

ATTACHMENT B  
ISI PROGRAM CHANGE

Date 2-24-1981

Change No. PC Rev. 1 - 1981  
Change No. Year

Program No. First - Last  
Interval Period

Inspection Category Inservice Testing of Pumps and Valves

Description of  
Change Extensive changes have been made to the pump and valve testing sections of  
this program. Only these sections have been changed, and they are attached for review  
and approval.

Reason for Change Changes were made to meet the requirements set forth in a program  
review with the NRC-DE and EG&G Idaho, Inc., on the 15th & 16th of July 1980. Several  
changes resulted from subsequent telephone conversations concerning a proposed revision,  
which was sent to the NRC on Nov. 12, 1980.

Lincoln J. Good  
Originator

Lincoln J. Good  
Plant ISI Coordinator

APPROVAL (Significant Changes Only):

James R. Robert  
Department Supervisor

E. Wood  
Plant Manager

Dodd H. Hall  
PORC

John Blum  
Manager of Operations

SECTION VI  
VALVE TESTING

TABLE OF CONTENTS

SECTION VI: VALVE TESTING

INTRODUCTION

VALVE CATEGORIES

VALVE SHEET LEGEND (SYMBOLS)

GENERIC EXEMPTIONS

RELIEF REQUESTS

VALVE LIST

#### INTRODUCTION:

This section consists of a list of all the valves that may be required to safely shutdown the plant or to mitigate the consequences of an accident. Information concerning the classification, function, and testing of each valve is included. All valves listed will be tested in accordance with Section XI of the ASME Code, subsection IWB, as amended to the summer of 1975. Deviations from these requirements have been reviewed and noted in the relief requests at the end of this section.

In accordance with paragraph (g)(5) of 10 CFR 50.55a Maine Yankee Atomic Power Company reserves the right to alter the testing requirements for valves should it be found that these requirements be impractical. The alterations will receive the same review and approval as the program itself.



### VALVE CATEGORIES

- Category A - Valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their function. These valves are leak tested as required by ASME Section XI, or Appendix J of 10 CFR 50.
- Category B - Valves for which seat leakage in the closed position is inconsequential for fulfillment of their function.
- Category C - Valves which are self-actuating in response to some system characteristic, such as pressure (relief valves) or flow direction (check valves).
- Category E - Valves which are normally locked (or sealed) open or locked (or sealed) closed to fulfill their function.

## VALVE SHEET LEGEND

### SYMBOL: VALVE TYPE

VOW : Butt-Welded Globe  
VOS : Socket-Welded Globe  
VOT : Threaded Globe  
VGW : Butt-Welded Gate  
VGS : Socket-Welded Gate  
VGT : Threaded Gate  
SV : Safety Valve  
VCW : Butt-Welded Check  
VCS : Socket-Welded Check  
VCT : Threaded Check  
VAW : Butt-Welded Angle  
VAS : Socket-Welded Angle  
VAT : Threaded Angle  
VVI : Non-Flanged Butterfly  
VWF : Flanged Butterfly  
SOV : Solenoid Operated Valve  
TV : Trip Valve  
VBS : Socket-Welded Ball Valve

### SIGNAL TYPE

SIAS - Safety Injection Actuation Signal  
CIS - Containment Isolation Signal  
RAS - Recirculation Actuation Signal  
CSAS - Containment Spray Actuation Signal  
MCB - Main Control Board  
SGEP - Steam Generator Emergency Panel

### VALVE ACTUATOR SYMBOLS

<u>SYMBOL</u>	<u>TYPE</u>	<u>EXAMPLE</u>
A	Air	AFW-A-101
M	Motor	FW-M-104
S	Solenoid	CH-I20-S
S	Safety	PV-S-16
F	Flow	
	Control	FW-F-107
P	Pressure	
	Control	MS-P-168
T	Trip	BD-T-12

### VALVE POSITION SYMBOLS

O - Open  
C - Closed  
LO - Locked Open  
LC - Locked Closed  
M - Modulating

LEGEND FOR VALVE TESTING FREQUENCY

- Q - Exercise valve (full stroke) every (3) months
- Qp - Exercise valve (part stroke) every (3) months
- LT - Leak test valves per Section XI Article IW-3420, every refueling
- LTs - Leak test (special); the main steam and feed system is leak tested by a special supplement to the Containment Class "A" Test which is performed as required by 10 CFR 50 App. J.
- SRV - Safety and relief valves are tested per Section XI Article IW-3510 & Appendix J.
- ET - Valve positions are verified and recorded before operations are performed and after operations are completed.
- CS - Exercise valve (full stroke) during cold shutdowns.
- CSp - Exercise valve (part stroke) during cold shutdowns.
- R - Exercise valve (full stroke) every reactor refueling
- Rp - Exercise valve (part stroke) every reactor refueling

MAIN STEAM AND FEEDWATER SYSTEM  
LEAK TEST EXEMPTION

The Main Steam and Feedwater Lines are carefully designed to maintain integrity during a LOC incident. Isolation from the containment atmosphere is provided by the steam generator shell (membrane barrier) and its connecting piping. These components are designed to withstand postulated missiles and water jets from the RCS.

Isolation outside the containment is provided by nonreturn valves, relief valves and automatic isolation valves in the steam piping and check and remote manual valves in the feedwater piping. All exempt valves are identified in the valve list by "LTs" (Leak Test Special) printed in the test frequency column. Also see Relief Request V-12.

R

The integrity of these valves will be determined at the conclusion of Class A leak tests on the containment by remotely opening steam generator vents while the containment is pressurized to the 28 psig retest pressure.

The increase in containment leakage due to exposure to internal pressure will be determined and extrapolated to 50 psig as described in the Technical Specifications, section 4.4.B.2 where applicable.

This test, therefore, is an exception to standard Class C leakage testing methods. However, the results and intent will remain unchanged.

LOCKED CATEGORY "A" AND "B" VALVES  
STROKING EXEMPTION

All valves categorized "A, E" or "B, E" in the valve list are passive valves. All category "E" valves are locked in their safe position. Therefore, adding "E" to any other valve category exempts that category from normal stroking requirements.

All category "E" valve positions are verified by plant operating procedures and are identified in the ISI program valve list as being category "E", "A, E", or "B, E".

MODULATING CONTROL VALVES  
STROKE TIME EXEMPTION

Some control valves operate in response to system conditions. The control characteristics of these valves makes stroke timing meaningless. Therefore, we wish to exempt these valves from the normal stroke timing requirement. We will cycle these valves quarterly unless relief is requested for some other reason.

Modulating control valves are identified in the valve list by an "M" (Modulating) printed in the normal or safety position columns.

## VALVE RELIEF REQUEST

NUMBER: V-1

SYSTEM: High Pressure Safety Injection

VALVE: HSI-17, HSI-27, HSI-37

DRAWING NO.: FM-30A/90A

CATEGORY: C

CLASS: 1

FUNCTION: Injection Check Valve

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be exercised during power operation since this would require injecting highly borated water into the reactor coolant system causing reactivity excursions on the reactor. Furthermore, this would cause thermal stresses on the reactor coolant system piping by the introduction of relatively cold water.

ALTERNATE TEST: (CSp, R) These valves will be partial stroke exercised during cold shutdown conditions providing the residual heat removal (RHR) system is being utilized to remove reactor decay heat. The RHR system cannot be placed in service during a cold shutdown specifically for the purpose of testing these valves due to extensive manpower utilization and man-rem exposure. Full stroke exercising of these valves shall be done during refueling outages with the RCS depressurized and the safety injection tanks being utilized. The safety injection tanks provide the only means for full stroking as the RHR system provides only sufficient flow to partial stroke exercise these valves.

# VALVE RELIEF REQUEST

NUMBER: V-2

SYSTEM: Chemical and Volume Control

VALVE: LD-M-2

DRAWING NO.: FM-31A/91A

CATEGORY: A

CLASS: 1

FUNCTIONS: Letdown Isolation

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve cannot be exercised during power operation since failure would cause a loss of pressurizer level control and reactor coolant system chemistry control.

ALTERNATE TEST: (CS) This valve will be full stroke exercised during cold shutdowns.



VALVE RELIEF REQUEST

NUMBER: V-3

SYSTEM: Chemical and Volume Control

VALVE: LD-T-S

DRAWING NO.: FM-31A/91A

CATEGORY: A

CLASS: 1

FUNCTION: Letdown Temperature Control

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve cannot be exercised during power operation since failure would cause a loss of pressurizer level control and reactor coolant system chemistry control.

ALTERNATE TEST: (CS) This valve will be full stroke exercised during cold shutdowns.

# VALVE RELIEF REQUEST

NUMBER: V-4

SYSTEM: Chemical and Volume Control

VALVE: CH-72

DRAWING NO.: FM-31A/91A

CATEGORY: C

CLASS: 1

FUNCTION: RCS Loop Fill Header Check Valve

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve cannot be exercised during power operation as this would require injecting relatively cold water into the reactor coolant system (RCS) causing thermal stresses on the RCS piping and reactivity changes due to the cold water being added with subsequent possible reactor trip.

ALTERNATE TEST: (CS) This valve will be full stroke exercised during cold shutdowns.

# VALVE RELIEF REQUEST

NUMBER: V-5

SYSTEM: Low Pressure Safety Injection

VALVE: LSI-12, LSI-22, LSI-32

DRAWING NO.: FM-31B/91B

CATEGORY: C

CLASS: 1

FUNCTION: Low Pressure Safety Injection Check Valve

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be exercised during power operation as the LPSI pumps do not develop enough head to overcome the reactor coolant system pressure on the downstream side of these check valves.

ALTERNATE TEST: (CS) These valves will be full stroke exercised providing the residual heat removal system is being utilized for decay heat removal. The RHR system cannot be placed in service during a cold shutdown specifically for the purpose of testing these valves due to extensive man-power utilization and man-rem exposure.

# VALVE RELIEF REQUEST

NUMBER: V-8

SYSTEM: High Pressure Safety Injection

VALVE: HSI-15, HSI-25, HSI-35

DRAWING NO.: FM-31B/91B

CATEGORY: C

CLASS: 1

FUNCTION: Injection Check Valve

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be exercised during power operation since this flow path would inject cold charging water into the reactor coolant system causing thermal stresses on the injection nozzles. Injecting cold water might also start a reactivity excursion which could cause a reactor trip.

ALTERNATE TEST: (Csp, R)

# VALVE RELIEF REQUEST

NUMBER: V-9

SYSTEM: Charging System

VALVE: CH-M-52

DRAWING NO.: FM-31A/91A

CATEGORY: A

CLASS: 1

FUNCTION: Charging Supply to Auxiliary Pressurizer Spray

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve cannot be exercised during power operation since failure of this valve in the open position could cause a loss of pressurizer/RCS pressure control.

ALTERNATE TEST: (CS) This valve will be full stroked exercised during cold shutdowns.

VALVE RELIEF REQUEST

NUMBER: V-10

SYSTEM: Charging System

VALVE: CH-F-38

DRAWING NO.: FM-31B/91B

CATEGORY: B

CLASS: 2

FUNCTION: Charging Flow Control

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve cannot be full stroke exercised during power operation since pressurizer level control could be lost if the valve failed in the shut position.

ALTERNATE TEST: (Qp, CS) This valve will be partial stroke exercised quarterly and full stroke exercised during cold shutdowns.

VALVE RELIEF REQUEST

NUMBER: V-11

SYSTEM: Feedwater

VALVE: FW-M-104, FW-M-204, FW-M-304

DRAWING NO. FM-12A/73A

CATEGORY: A

SAFETY CLASS: 2

FUNCTION: Steam Generator Isolation Valves

EXEMPT TEST: Q

BASIS FOR RELIEF: Feedwater cannot be secured while the plant is operating. Interrupting the  $3.5 \times 10^6$  lb/hr. feedwater flow to a steam generator would cause a low water condition which could result in a plant trip.

ALTERNATE TEST: These valves will be cycled full stroke during cold shutdown conditions.

# VALVE RELIEF REQUEST

NUMBER: V-12

SYSTEM: Containment Spray

VALVE: CS-M-91, CS-M-92

DRAWING NUMBER: FM-32A/92A

CATEGORY: A

SAFETY CLASS: 2

FUNCTION: Containment Sump Isolation Valves

EXEMPT TEST: LT

BASIS FOR RELIEF: The design of this system is not conducive to the standard type "C" leak test.

ALTERNATE TEST: (LTs) The integrity of these valves is tested as part of our containment class "A" leak test which is performed each inspection period.



VALVE RELIEF REQUEST

NUMBER: V-13

SYSTEM: Compressed Air and Containment Leakage Monitoring

VALVE: IS-109

DRAWING NO.: FM-20B/81B

CATEGORY: A/C

CLASS: 2

FUNCTION: Containment APD Discharge Header Check

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve can only be verified to close by leak testing, which is performed during refueling outages.

R

ALTERNATE TEST: (LT) Valve will be leak tested each refueling outage.

# VALVE RELIEF REQUEST

NUMBER: V-14

SYSTEM: Residual Heat Removal

VALVE: RH-M-2

DRAWING NO: FM-32A/92A

CATEGORY: A

SAFETY CLASS: 1

FUNCTION: Residual Heat Removal Outboard Stop Valve

EXEMPT TEST: Q, Cs, R

BASIS FOR RELIEF: This passive valve is not required to operate during plant operation or during emergency core cooling. Plant procedures require that this valve be locked closed at the control board during plant operation.

ALTERNATE TEST: Position verification by procedure.

# VALVE RELIEF REQUEST

NUMBER V-15

SYSTEM: Compressed Air and Containment Leakage Monitoring

VALVE: IA-137

DRAWING NO.: FM-20B/80B

CATEGORY: A/C

CLASS: 2

FUNCTION: Instrument Air Containment Check

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve is passive and always in its safety related position (closed) during power operation.

ALTERNATE TEST: LT

# VALVE RELIEF REQUEST

NUMBER: V-24

SYSTEM: Chemical and Volume Control

VALVE: SL-P-3

DRAWING NO.: FM-31A/91A

CATEGORY: A

CLASS: 2

FUNCTION: Reactor Coolant Pump Seal Water PCV

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve cannot be exercised during power operation, since closing this valve would stop seal water flow to the reactor coolant pumps, which could cause seal failure.

ALTERNATE TEST: (CS, R) This valve will be full stroke exercised during cold shutdowns when the RCP's are not running and during refueling outages.

# VALVE RELIEF REQUEST

NUMBER: V-26

SYSTEM: High Pressure Safety Injection/RCS Charging

VALVE: HSI-52, HSI-53, HSI-56, HSI-57, CH-149, CH-150

DRAWING NO.: FM-31B/91B

CATEGORY: C

CLASS: 2

FUNCTION: Charging Pump Check Valves

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be full or partial stroke exercised during power operation since this would require injecting highly borated water into the reactor coolant system causing a reactivity excursion, which could result in a reactor trip.

ALTERNATE TEST: (CSp, R) These valves will be partial stroke exercised at a cold shutdown frequency. Full stroke exercising cannot be accomplished during cold shutdown conditions, since an expansion volume does not exist in the RCS to accommodate the large volume of water required to full stroke exercise these valves. No other full flow flowpath exists for full stroke exercising these valves during the cold shutdown condition. The valves will be full stroke exercised during refueling outages.

VALVE RELIEF REQUEST

NUMBER: V-27

SYSTEM: Residual Heat Removal

VALVE: LSI-42, LSI-43, LSI-44, LSI-45

DRAWING NO.: FM-32A/92A

CATEGORY: C

CLASS: 2

FUNCTION: RWST Outlet Check and LPSI Pump Suction Check Valves

EXEMPT TEST: Q, CS

BASIS FOR RELIEF: These valves cannot be full stroke exercised during power operation, or cold shutdowns since the only full flow flowpath is into the reactor coolant system and the low pressure safety injection pumps cannot overcome PCS pressure.

ALTERNATE TEST: (Qp, R) These valves will be partial stroke exercised during power operation and full stroke exercised at refueling outages.

# VALVE RELIEF REQUEST

NUMBER: V-28

SYSTEM: Residual Heat Removal

VALVE: LSI-50, LSI-51

DRAWING NO.: FM-32A/92A

CATEGORY: C

CLASS: 2

FUNCTION: LPSI Pump Discharge Check

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be full or partial stroke exercised during power operation, since no flowpath exists except into the RCS or containment spray headers. The LPSI pumps cannot overcome RCS pressure to permit flow in this direction.

ALTERNATE TEST: (CS) These valves will be full stroke exercised during cold shutdowns when the RHR system is being utilized to remove core decay heat.

## VALVE RELIEF REQUEST

NUMBER: V-29

SYSTEM: SIA-10, SIA-20, SIA-30

DRAWING NO.: FM-32A/92A

CATEGORY: C

CLASS: 2

FUNCTION: Safety Injection Tank Discharge Check Valves

EXEMPT TEST: Q, CS, R

**BASIS FOR RELIEF:** These valves cannot be fully or partially stroked during plant operation or cold-shutdown conditions. The reactor coolant system is normally at a higher pressure than the safety injection tanks, and this back pressure keeps these check valves closed.

Exercising these valves full stroke during refueling would require the timed dumping of each tank into an open reactor vessel. The reactor head must be off to insure a sufficient R.C.S. volume, at a low enough pressure to allow a rapid discharge of each tank. Under these conditions the surge of water into the vessel might move and damage the fuel, which is normally held down by the reactor head. Following the surge of water, a large volume of nitrogen would be discharged into the containment building. This nitrogen would propel contaminated material into the containment building's atmosphere.

These valves are seal welded closed, have no mechanical method of cycling, and are located in a high radiation area.

**ALTERNATE TEST:** These valves will be part stroke exercised during refueling outages with the S.I. tanks being utilized to meet flow requirements. Testing will be done with the vessel head removed and the RCS depressurized.



VALVE RELIEF REQUEST

NUMBER: V-30

SYSTEM: Containment Spray

VALVE: CS-25, CS-26, CS-29, CS-30, CS-48, CS-51

DRAWING NO.: FM-32A/92A

CATEGORY: C

CLASS: 2

FUNCTION: Containment Spray Check Valves

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be full or partial stroke exercised during power operation, since no flow path exists except into the RCS or containment spray headers. The LPSI pumps cannot overcome RCS pressure to permit flow in this direction and spraying containment would soak and damage electrical equipment from contaminated borated water resulting in a massive cleanup effort.

ALTERNATE TEST: (CS) - These valves will be full stroke exercised during cold shutdowns when the RHR system is being utilized to remove core decay heat.

VALVE RELIEF REQUEST

NUMBER: V-33

SYSTEM: Air Cooling and Purging

VALVES: VP-A-1, VP-A-2, VP-A-3, VP-A-4, VP-A-5

DRAWING NO.: FB-6A/38A

CATEGORY: A

CLASS: 2

FUNCTION: Containment Purge System

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves are passive and do not change position to perform their safety related function, therefore exempt from regular testing requirements.

ALTERNATE TEST: (R, LT) Cycled and leak tested at a refueling interval.

# VALVE RELIEF REQUEST

NUMBER: V-36

SYSTEM: Containment Spray

VALVE: CS-3, CS-4

DRAWING NO.: FM-32A/92A

CATEGORY: A/C

CLASS: 2

FUNCTION: Containment Spray Headers Inlet Check

EXEMPT TEST: Q, CS

BASIS FOR RELIEF: These valves cannot be full or partial stroke exercised during power operations, since the only available flow-path introduces contaminated water into the containment area via the spray headers. This would result in electrical equipment damage and a massive radiological cleanup effort.

ALTERNATE TEST: (CSp, R) These valves will be partial stroke exercised during cold shutdowns by means of a drainline flow path.

Full stroke verification will be accomplished by partially disassembling the valves followed by mechanical exercising.

Alternately, one valve will be disassembled and exercised each refueling outage. If a degraded condition is found, the valve in the other train will be disassembled and tested. This method will insure valve operability while reducing radiation exposure, testing costs, and general respirator work.

# VALVE RELIEF REQUEST

NUMBER: V-37

SYSTEM: Containment Spray

VALVE: CS-93, CS-94

DRAWING NO.: FM-32A/92A

CATEGORY: C

CLASS: 2

FUNCTION: Containment Sump Suction Check Valves

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be partial or full stroke exercised during power operation or cold shutdowns, since the only flowpath would require flooding the containment sump and this is neither possible or practical.

ALTERNATE TEST: (R) These valves will be full stroke exercised during refueling outages by partially disassembling the valves followed by mechanical exercising.

Alternately, one valve will be disassembled and exercised each refueling outage. If a degraded condition is found, the valve in the other train will be disassembled and tested. This method will insure valve operability while reducing radiation exposure, testing costs, and general respirator work.

VALVE RELIEF REQUEST

NUMBER: V-38

SYSTEM: Primary Component Cooling

VALVE: PCC-222

DRAWING NO.: FM-34C/94C

CATEGORY: A/C

CLASS: 2

FUNCTION: Header Inlet Check to Containment Air Coolers

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve is open during power operation, since this flowpath is the inlet line for PCC to the air coolers in containment, therefore verification of the valve closing (its safety related position) is not possible.

ALTERNATE TEST: (LT) This valve will be verified to move shut (its safety related position) during refueling outages, at which time a leak rate test is performed.

VALVE RELIEF REQUEST

NUMBER: V-42

SYSTEM: Secondary Component Cooling

VALVE: SCC-T-227, SCC-T-257, SCC-T-315

DRAWING NO.: FM-17B/78A, 17B/78B

CATEGORY: B

CLASS: 3

FUNCTION: Hydrogen, Turbine Oil, and Electro-Hydraulic Governor Oil  
Coolers Temperature Control

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be exercised during power operation, since this would cause overheating of the turbine generator, electro-hydraulic governor oil control system, and turbine oil system, which are required for continued power operation.

ALTERNATE TEST: (CS) These valves will be full stroke exercised during cold shutdown conditions.

VALVE RELIEF REQUEST

NUMBER: V-43

SYSTEM: Auxiliary Feedwater

VALVE: AFW-43, AFW-306  
DRAWING NO.: FM-12A/73A  
CATEGORY: C

SAFETY CLASS: 3

FUNCTION: Aux. Feedwater Pump Suction Checks

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be full stroke exercised during power operation. The only full-flow path is to the steam generators and the cold water would cause thermal transients on the steam generator feedwater nozzles and ultimate failure.

ALTERNATE TEST: (Op, CS) These valves will be part stroked during the monthly pump tests and full stroked on a cold shutdown frequency.

# VALVE RELIEF REQUEST

NUMBER: V-44

SYSTEM: Auxiliary Feedwater

VALVE: AFW-104, AFW-204, AFW-304

DRAWING NO.: FM-12A/73A

CATEGORY: C

SAFETY CLASS: 2

FUNCTION: Aux. Feed System Isolation from Steam Generators

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be exercised during power operation, since the only flow path is into the steam generators and the cold water would cause thermal transients on the steam generator feedwater nozzles and ultimate failure.

ALTERNATE TEST: (CS) These valves will be full stroke exercised on a cold shutdown frequency.



VALVE RELIEF REQUEST

NUMBER: V-45

SYSTEM: Auxiliary Feedwater

VALVE: AFW-15, AFW-18, AFW-314

DRAWING NO.: FM-12A/73A

CATEGORY: C

SAFETY CLASS: 3

FUNCTION: Aux. Feedwater Pump Discharge Checks

EXEMPT TEST: Q

BASIS FOR RELIEF: These valves cannot be exercised during power operation since the only flow path is into the steam generators and the cold water would cause thermal transients on the steam generator feedwater nozzles and ultimate failure.

ALTERNATE TEST: (CS) These valves will be full stroke exercised on a cold shutdown frequency.

VALVE RELIEF REQUEST

NUMBER: V-46

SYSTEM: Primary Component Cooling

VALVE: PCC-M-150

DRAWING NO.: FM-34B/94B

CATEGORY: B

CLASS: 3

FUNCTION: Inlet to Letdown Heat Exchanger

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve cannot be exercised during power operation, since this would require securing the primary system letdown flow, which would result in a loss of pressurizer level control and also adversely effect the suction head for the charging pumps.

ALTERNATE TEST: (CS) This valve will be full stroke exercised during cold shutdown conditions.

# VALVE RELIEF REQUEST

MEER: V-47

STEM: Steam Generator Feedwater

ALVE: FW-F-107, FW-F-207, FW-F-307

AWING NO.: FM-12A/73A

ATEGORY: B

AFETY CLASS: 2

UNCTION: Feedwater Flow Control Valves

EMPT TEST: Q

ASIS FOR RELIEF: These valves cannot be full stroke exercised during power operation since feed flow to the given steam generator would be secured causing a loss of water level which could result in a reactor trip.

uring  
team  
ater

ALTERNATE TEST: (CS) These valves modulate during normal operation and will be full stroke exercised on a cold shutdown frequency.

on

# VALVE RELIEF REQUEST

NUMBER: V-49

SYSTEM: Primary Component Cooling

VALVE: PCC-M-219

DRAWING NO.: FM-34C/94C

CATEGORY: A

SAFETY CLASS: 3

FUNCTION: Cooling Water Supply to Reactor Coolant Pumps

EXEMPT TEST: Q

BASIS FOR RELIEF: This valve cannot be exercised during power operation, since closing this valve would isolate the cooling water supply to the reactor coolant pumps, which is required during power operation.

ALTERNATE TEST: (CS) This valve will be full stroke exercised during cold shutdown conditions providing the RCP's are secured. In the event the RCP's are in operation during a cold shutdown, this valve will be full stroke exercised during the following refueling outage.

VALVE RELIEF REQUEST

NUMBER: V-50

SYSTEM: RCS Charging

VALVE: CH-10, CH-19, CH-26

DRAWING NO.: FM-31B/91B

CATEGORY: C

SAFETY CLASS: 2

FUNCTION: Charging Pump Discharge Check Valves

EXEMPT TEST: Q

BASIS FOR RELIEF: Full flow is required to open these valves full stroke and the charging system operates at a reduced flow rate. Increasing the flow enough to fully open these valves could cause the RCS to go solid, resulting in overpressurization.

ALTERNATE TEST: (Qp, R) These valves will be part stroked during monthly charging pump performance tests, and full stroked during refueling by a high pressure safety injection system flow test.

VALVE RELIEF REQUEST

NUMBER: V-54

SYSTEM: Nitrogen Gas Piping

VALVE: N-29

DRAWING NO.: FM-29A/89A

CATEGORY: A/C

SAFETY CLASS: 2

FUNCTION: Penetration #44, Inner Isolation Check

EXEMPT TEST: Q

BASIS FOR RELIEF: The isolation function of this valve is verified on a refueling interval by a system leak test. This is the only method we have to verify its closed position and there is no safety requirement for opening this valve. Therefore, this valve should be exempt from quarterly stroke testing.

ALTERNATE TEST: LT

VALVE RELIEF REQUEST

NUMBER: V-57

SYSTEM: Primary Component Cooling

VALVE: PCC-M-90, PCC-M-150

DRAWING NO.: FM-34B/94B

CATEGORY: B

SAFETY CLASS: 3

FUNCTION: Inlets to Primary System Heat Exchangers

EXEMPT TEST: Q

BASIS FOR RELIEF: Closing these valves during normal plant operation would cause overheating, and possible failure, of primary plant equipment.

ALTERNATE TEST: CS

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
MS-S-12	2	J-2	A, C	4"	AS				SRV, LTS		
MS-S-13	2	I-2	A, C	6	AS				SRV, LTS		
MS-S-14	2	J-2	A, C	6	AS				SRV, LTS		
MS-S-15	2	K-2	A, C	6	SV				SRV, LTS		
MS-S-16	2	K-2	A, C	6	SV				SRV, LTS		
MS-S-17	2	K-2	A, C	6	SV				SRV, LTS		
MS-S-22	2	J-4	A, C	6	SV				SRV, LTS		
MS-S-23	2	J-4	A, C	6	SV				SRV, LTS		
MS-S-24	2	K-4	A, C	6	SV				SRV, LTS		
MS-S-25	2	K-4	A, C	6	SV				SRV, LTS		
MS-S-26	2	K-4	A, C	6	SV				SRV, LTS		
MS-S-27	2	K-4	A, C	6	SV				SRV, LTS		
MS-S-32	2	J-6	A, C	6	SV				SRV, LTS		
MS-S-33	2	J-6	A, C	6	SV				SRV, LTS		
MS-S-34	2	J-6	A, C	6	SV				SRV, LTS		
MS-S-35	2	K-6	A, C	6	SV				SRV, LTS		
MS-S-36	2	K-6	A, C	6	SV				SRV, LTS		
MS-S-37	2	K-6	A, C	6	SV				SRV, LTS		
MS-M-10	2	I-3	A	30	VSW	MCB			CS, LTS	V-6	
MS-M-20	2	I-4	A	30	VSW	MCB			CS, LTS	V-6	
MS-M-30	2	I-6	A	30	VSW	MCB			CS, LTS	V-6	
MS-11	2	I-3	C	30	VSW				Qp, CS	V-7	
MS-22	2	I-4	C	30	VSW				Qp, CS	V-7	
MS-33	2	I-6	C	30	VSW				Qp, CS	V-7	
MS-50	2	I-3	A, E	2	VOS		IC		Qp, CS		
MS-70	2	I-4	A, E	2	VOS		IC		ET, LTS		
MS-90	2	I-6	A, E	2	VOS		IC		ET, LTS		
MS-59	2	K-3	C	6	VSW				Q		
MS-79	2	K-5	C	6	VSW				Q		



VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
MS-99	2	K-6	C	6	VSM	MCB	0	C	0		
MS-M-161	2	K-7	A	6	WCM	MCB	0	C	0, 15s		
MS-A-162	2	K-7	B	6	WCM	MCB	0	M	0		

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
AS-540		H-4	A/E	1	VCS		LC	LC	ET, LT		
AS-542		H-4	A/E	1	VCS		LC	LC	ET, LT		
MS-164	3	D-4	C	3	VCM		C	0	Q		
MS-P-168	3	E-3	B	1-1/2	VCS	MCB	C	M	Q		
MS-A-173	3	E-2	B	3	VCF	MCB	0	M	Q		Signal (SCEP)
MS-185	3	D-4	E	3	VCM		LD	LD	ET		Governor Valve
MS-T-163	2	K-7	A	3	VCM	CIS	0	C	Q, ITS		

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
AFW-1	3	A-6	E	8	VCW		LO	LO	ET	V-45	
AFW-2	3	C-8	E	8	VCW		LO	LO	ET		
AFW-3	3	I-7	E	8	VCW		LO	LO	ET		
AFW-15	3	F-7	C	6	VCW		C	LO	CS		
AFW-17	3	F-7	E	6	VCW		LO	LO	ET		
Z-W-18	3	D-8	C	6	VCW		C	LO	CS		
AFW-20	3	D-8	E	6	VCW		LO	LO	ET		
AFW-43	3	E-7	C	8	VCW		C	LO	ET	V-45	
AFW-100	3	G-7	E	3	VCW		LO	LO	Q, CS	V-43	
AFW-A-101	2	G-7	A	2-1/2	ICV	MCB	0	M	Q, LTS		
AFW-102	2	G-7	E	3	VCW		LO	LO	ET		
AFW-200	3	H-7	E	3	VCW		LO	LO	ET		
AFW-A-201	2	G-7	A	2-1/2	ICV	MCB	0	M	Q, LTS		
AFW-202	2	H-7	E	3	VCW		LO	LO	ET		
AFW-300	3	G-7	E	3	VCW		LO	LO	ET		
AFW-A-301	2	G-7	A	2-1/2	ICV	MCB	0	M	Q, LTS		
AFW-302	2	G-7	E	3	VCW		LO	LO	ET		
AFW-306	3	I-8	C	6	VCW		C	LO	Q, CS	V-43	
AFW-314	3	F-8	C	6	VCW		C	LO	CS	V-45	
AFW-316	3	G-8	E	6	VCW		LO	LO	ET		
AFW-37	3	A-6	E	1-1/2	VCW		LO	LO	ET		
FW-A-112	2	H-2	B	4	ICV	MCB	C	M	Q		
FW-A-212	2	H-4	B	4	ICV	MCB	C	M	Q		
FW-A-312	2	H-6	B	4	ICV	MCB	C	M	Q		
FW-F-107	2	H-2	B	12	FCV	MCB	M	C	CS	V-47	
FW-F-207	2	H-4	B	12	FCV	MCB	M	C	CS	V-47	
FW-F-307	2	H-6	B	12	FCV	MCB	M	C	CS	V-47	
FW-131	2	J-2	C	14	VCW		0	0	CS	V-48	
FW-231	2	J-4	C	14	VCW		0	0	CS	V-48	

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
FW-311	2	J-6	C	14	VCM		O	C	S	V-48	
AFW-104	2	I-7	C	14	VCM		O	O	S	V-44	
AFW-204	2	I-7	C	14	VCM		O	O	S	V-44	
AFW-304	2	I-7	C	14	VCM		O	O	S	V-44	
AFW-4	3	B-8	E	4	VOS		IC	IC	ET		
AFW-26	3	C-7	E	1	VOS		IC	IC	ET		
AFW-307	3	E-8	E	6	VCM		IC	IC	ET		
AFW-311	3	F-8	E	1	VOS		IC	IC	ET		
AFW-312	3	F-8	E	1	VOS		IC	IC	ET		
AFW-21	3	F-7	E	3	VOS		IC	IC	ET		
AFW-103	3	H-7	E,A	3	VCM		IC	IC	ET, ITS		
AFW-203	3	H-7	E,A	3	VCM		IC	IC	ET, ITS		
AFW-303	3	H-7	E,A	3	VCM		IC	IC	ET, ITS		
AFW-105	2	I-8	A,E	3/4	VOS		IC	IC	ET, ITS		
AFW-205	2	I-8	A,E	3/4	VOS		IC	IC	ET, ITS		
AFW-305	2	I-8	A,E	3/4	VOS		IC	IC	ET, ITS		
FW-M-104	2	J-2	A	14	VCM	MCB	O	C	CS, ITS	V-11	
FW-M-204	2	J-4	A	14	VCM	MCB	O	C	CS, ITS	V-11	
FW-M-304	2	J-6	A	14	VCM	MCB	O	C	CS, ITS	V-11	

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
SW-1	3	H-7	C	20	NCF						
SW-4	3	H-6	C	20	NCF						
SW-7	3	H-4	C	20	NCF						
SW-10	3	H-2	C	20	NCF						
SW-16	3	F-6	C	24	NCF						
SW-17	3	F-9	C	24	NCF						
SW-2	3	H-7	E	20	WF		0	0	0		
SW-5	3	H-6	E	20	WF		0	0	0		
SW-8	3	H-4	E	20	WF		0	0	0		
SW-11	3	H-2	E	20	WF		0	0	0		
SW-30	3	F-7	E	24	WF		0	0	0		
SW-31	3	F-8	E	24	WF		0	0	0		
SW-32	3	F-7	E	24	WF		0	0	0		

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
SXC-2	3	31-7	E	16	WVI		0	0	0		
SXC-7	3	31-7	C	16	WVI		0	0	0		
SXC-8	3	31-7	E	16	WVI		0	0	0		
SXC-9	3	31-9	E	16	WVI		0	0	0		
SXC-14	3	31-8	C	16	WVI		0	0	0		
SXC-15	3	31-8	E	16	WVI		0	0	0		
SXC-T-23	3	31-7	B	14	WVI		0	0	0		
SXC-T-24	3	31-7	B	16	WVI		0	0	0		
SXC-62	3	31-4	E	1-1/2	WCS		0	0	0		
SXC-162	3	31-4	E	14	WVI		0	0	0		
SXC-M-165	3	31-4	B	14	WVI	RAS	0	0	0	V-42	
SXC-T-227	3	31-5	B	8	WVI	CSAS	0	0	0		
			E								

R

R R

R R R R R R R R R R R R R R R R



VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
SOC-T-315	3	I-7	B	3/4	VOS	CSAS	0	C	QS	V-42	
SOC-T-257	3	A-4	B	4	VOW	CSAS	0	C	QS	V-42	
SOC-T-292	3	I-2	B	4	ICV		C		Q		
SOC-T-301	3	J-2	B	4	ICV		C		Q		
SOC-T-294	3	J-4	B	4	ICV		C		Q		
SOC-T-303	3	K-4	B	4	ICV		C		Q		
SOC-T-296	3	I-4	B	3	ICV		0		Q		
SOC-T-305	3	K-4	B	3	ICV		0		Q		
SOC-291	3	I-2	C	4	VOW		C	0	Q		
SOC-300	3	K-2	C	4	VOW		C	0	Q		
SOC-298	3	I-5	C	4	VOW		C	0	Q		
SOC-307	3	K-5	C	4	VOW		C	0	Q		
SOC-290	3	I-2	E	4	VGW		10	10	ET		
SOC-299	3	J-2	E	4	VGW		10	10	ET		
SOC-297	3	J-5	E	4	VGW		10	10	ET		
SOC-306	3	K-5	E	4	VGW		10	10	ET		
FS-37	3	I-2	E	6			10	10	ET		

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
IA-A-98	2	E-6	A	1	AGS	CIS	0	C	Q, LT		
IA-A-101	2	C-6	A	1	AGS	CIS	0	C	Q, LT		
IA-A-107	2	E-6	A	1/2	AGS	CIS	0	C	Q, LT		
IA-109	2	D-6	A,C	1	ACT		0	C	LT	V-13	
IA-135	2	E-5	A,E	1-1/2	ACT		IC	IC	ET, LT		
IA-137	2	D-5	A,C	1-1/2	ACT		C		LT	V-15	
SA-180	2	A-7	A,E	6	AGW		IC	IC	ET, LT		
SA-A-138	2	D-4	A	3	AGT	CIS	C	C	Q, LT		
SA-139	2	D-4	A,C	3	AGW		C	C	CS, LT	V-16	
IM-A-55	2	D-2	A	3/8	VO	MCB	0	C	Q, LT		
IM-A-56	2	D-2	A	3/8	VO	MCB	0	C	Q, LT		
IM-A-57	2	D-3	A	3/8	VO	MCB	0	C	Q, LT		
IM-A-58	2	D-3	A	3/8	VO	MCB	0	C	Q, LT		
IM-A-43	2	G-2	A	3/8	IV	CIS	0	C	Q, LT		
IM-A-45	2	G-2	A	3/8	IV	CIS	0	C	Q, LT		



SYSTEM NAME: CUMULICAL FEED & SECONDARY SAMPLING

FM DRAWING NO. 22A, 83A

PAGE 10

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RF' IEF REQUESTS	REMARKS
CV-29	2	20-1	A/E	3/4	MS		5 5 5	5 5 5	ET, IF ET, IF ET, IF		
CV-31	2	20-2	A/E	3/4	MS		5 5 5	5 5 5	ET, IF ET, IF ET, IF		
CV-33	2	20-3	A/E	3/4	MS		5 5 5	5 5 5	ET, IF ET, IF ET, IF		

SYSTEM NAME:      SECONDARY H.P. DRAIN PIPING

FM DRAWING NO.      26A, 87A

PAGE 11

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
HYP-A-96	2	1-6	B	2	WGS	CIS	0	C	0		
HYP-A-17	2	1-6	B	2	WGS	CIS	0	C	0		

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
BD-T-12	2	1-7	V	2	MOG	CIS	0	0	0, 1, 1, 1, 1, 1		
BD-T-22	2	1-5	V	2	MOG	CIS	0	0	0, 1, 1, 1, 1, 1		
BD-T-32	2	1-3	V	2	MOG	CIS	0	0	0, 1, 1, 1, 1, 1		
BD-59	2	1-7	V, E	3	MOG	LC	0	0	0, 1, 1, 1, 1, 1		

SYSTEM NAME: DIESEL GEN. STARTING AIR

FM DRAWING NO. 27A/89A

PAGE 13

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
HC-7	3	1-3	C	1-5	WCS		C	C	C		
HC-8	3	1-4	C	1-5	WCS		C	C	C		
HC-11	3	1-4	C	1-5	WCS		C	C	C		
HC-12	3	1-4	C	1-5	WCS		C	C	C		

SYSTEM NAME: GAS PIPING

FM DRAWING NO. 29A, 89A

PAGE 14

VALVE NUMBER		
H-29	2	SAFETY CLASS
H-A-66	2	COORDINATES
	A, C	CATEGORY
	2	SIZE (INCHES)
	WCS	VALVE TYPE
		SIGNAL TYPE
	0	NORMAL POSITION
	C	SAFETY POSITION
	10, 10	TEST FREQUENCY
	V-54	RELIEF REQUESTS
		REMARKS

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
HS-17	1	1-5	E	3	VCW		10	10	ET		
HS-27	1	1-2	E	3	VCW		10	10	ET		
HS-37	1	1-2	E	3	VCW		10	10	ET		
HS-16	1	1-6	E	10	VCW		10	10	ET		
HS-26	1	1-4	E	10	VCW		10	10	ET		
HS-36	1	1-4	E	10	VCW		10	10	ET		
HS-17	1	1-6	C	14	VCW		0	0	CSp, R	V-1	
HS-27	1	1-4	C	14	VCW		0	0	CSp, R	V-1	
HS-37	1	1-4	C	14	VCW		0	0	CSp, R	V-1	
PR-S-11	1	1-7	C	3	SV		0	0	SV		
PR-S-12	1	1-7	C	3	SV		0	0	SV		
PR-S-13	1	1-7	C	3	SV		0	0	SV		
PR-S-14	1	1-7	C	2-1/2	RV		0	0	SV		
PR-S-15	1	1-7	C	2-1/2	RV		0	0	SV		
PR-M-16	1	1-7	B	2-1/2	VCW	MB	0	0	Q		
PR-M-17	1	1-7	B	2-1/2	VCW	MB	0	0	Q		
PR-A-40	2	1-6	A	2	VCW	CIS	0	0	Q, ET		
PR-A-41	2	1-6	A	2	VCW	CIS	0	0	Q, ET		
IV-A-78	2	1-7	A	2	VCW	CIS	0	0	Q, ET		
IV-B0	2	1-7	A, C	2	VCW	CIS	0	0	Q, ET, R	V-18	



VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
CI-65	2	F-7	A, E	2	VCS		LC	LC	ET, IT	V-4	
CI-66	3	F-7	A, E	2	VCS		LC	LC	ET, IT		
CI-72	1	E-4	C	2	VCS		C	LC	CS		
CI-73	1	B-4	A, E	1	VCS		LC	LC	ET, IT		
CI-85	2	E-4	A, E	2	VCS		LC	LC	ET, IT		
CI-A-32	2	F-7	A	1	VW	SIAS	O	C	Q, IT		
CI-A-33	2	F-7	A	3	VW	SIAS	O	C	Q, IT	V-10	
CI-F-38	2	F-4	B	2	VCS	SIAS	M	C	Q, CS		
CI-F-70	2	F-4	B	1	VCS	SIAS	O	C	Q, CS	V-19	
CI-M-1	2	I-6	B	4	VW	SIAS	O	C	Q, CS		
CI-M-44	1	B-2	A	3	IRV		O	O	Q, IT		
CI-M-49	1	A-3	A	3	IRV		O	O	Q, IT		
CI-M-52	1	B-3	A	2	IRV		C	C	CS, IT	V-19	
CI-M-75	1	B-4	A	2	IRV	MCB	O	O	Q, IT		
CI-M-87	2	I-7	B	4	VW	SIAS	O	O	Q, P, R	V-19	
CI-S-47	1	B-2	A, C	1	VCS		O	O	IT	V-20	
LD-M-2	1	B-1	A	2-1/2	VW	SIAS	O	C	CS, IT	V-2	
LD-F-5	1	E-2	A	2	VCS	SIAS	O	C	CS, IT	V-3	
RD-M-15	1	F-4	A	2	IRV	MCB	O	C	O, IT		
RD-M-25	1	D-4	A	2	IRV	MCB	O	C	O, IT		
RD-M-35	1	E-4	A	2	IRV	MCB	O	C	O, IT		
SL-9	2	D-8	A, E	1	VCS		LC	LC	ET, IT		
SL-15	2	E-9	A, E	1	VCS		LC	LC	ET, IT		
SL-A-53	2	F-6	A	3	VW	CIS	O	C	CS, IT	V-23	
SL-M-29	2	B-6	A	1-1/2	VCS	CIS	O	C	CS, IT	V-23	
SL-M-40	2	C-7	A	1-1/2	VCS	CIS	O	C	CS, IT	V-23	
SL-M-51	2	E-7	A	1-1/2	VCS	CIS	O	C	CS, IT	V-23	
SL-F-3	2	D-8	A	2	VCS	SIAS	O	C	CS, IT	V-24	

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
CI-7	2	1-4	E	10	VCW		L	L	ET		
CI-8	2	1-3	E	10	VCW		L	L	ET		
CI-10	2	1-5	C	4	VCW		O	O	Qp, R	V-50	
CI-11	2	1-5	E	4	VCW		IO	IO	ET		
CI-14	2	1-5	E	6	VCW		IO	IO	ET		
CI-16	2	1-3	E	6	VCW		IO	IO	ET		
CI-19	2	1-3	C	4	VCW		O	O	Qp, R	V-50	
CI-20	2	1-3	E	4	VCW		IO	IO	ET		
CI-21	2	1-2	E	6	VCW		IO	IO	ET		
CI-26	2	1-2	C	3	VCW		O	O	Qp, R	V-50	
CI-27	2	1-2	E	4	VCW		IO	IO	ET		
CI-30	2	1-4	E	4	VCW		L	L	ET		
CI-31	2	1-3	E	4	VCW		L	L	ET		
CI-M-86	2	1-2	E	2	VCB		IO	IO	ET		
CI-149	2	1-2	C	3	VCW	SIAS	C	O	QSp, R	V-26	
CI-150	2	1-4	C	3	VCW	SIAS	C	O	QSp, R	V-26	
ESI-M-11	2	1-3	A	3	VCW	SIAS	C	O	Q, IT		
ESI-M-12	2	1-3	A	3	VCW	SIAS	C	O	Q, IT		
ESI-15	1	1-3	C, A	4	VCW	SIAS	C	O	QSp, R	V-B	IT
ESI-M-21	2	1-5	A	3	VCW	SIAS	C	O	Q, IT		
ESI-M-22	2	1-5	A	3	VCW	SIAS	C	O	Q, IT		
ESI-25	1	1-6	C, A	4	VCW	SIAS	C	O	QSp, R	V-B	IT
ESI-M-31	2	1-7	A	3	VCW	SIAS	C	O	Q, IT		
ESI-M-32	2	1-7	A	3	VCW	SIAS	C	O	Q, IT		
ESI-35	1	1-8	C, A	4	VCW	SIAS	C	O	QSp, R	V-B	IT
ESI-M-40	2	1-7	B	4	VCW	SIAS	C	O	Q		
ESI-M-41	2	1-7	B	4	VCW	SIAS	C	O	Q		
ESI-M-42	2	1-8	B	4	VCW	SIAS	C	O	Q		
ESI-M-43	2	1-8	B	4	VCW	SIAS	C	O	Q		



HIGH PRESSURE SAFETY INJECTION &  
CHEMICAL VALVE CONTROL

PAGE 18

FM DRAWING NO. 31B, 91B

SYSTEM NAME

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
IESI-48	2	10-7	E	2	VCS		IC	IC	1H		
IESI-49	2	10-7	E	2	VCS		IC	IC	1H		
IESI-M-50	2	1-5	B	10	VCM		IC	IC	1H		
IESI-M-51	2	1-2	B	10	VCM		IC	IC	1H		
IESI-52	2	1-5	C	10	VCM		IC	IC	1H		
IESI-53	2	1-2	C	10	VCM		IC	IC	1H		
IESI-M-54	2	1-4	B	6	VCM	RAS	IC	IC	1H	V-26	
IESI-M-55	2	1-2	B	6	VCM	RAS	IC	IC	1H	V-26	
IESI-56	2	1-4	C	6	VCM		IC	IC	1H		
IESI-57	2	1-2	C	6	VCM		IC	IC	1H		
IESI-M-11	2	1-3	A	8	VCM	SIAS	IC	IC	1H	V-26	
IESI-12	1	1-4	C, A	10	VCM		IC	IC	1H	V-26	
IESI-M-21	2	1-6	A	8	VCM	SIAS	IC	IC	1H	V-5	
IESI-22	1	1-6	C, A	10	VCM		IC	IC	1H	V-5	
IESI-M-31	2	1-8	A	8	VCM	SIAS	IC	IC	1H	V-5	
IESI-32	1	1-8	C	10	VCM		IC	IC	1H		
SIAS-A-12	1	1-3	B	1	VCS	SIAS	IC	IC	1H		
SIAS-A-22	1	1-5	B	1	VCS	SIAS	IC	IC	1H		
SIAS-A-32	1	1-7	B	1	VCS	SIAS	IC	IC	1H		

SYSTEM NAME: RESIDUAL HEAT RE&VAL., CONTAINMENT SPRAY & L.P. SAFETY INJECTION SYSTEM

FM DRAWING NO. 32A, 92A

PAGE 19

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
CS-16	2	H-7	E	6	MCW		LC	LC	ET		
CS-23	2	H-3	E	4	MCW		LC	LC	ET		
ISI-M-40	2	K-3	B	18	MCW	RAS			Q	V-27	
ISI-M-41	2	K-3	B	18	MCW	RAS			Q	V-27	
ISI-42	2	K-4	C	16	MCW				Qp, Q	V-27	
ISI-43	2	K-4	C	16	MCW				Qp, Q	V-27	
ISI-45	2	K-7	C	16	MCW				Qp, Q	V-27	
ISI-50	2	I-7	C	10	MCW				Qp, Q	V-28	
ISI-51	2	I-6	C	10	MCW				Qp, Q	V-28	
ISI-56	2	I-7	C	3	MCW				Q		
ISI-57	2	I-6	C	3	MCW				Q		
ISI-F-59	2	F-7	E	12	MCW		LC	LC	ET	V-27	
ISI-44	2	K-7	C	16	MCW				Qp, R		
CS-M-1	2	D-2	A	10	MCW	CSAS	C	C	Q, LT		
CS-M-2	2	D-3	A	10	MCW	CSAS	C	C	Q, LT		
CS-4	2	D-2	A, C	10	MCW		C	C	CSp, R	V-36	LT
CS-3	2	D-2	A, C	10	MCW		C	C	CSp, R	V-36	LT
CS-25	2	I-4	C	10	MCW		C	C	Q	V-30	
CS-26	2	I-6	C	10	MCW		C	C	Q	V-30	
CS-29	2	H-4	C	10	MCW		C	C	Q	V-30	
CS-30	2	H-6	C	16	MCW		C	C	Q	V-30	
CS-33	2	I-4	C	3	MCW		C	C	Q		
CS-34	2	I-5	C	3	MCW		C	C	Q		
CS-53	2	F-2	C	6	MCW		C	C	Q		
CS-A-55	2	D-3	A	3	MCW		C	C	Q, LT		
CS-A-56	2	D-3	A	3	MCW		C	C	Q, LT		
CS-68	2	I-3	E	8	MCW		LC	LC	ET		
CS-5	2	C-2	E	10	MCW		LC	LC	ET		
CS-6	2	C-2	E	10	MCW		LC	LC	ET		

R

R

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
CS-14	2	E-6	2	J-4	E	10	IO	IO	EF		
CS-17	2	J-4	E	10	WGV	10	IO	IO	EF		
CS-18	2	J-6	E	14	WGV	10	IO	IO	EF		
CS-21	2	J-6	E	2	WGS	10	IO	IO	EF		
CS-22	2	K-5	E	2	WGS	10	IO	IO	EF		
CS-27	2	I-4	E	10	WGV	10	IO	IO	EF		
CS-28	2	I-6	E	10	WGV	10	IO	IO	EF		
CS-31	2	G-4	E	10	WGV	10	IO	IO	EF		
CS-32	2	G-6	E	10	WGV	10	IO	IO	EF		
CS-35	2	I-4	E	3	WBM	10	IO	IO	EF		
CS-36	2	I-5	E	3	WBM	10	IO	IO	EF		
CS-37	2	I-4	E	10	WGV	10	IO	IO	EF		
CS-38	2	I-5	E	10	WGV	10	IO	IO	EF		
CS-41	2	J-5	E	14	WGV	10	IO	IO	EF		
CS-42	2	J-5	E	14	WGV	10	IO	IO	EF		
CS-44	2	I-5	E	2	WGS	10	IO	IO	EF		
CS-46	2	I-5	C	3	WGV	10	IO	IO	EF		
CS-47	2	I-4	E	3	WBM	10	IO	IO	EF		
CS-48	2	I-5	C	10	WGV	10	IO	IO	EF		
CS-49	2	I-5	E	10	WGV	10	IO	IO	EF		
CS-50	2	I-5	E	10	WGV	10	IO	IO	EF		
CS-51	2	I-5	C	10	WGV	10	IO	IO	EF		
CS-52	2	I-5	E	10	WGV	10	IO	IO	EF		
CS-54	2	G-3 A,C,7	2	WGS	10	IO	IO	IO	EF		
CS-93	2	I-8	C	16	WGV	10	IO	IO	EF		
CS-94	2	I-8	C	16	WGV	10	IO	IO	EF		
CS-95	2	K-5	E	2	WGS	10	IO	IO	EF		
CS-M-66	2	I-3	B	8	WGV	10	IO	IO	EF		
CS-M-71	2	I-3	B	8	WGV	10	IO	IO	EF		

SYSTEM NAME: RESIDUAL HEAT REMOVAL, CONTAINMENT SPRAY & L.P. SAFETY INJECTION SYSTEM

FM DRAWING NO. 32A/92A

PAGE 21

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
CS-M-91	2 H-8		A	16	NVI	RAS	C	O	Q, LTS	V-12	
CS-M-92	2 H-8		A	16	NVI	RAS	C	O	Q, LTS	V-12	
ISI-46	2 K-7		E	16	NW		IO	IO	ET		
ISI-47	2 K-7		E	16	NW		IO	IO	ET		
ISI-52	2 I-6		E	10	NW		IO	IO	ET		
ISI-53	2 I-7		E	10	NW		IO	IO	ET		
ISI-54	2 I-6		E	3	NW		IO	IO	ET		
ISI-55	2 I-6		E	3	NW		IO	IO	ET		
ISI-67	2 J-6		E	2	NCS		IO	IO	ET		
ISI-68	2 J-7		E	2	NCS		IO	IO	ET		
SI-A-16	2 B-4		C	14	NW		C	O	RP	V-29	
SI-A-20	2 B-6		C	14	NW		C	O	RP	V-29	
SI-A-30	2 B-8		C	14	NW		C	O	RP	V-29	
SI-A-56	2 J-2		E	6	NW		IO	IO	ET		
ISI-M-2	1										
SI-A-47	1 A-6		A	12	NW		C	O	LT	V-14	
SI-A-49	2 D-1		A	2	NCS	CIS	C	C	Q, IF		
SI-A-53	2 D-1		A	2	NCS	CIS	C	C	Q, IF		
SI-A-54	2 F-1		B	6	NW		O	C	Q		
SI-A-5-110	2 F-1		B	6	NW	RAS	O	C	Q		
SI-A-5-220	2 B-2		C	1	SV		C	O	SKV		
SI-A-5-330	2 B-4		C	1	SV		C	O	SKV		
ISI-4	2 B-6		C	1	SV		C	O	SKV		
ISI-6	1 A-6		A, E	12	NCS		IC	IC	ET, LT		
ISI-7	2 J-7		A, E	14	NW		IC	IC	ET, LT		
CS-72	2 J-7		A, E	14	NW		IC	IC	ET, LT		
CS-67	2 I-3		E	8	NW		IO	IO	ET		
CS-65	2 I-3		E	8	NW		IO	IO	ET		

R R

R R

SYSTEM NAME: RESIDUAL HEAT REMOVAL, CONTAINMENT SPRAY & L.P. SAFETY INJECTION SYSTEM

FM DRAWING NO. 32A/92A

PAGE 22

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
CS-15	2	4-4	E	6	W		IC	IC	1A		
CS-16	2	4-4	E	6	W		IC	IC	1A		
CS-13	2	4-4	E	10	W		IC	IC	1A		
ISI-10	2	6-6	E	10	W		IC	IC	1A		
ISI-11	2	6-6	E	10	W		IC	IC	1A		
ISI-19	2	7-7	E	6	W		IC	IC	1A		
CS-63	2	1-3	E	8	W		IC	IC	1A		
CS-73	2	1-3	E	8	W		IC	IC	1A		

R

R R





VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
PX-M-43	3	1-2	B	14	WCV	SVN	C	O	O		
PX-T-20	3	1-6	B	10	WCV		M	M	O		
PX-T-19	3	1-6	B	10	WCV		M	M	O		
PX-A-53	3	1-3	B	14	WCV		M	M	O		
PX-6	3	1-5	C	16	WCV		C	O	O		
PX-13	3	1-6	C	16	WCV		O	O	O		
PX-9	3	1-5	E	16	WI		O	O	ET		
PX-2	3	1-6	E	16	WI		O	O	ET		
PX-14	3	1-5	E	16	WI		O	O	ET		
PX-7	3	1-6	E	16	WI		O	O	ET		
PX-44	3	1-4	E	1-1/2	WS		O	O	ET		
PX-49	3	1-4	E	1-1/2	WS		O	O	ET		
PX-51	3	1-4	E	1-1/2	WS		O	O	ET		
PX-50	3	1-4	E	1-1/2	WS		O	O	ET		
PX-52	3	1-4	E	1-1/2	WS		O	O	ET		
PX-55	3	1-2	E	2	WS		O	O	ET		

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
ICU-M-90	3 F-2	3 F-2	B	6	W3W	RAS	0	0	8 S	V-57	
ICU-M-150	3 F-1	3 F-1	B	8	W2W	RAS	0	0		V-57	



VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
RV-A-216	2	1-7	V	1-1/2	MC	CIS	0	0	0	V-39	
RV-A-218	2	1-7	V	1-1/2	MC	CSAS	0	0	0	V-39	
RV-A-252	2	1-7	V	9	MC	CIS	0	0	0	V-40	
RV-A-254	2	1-8	V	9	MC	CIS	0	0	0	V-40	
RV-A-268	2	A-6	V	4	MC	MTB	0	0	0	V-41	
RV-A-270	2	A-7	V	4	MC	MTB	0	0	0	V-41	
RV-A-300	2	D-7	V	4	MC	CIS	0	0	0	V-41	
RV-A-302	2	D-8	A	4	MC	CIS	0	0	0	V-51	
RV-222	2	F-2	A,C	8	MC	CIS	0	0	0	V-38	
RV-M-219	3	1-1	V	10	MC	CIS	0	0	0	V-49	

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
PAP-1	2	B-8	A,E	2	W		LC	LC	ET, LT		
PAP-2	2	B-8	A,E	3/4	W		LC	LC	ET, LT		
PAP-3	2	B-8	A,E	3/4	W		LC	LC	ET, LT		
PS-A-15	2	D-3	A	3/8	W	CIS	C	C	Q, LT		
PS-A-17	2	D-3	A	3/8	W	CIS	C	C	Q, LT		
PS-A-20	2	D-4	A	3/8	W	CIS	C	C	Q, LT		
PS-A-23	2	D-5	A	3/8	W	CIS	O	C	Q, LT		
VP-A-3	2	C-8	A	42	VI		O	C	R, LT	V-33	
VP-A-4	2	C-8	A	8	W		O	C	R, LT	V-33	
VP-A-5	2	C-8	A	42	CV		C	C	F, LT	V-33	
VP-A-1	2		A	42	CV		C	C	R, LT	V-33	FB-6A
VP-A-2	2		A	42	CV		C	C	R, LT	V-33	FB-6A
PS-A-1	1	C-5	A	3/4	IV		C	C	Q, LT		
PS-A-2	1	C-6	A	3/4	IV		C	C	Q, LT		
PS-A-3	1	C-6	A	3/4	IV		C	C	Q, LT		
PS-A-4	1	C-5	A	3/4	IV		C	C	Q, LT		
PS-A-8	1	C-4	A	1	IV		C	C	Q, LT		
PAP-4	2	C-8	A,E	2	W		LC	LC	ET, LT		

VALVE NUMBER	SAFETY CLASS	COORDINATES	CATEGORY	SIZE (INCHES)	VALVE TYPE	SIGNAL TYPE	NORMAL POSITION	SAFETY POSITION	TEST FREQUENCY	RELIEF REQUESTS	REMARKS
CF-4	2	J-3	A, E	6	MM		CI	CI	LT, LT, LT, LT, LT, LT, LT, LT		
CF-7	2	K-3	A, E	6	MM		CI	CI	LT, LT, LT, LT, LT, LT, LT, LT		
C-A-14	2	J-4	A	1-1/2	MOS	CIS	CI	CI	Q, Q, Q, Q, Q, Q, Q, Q		
C-A-15	2	K-4	A	1-1/2	MOS	CIS	CI	CI	Q, Q, Q, Q, Q, Q, Q, Q		
CF-119-S	2	I-5	B	3/4	SOV	SIAS	O	CI	Q, Q, Q, Q, Q, Q, Q, Q		
CF-120-S	2	I-5	B	3/4	SOV	SIAS	O	CI	Q, Q, Q, Q, Q, Q, Q, Q		
CF-121-S	2	J-5	B	3/4	SOV	SIAS	O	CI	Q, Q, Q, Q, Q, Q, Q, Q		
CF-122-S	2	J-5	B	3/4	SOV	SIAS	O	CI	Q, Q, Q, Q, Q, Q, Q, Q		

SECTION V  
PUMP TESTING

#### INTRODUCTION:

All nuclear safety class pumps, that are required to safely shutdown the plant or to mitigate the consequences of an accident, are identified in this section. These pumps will be tested in accordance with Section XI of the ASME Code, subsection IWP, as amended to the summer of 1975. Deviations from these test requirements have been reviewed and noted in the relief requests at the end of this section.

In accordance with paragraph (g) (5) of 10 CFR 50.55a Maine Yankee Atomic Power Company reserves the right to alter the testing requirements for pumps should it be found that these requirements be impractical. The alterations will receive the same review and approval as the program itself.

# INSERVICE PUMP TESTING REQUIREMENTS

PUMP/SYSTEM	REFERENCE DRAWING	SAFETY CLASS	OPERABILITY FREQUENCY	INSERVICE TEST QUANTITIES							TYPE SYSTEM FIXED OR VARIABLE	RELIEF REQUESTS
				N SPEED	P <sub>i</sub> INLET PRESS.	P DIFF. PRESS.	Q FLOW	V VIB. AMPLI- TUDE	L OR P LUB. LEVEL OR PRESS.	T <sub>b</sub> BRG TEMP.		
P-9A, B/ Primary Component Cool. Pumps	FM-34A	3	M	NR							V	
P-10 A, B/ Secondary Comp. Cooling Pumps	FM-17A	3	M	NR							V	
P-12A, B/ Low Press. Saf. Inj. Pump	FM-32A	2	M	NR							F	P-1
P-14 A, B, S Charg/RESI	FM-31B	2	M	NR							F	
P-25A, C Aux. Feedwtr.	FM-12A	3	M	NR							F	
P-29A, B, C, D Service Wtr.	FM-16A	2	M	NR							V	P-3
P-61A, B, S Cont. Spray	FM-32A	2	M	NR							F	P-2

PUMP RELIEF REQUEST

NUMBER: P-1

SYSTEM: Low Pressure Safety Injection

PUMP: P-12A, P-12B

CLASS: 2

TEST REQUIREMENTS: Measure vibration and pump bearing temperature.

BASIS FOR RELIEF: To measure vibration and bearing temperatures of the  
LPSI pumps would require disassembly of these pumps.

ALTERNATE TESTING: The vibration and bearing temperatures shall be measured  
at the lower motor bearing and at the upper pump packing.

# PUMP RELIEF REQUEST

NUMBER: P-2

SYSTEM: Containment Spray

PUMP: P-61A, P-61B, P-61S

CLASS: 2

TEST REQUIREMENT: Measure vibration and pump bearing temperature.

BASIS FOR RELIEF: To measure vibration and bearing temperatures of the containment spray pumps would require disassembly of these pumps.

ALTERNATE TESTING: The vibration and bearing temperatures shall be measured at the lower motor bearing and at the upper pump packing.



## PUMP RELIEF REQUEST

NUMBER: P-3

SYSTEM: Service Water

PUMP: P-29A, P-29B, P-29C, P-29D

CLASS: 3

TEST EQUIPMENT: Measure vibration, pump bearing temperature, and differential pressure.

BASIS FOR RELIEF: The service water pump bearings are inaccessible, as these are physically submerged under water. Total pump head is about 35 psig and normal fluctuations in pressure are 2 psig or more. These normal readings frequently exceed the ASME code limits. Therefore, we request relief from the code limits for differential pressure, and we will meet the requirements for alternate testing listed below.

ALTERNATE TESTING: Pump vibration and bearing temperatures shall be measured at the lower motor bearing and at the upper pump packing.

### ALTERNATE RANGES FOR DIFFERENTIAL PRESSURE

<u>Alert Range</u>	<u>Required Action Range</u>
$\Delta P < 0.91 \times Pr$	$\Delta P < 0.88 Pr$
$\Delta P > 1.04 \times Pr$	$\Delta P > 1.05 Pr$