL	22 CONTAINMENT FAN COIL INLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32388	ZCL	23 CONTAINMENT FAN COIL INLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
MV32389	ZCL	24 CONTAINMENT FAN COIL INLET	NF-39217	36	B	ACT-BOTH	SP-2158	E	Q	
ZCS-22-1	ZCS	21 CONT SPRAY PUMP SUCT RELIEF	NF-39237	19	C	ACT-BOTH	P3120-14-21A	SP	10Y	
ZCS-22-2	ZCS	22 CONT SPRAY PUMP SUCT RELIEF	NF-39237	19	C	ACT-BOTH	P3120-14-22A	SP	10Y	
CS-46	ZCS	22 CONT SPRAY PUMP SUCT CHK	NF-39237	19	C	ACT-BOTH		E	R	
CS-47	ZCS	21 CONT SPRAY PUMP SUCT CHK	NF-39237	19	C	ACT-BOTH		E	R	
CS-48	ZCS	22 CONT SPRAY PUMP DISCH CHK VLV	NF-39237	19	A, C	ACT-BOTH		E	R	
							SP-2072.29B	LT	R	
CS-49	ZCS	21 CONT SPRAY PUMP DISCH CHK VLV	NF-39237	19	A, C	ACT-BOTH		E	R	
							SP-2072.29A	LT	R	
MV32108	ZCS	21 CONT SPRAY PUMP SUCT	NF-39237	19	B	ACT-OPEN	SP-2137	E	R	
MV32109	ZCS	22 CONT SPRAY PUMP SUCT	NF-39237	19	B	ACT-OPEN	SP-2137	E	R	
MV32110	ZCS	21 CONT SPRAY PUMP SUCT	NF-39237	19	B	ACT-BOTH	SP-2137	E	R	
MV32111	ZCS	22 CONT SPRAY PUMP SUCT	NF-39237	19	B	ACT-BOTH	SP-2137	E	R	
MV32114	ZCS	21 CONT SPRAY PUMP DISCH	NF-39237	19	A	ACT-OPEN	SP-2241/2137	E	CS	
							SP-2072.29B	LT	R	
MV32116	ZCS	22 CONT SPRAY PUMP DISCH	NF-39237	19	A	ACT-OPEN	SP-2241/2137	E	CS	
							SP-2072.29A	LT	R	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
2FW-8-1	2FW	FEEDWATER PUMP DISCH-AT STM GEN 21 CHK	NF-39223	38	C	ACT-CLOSE		E	CS	
2FW-8-2	2FW	FEEDWATER PUMP DISCH AT STM GEN 22 CHK	NF-39223	38	C	ACT-CLOSE		E	CS	
MV32028	2FW	FW TO 21 STEAM GENERATOR	NF-39223	38	B	ACT-CLOSE		E	CS	
MV32029	2FW	FW TO 22 STEAM GENERATOR	NF-39223	38	B	ACT-CLOSE		E	CS	
2HC-1-3	2HC	INST AIR SUPPLY TO CNTMT VESSEL	NF-39251	25	B	ACT-OPEN	SP-2157	E	CS	
2HC-1-4	2HC	INST AIR SUPPLY TO CNTMT VESSEL	NF-39251	25	B	ACT-OPEN	SP-2157	E	CS	
2HC-1-5	2HC	EMERGENCY AIR SUPPLY TO CNTMT VESSEL	NF-39251	25	B	ACT-OPEN	SP-2157	E	CS	
2HC-1-6	2HC	INST AIR SUPPLY TO CNTMT VESSEL	NF-39251	25	B	ACT-OPEN	SP-2157	E	CS	
2HC-2-1	2HC	INST & EMERG AIR TO INSIDE CNTMT VESSEL CK	NF-39251	25	A, C	ACT-BOTH		E	CS	
							SP-2072.50	LT	R	
2HC-2-2	2HC	INST & EMERG AIR TO INSIDE CNTMT VESSEL CK	NF-39251	25	A, C	ACT-BOTH		E	CS	
							SP-2072.42A	LT	R	
CV31924	2HC	POST LOCA TO FI ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-2072.50	LT	R	
CV31926	2HC	POST LOCA TO GA ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-2072.50	LT	R	
CV31928	2HC	POST LOCA TO GA ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-2072.42A	LT	R	
CV31930	2HC	POST LOCA TO FI ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-2072.42A	LT	R	
MV32290	2HC	POST LOCA VENT ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
							SP-2072.50	LT	R	
MV32292	ZHC	POST LOCA VENT ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-2072.42A	LT	R	
MV32293	ZHC	POST LOCA SUPPLY ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-2072.50	LT	R	
MV32295	ZHC	POST LOCA SUPPLY ISOL	NF-39251	25	A	ACT-BOTH	SP-1252	E	Q	
							SP-2072.42A	LT	R	
ZMS-15-1	ZMS	FROM 22 STM GEN 22 AUX FDWTR PUMP CHK	NF-39219	37	C	ACT-BOTH		E	CS	
ZMS-15-2	ZMS	FROM 21 STM GEN 22 AUX FDWTR PUMP CHK	NF-39219	37	C	ACT-BOTH		E	CS	
RS-19-3	ZMS	STM GEN 21 OUTLET STOP - CHECK	NF-39219	37	C	ACT-CLOSE		E	CS	
RS-19-4	ZMS	STM GEN 22 OUTLET STOP - CHECK	NF-39219	37	C	ACT-CLOSE		E	CS	
RS-21-11	ZMS	21 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-12	ZMS	21 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-13	ZMS	21 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-14	ZMS	21 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-15	ZMS	21 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-16	ZMS	22 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-17	ZMS	22 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-18	ZMS	22 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-19	ZMS	22 STM RELIEF HDR	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	
RS-21-20	ZMS	22 STM RELIEF HDR STM GEN 22	NF-39219	37	C	ACT-BOTH	P3120-52-2	SP	10Y	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
CV31116	ZMS	21 LOOP A MN STM HDR ISOL	NF-39219	37	B	ACT-CLOSE	SP-2099	E	CS	
CV31117	ZMS	22 LOOP B MN STM HDR ISOL	NF-39219	37	B	ACT-CLOSE	SP-2099	E	CS	
CV31999	ZMS	21 TD AFWP MN STM SUPPLY	NF-39219	37	B	ACT-OPEN	SP-2102	E	Q	
MV32019	ZMS	LOOP A MN STM TO 22 TD AFWP MV	NF-39219	37	B	PAS-OPEN		PV	2Y	
MV32020	ZMS	LOOP B MN STM TO 22 TD AFWP MV	NF-39219	37	B	PAS-OPEN		PV	2Y	
MV32048	ZMS	2 LOOP A MN STM HDR EQLZG MV	NF-39219	37	B	PAS-CLOSE		PV	2Y	
MV32050	ZMS	2 LOOP B MN STM HDR EQLZG MV	NF-39219	37	B	PAS-CLOSE		PV	2Y	
RUPT DISC	ZMS	AF EXH	NF-39219	37	D	PASSIVE		SP	5Y	
2RC-10-1	2RC	PRESSURIZER RELIEF VALVE	HIAW 1001-3	30	C	ACT-BOTH	P3120-57-2A	SP	5Y	
2RC-10-2	2RC	PRESSURIZER RELIEF VALVE	HIAW 1001-3	30	C	ACT-BOTH	P3120-57-2B	SP	5Y	
2RC-3-1	2RC	REACTOR MAKE UP WTR TO PRZR RELIEF TANK	HIAW 1001-3	30	A, C	ACT-CLOSE		E	CS	
							SP-2072.45	LT	R	
2RC-5-1	2RC	NITROGEN SUPPLY LINE TO PRZR RELIEF TNK	HIAW 1001-3	30	A, C	ACT-CLOSE		E	CS	
							SP-2072.45	LT	R	
CV31209	2RC	PRT N2 SUPPLY ISOL	HIAW 1001-3	30	A	ACT-CLOSE	SP-2272	E	Q	
							SP-2072.2	LT	R	
CV31233	2RC	PRESSURIZER OUTLET TO PRZR RLF TNK A	HIAW 1001-3	30	B	ACT-BOTH	SP-2291	E	CS	
CV31234	2RC	PRESSURIZER OUTLET TO PRZR RLF TNK B	HIAW 1001-3	30	B	ACT-BOTH	SP-2291	E	CS	
CV31342	2RC	RTR M/U WATER TO PRT ISOL	HIAW 1001-3	30	A	ACT-CLOSE	SP-2272	E	Q	
							SP-2072.45	LT	R	
CV31344	2RC	PRT SAMPLE TO GA	HIAW 1001-3	30	A	ACT-CLOSE	SP-2246	E	Q	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
							SP-2072.1	LT	R	
CV31345	2RC	PRT SAMPLE TO GA	HIAW 1001-3	30	A	ACT-CLOSE	SP-2246	E	Q	
							SP-2072.1	LT	R	
MV32197	2RC	PRESSURIZER OUTLET TO PRZR RLF TNK A	HIAW 1001-3	30	B	ACT-BOTH	SP-2265	E	Q	
MV32198	2RC	PRESSURIZER OUTLET TO PRZR RLF TNK B	HIAW 1001-3	30	B	ACT-BOTH	SP-2265	E	Q	
SV37091	2RC	PRESSURIZER VENT VALVE A	HIAW 1001-3	30	B	ACT-BOTH	SP-2248	E	R	
SV37092	2RC	PRESSURIZER VENT VALVE B	HIAW 1001-3	30	B	ACT-BOTH	SP-2248	E	R	
SV37093	2RC	RTR HEAD VENT VALVE A	HIAW 1001-3	30	B	ACT-BOTH	SP-2248	E	R	
SV37094	2RC	RTR HEAD VENT VALVE B	HIAW 1001-3	30	B	ACT-BOTH	SP-2248	E	R	
SV37095	2RC	VENT TO PRT VALVE A	HIAW 1001-3	30	B	ACT-BOTH	SP-2248	E	R	
SV37096	2RC	VENT TO CNTMT ATMOSPHERE	HIAW 1001-3	30	B	ACT-BOTH	SP-2248	E	R	
CV31129	2RD	RAD MON 2R-11 & 2R-12 SMPL RTN	NF-39790-4	N/A	A	ACT-CLOSE	SP-2244	E	Q	
							SP-2072.22	LT	R	
CV31642	2RD	RAD MON 2R-11 & 2R-12 SMPL RTN	NF-39790-4	N/A	A	ACT-CLOSE	SP-2244	E	Q	
							SP-2072.22	LT	R	
CV31643	2RD	RAD MON 2R-11 & 2R-12 SMPL INLET	NF-39790-4	N/A	A	ACT-CLOSE	SP-2244	E	Q	
							SP-2072.23	LT	R	
CV31644	2RD	RAD MON 2R-11 & 2R-12 SMPL INLET	NF-39790-4	N/A	A	ACT-CLOSE	SP-2244	E	Q	
							SP-2072.23	LT	R	
2RH-3-1	2RH	RHR PUMP 22 SUCT LINE CHK	HIAW 1001-8	35	C	ACT-CLOSE		E	R	
2RH-3-2	2RH	RHR PUMP 21 SUCT LINE CHK	HIAW 1001-8	35	C	ACT-CLOSE		E	R	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
2RH-3-3	2RH RHR PUMP 22 DISCHARGE LINE CHK	HIAW 1001-8	35	C	ACT-OPEN		E	CS	
2RH-3-4	2RH RHR PUMP 21 DISCH LINE CHK	HIAW 1001-8	35	C	ACT-OPEN		E	CS	
2RH-6-1	2RH 2 INCH-LETDOWN LINE BY-PASS	HIAW 1001-8	35	C	ACT-OPEN		E	CS	
2RH-8-1	2RH RHR PUMP #21 & #22 SUCTION	HIAW 1001-8	35	C	ACT-BOTH	P3120-59-2A	SP	10Y	
CV31238	2RH RH EXCH #21 OUTLET	HIAW 1001-8	35	B	PAS-OPEN		PV	2Y	
CV31239	2RH RH EXCH #22 OUTLET	HIAW 1001-8	35	B	PAS-OPEN		PV	2Y	
MV32169	2RH DOWNSTREAM OF CV31238	HIAW 1001-8	35	A	PAS-CLOSE	SP-2273	PV	2Y	
						SP-2070	LT	R	
MV32192	2RH 2 REAC LOOP A RSDL HT RMVL ISOL MV A	HIAW 1001-8	35	A	PAS-CLOSE	SP-2273	PV	2Y	
						SP-2070	LT	R	
MV32195	2RH 2 REAC LOOP A RSDL HT RMVL ISOL MV B	HIAW 1001-8	35	A	PAS-CLOSE	SP-2273	PV	2Y	
						SP-2070	LT	R	
MV32232	2RH 2 REAC LOOP B RSDL HT RMVL ISOL MV A	HIAW 1001-8	35	A	PAS-CLOSE	SP-2273	PV	2Y	
						SP-2070	LT	R	
MV32233	2RH 2 REAC LOOP B RSDL HT RMVL ISOL MV B	HIAW 1001-8	35	A	PAS-CLOSE	SP-2273	PV	2Y	
						SP-2070	LT	R	
CV31742	2SA 2 CNTMT INST AIR ISOL VLV A	NF-39244	N/A	A	ACT-CLOSE	SP-2072.20	E	R	
						SP-2072.20	LT	R	
CV31743	2SA 2 CNTMT INST AIR ISOL VLV B	NF-39244	N/A	A	ACT-CLOSE	SP-2072.20	E	R	
						SP-2072.20	LT	R	
MV32046	2SB 21 SGB ISOL VLV	NF-39250	40	B	ACT-CLOSE	SP-2267	E	Q	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32049	2SB	22 SGB ISOL MV	NF-39250	40	B	ACT-CLOSE	SP-2267	E	Q	
MV32051	2SB	21 SGB ISOL MV	NF-39250	40	B	ACT-CLOSE	SP-2267	E	Q	
MV32059	2SB	22 SGB ISOL MV	NF-39250	40	B	ACT-CLOSE	SP-2267	E	Q	
2SI-10-1	2SI	SAFETY INJECTION PUMP #21 DISCH CHK	HIAW 1001-7	34	C	ACT-OPEN	SP-2092A	E	R	
						ACT-CLOSE	SP-2070	E	R	
2SI-10-2	2SI	SAFETY INJECTION PUMP #22 DISCH CHK	HIAW 1001-7	34	C	ACT-OPEN	SP-2092A	E	R	
						ACT-CLOSE	SP-2070	E	R	
2SI-16-1	2SI	FROM S I PUMP DISCH TO TEST LINE CHK	HIAW 1001-7	34	C	ACT-OPEN	SP-2088	E	Q	
2SI-16-2	2SI	FROM S I PUMP DISCH TO TEST LINE CHK	HIAW 1001-7	34	C	ACT-OPEN	SP-2088	E	Q	
2SI-16-3	2SI	REF WTR STG TANK OUTLET TO S I PUMP SUCT	HIAW 1001-7	34	C	ACT-OPEN	SP-2088	E	Q	
2SI-16-4	2SI	COLD LEG INJ LINE TO LOOP B COLD LEG CHK	HIAW 1001-6	33	C	ACT-OPEN	SP-2092A	E	R	
						ACT-CLOSE	SP-2070	E	R	
2SI-16-5	2SI	REACTOR VESSEL INJ LINE TO REAC VESSEL CHK	HIAW 1001-6	33	C	ACT-OPEN	SP-2092A	E	R	
						ACT-CLOSE	SP-2070	E	R	
2SI-16-6	2SI	COLD LEG INJ LINE TO LOOP A COLD LEG CHK	HIAW 1001-6	33	C	ACT-OPEN	SP-2092A	E	R	
						ACT-CLOSE	SP-2070	E	R	
2SI-16-7	2SI	REACTOR VESSEL INJ LINE TO REAC VESSEL CHK	HIAW 1001-6	33	C	ACT-OPEN	SP-2092A	E	R	
						ACT-CLOSE	SP-2070	E	R	
2SI-25-1	2SI	ACCUMULATOR 21 RELIEF	HIAW 1001-6	33	C	ACT-BOTH	P3120-69-21B	SP	10Y	
2SI-25-2	2SI	ACCUMULATOR 22 RELIEF	HIAW 1001-6	33	C	ACT-BOTH	P3120-69-22B	SP	10Y	
2SI-26-1	2SI	LO HEAD SI TO RX VSL RELIEF	HIAW 1001-6	33	C	ACT-BOTH	P3120-69-2A	SP	10Y	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
2SI-4-1	2SI	21 SI PUMP SUCT LINE RELIEF	HIAW 1001-7	34	C	ACT-BOTH	P3120-69-21A	SP	10Y	
2SI-4-2	2SI	22 SI PUMP SUCT LINE RELIEF	HIAW 1001-7	34	C	ACT-BOTH	P3120-69-22A	SP	10Y	
2SI-6-1	2SI	ACC 12 IN OUTLET TO LOOP B COLD LEG	HIAW 1001-6	33	A, C	ACT-OPEN	SP-2092C	E	R	
						ACT-CLOSE	SP-2070	LT	R	
2SI-6-2	2SI	DOWNSTREAM OF CHECK VAL 2SI-6-1	HIAW 1001-6	33	A, C	ACT-OPEN	SP-2092C	E	R	
						ACT-CLOSE	SP-2269	LT	R	
2SI-6-3	2SI	ACC 12 IN OUTLET TO LOOP A COLD LEG	HIAW 1001-6	33	A, C	ACT-OPEN	SP-2092C	E	R	
						ACT-CLOSE	SP-2070	LT	R	
2SI-6-4	2SI	DOWNSTREAM OF CHECK VAL 2SI-6-3	HIAW 1001-6	33	A, C	ACT-OPEN	SP-2092C	F	R	
						ACT-CLOSE	SP-2269	LT	R	
2SI-7-1	2SI	FR RWST TO RHR PUMP SUCT	HIAW 1001-7	34	C	ACT-OPEN	SP-2092B	E	R	
						ACT-CLOSE		E	R	
2SI-7-2	2SI	FR RWST TO RHR PUMP SUCT	HIAW 1001-7	34	C	ACT-OPEN	SP-2092B	E	R	
						ACT-CLOSE		E	R	
2SI-8-1	2SI	FROM BORIC ACID TNKS TO SAFETY INJ PUMPS	HIAW 1001-7	34	B	PAS-OPEN		PV	2Y	
2SI-8-2	2SI	FROM BORIC ACID TNKS TO SAFETY INJ PUMPS	HIAW 1001-7	34	B	PAS-CLOSE		PV	2Y	
2SI-9-1	2SI	COLD LEG INJECTION LINE TO LOOP B COLD LEG	HIAW 1001-6	33	C	ACT-OPEN	SP-2092A	E	R	
						ACT-CLOSE	SP-2070	E	R	
2SI-9-2	2SI	COLD LEG INJECTION LINE TO LOOP A COLD LEG	HIAW 1001-6	33	C	ACT-OPEN	SP-2092A	E	R	
						ACT-CLOSE	SP-2070	E	R	
2SI-9-3	2SI	FROM RESIDUAL HT EXCH TO REACTOR VESSEL	HIAW 1001-6	33	A, C	ACT-OPEN	SP-2092D	E	R	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
						ACT-CLOSE	SP-2070	LT	R	
2SI-9-4	2SI	FROM RESIDUAL HT EXCH TO REACTOR VESSEL	HIAW 1001-6	33	A, C	ACT-OPEN	SP-2092D	E	R	
						ACT-CLOSE	SP-2070	LT	R	
2SI-9-5	2SI	FROM R H EXCH TO REACTOR VESSEL	HIAW 1001-6	33	A, C	ACT-OPEN	SP-2092D	E	R	
						ACT-CLOSE	SP-2070	LT	R	
2SI-9-6	2SI	FROM R H EXCH TO REACTOR VESSEL	HIAW 1001-6	33	A, C	ACT-OPEN	SP-2092D	E	R	
						ACT-CLOSE	SP-2070	LT	R	
CV31244	2SI	N2 SUPPLY TO ACC HCV	HIAW 1001-6	33	A	PAS-CLOSE		PV	2Y	
							SP-2072.31	LT	R	
CV31459	2SI	ACC AFTER CK TEST VLV	HIAW 1001-6	33	B	PAS-CLOSE		PV	2Y	
CV31461	2SI	ACC AFTER CK TEST VLV	HIAW 1001-6	33	B	PAS-CLOSE		PV	2Y	
CV31511	2SI	N2 SUPPLY TO 21 ACC ISOL	HIAW 1001-6	33	A	ACT-CLOSE		E	CS	
							SP-2072.31	LT	R	
CV31512	2SI	N2 SUPPLY TO 22 ACC ISOL	HIAW 1001-6	33	A	ACT-CLOSE		E	CS	
							SP-2072.31	LT	R	
CV31554	2SI	N2 SUPPLY TO ACC CONTMNT ISOL	HIAW 1001-6	33	A	ACT-CLOSE		E	Q	
							SP-2072.31	LT	R	
CV31555	2SI	ACC TO RC DRAIN TNK	HIAW 1001-6	33	B	ACT-CLOSE		E	CS	
CV31556	2SI	ACC TO RC DRAIN TNK	HIAW 1001-6	33	B	ACT-CLOSE		E	CS	
MV32167	2SI	FR RH EXCH TO REACTOR VESSEL	HIAW 1001-6	33	B	PAS-OPEN		PV	2Y	
MV32168	2SI	FR RH EXCH TO REACTOR VESSEL	HIAW 1001-6	33	B	PAS-OPEN		PV	2Y	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32173	2SI	2 SAF INJ REAC VSL INJ ISOL MV B	HIAW 1001-6	33	B	ACT-OPEN	SP-2236	E	CS	
MV32171	2SI	2 SAF INJ LOOP B COLD LEG ISOL MV	HIAW 1001-6	33	B	PAS-OPEN		PV	2Y	
MV32172	2SI	2 SAF INJ REAC VSL INJ ISOL MV A	HIAW 1001-6	33	B	ACT-OPEN	SP-2236	E	CS	
MV32173	2SI	2 SAF INJ LOOP A COLD LEG ISOL MV	HIAW 1001-6	33	B	PAS-OPEN		PV	2Y	
MV32174	2SI	ACCUMULATOR 21 12 INCH OUTLET	HIAW 1001-6	33	B	PAS-OPEN		PV	2Y	
MV32175	2SI	ACCUMULATOR 22 12 INCH OUTLET	HIAW 1001-6	33	B	PAS-OPEN		PV	2Y	
MV32176	2SI	2 SAF INJ COLD LEG INJ ISOL MV	HIAW 1001-6	33	B	PAS-OPEN		PV	2Y	
MV32177	2SI	2 SAF INJ REAC VSL INJ ISOL MV	HIAW 1001-6	33	B	PAS-OPEN		PV	2Y	
MV32178	2SI	21 CONTM SMP B ISOL MV A1	HIAW 1001-6	33	A	ACT-BOTH	SP-2137	E	R	#3
							SP-2072.30A	LT	R	
MV32179	2SI	21 CONTM SMP B ISOL MV A2	HIAW 1001-6	33	A	ACT-BOTH	SP-2137	E	R	#3
							SP-2072.30B	LT	R	
MV32180	2SI	21 CONTM SMP B ISOL MV B1	HIAW 1001-6	33	B	ACT-BOTH	SP-2137	E	R	
MV32181	2SI	21 CONTM SMP B ISOL MV B2	HIAW 1001-6	33	B	ACT-BOTH	SP-2137	E	R	
MV32182	2SI	REF WTR STR TNK OUTLET	HIAW 1001-7	34	B	ACT-OPEN	SP-2088	E	Q	
MV32183	2SI	REF WTR STR TNK OUTLET	HIAW 1001-7	34	B	ACT-OPEN	SP-2088	E	Q	
MV32184	2SI	BAST TO 21 & 22 SI PUMP SUCTION MV A	HIAW 1001-7	34	B	ACT-BOTH	SP-2088	E	Q	
MV32185	2SI	BAST TO 21 & 22 SI PUMP SUCTION MV B	HIAW 1001-7	34	B	ACT-BOTH	SP-2088	E	Q	
MV32186	2SI	BAST TO 21 & 22 SI PUMP SUCTION MV C	HIAW 1001-7	34	B	PAS-OPEN		PV	2Y	
MV32187	2SI	RFLG WTR TO 21 RSDL HT RMVL PMP ISOL MV	HIAW 1001-7	34	B	PAS-OPEN		PV	2Y	
MV32188	2SI	RFLG WTR TO 22 RSDL HT RMVL PMP ISOL MV	HIAW 1001-7	34	B	PAS-OPEN		PV	2Y	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
MV32190	2SI	SI PUMP #21 SUCTION LINE	HIAW 1001-7	34	B	ACT-BOTH	SP-2236	E	CS	
MV32191	2SI	SI PUMP #22 SUCTION LINE	HIAW 1001-7	34	B	ACT-BOTH	SP-2236	E	CS	
MV32204	2SI	SAF INJ TEST TO 21 RFLG WTR STOR TNK MV A	HIAW 1001-7	34	B	ACT-BOTH	SP-2236	E	CS	
MV32205	2SI	SAF INJ TEST TO 21 RFLG WTR STOR TNK MV B	HIAW 1001-7	34	B	ACT-BOTH	SP-2236	E	CS	
MV32208	2SI	FR RH EXCH TO SI PUMP 21 SUCT	HIAW 1001-7	34	B	ACT-OPEN	SP-2137	E	R	
MV32209	2SI	FR RH EXCH TO SI PUMP 22 SUCT	HIAW 1001-7	34	B	ACT-OPEN	SP-2137	E	R	
CV31412	2SS	2A SGB SAMPLE # SM-235 (OUTSIDE CNTMT)	NF-39238	20	B	ACT-CLOSE		E	Q	
CV31413	2SS	2B SGB SAMPLE # SM-236 (OUTSIDE CNTMT)	NF-39238	20	B	ACT-CLOSE		E	Q	
CV31639	2SS	2A SGB SAMPLE # SM-235 (INSIDE CNTMT)	NF-39238	20	B	ACT-CLOSE		E	Q	
CV31640	2SS	2B SGB SAMPLE # SM-236 (INSIDE CNTMT)	NF-39238	20	B	ACT-CLOSE		E	Q	
MV32406	2SS	PRZR STEAM SPACE SAMPLE VLV A	NF-39238	20	A	ACT-CLOSE	SP-2242	E	Q	
							SP-2072.15	LT	R	
MV32407	2SS	PRZR STEAM SPACE SAMPLE VLV B	NF-39238	20	A	ACT-CLOSE	SP-2242	E	Q	
							SP-2072.15	LT	R	
MV32408	2SS	PRZR LIQ SAMPLE VLV A	NF-39238	20	A	ACT-CLOSE	SP-2242	E	Q	
							SP-2072.16	LT	R	
MV32409	2SS	PRZR LIQ SAMPLE VLV B	NF-39238	20	A	ACT-CLOSE	SP-2242	E	Q	
							SP-2072.16	LT	R	
MV32410	2SS	LOOP B HOT LEG SMPL	NF-39238	20	A	ACT-CLOSE	SP-2242	E	Q	
							SP-2072.17	LT	R	
MV32411	2SS	LOOP B HOT LEG SMPL	NF-39238	20	A	ACT-CLOSE	SP-2242	E	Q	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
							SP-2072.17	LT	R	
2SM-10-1	2VC	SAMPLE RET LINE TO VOL CONTR TANK CHK	NF-39238	32	C	ACT-CLOSE		E	R	
2VC-13-1	2VC	VOLUME CONTROL TANK INLET CHK	HIAW 1001-5	32	C	ACT-CLOSE		E	R	
2VC-13-2	2VC	CHEM MIX TK #21 OUTLET TO VC TK #21 OLET CHK	HIAW 1001-5	32	C	ACT-CLOSE		E	CS	
2VC-14-1	2VC	SEAL WTR INJECT FILTERS TO RCP 21 CHK	HIAW 1001-4	31	A	ACT-CLOSE	SP-1279	E	CS	
							SP-2072.13A	LT	R	
2VC-14-2	2VC	SEAL WTR INJECT FILTERS TO RCP #22 CHK	HIAW 1001-4	31	A	ACT-CLOSE	SP-1279	E	CS	
							SP-2072.13B	LT	R	
2VC-17-1	2VC	CHARGING LINE CV-31420 BYPASS CHK	HIAW 1001-4	31	C	ACT-CLOSE		E	CS	
2VC-24-1	2VC	VOLUME CONTROL TANK #21 RELIEF	HIAW 1001-5	32	C	ACT-BOTH	P3120-75-2A	SP	10Y	
2VC-25-1	2VC	RC PUMPS DISCH LINE TO SEAL WTR FLTR RELIEF	HIAW 1001-4	31	C	ACT-BOTH	P3120-75-2B	SP	10Y	
2VC-26-1	2VC	REGEN HEAT EXCH #21 LTDN LINE OUTLT RELF	HIAW 1001-4	31	C	ACT-BOTH	P3120-75-2C	SP	10Y	
2VC-28-1	2VC	21 CHG PMP DISCH RELIEF	HIAW 1001-5	32	C	ACT-BOTH	P3120-75-21A	SP	10Y	
2VC-28-2	2VC	22 CHG PMP DISCH RELIEF	HIAW 1001-5	32	C	ACT-BOTH	P3120-75-22A	SP	10Y	
2VC-28-3	2VC	23 CHG PMP DISCH RELIEF	HIAW 1001-5	32	C	ACT-BOTH	P3120-75-23A	SP	10Y	
2VC-7-10	2VC	2-HCV-142 BY-PASS	HIAW 1001-5	32	A	PAS-CLOSE		PV	2Y	
							SP-2072.12	LT	R	
2VC-7-11	2VC	DOWNSTREAM OF 2-HCV-142	HIAW 1001-5	32	A	ACT-CLOSE		E	CS	
							SP-2072.12	LT	R	
2VC-8-1	2VC	UPSTREAM OF REGENERATIVE HEAT EXCH #21	HIAW 1001-4	31	A, C	ACT-CLOSE		E	CS	
							SP-2072.12	LT	R	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
2VC-8-10	2VC	DOWNSTREAM OF R C FILTER	HIAW 1001-5	32	C	ACT-CLOSE		E	CS	
2VC-8-11	2VC	BORTIC ACID BLENDER SUCTION	HIAW 1001-5	32	C	ACT-CLOSE		E	CS	
2VC-8-14	2VC	R M W TO CHARGING PUMPS SUCT	HIAW 1001-5	32	C	ACT-CLOSE		E	CS	
2VC-8-2	2VC	DNSTREAM OF REGENERATIVE HEAT EXCH #21	HIAW 1001-4	31	C	ACT-CLOSE	SP-2237	E	CS	
2VC-8-3	2VC	21 REGEN HX AUX SPRAY TO 21 PRZR CV31421	HIAW 1001-4	31	C	ACT-CLOSE		E	CS	
2VC-8-4	2VC	R C PUMP #22 SUCTION	HIAW 1001-4	31	A, C	ACT-CLOSE	SP-2166	E	R	
							SP-2072.13B	LT	R	
2VC-8-5	2VC	R C PUMP #21 SUCTION	HIAW 1001-4	31	A, C	ACT-CLOSE	SP-2166	E	R	
							SP-2072.13A	LT	R	
2VC-8-6	2VC	R C PUMP #22 SUCTION	HIAW 1001-4	31	C	ACT-CLOSE	SP-2166	E	R	
2VC-8-7	2VC	R C PUMP #21 SUCTION	HIAW 1001-4	31	C	ACT-CLOSE	SP-2166	E	R	
CV31211	2VC	CHG LINE HCV	HIAW 1001-5	32	A	ACT-CLOSE	SP-2281	E	CS	
							SP-2072.12	LT	R	
CV31222	2VC	EXCESS LTDN HX OUTLET	HIAW 1001-4	31	B	ACT-CLOSE		E	CS	
CV31230	2VC	2 REAC CLNT LOOP PZR LTDN LN ISOL	HIAW 1001-3	30	B	ACT-CLOSE	SP-2162	E	CS	
CV31279	2VC	2 REAC CLNT LOOP PZR LTDN LN ISOL	HIAW 1001-3	30	B	ACT-CLOSE	SP-2162	E	CS	
CV31347	2VC	LETDOWN ORIFICE ISOL	HIAW 1001-4	31	A	ACT-CLOSE	SP-2162	E	CS	
							SP-2072.11	LT	R	
CV31348	2VC	LETDOWN ORIFICE ISOL	HIAW 1001-4	31	A	ACT-CLOSE	SP-2162	E	CS	
							SP-2072.11	LT	R	
CV31349	2VC	LETDOWN ORIFICE ISOL	HIAW 1001-4	31	A	ACT-CLOSE	SP-2162	E	CS	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
							SP-2072.11	LT	R	
CV31422	2VC	EXCESS LETDOWN HEAT EXCH INLET	HIAW 1001-4	31	B	ACT-CLOSE		E	CS	
CV31424	2VC	EXS LETDOWN HEAT EXCH TO SEAL WTR FLTR	HIAW 1001-4	31	B	PAS-NOTE 2		PV	2Y	
CV31430	2VC	LETDOWN CNTMT ISOL	HIAW 1001-4	31	A	ACT-CLOSE	SP-2162	E	CS	
							SP-2072.11	LT	R	
MV32194	2VC	SEAL RETURN CONT ISOL	HIAW 1001-4	31	A	ACT-CLOSE	SP-2280	E	CS	
							SP-2072.14	LT	R	
MV32210	2VC	SEAL RETURN CONT ISOL	HIAW 1001-4	31	A	ACT-CLOSE	SP-2280	E	CS	
							SP-2072.14	LT	R	
CV31619	2WL	SUMP A DISCH CNTMT ISOL VLV A	HIAW 1-123	N/A	A	ACT-CLOSE	SP-2284	E	Q	
							SP-2072.26	LT	R	
CV31620	2WL	SUMP A DISCH CNTMT ISOL VLV B	HIAW 1-123	N/A	A	ACT-CLOSE	SP-2284	E	Q	
							SP-2072.26	LT	R	
CV31731	2WL	RCDT TO GA CNTMT ISOL VLV A	HIAW 1-123	N/A	A	ACT-CLOSE	SP-2284	E	Q	
							SP-2072.21	LT	R	
CV31732	2WL	RCDT TO GA CNTMT ISOL VLV B	HIAW 1-123	N/A	A	ACT-CLOSE	SP-2284	E	Q	
							SP-2072.21	LT	R	
CV31733	2WL	RCDT TO VENT HDR CNTMT ISOL VLV A	HIAW 1-123	N/A	A	ACT-CLOSE	SP-2284	E	Q	
							SP-2072.4	LT	R	
CV31734	2WL	RCDT TO VENT HDR CNTMT ISOL VLV B	HIAW 1-123	N/A	A	ACT-CLOSE	SP-2284	E	Q	
							SP-2072.4	LT	R	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
CV31735	2WL RCDT DISCH CNTMT ISOL VLV A	HIAW 1-123	N/A	A	ACT-CLOSE	SP-2284	E	Q	
						SP-2072.5	LT	R	
CV31736	2WL RCDT DISCH CNTMT ISOL VLV B	HIAW 1-123	N/A	A	ACT-CLOSE	SP-2284	E	Q	
						SP-2072.5	LT	R	
CV31314	2ZP INSERVICE PURGE EXH ISOL B	NF-36902-2	N/A	A	ACT-CLOSE		E	AR	
							LT	R	
CV31315	2ZP INSERVICE PURGE EXH ISOL A	NF-36902-2	N/A	A	ACT-CLOSE		E	AR	
							LT	R	
CV31627	2ZP CNTMT VAC BRKR PWR OP	NF-36902-2	N/A	A	ACT-BOTH	SP-2130	E	Q	
						Sf 2072.41A	LT	R	
CV31628	2ZP CNTMT VAC BRKR PWR OP	NF-36902-2	N/A	A	ACT-BOTH	SP-2130	E	Q	
						SP-2072.41B	LT	R	
CV31630	2ZP CNTMT VAC BRKR GRAV OP	NF-36902-2	N/A	A, C	ACT-BOTH	SP-2130	E	Q	
						SP-2072.41A	LT	R	
CV31631	2ZP CNTMT VAC BRKR GRAV OP	NF-36902-2	N/A	A, C	ACT-BOTH	SP-2130	E	Q	
						SP-2072.41B	LT	R	
CV31635	2ZP INSERVICE PURGE SUPPLY ISOL B	NF-36902-2	N/A	A	ACT-CLOSE		E	AR	
							LT	R	
CV31636	2ZP INSERVICE PURGE SUPPLY ISOL A	NF-36902-2	N/A	A	ACT-CLOSE		E	AR	
							LT	R	
CV39413	2ZX COOLING WATER TO 21 & 23 FCU	NF-86172-1	41	B	ACT-OPEN	SP-1245	E	Q	

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request
CV39414	22X	21& 23 FCU CHILLED WATER SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-1245	E	Q	
CV39415	22X	COOLING WATER TO 22 & 24 FCU	NF-86172-1	41	B	ACT-OPEN	SP-1245	E	Q	
CV39416	22X	22& 24 FCU CHILLED WATER SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-1245	E	Q	
CV39417	22X	21 SHROUD CLG COILS TR A CW SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-2297	E	Q	
CV39418	22X	22 SHROUD CLG COILS TR B CW SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-2297	E	Q	
CV39419	22X	21 SHROUD CLG COILS TR A CW SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-2297	E	Q	
CV39420	22X	22 SHROUD CLG COILS TR B CW SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-2297	E	Q	
CV39421	22X	COOLING WATER FROM 21 & 23 FCU	NF-86172-1	41	B	ACT-OPEN	SP-1245	E	Q	
CV31422	22X	22& 24 FCU CHILLED WATER SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-1245	E	Q	
CV31423	22X	COOLING WATER FROM 22 & 24 FCU	NF-86172-1	41	B	ACT-OPEN	SP-1245	E	Q	
CV31424	22X	21& 23 FCU CHILLED WATER SUPPLY CV	NF-86172-1	41	B	ACT-CLOSE	SP-1245	E	Q	

SECTION 2.4 REQUESTS FOR RELIEF FROM ASME CODE SECTION XI
REQUIREMENTS DETERMINED TO BE IMPRACTICAL

UNIT NO 2 COMPONENTS

This section contains a tabulation of the requirements contained in Section XI of the ASME Code that we have determined are impractical on Unit 2.

The Requests for Relief included in the program for Unit 2 are listed below.

<u>REQUEST FOR RELIEF NO.</u>	<u>SUBJECT</u>
1	Pump Vibration
2	Flow Instrumentation Accuracy
3	Visual Verification of Valves
4	Pump Vibration Sensor Locations
6	Unused
7	Unused
8	Unused
9	Unused

1. REQUEST FOR RELIEF

COMPONENT	FUNCTION	ASME Code Class	ASME Vlv Cat
21, 22 Safety Injection Pump	Deliver cooling water to the reactor core in the event of a loss of coolant accident.	2	---
21, 22 Containment Spray Pump	Provide sufficient heat removal capability to maintain the post accident containment pressure below the design pressure.	2	---
21, 22 Component Cooling Pump	Remove heat from components associated with removal of reactor core decay heat under accident conditions	3	---

CODE REQUIREMENT

Relief is requested from OMa 1988, part 6 Table 3 which requires vibration alert limits for centrifugal pumps to be $>2.5V_r$ to $6 V_r$ or > 0.325 in/sec.

ALTERNATE TESTING

Alert limits will be set using pump vibration history. Limits will be established per the Code unless the value becomes > 0.325 inches/sec. In those cases the alert limit will be set at $V_r + 0.2$ Inches/sec.

ALTERNATE TESTING (CONT'D)

21, 22 SI Pumps

Alert limits at locations on the pump which are above Code value will be compared with alert limits on the pump which are within Code acceptable values. Subsequent data will be evaluated based on pump vibration trending and history.

In addition to quarterly miniflow test data, full flow vibration data will be taken and analyzed once per refueling.

21, 22 CS Pumps

Alert limits at locations on the pump which are above Code value will be compared with alert limits on the pump which are within Code acceptable values. Subsequent data will be evaluated based on pump vibration trending and history.

21, 22 CC Pumps

Vibration limits depend on sensor location and pump flow. Limits will be established based on these variables.

1. REQUEST FOR RELIEF (COND'T)

BASIS FOR REQUESTING RELIEF

21, 22 SI Pumps

The Code alert limits will not be met because the Code does not recognize the higher vibration levels at minimum flow. The higher vibration levels are at higher frequencies which can be accounted for by internal hydraulic forces (i.e, vane passing frequencies). Trending of vibration data at both minimum flow and full flow will adequately reflect changes in pump conditions.

21, 22 CS Pumps

The Code alert limits will not be met because the Code does not recognize the higher vibration levels at minimum flow. A second contributing factor is the effect of piping configuration. Trending of vibration data will adequately reflect changes in pump condition.

21, 22 CC Pumps

The component cooling system resistance cannot be adjusted to achieve a standard reference point during a test. Per the Code, flow and pressure readings will be taken and compared to reference values. These reference values will be based on pump performance and history when it was in good mechanical condition. Certain vibration points are sensitive to flow conditions, particularly low flows. The outboard pump bearing is very load sensitive and vibration varies by as much as 100%. Vibration readings will be correlated to pressure/flow readings.

JUSTIFICATION

All pumps have a detailed vibration history which is trended and available to the engineering staff. Operating history and availability of these pumps has been excellent with no failures. The pump manufacturers are in agreement that pump degradation can be monitored by trending vibration levels from a reference point properly established. Alternate acceptance criteria established as described above will give adequate indications of pump degradation.

2. REQUEST FOR RELIEF

COMPONENTS	FUNCTION	ASME Code Class	ASME Code Class
21, 22 Component Cooling Pump	Remove heat from components associated with removal of reactor core decay heat under accident conditions.	3	---

CODE REQUIREMENTS

OMa 1988 Part 6, Section 4.6 requires flow instrumentation be accurate within $\pm 2\%$.

ALTERNATE TESTING

Presently installed instrumentation is accurate to $\pm 3\%$. This accuracy is sufficient to allow measurement of flow changes.

BASIS FOR REQUESTING RELIEF

The addition of a more accurate flowmeter would require a plant modification with little increase in safety.

JUSTIFICATION

During each surveillance test the pump differential pressure vs. flow is compared to an acceptance curve based on the code. The component cooling water flow indicators have accuracy which is sufficient to measure change in flow and pump degradation. In addition, the pump acceptance curves will be reduced by 1% of normal flow to account for the higher instrument inaccuracy.

3. REQUEST FOR RELIEF

COMPONENT	FUNCTION	ASME Code class	ASME Vlv Cat
MV-32178 Containment Sump B Isolation Valve A1	Open to provide for ECC during recirculation phase, close for Containment Isolation.	2	A
MV-32179 Containment Sump B Isolation Valve A2	Open to provide for ECC during recirculation phase, close for Containment Isolation.	2	A

CODE REQUIREMENT

OMa-1988 Part 10, Section 4.1 requires valves with remote position indicators to be observed locally at least once every two years to verify valve operation is accurately indicated.

ALTERNATE TESTING

System characteristics and/or visual observation will be used to determine obturator movement. The valves are enclosed by valve enclosures which are part of the containment barrier. It is not considered practical to disassemble these enclosures to verify correct position indication. The valves are leak tested in the closed position each refueling outage and will be visually verified to stroke whenever the cover is removed.

BASIS FOR REQUESTING RELIEF

Valve design does not allow for easy access to valves for inspection of position. Removing the valve cover would be a hardship with no equivalent increase in safety.

JUSTIFICATION

These valves are full stroked and timed both open and closed each refueling outage. Any change in the position indication system would be reflected in the timing. This stroking plus periodic inspection whenever the cover is removed gives adequate indication that the valve is operable.

4. REQUEST FOR RELIEF

COMPONENT	FUNCTION	ASME CODE CLASS	ASME VLV. CAT.
21, 22 Residual Heat Removal Pumps	Deliver cooling water to the reactor core in the event of a loss of coolant accident.	2	---

CODE REQUIREMENT

On vertical line shaft pumps, vibration measurements shall be taken on the upper motor bearing housing in three orthogonal directions, one of which is the axial direction.

ALTERNATE TESTING

Two existing installed probes which measure vibration in two orthogonal directions will be used.

BASIS FOR REQUESTING RELIEF

The upper motor thrust bearing housing is inaccessible for an axial measurement. Portable instrumentation would be difficult to use due to a domed cover over the pump housing which limits access and would tend to amplify any readings. The addition of a permanent probe would be costly with no commensurate benefit to safety.

JUSTIFICATION

The thrust bearing on this pump would transfer a component of the axial vibration to the radial probes.

ASME SECTION XI VALVES UNIT 1

Valve Number	Sys	Description	P&ID	Code Dwg	Normal Positn	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request	Comments
CV39403	ZX	COOLING WATER TO 12 & 14 FCU	NF-86172-2	41	BY SS	B	ACT-OPEN	SP-1245	E	Q		
CV39404	ZX	12& 14 FCU CHILLED WATER SUPPLY CV	NF-86172-2	41	BY SS	B	ACT-CLOSE	SP-1245	E	Q		
CV39405	ZX	11 SHROUD CLG COILS TR A CW SUPPLY CV	NF-86172-1	41	OPEN	B	ACT-CLOSE	SP-1245	E	Q		
CV39406	ZX	12 SHROUD CLG COILS TR B CW SUPPLY CV	NF-86172-1	41	OPEN	B	ACT-CLOSE	SP-1245	E	Q		
CV39407	ZX	11 SHROUD CLG COILS TR A CW SUPPLY CV	NF-86172-1	41	OPEN	B	ACT-CLOSE	SP-1245	E	Q		
CV39408	ZX	12 SHROUD CLG COILS TR B CW SUPPLY CV	NF-86172-1	41	OPEN	B	ACT-CLOSE	SP-1245	E	Q		
CV39409	ZX	COOLING WATER FROM 11 & 13 FCU	NF-86172-2	41	BY SS	B	ACT-OPEN	SP-1245	E	Q		
CV39410	ZX	12& 14 FCU CHILLED WATER SUPPLY CV	NF-86172-2	41	BY SS	B	ACT-CLOSE	SP-1245	E	Q		
CV39411	ZX	COOLING WATER FROM 12 & 14 FCU	NF-86172-2	41	BY SS	B	ACT-OPEN	SP-1245	E	Q		
CV39412	ZX	11& 13 FCU CHILLED WATER SUPPLY CV	NF-86172-2	41	BY SS	B	ACT-CLOSE	SP-1245	E	Q		

ASME SECTION XI VALVES UNIT 2

Valve Number	Sys	Description	P&ID	Code Dwg	Normal Positn	Vlv Category	Vlv Function	Test Proc	Test Type	Test Freq	Relief Request	Comments
CV31314	2ZP	INSERVICE PURGE EXH ISOL B	NF-36902-2	N/A	FLANGED	A	ACT-CLOSE		E	AR		See Deferral Note G
CV31315	2ZP	INSERVICE PURGE EXH ISOL A	NF-36902-2	N/A	FLANGED	A	ACT-CLOSE		LT	R		See Deferral Note G
CV31627	2ZP	CNTMT VAC BRKR PWR OP	NF-36902-2	N/A	CLOSE	A	ACT-BOTH	SP-2130	E	Q		
CV31628	2ZP	CNTMT VAC BRKR PWR OP	NF-36902-2	N/A	CLOSE	A	ACT-BOTH	SP-2072.41A	LT	R		
CV31630	2ZP	CNTMT VAC BRKR GRAV OP	NF-36902-2	N/A	CLOSE	A, C	ACT-BOTH	SP-2130	E	Q		
CV31631	2ZP	CNTMT VAC BRKR GRAV OP	NF-36902-2	N/A	CLOSE	A, C	ACT-BOTH	SP-2072.41B	LT	R		
CV31635	2ZP	INSERVICE PURGE SUPPLY ISOL B	NF-36902-2	N/A	FLANGED	A	ACT-CLOSE	SP-2130	E	Q		See Deferral Note G
CV31636	2ZP	INSERVICE PURGE SUPPLY ISOL A	NF-36902-2	N/A	FLANGED	A	ACT-CLOSE	SP-2072.41A	LT	R		See Deferral Note G
CV39413	2ZX	COOLING WATER TO 21 & 23 FCU	NF-86172-1	41	BY SS	B	ACT-OPEN	SP-1245	E	Q		
CV39414	2ZX	21 & 23 FCU CHILLED WATER SUPPLY CV	NF-86172-1	41	BY SS	B	ACT-CLOSE	SP-1245	E	Q		
CV39415	2ZX	COOLING WATER TO 22 & 24 FCU	NF-86172-1	41	BY SS	B	ACT-OPEN	SP-1245	E	Q		
CV39416	2ZX	22 & 24 FCU CHILLED WATER SUPPLY CV	NF-86172-1	41	BY SS	B	ACT-CLOSE	SP-1245	E	Q		
CV39417	2ZX	21 SHROUD CLG COILS TR A CW SUPPLY CV	NF-86172-1	41	OPEN	B	ACT-CLOSE	SP-2297	E	Q		
CV39418	2ZX	22 SHROUD CLG COILS TR B CW SUPPLY CV	NF-86172-1	41	OPEN	B	ACT-CLOSE	SP-2297	E	Q		
CV39419	2ZX	21 SHROUD CLG COILS TR A CW SUPPLY CV	NF-86172-1	41	OPEN	B	ACT-CLOSE	SP-2297	E	Q		
CV39420	2ZX	22 SHROUD CLG COILS TR B CW SUPPLY CV	NF-86172-1	41	OPEN	B	ACT-CLOSE	SP-2297	E	Q		
CV39421	2ZX	COOLING WATER FROM 21 & 23 FCU	NF-86172-1	41	BY SS	B	ACT-OPEN	SP-1245	E	Q		
CV31422	2ZX	22 & 24 FCU CHILLED WATER SUPPLY CV	NF-86172-1	41	BY SS	B	ACT-CLOSE	SP-1245	E	Q		
CV31423	2ZX	COOLING WATER FROM 22 & 24 FCU	NF-86172-1	41	BY SS	B	ACT-OPEN	SP-1245	E	Q		
CV31424	2ZX	21 & 23 FCU CHILLED WATER SUPPLY CV	NF-86172-1	41	BY SS	B	ACT-CLOSE	SP-1245	E	Q		

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DEFERRAL NOTES UNIT 1

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DEFERRAL NOTE A

The following valves will not be stroked on a quarterly basis for the following reasons:

AF-15-9, 10; AF-14-1, 3

These valves are part stroked open quarterly and are full stroked each cold shutdown. Full stroking of the check valves open each quarter is impractical since it requires sending full flow to the steam generators and this causes thermal shocking of the Aux. Feedwater Lines as they enter the Steam Generator. Additionally this test does not address verification of the check valve closed. Verification that the check valve closes can be done by imposing a pressure downstream of the check and measurement of pressure. These complex tests are not warranted for the information received. The valve will be cycled per the Code each cold shutdown.

AF-16-1, 2; AF-15-1, 2, 3, 4

These valves are stroked each cold shutdown to a position required for the system to perform its safety function. This is accomplished by measuring flow through the check valve while the aux feedwater pump is discharging to each steam generator. The valves cannot be partial or full stroked quarterly since this causes thermal shocking of the aux feedwater lines as they enter the steam generator.

Stroking these valves requires cycling of valves which are required by Technical Specification to be locked open and the mispositioning of which causes a compromise of the safety function of the system. Such risk is not warranted by the additional information obtained by increasing the stroke interval of these valves.

Also, testing to verify the obturator travels to the seat on cessation of flow each cold shutdown as schedule permits.

CC-3-3, 4; CC-5-1, 2

These valves are full stroked open and tested to verify the obturator travels to the seat on cessation of flow each cold/refueling shutdown. Testing the valve closed on a quarterly basis is impractical since it potentially interrupts cooling water flow from the reactor coolant pumps and thus effects plant reliability.

F-8-1, 2; CV-31098, 99; RS-19-1, 2

These valves are tested to verify they close each cold/refueling shutdown. Testing the valves quarterly is impractical since such testing requires a Plant shutdown.

SI-6-1, 2, 3, 4; SI-9-3, 4, 5, 6.

With the reactor vessel head removed, these check valves are full stroked. Each valve is also verified to close and back leakage measured during refueling shutdown, and plant start-up operations. It is impractical to stroke the valves quarterly or at cold shutdown. Quarterly testing is prevented because system design and cold shutdown testing cannot be performed except when Reactor Vessel Head is removed and the refueling pool is partially flooded in preparation for refueling. These valves will be tested in accordance with the Code as described above.

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DEFERRAL NOTE A (CONT'D)

SI-16-4, 5, 6, 7; SI-9-1, 2

With the reactor vessel head removed, these check valves are full stroked. Each valve is also verified to close during refueling shutdown and plant start-up operations. The valves are not pressure isolation valves, therefore back leakage is not a Code requirement. It is impractical to stroke valves except at refueling shutdown when the reactor head is removed.

VC-8-2; VC-17-1

These valves are in piping which provides charging flow to the reactor coolant system. Interrupting flow to test the check valve would require placing excess letdown in service, removing normal charging and implore a thermal cycle on the letdown system nozzles. The valves are tested in accordance with the Code each cold shutdown.

VC-8-6, 7

These valves are in piping which provides seal injection flow to the reactor coolant pumps and it's impractical to verify the valves close on cessation of flow since such testing could result in seal failure. Possible foreign material entry and excessive valves manipulations could damage RCP seals. The valves are tested in accordance with the Code each refueling shutdown.

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DEFERRAL NOTE B

Exercising these valves quarterly or at cold shutdown requires removal of safeguards equipment from service and requires excessive system or component manipulation in order to establish the proper test conditions. This coupled with the possibility of errors in restoration of safeguards equipment or the occurrence of an event with abnormal system lineups could result in unsafe operation of the plant which is not warranted for the type of testing to be accomplished. Specifically:

CV-31226, 31255

These valves are in piping which provides let-down flow to the reactor coolant system. Interrupting flow to test these valves would require placing excess letdown in service, removing normal charging and impose a thermal cycle on the letdown/charging system nozzles. Valves will be tested at cold shutdown.

CV-31231, 32

These valves are stroked open and closed during cool down operation. Stroking these valves with the RCS at pressure causes a loss of one of the pressure boundaries of the reactor coolant system and during this stroking results in a small loss of RCS inventory. Valves will be tested at cold shutdown.

HC-1-3, 4, 5, 6; SV-33990, 991

These valves are stroked open and closed each cold shutdown during post-LOCA hydrogen control system valve cycling. Valve cycling requires opening manual valves required by Technical Specification to be closed.

MV-32067, 69

The valves provide a pressure boundary between RCS and SI. Cycling the valves with RCS at pressure challenges Technical Specification pressure isolation valves. The valves are cycled at CSO.

MV-32202, 203

Stroking these valves removes the mini flow protection for the SI pumps, and therefore requires removal of both SI pumps from service. The valves are cycled at cold shutdown.

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DEFERRAL NOTE B (CONT'D)

MV-32075, 76, 77, 78

These valves will be cycled at refueling shutdown. The valves are the boundary between RHR and containment Sump B. Cycling valves contaminates the Sump.

MV-32098, 099, 096, 097

Stroking these valves requires the use of electrical jumpers and closing breakers required by the Technical Specification to be open. MV-32096 and MV-32097 are interlocked with MV-32098 and 32099 to provide a continuous suction for the CS pumps. Testing these valves (which would require a Technical Specifications change) is impractical except at refueling due to the need for excessive manipulation of safety related equipment to perform the testing.

MV-32162, 163

Stroking these valves results in entering an LCO as required by Technical Specification. Safety function is to close to isolate RWST during SI recirc mode. Other valves with similar functions are locked closed to prevent cycling during normal operation. See MV-32206, 207, below. Valves will be tested at cold shutdown.

MV-32206, 207

The power supply to these valves is required by Technical Specification to be in the OFF position. Cycling these valves requires turning the power supply to the ON position. To comply with Technical Specification valves will be cycled at cold shutdown.

SV-37035, 36, 37, 38, 39, 40

Stroking of these could cause a small loss of coolant accident from the RCS. Therefore, the testing will be done each refueling. The justification for this frequency was included in NSP letter to the NRC dated July 6, 1981, and was agreed to by Lawrence Livermore National Laboratory Technical Evaluation Report (TER) February 23, 1983. The TER was included as enclosure 2 of the NRC SER dated September 19, 1983.

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DEFERRAL NOTE B (CONT'D)

CV-31441, 443, 444, 446

Cycling these valves results in a loss in accumulator nitrogen inventory, or borated water inventory. The valves will be full stroked in accordance with the Code at cold shutdown.

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DEFERRAL NOTE C

The quarterly test of the RHR pumps recirculates the fluid in the RHR loop. The recirculation line returns to the suction line down stream of SI-7-1(-2). Because there is no flow path available other than this recirculation, there is no loss of inventory from this loop. This results in no flow from the RWST and makes stroking SI-7-1(-2) impractical.

SI-7-1, 2

Exercising these valves quarterly or at cold shutdown requires transfer of inventory from the RWST to waste or to the RCS and then to waste. The benefits of this exercise is deemed not worth the effort. The valves will be exercised each refueling shutdown.

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DEFERRAL NOTES UNIT 1

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DEFERRAL NOTE D

Exercising these valves open at cold shutdown requires removal of safeguards equipment from service and excessive system or component manipulation in order to establish the proper test conditions. This coupled with the possibility of errors in the restoration of safeguards equipment or the occurrence of an event with abnormal system line-ups could result in unsafe operation of the plant which is not warranted for the type of testing to be accomplished. Specifically:

SI-10-1, 2

Stroking these valves open at cold shutdown requires opening valves which are closed for protection of the Reactor Coolant System against over-pressurization. Testing valves closed more than once each refueling cycle is impractical. These valves will be tested in accordance with the Code at refueling shutdown.

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DEFERRAL NOTE E

The following valve will not be stroked on a quarterly basis for the following reasons:

RH-6-1

Installation of the valve is such that it cannot be exercised open during normal plant operation. Isolation of the valve for exercising requires removal of the letdown line and one loop of the RHR system from service. The close function of the valve is verified on a continuous basis by a high pressure alarm which sounds when back leakage occurs. These valves will be tested in accordance with the Code at Cold Shutdown.

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DEFERRAL NOTE F

The following valve will not be stroked on a quarterly basis for the following reasons:

MV-32121, 120, 266, 267

Exercising these valves during power operation requires establishing an abnormal system lineup. Should inadvertent isolation of the cross connected portions of the system occur (either through operator error in establishing the lineup or from spurious signals from instrumentation in the valve closure circuitry) considerable damage to the reactor coolant pumps and other reactor auxiliary equipment could result. The valves will be stroked each cold shutdown.

CV-31330, 31210

Cycling these excess letdown isolation valves introduces upsets in the operation of charging, seal injection and letdown systems. Possible foreign material entry and system upsets could damage the RCP seals. The valves will be stroked at cold shutdown.

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DEFERRAL NOTE G

These containment isolation valves are leak rate tested in accordance with 10CFR 50 Appendix J, and are classified TYPE A valves. It is impractical to stroke these valves quarterly for one or more of the following reasons.

- 1). Stroking the valves results in a loss of redundancy and requires logging equipment Out of Service and entering a limiting condition of operation as required by Technical Specification.
- 2). Requires manual operator action in response to design basis accidents. Administrative control over the positioning of the valve is required and unnecessary disrupts Plant operations.
- 3). Creates operational problems because of the conditions created by the stroking of a normal open/or normal closed valve.

CV-31310, 31311, 31633, 31634

These containment purge supply and exhaust valves are blind flanges out of service during operation. When they are used for containment integrity, the valves are exercised and leak tested prior to being placed in service.

CV-31339, 31325, 31326, 31327

Cycling these containment isolation valves requires removal of RCS charging and letdown, causes thermal cycles on system nozzles, and introduces upsets in the operation of charging, seal injection and letdown systems. Stroke at cold shutdown.

MV-32103, 5

The CS pump discharge MOV are opened only on "P" signal, HI containment pressure. There is no control switch to open/close this MOV.

Opening the discharge MOV using electrical jumpers with the suction valve open allows borated water to enter the containment spray header. At the conclusion of such a test the water needs to be drained to prevent formation of boric acid crystals in the spray header. This operation requires the opening of a normally closed containment integrity valve. The use of electrical jumpers and excessive valve manipulation and resultant potential for errors make cycling the CS pump discharge MOV on a quarterly basis impractical. In addition, surveillance history shows these MOV's have never failed to operate after some 20 years of testing. These valves will be cycled at cold shutdown.

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DEFERRAL NOTE 6 (CONT'D)

MV-32199, 32166

Cycling these seal water return containment isolation motor operated valves with RCS pressure causes the lifting of seal water return safety-relief valve. These valves will be cycled each cold shutdown.

RC-3-1

Cycling this two inch diameter, normally closed, check valve, located inside containment, closed requires, adding RMU water to PRT, followed by venting and draining of piping and taking administrative control over opening/closing of containment isolation valves. The valve will be cycled each cold shutdown.

RC-5-1

Cycling this one inch diameter, normally closed, check valve, located inside containment, closed requires adding nitrogen to the PRT followed by venting of piping and taking administrative control over opening/closing of containment isolation valves. The valve will be cycled each cold shutdown.

VC-8-1; CV-31198, VC-7-11

Cycling these valves interrupts charging and letdown flow to/from the Reactor Coolant System, causing thermal cycles in piping nozzles. The valves will be cycled each cold shutdown.

VC-14-1, 2

Cycling these manual valves at power interrupts seal injection to the operating reactor coolant pumps. The valves will be cycled each cold shutdown.

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DEFERRAL NOTE H

Exercising these valves more frequently than refueling shutdown creates extensive operational problems. Specifically:

CV-31740, CV-31741

Cycling of these valves will isolate all instrument air in containment. This will cause all of the air operated control valves to go to their failed position.

VC-8-4, 5

Cycling these check valves at power interrupts seal injection to the operating reactor coolant pumps. The valves will be cycled each refueling shutdown. Foreign material entry and valve manipulations could cause RCP seal damage following testing at cold shutdown.

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DEFERRAL NOTE J

The following valves will not be stroked on a quarterly basis for the following reasons:

AF-13-1

This valve will be full stroked each cold shutdown. The valve cannot be stroked open quarterly since this would result in thermal shock to the Aux Feedwater lines as they enter the Steam Generator. In addition, quarterly stroking would require cross tying the Aux Feedwater Systems for both units. The valve is tested closed quarterly.

MV-32023, 32024

These valves are full stroked each cold shutdown. Stroking these valves quarterly is impracticable. It would isolate all Feedwater Flow to an individual Steam Generator

MV-32025, 27

The purpose of these valves is to provide a backup supply of makeup to the steam generators. Normal supply is demineralized water from the condensate storage tanks (Technical Specification lower volume limit of 100,000 gallons) with backup supply from the river.

These valves receive no auto open signal. They are manually opened. Stroking the valves breaks one of the barriers between the demineralized water and the river water and increases potential of river water to steam generator contamination. Valves will be stroked at refueling shutdown.

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DEFERRAL NOTE K

Quarterly testing prohibited by Plant Technical Specifications. These valves will not be tested quarterly as they are integral components of systems that are required to be operable during unit operations.

CA-11-1

This valve will not be tested quarterly as doing so requires isolating CA from both trains of CS, taking CS from service. Furthermore, testing this valve at CSD requires excessive valve manipulation, line evacuation, an external source of pressurization and introduces the possibility of pump cavitation due to the introduction of air into the system. This valve will be tested in accordance with the Code at refueling shutdown.

CC-14-5, 6, CC-18-1, 2, CC-61-1, 2

These valves and their associated piping supply CC to the RCP's. The continuous flow is an indication that the valves stroke open. The cessation of flow required to close the valves would require declaring the RCP's out-of-service. These valves are tested in accordance with the Code at cold Shutdown.

RH-3-1, 2

These valves and their associated piping provide suction to the RHR. As the RCS Loop must remain closed above CSD, these check valves cannot be stroked during power operations. At CSD the cessation of flow required to stroke these valves closed would require removing RHR from service. These valves will be tested in accordance with the Code at refueling shutdown.

RS-15-1, 2

Will not be tested quarterly as doing so would require a unit shutdown. These valves will be tested in accordance with the Code at cold shutdown.

SM-10-1

This valve will be tested in accordance with the Code at Refueling Shutdown. This valve is tied directly to the Reactor Coolant Pump Seal Water Return Line and the Volume Control Tank (VCT). Testing of the valve cannot be done quarterly because it requires removal of the seal water return line, and excessive valve manipulation makes it impracticable to test this valve at cold shutdown.

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DEFERRAL NOTE K (COND'T)

VC-8-10; VC-8-11; VC-8-14

These valves will be tested in accordance with the Code at refueling shutdown. Testing these valves requires the removal of the boric acid/reactor make up water blender from service. Excessive valve manipulations and system alignments are needed to conduct the test. The benefits of the exercise are not deemed worth the effort.

VC-8-3

This valve will be tested in accordance with the Code at cold shutdown. This valve is the boundary valve between auxiliary spray and the RCS Pressurizer. It is located in containment. Full stroke testing the valve quarterly is not practical, and will produce thermal cycles on the pressurizer spray nozzle.

VC-13-1, 2

These valves will not be tested quarterly. The valve/system manipulations required to install an external pressure source and pressure indication make quarterly testing impractical. The test medium for VC-13-1 is hydrogen and Xenon from the VCT. Depressurizing the piping down stream of VC-13-1 introduces industrial safety hazards not warranted for the testing to be accomplished. The valve will be tested at refueling shutdown.

The test medium for VC-13-2 is charging pump suction fluid. Depressurizing the piping down stream of VC-13-2 requires opening two normally closed valves, installing a pressure gauge & venting the normally closed chemical mixing tank. This complex test is not warranted & is considered impractical. This valve will be tested in accordance with the code at cold shut down.

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DEFERRAL NOTE L

These valves will not be tested quarterly as the system manipulations required outweigh the value of information obtained through testing. For the following reasons:

CC-23-1

These valves will not be tested quarterly. Doing so would require excessive valve manipulation to install an external pressure source, isolate the excess pressure source, isolate the excess letdown heat exchanger and drain the heat exchanger and associated piping. Valve stroke indication would then require the addition of pressure instrumentation. This work would be done in containment at power. Because this heat exchanger and its associated piping is out-of-service during normal unit operations and because there is a motor valve providing redundant reverse flow protection, this valve will be tested in accordance with the Code at cold shutdown using non-intrusive diagnostic methods.

CS-16, 17

These valves will not be full stroke tested quarterly or at cold shutdown. Stroking the valve open/closed requires opening the CS pump discharge motor valve and the addition of borated water into the CS piping, taking the CS pump breaker out-of-service, draining CS piping and opening and closing motor operated valves using electrical jumpers. Also, testing these valves requires opening manual containment isolation valves.

These valves are part stroked open quarterly during the running of the CS pump surveillance test and will be full stroked in accordance with the code on a refueling basis. Stroking more frequently is not warranted given the complex nature of the testing.

CS-18, 19

These valves will not be full stroke tested quarterly or at cold shutdown. Stroking the valve open/closed requires opening the CS pump discharge motor valve and the addition of borated water into the CS piping, taking the CS pump breaker out-of-service, draining CS piping and opening and closing motor operated valves using electrical jumpers. Also, testing these valves requires opening manual containment isolation valves. These valves will be tested at refueling shutdown.

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DEFERRAL NOTE L (CONT'D)

HC-2-1, 2

These valves will not be tested quarterly. They are stroked open and closed each cold/refueling shutdown during POST-LOCA Hydrogen Control System valve cycling and 10 CFR50 Appendix J leak testing. Quarterly testing would require entering containment at power, providing an external pressure source and additional pressure indication. The benefit of the additional testing is not significant to warrant the extensive test procedure as these valves are not in service under normal unit operation minimizing the probability of degradation over time between refueling. A motor valve provides redundant reverse flow protection to each check valve. The valves will be tested in accordance with the Code for stroke at cold shutdown and for leak tightness at refueling shutdown.

RH-3-3, 4

These valves are partially stroked open quarterly. Testing to provide closure would require entering an LCO by removing a train of RHR from service, connection an external pressure source downstream of the valve, installation of additional pressure indication and entrance into a confined space area. The amount of additional information obtained by adding the closure test to a procedure that already tests the open stroke does not justify the extensive system manipulation required. These valves will be tested in accordance with the Code at cold shutdown.

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DEFERRAL NOTE A

The following valves will not be stroked on a quarterly basis for the following reasons:

AF-15-11, 12; AF-14-5, 7

These valves are part stroked open quarterly and are full stroked each cold shutdown. Full stroking of the check valves open each quarter is impractical since it requires sending full flow to the steam generators and this causes thermal shocking of the Aux. Feedwater lines as they enter the Steam Generator. Additionally this test does not address verification of the check valve closed. Verification that the check valve closes can be done by imposing a pressure downstream of the check and measurement of pressure. These complex tests are not warranted for the information received. The valve will be cycled per the Code each cold shutdown.

AF-16-3, 4; AF-15-5, 6, 7, 8,

These valves are stroked each cold shutdown to a position required for the system to perform its safety function. This is accomplished by measuring flow through the check valve while the aux feedwater pump is discharging to each steam generator. The valves cannot be partial or full stroked quarterly since this causes thermal shocking of the aux feedwater lines as they enter the steam generator.

Stroking these valves requires cycling of valves which are required by Technical Specification to be locked open and the mispositioning of which causes a compromise of the safety function of the system. Such risk is not warranted by the additional information obtained by increasing the stroke interval of these valves.

Also, testing to verify the obturator travels to the seat on cessation of flow each cold shutdown as schedule permits.

2CC-3-3, 4; 2CC-5-1, 2

These valves are full stroked open and tested to verify the obturator travels to the seat on cessation of flow each cold/refueling shutdown. Testing the valve closed on a quarterly basis is impractical since it potentially interrupts cooling water flow from the reactor coolant pumps and thus effects plant reliability.

2FW-8-1, 2; CV-31116, 117; RS-19-3, 4

These valves are tested to verify they close each cold/refueling shutdown. Testing the valves quarterly is impractical since such testing requires a Plant shutdown.

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DEFERRAL NOTE A (CONT'D)

2SI-6-1, 2, 3, 4; 2SI-9-3, 4, 5, 6

With the reactor vessel head removed, these check valves are full stroked. Each valve is also verified to close and back leakage measured during refueling shutdown, and plant start-up operations. It is impractical to stroke the valves quarterly or at cold shutdown. Quarterly testing is prevented because system design and cold shutdown testing cannot be performed except when Reactor Vessel Head is removed and the refueling pool is partially flooded in preparation for refueling. These valves will be tested in accordance with the Code as described above.

2SI-16-4, 5, 6, 7; 2SI-9-1, 2

With the reactor vessel head removed, these check valves are full stroked. Each valve is also verified to close during refueling shutdown and plant start-up operations. The valves are not pressure isolation valves, therefore back leakage is not a Code requirement. It is impractical to stroke valves except at refueling shutdown when the reactor head is removed.

2VC-8-2; 2VC-17-1

These valves are in piping which provides charging flow to the reactor coolant system. Interrupting flow to test the check valve would require placing excess letdown in service, removing normal charging and impose a thermal cycle on the letdown system nozzles. The valves are tested in accordance with the Code each cold shutdown.

2VC-8-6, 7

These valves are in piping which provides seal injection flow to the reactor coolant pumps and it's impractical to verify the valves close on cessation of flow since such testing could result in seal failure. Possible foreign material entry and excessive valves manipulations could damage RCP seals. The valves are tested in accordance with the Code each refueling shutdown.

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DEFERRAL NOTE B

Exercising these valves quarterly or at cold shutdown requires removal of safeguards equipment from service and requires excessive system or component manipulation in order to establish the proper test conditions. This coupled with the possibility of errors in restoration of safeguards equipment or the occurrence of an event with abnormal system lineups could result in unsafe operation of the plant which is not warranted for the type of testing to be accomplished. Specifically:

CV-31230, 31279

These valves are in piping which provides let-down flow to the reactor coolant system. Interrupting flow to test these valves would require placing excess letdown in service, removing normal charging and impose a thermal cycle on the letdown/charging system nozzles. Valves will be tested at cold shutdown.

CV-31233, 31234

These valves are stroked open and closed during cool down operation. Stroking these valves with the RCS at pressure causes a loss of one of the pressure boundaries of the reactor coolant system and during this stroking results in a small loss of RCS inventory. Valves will be tested at cold shutdown.

ZHC-1-3, 4, 5, 6

These valves are stroked open and closed each cold shutdown during post-LOCA hydrogen control system valve cycling. Valve cycling requires opening manual valves required by Technical Specification to be closed.

MV-32108, 32109, 32110, 32111

Stroking these valves requires the use of electrical jumpers and closing breakers required by the Technical Specification to be open. MV-32108 and MV-32109 are interlocked with MV-32110 and 32111 to provide a continuous suction for the CS pumps. Testing these valves (which would require a Technical Specifications change) is impractical except at refueling due to the need for excessive manipulation of safety related equipment to perform the testing.

MV-32170, 32172

The valves provide a pressure boundary between RCS and SI. Cycling the valves with RCS at pressure challenges Technical Specification pressure isolation valves. The valves are cycled at cold shutdown.

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DEFERRAL NOTE B (CONT'D)

MV-32204, 32205

Stroking these valves removes the mini flow protection for the SI pumps, and therefore requires removal of both SI pumps from service. The valves are cycled at each cold shutdown.

MV-32178, 32179, 32180, 32181,

These valves will be cycled at refueling shutdown. The valves are the boundary between RHR and containment Sump B. Cycling valves contaminates the Sump.

MV-32190, 191

Stroking these valves results in entering an LCD as required by Technical Specification. Safety function is to close to isolate RWST during SI recirc mode. Other valves with similar functions are locked closed to prevent cycling during normal operation. See MV-32208, 209, below. Valves will be tested at cold shutdown.

MV-32208, 32209

The power supply to these valves is required by Technical Specification to be in the OFF position. Cycling these valves requires turning the power supply to the ON position. To comply with Tech. Specs., valves will be cycled at cold shutdown.

SV-37091, 092, 093, 094, 095, 096

Stroking of these could cause a small loss of coolant accident from the RCS. Therefore, the testing will be done each refueling. The justification for this frequency was included in NSP letter to the NRC dated July 6, 1981, and was agreed to by Lawrence Livermore National Laboratory Technical Evaluation Report (TER) February 23, 1983. The TER was included as enclosure 2 of the NRC SER dated September 19, 1983.

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DEFERRAL NOTE B (CONT'D)

CV-31511, 512, 555, 556

Cycling these valves results in a loss in accumulator nitrogen inventory, or borated water inventory. The valves will be full stroked in accordance with the Code at cold shutdown.

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DEFERRAL NOTE C

The quarterly test of the RHR pumps recirculates the fluid in the RHR loop. The recirc line returns to the suction line down stream of 2SI-7-1(-2) . Because there is no flow path available other than this recirculation, there is no loss of inventory from this loop. This results in no flow from the RWST and makes stroking 2SI-7-1(-2) impractical.

2SI-7-1, 2

Exercising these valves quarterly or at cold shutdown requires transfer of inventory from the RWST to waste or to the RCS and then to waste. The benefits of this exercise is deemed not worth the effort. The valves will be exercised each refueling.

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DEFERRAL NOTE D

Exercising these valves open at cold shutdown requires removal of safeguards equipment from service and excessive system or component manipulation in order to establish the proper test conditions. This coupled with the possibility of errors in the restoration of safeguards equipment or the occurrence of an event with abnormal system line-ups could result in unsafe operation of the plant which is not warranted for the type of testing to be accomplished. Specifically:

2SI-10-1, 2

Stroking these valves open at cold shutdown requires opening valves which are closed for protection of the Reactor Coolant System against over-pressurization. Testing valves closed more than once each refueling cycle is impractical. These valves will be tested in accordance with the Code at refueling shutdown.

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DEFERRAL NOTE E

The following valve will not be stroked on a quarterly basis for the following reasons:

ZRH-6-1

Installation of the valve is such that it cannot be exercised open during normal plant operation. Isolation of the valve for exercising requires removal of the letdown line and one loop of the RHR system from service. The close function of the valve is verified on a continuous basis by a high pressure alarm which sounds when back leakage occurs. These valves will be tested in accordance with the Code at Cold Shutdown.

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DEFERRAL NOTE F

The following valve will not be stroked on a quarterly basis for the following reasons:

MV-32122, 123, 268, 269

Exercising these valves during power operation requires establishing an abnormal system lineup. Should inadvertent isolation of the cross connected portions of the system occur (either through operator error in establishing the lineup or from spurious signals from instrumentation in the valve closure circuitry) considerable damage to the reactor coolant pumps and other reactor auxiliary equipment could result. The valves will be stroked each cold shutdown.

CV-31422, 31222

Cycling these excess letdown isolation valves introduces upsets in the operation of charging, seal injection and letdown systems. Possible foreign material entry and system upsets could damage the RCP seals. The valves will be stroked at cold shutdown.

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DEFERRAL NOTE G

These containment isolation valves are leak rate tested in accordance with 10CFR 50 Appendix J, and are classified TYPE A valves. It is impractical to stroke these valves quarterly for one or more of the following reasons.

- 1). Stroking the valves results in a loss of redundancy and requires logging equipment Out of Service and entering a limiting condition of operation as required by Technical Specification.
- 2). Requires manual operator action in response to design basis accidents. Administrative control over the positioning of the valve is required and unnecessarily disrupts Plant operations.
- 3). Creates operational problems because of the conditions created by the stroking of a normal open/or normal closed valve.

CV-31314, 31315, 31635, 31636

These containment purge supply and exhaust valves are blind flanges out of service during operation. When they are used for containment integrity, the valves are exercised and leak tested prior to being placed in service.

CV-31430, 31347, 31348, 31349

Cycling these containment isolation letdown isolation valves requires removal of RCS charging and letdown, causes thermal cycles on system nozzles, and introduces upsets in the operation of charging, seal injection and letdown systems. Valves will be stroked at cold shutdown.

MV-32114, 116

The CS pump discharge MOV are opened only on "P" signal, HI containment pressure. There is no control switch to open/close this MOV.

Opening the discharge MOV using electrical jumpers with the suction valve open allows borated water to enter the containment spray header. At the conclusion of such a test the water needs to be drained to prevent formation of boric acid crystals in the spray header. This operation requires the opening of a normally closed containment integrity valve. The use of electrical jumpers and excessive valve manipulation and resultant potential for errors make cycling the CS pump discharge MOV on a quarterly basis impractical. In addition, surveillance history shows these MOV's have never failed to operate after some 20 years of testing. These valves will be cycled at cold shutdown.

MV-32210, 32154

Cycling these seal water return containment isolation motor operated valves with RCS at pressure causes the lifting of seal water return safety-relief valve. These valves will be cycled each cold shutdown.

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DEFERRAL NOTE 6 (CONT'D)

2RC-3-1

Cycling closed this two inch diameter normally closed check valve located inside containment requires adding RMU water to PRT. This is followed by venting and draining of piping and taking administrative control over opening/closing of containment isolation valves. The valve will be cycled each cold shutdown.

2RC-5-1

Cycling this one inch diameter, normally closed, check valve, located inside containment, closed requires adding nitrogen to the PRT followed by venting of piping and taking administrative control over opening/closing of containment isolation valves. The valve will be cycled each cold shutdown.

2VC-8-1; CV-31211; 2VC-7-11

Cycling these valves interrupts charging and letdown flow to/from the Reactor Coolant System, causing thermal cycles in piping nozzles. The valves will be cycled each cold shutdown.

2VC-14-1, 2

Cycling these manual valves at power interrupts seal injection to the operating reactor coolant pumps. The valves will be cycled each cold shutdown.

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DEFERRAL NOTE H

Exercising these valves more frequently than refueling shutdown creates extensive operational problems. Specifically:

CV-31742, CV-31743

Cycling of these valves will isolate all instrument air in containment. This will cause all of the air operated control valves to go to their failed position.

ZVC-8-4, 5

Cycling these check valves at power interrupts seal injection to the operating reactor coolant pumps. The valves will be cycled each refueling shutdown. Foreign material entry and valve manipulations could cause RCP seal damage following testing at cold shutdown.

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DEFERRAL NOTE J

The following valves will not be stroked on a quarterly basis for the following reasons:

2AF-13-1

This valve will be full stroked each cold shutdown. The valve cannot be stroked open quarterly since this would result in thermal shock to the Aux Feedwater lines as they enter the Steam Generator. In addition, quarterly stroking would require cross tying the Aux Feedwater Systems for both units. The valve is tested closed quarterly.

MV-32026, 30

The purpose of these valves is to provide a backup supply of makeup to the steam generators. Normal supply is demineralized water from the condensate storage tanks (Technical Specification lower volume limit of 100,000 gallons) with backup supply from the river.

These valves receive no auto open signal. They are manually opened. Stroking the valves breaks one of the barriers between the demineralized water and the river water and increases potential of river water to steam generator contamination. Valves will be stroked at refueling shutdown.

MV-32028, 32029

These valves are full stroked each cold shutdown. Stroking these valves quarterly is impracticable. It would isolate all Feedwater Flow to an individual Steam Generator

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DEFERRAL NOTE K

Quarterly testing prohibited by Plant Technical Specifications. These valves will not be tested quarterly as they are integral components of systems that are required to be operable during unit operations.

2CA-11-1

This valve will not be tested quarterly as doing so requires isolating CA from both trains of CS, taking CS from service. Furthermore, testing this valve at CSD requires excessive valve manipulation, line evacuation, an external source of pressurization and introduces the possibility of pump cavitation due to the introduction of air into the system. This valve will be tested in accordance with the Code at refueling shutdown.

2CC-14-5, 6; 2CC-18-1, 2; 2CC-61-1, 2

These valves and their associated piping supply CC to the RCP's. The continuous flow is an indication that the valves stroke open. The cessation of flow required to close the valves would require declaring the RCP's out-of-service. These valves are tested in accordance with the Code at cold Shutdown.

2MS-15-1, 2

Will not be tested quarterly as doing so would require a unit shutdown. These valves will be tested in accordance with the Code at cold shutdown.

2RH-3-1, 2

These valves and their associated piping provide suction to the RHR. As the RCS Loop must remain closed above CSD, these check valves cannot be stroked during power operations. At CSD the cessation of flow required to stroke these valves closed would require removing RHR from service. These valves will be tested in accordance with the Code at refueling shutdown.

2SM-10-1

This valve will be tested in accordance with the Code at Refueling Shutdown. This valve is tied directly to the Reactor Coolant Pump Seal Water Return Line and the Volume Control Tank (VCT). Testing of the valve cannot be done quarterly because it requires removal of the seal water return line, and excessive valve manipulation makes it impracticable to test this valve at cold shutdown.

2VC-8-10; 2VC-8-11; 2VC-8-14

These valves will be tested in accordance with the Code at refueling shutdown. Testing these valves requires the removal of the boric acid/reactor make up water blender from service. Excessive valve manipulations and system alignments are needed to conduct the test. The benefits of the exercise are not deemed worth the effort.

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DEFERRAL NOTE K (CONT'D)

2VC-8-3

This valve will be tested in accordance with the Code at cold shutdown. This valve is the boundary valve between auxiliary spray and the RCS Pressurizer. It is located in containment. Full stroke testing the valve quarterly is not practical, and will produce thermal cycles on the pressurizer spray nozzle.

2VC-13-1, 2

These valves will not be tested quarterly. The valve/system manipulations required to install an external pressure source and pressure indication make quarterly testing impractical. The test medium for 2VC-13-1 is hydrogen and Xenon from the VCT. Depressurizing the piping down stream of 2VC-13-1 introduces industrial safety hazards not warranted for the testing to be accomplished. The valve will be tested at refueling shutdown.

The test medium for 2VC-13-2 is charging pump suction fluid. Depressurizing the piping down stream of 2VC-13-2 requires opening two normally closed valves, installing a pressure gauge & venting the normally closed chemical mixing tank. This complex test is not warranted & is considered impractical. This valve will be tested in accordance with the code at cold shutdown.

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DEFERRAL NOTE L

These valves will not be tested quarterly as the system manipulations required outweigh the value of information obtained through testing. For the following reasons:

2CC-23-1

These valves will not be tested quarterly. Doing so would require excessive valve manipulation to install an external pressure source, isolate the excess letdown heat exchanger and drain the heat exchanger and associated piping. Valve stroke indication would then require the addition of pressure instrumentation. This work would be done in containment at power. Because this heat exchanger and its associated piping is out-of-service during normal unit operations and because there is a motor valve providing redundant reverse flow protection, this valve will be tested in accordance with the Code at cold shutdown using non-intrusive diagnostic methods.

CS-46, 47

These valves will not be full stroke tested quarterly or at cold shutdown. Stroking the valve open/closed requires opening the CS pump discharge motor valve and the addition of borated water into the CS piping, taking the CS pump breaker out-of-service, draining CS piping and opening and closing motor operated valves using electrical jumpers. Also, testing these valves requires opening manual containment isolation valves.

These valves are part stroked open quarterly during the running of the CS pump surveillance test and will be full stroked in accordance with the code on a refueling basis. Stroking more frequently is not warranted given the complex nature of the testing.

CS- 48, 49

These valves will not be full stroke tested quarterly or at cold shutdown. Stroking the valve open/closed requires opening the CS pump discharge motor valve and the addition of borated water into the CS piping, taking the CS pump breaker out-of-service, draining CS piping and opening and closing motor operated valves using electrical jumpers. Also, testing these valves requires opening manual containment isolation valves. These valves will be tested at refueling shutdown.

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DEFERRAL NOTE L (CONT'D)

2HC-2-1, 2

These valves will not be tested quarterly. They are stroked open and closed each cold/refueling shutdown during POST-LOCA Hydrogen Control System valve cycling and 10 CFR50 Appendix J leak testing. Quarterly testing would require entering containment at power, providing an external pressure source and additional pressure indication. The benefit of the additional testing is not significant to warrant the extensive test procedure as these valves are not in service under normal unit operation minimizing the probability of degradation over time between refueling. A motor valve provides redundant reverse flow protection to each check valve. The valves will be tested in accordance with the Code for stroke at cold shutdown and for leak tightness at refueling shutdown.

2RH-3-3, 4

These valves are partially stroked open quarterly. Testing to provide closure would require entering an LCO by removing a train of RHR from service, connection an external pressure source downstream of the valve, installation of additional pressure indication and entrance into a confined space area. The amount of additional information obtained by adding the closure test to a procedure that already tests the open stroke does not justify the extensive system manipulation required. These valves will be tested in accordance with the Code at cold shutdown.

APPENDIX D
IST SECTION XI VALVE NOTES

- NOTE 1. Valves are required to be closed & maintained closed for LO head SI train separation & accident mitigation. Based upon original construction piping downstream of valves is non-safety related.
- NOTE 2. Valve is normally in VCT position, fails to VCT position and is required to be in the closed position for accident conditions. Therefore this valve is a passive valve.
- NOTE 3. Safety related piping and heat exchanger at Prairie Island are designed to withstand the maximum sustained fluid operating pressure, including allowances for pressure surges.
- Relief valves are installed in systems to relieve excess pressures caused by fluid expansion effects during component maintenance to meet B31.1 paragraph 101.4.2 and/or ASME Section VIII Art UG. these valves are exempt from the IST PROGRAM and so footnoted in Tables 1 & 2.
- The relief valves are set such that the maximum sustained fluid operating pressure does not challenge the design pressure rating of the system during all normal and accident scenarios. The exempted valves are services, tested and maintained per the Plant PM program using OM-1, 1987 as guidance.
- The excluded valves are deemed to have no specific function in shutting down a reactor or in mitigating the consequences of an accident.
- NOTE 4. The valve outlet flange and bellows of the valve perform the pressure retaining function and this function determines the code designation symbol.
- NOTE 5. CL system manual boundary valves less than 4" in diameter, which are open during normal operation, are not required to be closed for accident mitigation based upon adequate capacity of CL pumps.
- NOTE 6. The Cooling Water Strainer backwash valves were removed from the ASME Section XI IST Program per Evaluation dated 12-27-89.
- NOTE 7. These check valves are capped on inlet and are not required for safe shutdown as accident mitigation. Removal of check valves is planned.

APPENDIX D
IST SECTION XI VALVE NOTES

- NOTE 8. These valves are tested as part of LLRT boundary and are categorized as TEST valves.
- NOTE 9. Valve is isolated during SI actuation.
- NOTE 10. These valves fail open, and are normally open. Failure of valves to close in event of RCP #1 seal failure increases severity of the failure in terms of RCS leakage and requires an expedited shutdown and cooldown.
- NOTE 11. SE 251 determined Charging Pumps and BAST and associated piping and valves as having no safe shutdown or accident mitigation function. The piping and pumps are pressure retaining and used for control only.
- NOTE 12. The SFP cooling is non safety related based upon no accident or safe shutdown function as defined in the USAR. The close function of these check valves is also not safety related since no single active or passive failure will cause loss of the return header.