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NUCLEAR ENERGY SERVICES, INC.

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PUMP AND VALVE INSERVICE TESTING PROGRAM PLAN

FOR

LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER PLANT

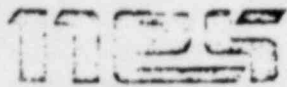
UNIT 1

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1. INTRODUCTION AND TEST BASES

The 1977 edition of ASME Code, Section XI, including Summer 1979 Addenda, incorporates the requirements for operational testing of certain pumps and valves within a nuclear power plant. The Code of Federal Regulations, under 10 CFR 50.55a, requires that the first pump and valve test period be initiated at the start of facility commercial operation.

According to 10 CFR 50.55a, the edition of the Code applicable to the Pump and Valve Plan would be the one in effect 12 months prior to the issuance of the operating license. As of this writing, the 1979 Summer Addenda is the latest edition of the code endorsed by the NRC. Accordingly, the plan complies to the edition of the code currently approved by the NRC and will be revised, as necessary, to meet the requirements of the new edition, as they are received and endorsed by the NRC.

All pumps and valves that cannot be tested to the full extent of Section XI requirements, due to location, function, design and/or instrumentation, are identified and the reasons for noncompliance fully described using the standard formats recommended by the NRC in the "Guidance for Preparing Pump and Valve Testing Program Descriptions and Associated Relief Requests Pursuant to 10 CFR 50.55a(g)".

2. TEST PLAN DESCRIPTION

According to 10 CFR 50.55a(g), the Section XI Pump and Valve Inservice Testing Program shall be initiated at the start of facility commercial operation.

This Plan has been prepared in accordance with the requirements of the ASME Section XI, 1977 edition, up to and including 1979 Summer Addenda, the latest endorsed by the NRC. The Plan shall be in effect for the first 120-month period and shall be updated thereafter every 120 months to the edition of the code in effect 12 months prior to the start of each 120-month period.

The requirements and record formats for inservice testing of Class 1, 2 and 3 pumps and valves installed at Shoreham Nuclear Power Plant Unit 1 have been defined per Section XI, Subsections IWP and IWV, as well as per NRC recommendations in "Guidance for Preparing Pump and Valve Testing Program Descriptions and Associated Relief Requests Pursuant to 10 CFR 50.55a(g)".

3. PUMP AND VALVE INSERVICE TESTING PROGRAM BOOK

The following sections comprise the Shoreham Nuclear Power Plant Unit 1 Pump and Valve Inservice Testing Program Book and are discussed in detail in their corresponding Appendices.

3.1 PUMP LIST AND RELIEF REQUESTS

Appendix A identifies the selected pumps with all additional information, including relief requests, required by the "NRC Staff Guidance".

3.2 VALVE LIST AND RELIEF REQUESTS

The safety-related Class 1, 2 and 3 valves are addressed in the program. Safety-related components are those valves required to safely shut down the plant or mitigate the consequences of an accident.

Appendix B includes detailed information to support requests for relief from testing requirements for each affected valve as required by the "NRC Staff Guidance".

APPENDIX A

PUMP LIST AND RELIEF REQUESTS

APPENDIX A

PUMP LIST

The list for safety-related Class 1, 2 and 3 pumps provided with an emergency power source is presented in this Appendix.

In the pump list, the test parameters to be measured or observed and the test frequency are identified. Footnotes 1 through 6 refer to deviations and exceptions to the code requirements and are further discussed below:

- (1) Pump with constant speed drive, speed is not measured since test will be performed at nominal motor nameplate speed as required by Section XI, IWP-3100.
- (2) Inlet pressure to be calculated from the ocean level. The water level will be measured while establishing and verifying Reference Data sets and used as information during subsequent test analysis.
- (3) Bearing temperature measurement not required (IWP-4310) since bearings are in the pumped fluid flow path.
- (4) Clamp on ultrasonic flow meter to be used.
- (5) Bearing temperatures are measured once a year as stipulated by Section XI, IWP-3300.
- (6) Lubricant level or pressure not observed because of bearing lubrication design.

PUMP LIST NOMENCLATURE

The following abbreviations have been used in Table A-1

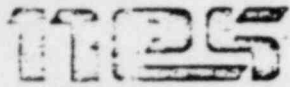
N	=	Rotative Speed
Pi	=	Inlet Pressure
ΔP	=	Differential Pressure Across Pump
Q	=	Flow Rate
V	=	Vibration Amplitude
T _b	=	Bearing Temperature
Q	=	Quarterly
X	=	Instrumentation Existing
C	=	Cold Shutdown
L	=	Lubricant Level or Pressure

TABLE A-1

System	Pump I.D.	P& I.D.	Class	Test Freq.	MEASURED PARAMETERS						
					N	PI	ΔP	Q	V	$T_b(5)$	L
RHR	P-014 A,B,C & D	FM-20 A & B	2	Q	(1)	X	X	X	X	(3)	(6)
HPCI	P-016	FM-25 A & B	2	Q	X	X	X	X	X	X	X
RCIC	P-015	FM-22 A & B	2	Q	X	X	X	X	X	X	X
Core Spray	P-013 A & B	FM-23 A	2	Q	(1)	X	X	X	X	(3)	(6)
Stand by Liquid Control	P-024 A & B	FM-21 A	2	Q	(1)	X	X	X	X	X	(6)
Service Water	P-003 A,B,C & D	FM-47 A	3	Q	(1)	(2)	X	X	X	(3)	(6)
RBCLCW	P-005 A, B & C	FM-15 A	3	Q	(1)	X	X	(4)	X	X	(6)
RBSVS & CRAC Chill Water	P-137 A & B P-138 A & B	FB-43 A & B	3	Q	(1)	X	X	X	X	X	X
RBSVS & CRAC Condensate Pump	P-139 A & B P-140 A & B	FB-43 A & B	3	Q	(1)	X	X	X	X	X	X

* All (numbers) refer to footnotes on page 2.

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APPENDIX B

VALVE LIST AND RELIEF REQUESTS

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APPENDIX B

VALVE LIST

The lists for safety-related Class 1, 2, and 3 valves and associated relief requests are presented in this Appendix and arranged by system. The standard format recommended by the NRC Staff in their "Guidance for Preparing Pump and Valve Testing Program Descriptions and Associated Relief Requests Pursuant to 10 CFR 50.55a(g)" has been used to the extent practical to provide the required information.

VALVE LIST NOMENCLATURE

The following abbreviations have been used in the valve list.

Valve Type

GL	Globe
GT	Gate
R	Relief
C	Check
E	Explosive
A	Angle
B	Butterfly
D	Diaphragm
XC	Excess Flow Check

Actuator Type

MO	Motor Operated
AO	Air-Piston Operated
EM	Electro-Mechanical
SA	Self-Actuated
AD	Air-Diaphragm
M	Manual
E	Explosive
HYD	Hydraulic

Normal Position

O	Open
C	Closed
LO	Locked Open
LC	Locked Closed

Test Requirements

PV	Passive Valve
LRT	Leak Rate Test
ET-Q	Exercising Test - Quarterly
ET-C	Exercising Test at Cold Shutdown
ET-R	Exercising Test at Refueling
	(including Stroke Time and Fail Safe Test where applicable)
SRT	Safety/Relief Test
XT	Explosive Test

Note: Position indications will be verified in accordance with IWV-3300

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-042	1	D-3	X					3	GT	MO	C	LRT ET-Q	01		Exercise during pump test
MOV-031	2	G-8		X				6	GT	MO	O	ET-Q			
MOV-032	2	D-8	X					6	GT	MO	C	LRT ET-Q	01		
MOV-036	2	E-6	X					2	GL	MO	C	LRT ET-Q	01		Exercise during pump test
MOV-037	2	F-5		X				4	GL	MO	C	ET-Q			Exercise during pump test
MOV-035	1	D-4		X				4	GT	MO	C	ET-Q	02	ET-C	
MOV-043	2	G-6		X				3	GT	MO	C	ET-Q			Exercise during pump test
0001	2	F-8			X			6	C	SA	--	ET-Q			Exercise during pump test

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
0002	2	D-8			X		6	C	SA	--	ET-Q			
0012	2	E-5			X		4	C	SA	--	ET-Q			Exercise during pump test
0020	2	E-5	X		X		8	C	SA	--	LRT ET-Q	01 03	ET-R	Exercise during pump test (forward flow test only)
0021	2	D-5	X		X		8	C	SA	--	LRT ET-Q	01 03	ET-R	Exercise during pump test (forward flow test only)
0025	2	D-6	X		X		2	C	SA	--	LRT ET-Q	01 04	ET-R	Reverse flow test only
0024	2	E-6			X		2	C	SA	--	ET-Q			Exercise during pump test
MOV-041	1	C-3	X				3	GT	MO	O	LRT ET-Q	01 05	ET-C	
MOV-047	1	C-3	X				1	GL	MO	O	LRT ET-Q	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-048	1	D-3	X					1	GL	MO	O	LRT ET-Q	01		
MOV-034	2	E-5		X				4	GT	MO	O	PV			
MOV-045	2	C-5	X					3	GT	MO	O	LRT ET-Q	01 05	ET-C	
MOV-049	2	C-5	X					1½	GL	MO	O	LRT ET-Q	01		
0015	2	E-4			X			1	C	SA	--	ET-Q	06	ET-C	
0016	2	E-4			X			1	C	SA	--	ET-Q	06	ET-C	
MOV-046	2	D-6	X		X			2	C	MO/SA	O	LRT ET-Q	01 07	ET-C	

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
MOV-038	2	D-5	X				2	GL	MO	C	ET-Q			Exercise during pump test
MOV-044	2	G-3	X				3	GT	MO	O	ET-Q			Exercise during pump test
0006	2	F-6			X		2	C	SA	--	ET Q			

RELIEF REQUEST

01

System:	RCIC
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	1 & 2
Function:	Containment Isolation
Test Requirement:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.



RELIEF REQUEST

02

System:	RCIC
Valve:	MOV-035
Category:	B
Class:	1
Function:	RCIC injection valve
Test Requirement:	Exercise test quarterly
Basis for Relief:	Testing during normal operation requires closing valve MOV-034. Failure of MOV-034 in the closed position would cause a loss of system function which would put the plant in an unsafe condition.
Alternate Testing:	Exercise during cold shutdown.

RELIEF REQUEST

03

System:	RCIC
Valve:	0020 & 0021
Category:	A - C
Class:	2
Function:	Containment isolation valves in the steam exhaust line
Test Requirement:	Exercise test quarterly.
Basis for Relief:	Reverse flow testing during normal operation requires closing valve MOV-045. Failure of MOV-045 in the closed position would cause a loss of system function which would put the plant in an unsafe condition.
Alternate Testing:	Forward flow test will be accomplished quarterly during the pump test. Reverse flow test will be accomplished during the Appendix J leak rate test at refueling.

RELIEF REQUEST

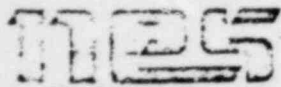
04

System:	RCIC
Valve:	0025
Category:	A - C
Class:	2
Function:	Containment isolation valve in the vacuum pump discharge line
Test Requirement:	Exercise test quarterly
Basis for Relief:	Reverse flow testing during normal operation requires closing valve MOV-046. Failure of MOV-046 in the closed position would cause a loss of system function which would put the plant in an unsafe condition.
Alternate Testing:	Reverse flow testing will be accomplished during the Appendix J leak rate test at refueling.

RELIEF REQUEST

05

System:	RCIC
Valve:	MOV-041 & 045
Category:	A
Class:	1
Function:	RCIC steam supply and exhaust valves
Test Requirement:	Exercise test quarterly
Basis for Relief:	Failure of one of these valves in the closed position would cause a loss of system function which would put the plant in an unsafe condition.
Alternate Testing:	Exercise during cold shutdown.



RELIEF REQUEST

07

System: RCIC

Valve: MOV-046

Category: A - C

Class: 2

Function: Motor-operated check valve on RCIC vacuum pump discharge line that is key-locked open.

Test Requirement: Exercise test during normal operation.

Basis for Relief: Failure of valve in closed position will result in loss of RCIC system function.

Alternate Testing: Exercise during cold shutdown.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-031	2	F-8		X				16	GT	MO	O	ET-Q			
MOV-036	2	D-6	X					4	GL	MO	C	LRT ET-Q	01		Exercise during pump test
MOV-032	2	D-8	X					16	GT	MO	C	LRT ET-Q	01		
MOV-043	2	G-6		X				10	GT	MO	C	ET-Q			Exercise during pump test
MOV-033	1	E-5		X				14	GT	MO	C	ET-Q	02	ET-C	
MOV-042	1	D-4	X					10	GT	MO	C	LRT ET-Q	01		
0001	2	F-8			X			16	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0002	2	D-8			X			16	C	SA	--	ET-Q			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
0012	2	E-6			X		4	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0013	2	E-5			X		14	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0021	2	D-5	X		X		18	C	SA	--	LRT ET-Q	01 03	ET-R	Exercise during pump test (forward flow test only)
0022	2	D-5	X		X		18	C	SA	--	LRT ET-Q	01 03	ET-R	Exercise during pump test (forward flow test only)
MOV-037	2	E-5		X			10	GL	MO	C	ET-Q			Exercise during pump test
MOV-041	1	C-4	X				10	GT	MO	O	LRT ET-Q	01 04	ET-C	
MOV-047	1	C-4	X				1	GL	MO	O	LRT ET-Q	01		
MOV-048	1	C-4	X				1	GL	MO	O	LRT ET-Q	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
AOV-081	2	H-7		X				1	GT	AO	O	ET-Q			Exercise during pump test
AOV-082	2	H-7		X				1	GT	AO	O	ET-Q			Exercise during pump test
MOV-044	2	C-5	X					18	GT	MO	LO	LRT ET-Q	01 04	ET-C	
MOV-049	2	C-5	X					2	GL	MO	O	LRT ET-Q	01		
0023	2	D-5			X			2	C	SA	--	ET-Q	05	ET-C	
0024	2	D-5			X			2	C	SA	--	ET-Q	05	ET-C	
MOV-034	2	E-4		X				14	GT	MO	O	PV			
0019	2	F-3			X			2	C	SA	--	ET-Q	06	ET-C	Forward flow test only

Valve No.	0018	Class	2	Coordinates	F-3	Valve Category A B C D	Pressure Isolation	Size (inches)	2	Valve Type	C	Actuator Type	SA	Normal Position	ET-Q	Relief Requests	06	Alternate Tests Performed	ET-C	Remarks	Forward flow test only

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
MOV-039	2	D-5		X			2	GL	MO	C	ET-Q			Exercise during pump test
HOV-051	2	H-2		X			10	GT	HYD	C	ET-Q			Exercise during pump test
RV-146	2	C-5			X		1 1/2	R	SA	--	SRT			
0007	2	C-5			X		2	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0011	2	D-7			X		2	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)

RELIEF REQUEST

01

System:	HPCI
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	1 & 2
Function:	Containment Isolation
Test Requirements:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Code Section IX.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System:	HPCI
Valve:	MOV-035
Category:	B
Class:	1
Function:	HPCI injection valve
Test Requirement:	Exercise test quarterly
Basis for Relief:	Testing during normal operation requires closing valve MOV-034. Failure of MOV-034 in the closed position would cause a loss of system function which would put the plant in an unsafe condition.
Alternate Testing:	Exercise during cold shutdown.

RELIEF REQUEST

03

System:	HPCI
Valve:	0021 & 0022
Category:	A - C
Class:	2
Function:	Containment isolation valves in the steam exhaust line.
Test Requirements:	Exercise test quarterly.
Basis for Relief:	Reverse flow testing during normal operation requires closing valve MOV-044. Failure of MOV-044 in the closed position would cause a loss of system function which would put the plant in an unsafe condition.
Alternate Testing:	Forward flow test will be accomplished quarterly during the pump test. Reverse flow test will be accomplished during the Appendix J leak rate test at refueling.

RELIEF REQUEST

04

System:	HPCI
Valve:	MOV-041 & 044
Category:	A
Class:	1
Function:	HPCI steam supply and exhaust valves
Test Requirement:	Exercise test quarterly
Basis for Relief:	Failure of one of these valves in the closed position would cause a loss of system function which would put the plant in an unsafe condition.
Alternate Testing:	Exercise during cold shutdown.



RELIEF REQUEST

05

System: HPCI

Valve: 0023 & 0024

Category: C

Class: 2

Function: Check valves on vacuum breaker lines to RCIC turbine exhaust.

Test Requirement: Exercise test during normal operation.

Basis for Relief: These check valves do not have position indication or other means of detecting disk movement during normal operation without affecting availability of the HPCI system to perform its safety function.

Alternate Testing: Exercise test during cold shutdown.

RELIEF REQUEST

06

System:	HPCI
Valve:	0018 & 0019
Category:	C
Class:	2
Function:	Check valves on discharge of loop level system pumps into HPCI pump discharge line.
Test Requirement:	Exercise test during normal operation.
Basis for Relief:	These simple check valves do not have position indication. The loop level system is always in operation to keep the HPCI discharge line pressurized. Proper operation of loop level system is verified by the operator by indication of system pressure in the Control Room and during HPCI pump test.
Alternate Testing:	Venting operation during pump test to verify open and exercise test at cold shutdown to verify closed.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-041A	2	I-6	X					6	GL	MO	C	LRT ET-Q	01		
MOV-038A	2	G-2	X					10	A	MO	C	LRT ET-Q	01		
MOV-039A	2	I-2	X					10	GT	MO	C	LRT ET-Q	01		
MOV-037A	1	I-3	X				X	24	GT	MO	C	LRT ET-Q	01		
MOV-045A	2	E-7	X					4	GT	MO	O	LRT ET-Q	01		Exercise during pump test
MOV-036A	2	G-3		X				24	A	MO	O	PV			
MOV-040A	2	G-4	X					16	GT	MO	C	LRT ET-Q	01		Exercise during pump test
MOV-031A	2	I-7	X					20	GT	MO	O	LRT ET-Q	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-031C	2	I-8	X					20	GT	MO	O	LRT ET-Q	01		Exercise during pump test
MOV-032A	2	H-7		X				20	GT	MO	C	ET-Q			
MOV-032C	2	H-8		X				20	GT	MO	C	ET-Q			
MOV-042A	2	G-6	X					16	GL	MO	C	LRT ET-Q	01		
MOV-043A	2	D-4		X				4	GT	MO	C	ET-Q			
MOV-033A	2	D-7		X				16	GT	MO	O	ET-Q			
MOV-034A	2	D-8		X				18	A	MO	O	ET-Q			
MOV-035A	2	D-4	X					16	GT	MO	O	ET-Q			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
AOV-081A	1	J-3	X		X		X	24	C	AO	C	LRT ET-Q	01 03	
0020A	2	D-7			X			16	C	SA	--	ET-Q		Exercise during pump test
0020C	2	D-8			X			16	C	SA	--	ET-Q		Exercise during pump test
RV-153A	2	H-3			X			1	R	SA	--	SRT		
RV-152A	2	B-5	X		X			4	R	SA	--	LRT SRT	01	
MOV-055A	2	A-6	X					1	GL	MO	C	LRT ET-Q	01	
MOV-056A	2	A-5	X					1	GL	MO	C	LRT ET-Q	01	

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
RV-157A	2	B-6	X		X			1	R	SA	--	LRT SRT	01		
MOV-081A	1	J-2	X				X		GL	MO	C	LRT ET-Q	01		
MOV-044A	2	E-6	X					4	GT	MO	C	LRT ET-Q	01		
MOV-057A	2	A-4		X				1	GL	MO	C	ET-Q			
0035A	2	E-7			X			3	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0035C	2	E-8			X			3	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0037A	2	G-2			X			1	C	SA	--	ET-Q			Forward flow test only
3145	2	I-5	X		X			1	C	SA	--	LRT ET-Q	01		Reverse flow test only

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
3144	2	I-5	X		X			1	C	SA	--	LRT ET-Q	01		Reverse flow test only
0041	2	I-6			X			1	C	SA	--	ET-Q	02	ET-R	Forward flow test only
0040	2	I-6			X			1	C	SA	--	ET-Q	02	ET-R	Forward flow test only
0022A	2	H-2			X			4	C	SA	--	ET-Q			Forward flow test only
AOV-061A	2	A-6		X				3/4	GT	AO		ET-Q			
AOV-062A	2	A-6		X				3/4	GT	AO		ET-Q			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-041B	2	B-6	X					6	GL	MO	C	LRT ET-Q	01		Exercise during pump test
MOV-040B	2	D-4	X					16	GT	MO	C	LRT ET-Q	01		
MOV-038B	2	C-2	X					10	A	MO	C	LRT ET-Q	01		
MOV-039B	2	B-2	X					10	GT	MO	C	LRT ET-Q	01		
MOV-037B	1	B-3	X				X	24	GT	MO	C	LRT ET-Q			Exercise during pump test
MOV-036B	2	D-3		X				24	A	MO	O	-PV			
MOV-045B	2	F-7	X					4	GT	MO	O	LRT ET-Q	01		
MOV-053	1	B-2	X				X	4	GL	MO	C	LRT ET-Q	01 04	ET-C	

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-054	1	A-2	X				X	4	GT	MO	C	LRT ET-Q	01 04	ET-C	
MOV-047	1	A-4	X				X	20	GT	MO	C	LRT ET-Q	01 05	ET-C	
MOV-048	1	A-4	X				X	20	GT	MO	C	LRT ET-Q	01 05	ET-C	
MOV-031B	2	B-7	X					20	GT	MO	O	LRT ET-Q	01		
MOV-031D	2	B-8	X					20	GT	MO	O	LRT ET-Q	01		
MOV-032B	2	C-7		X				20	GT	MO	C	ET-Q			
MOV-032D	2	C-8		X				20	GT	MO	C	ET-Q			
MOV-042B	2	D-6	X					16	GL	MO	C	LRT ET-Q	01		Exercise during pump test

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-049	2	E-5		X				10	GT	MO	C	ET-Q			
MOV-043B	2	F-4		X				4	GT	MO	C	ET-Q			
MOV-044B	2	G-4	X					4	GT	MO	C	LRT ET-Q	01		
MOV-035B	2	H-4		X				16	GT	MO	O	ET-Q			
MOV-033B	2	G-7		X				16	GT	MO	O	ET-Q			
RV-163	2	G-2	X		X			1	R	SA	--	LRT ET-Q	01		
RV-164	2	F-3	X		X			1	R	SA	--	LRT ET-Q	01		
MOV-034B	2	G-8		X				18	A	MO	O	ET-Q			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
AOV-081B	1	A-3	X		X		X	24	C	AO	C	LRT ET-Q	01 03		
0020B	2	F-7			X			16	C	SA	--	ET-Q			Exercise during pump test
0020D	2	F-8			X			16	C	SA	--	ET-Q			Exercise during pump test
RV-155	2	F-5	X		X			2	R	SA	--	LRT SRT	01		
RV-152B	2	I-5	X		X			4	R	SA	--	LRT SRT	01		
MOV-055B	2	J-6	X					1	GL	MO	C	LRT ET-Q	01		
MOV-056B	2	J-5	X					1	GL	MO	C	LRT ET-Q	01		
RV-157B	2	I-6	X		X			1	R	SA	--	LRT SRT	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-081B	1	A-3	X				X		GL	MO	C	LRT ET-Q	01		
MOV-050	2	C-4		X				24	GT	MO	C	PV			Power disconnected
0035B	2	E-7			X			3	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0035D	2	E-8			X			3	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
MOV-057B	2	J-4		X				1	GL	MO	C	ET-Q			
RV-153B	2	D-4			X			1	R	SA	--	SRT			
0022B	2	D-3			X			4	C	SA	--	ET-Q			
0023	2	C-1			X			4	C	SA	--	ET-Q			Forward flow test only

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
0037B	2	D-2			X			1	C	SA	--	ET-Q			Forward flow test only
0028	2	A-4			X			4	C	SA	--	ET-Q			Reverse flow test only
MOV-051	2	C-4		X				4	GT	MO	C	PV			
MOV-052	2	C-4		X				4	GL	MO	C	PV			
AOV-061B	2	J-6		X				3/4	GT	AO	C	ET-Q			
AOV-062B	2	J-6		X				3/4	GT	AO	C	ET-Q			

RELIEF REQUEST

01

System: RHR

Valve: Containment Isolation Valves (as listed)

Category: A

Class: 1 & 2

Function: Containment Isolation

Test Requirement: Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.

Basis for Relief: Appendix J leak rate testing meets the intent of the ASME requirements.

Alternate Testing: Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.



RELIEF REQUEST

02

System: RHR

Valve: 0040 & 0041

Category: C

Class: 2

Function: Vacuum breakers in thermal relief valve discharge from RHR heat exchanger.

Test Requirement: Exercise test during normal operation.

Basis for Relief: Line is open to suppression pool on one end and is not accessible for testing during normal operation or routine plant shutdown.

Alternate Testing: Exercise test during refueling.



RELIEF REQUEST

03

System: RHR

Valve: AOV-081 A & B

Category: A - C

Class 1

Function: RHR Injection Valve

Test Requirement: Exercise test during normal operation

Basis for Relief: Valve can only be part-stroke exercised during normal operation. Valve can be full-stroke exercised during RHR system operation at cold shutdown.

Alternate Testing: Part-stroke exercise quarterly, full-stroke exercise at cold shutdown.

RELIEF REQUEST

04

System:	RHR
Valve:	MOV-053 & MOV-054
Category:	A
Class:	1
Function:	Inboard and outboard containment isolation valves on RHR reactor vessel head spray line.
Test Requirement:	Exercise test during normal operation quarterly.
Basis for Relief:	Valves are interlocked with reactor pressure at 135 psig.
Alternate Testing:	Exercise at low pressure condition during cold shutdown.



RELIEF REQUEST

05

System:	RHR
Valve:	MOV-047 & MOV-048
Category:	A
Class:	1
Function:	Inboard and outboard isolation valve on RHR suction line from reactor vessel.
Test Requirement:	Exercise test during normal operation quarterly
Basis for Relief:	Valves are interlocked with reactor pressure at 135 psig.
Alternate Testing:	Exercise at cold shutdown.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-032A	3	G-1		X				8	GT	MO	O	ET-Q			
MOV-032B	3	H-1		X				8	GT	MO	O	ET-Q			
MOV-033A	3	E-1		X				6	GT	MO	O	ET-Q	02	ET-C	
MOV-033B	3	E-1		X				6	GT	MO	O	ET-Q	02	ET-C	
MOV-034A	3	I-1		X				6	GT	MO	O	ET-Q	02	ET-C	
MOV-034B	3	H-1		X				6	GT	MO	O	ET-Q	02	ET-C	
MOV-042A	3	F-9		X				14	GT	MO	C	ET-Q			
MOV-042B	3	G-9		X				14	GT	MO	C	ET-Q			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-043A	3	E-7		X				8	GT	MO	O	ET-Q			
MOV-043B	3	E-7		X				8	GT	MO	O	ET-Q			
MOV-044A	3	G-7		X				8	GT	MO	O	ET-Q			
MOV-044B	3	G-7		X				8	GT	MO	O	ET-Q			
MOV-031A	3	G-6		X				8	GT	MO	O	ET-Q			
MOV-031B	3	G-6		X				8	GT	MO	O	ET-Q			
MOV-041A	3	G-9		X				14	GT	MO	O	ET-Q			
MOV-041B	3	G-9		X				14	GT	MO	O	ET-Q			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
0005A	3	F-2			X			8	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0005B	3	J-2			X			8	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0005C	3	H-2			X			8	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0036A	3	D-6			X			12	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0036B	3	J-6			X			12	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
AOV-282	3	G-8			X			8	C	SA/AO	--	ET-Q	03	ET-C	
MOV-035	2	E-6	X					4	GT	MO	O	LRT ET-Q	01 04	ET-C	
MOV-036	2	A-4	X					4	GT	MO	O	LRT ET-Q	01 04	ET-C	

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-047	2	F-6	X					4	GT	MO	O	LRT ET-Q	01 04	ET-C	
MOV-048	2	J-4	X					4	GT	MO	O	LRT ET-Q	01 04	ET-C	
AOV-293	3	A-4			X			6	C	SA/AO	--	ET-Q	05	ET-C	Reverse flow test only
AOV-294	3	K-4			X			6	C	SA/AO	--	ET-Q	05	ET-C	Reverse flow test only



Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-231	2	A-1	X					4	GT	MO	O	LRT ET-Q	01		
MOV-232	2	A-2	X					3	GT	MO	O	LRT ET-Q	01		
MOV-233	2	A-4	X					3	GT	MO	O	LRT ET-Q	01		
MOV-234	2	A-5	X					3	GT	MO	O	LRT ET-Q	01		
MOV-235	2	A-6	X					3	GT	MO	O	LRT ET-Q	01		
MOV-236	2	L-1	X					4	GT	MO	O	LRT ET-Q	01		
MOV-237	2	L-2	X					3	GT	MO	O	LRT ET-Q	01		
MOV-238	2	L-3	X					3	GT	MO	O	LRT ET-Q	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-239	2	L-5	X					3	GT	MO	O	LRT ET-Q	01		
MOV-240	2	L-6	X					3	GT	MO	C	LRT ET-Q	01		
MOV-147	2	B-1	X					4	GT	MO	O	LRT ET-Q	01 06	ET-C	
MOV-148	2	K-1	X					4	GT	MO	O	LRT ET-Q	01 06	ET-C	
0037AA	2	A-2	X		X			3	C	SA	--	LRT ET-Q	01 07	ET-C	
0037AB	2	A-4	X		X			3	C	SA	--	LRT ET-Q	01 07	ET-C	
0037AC	2	A-5	X		X			3	C	SA	--	LRT ET-Q	01 07	ET-C	
0037AD	2	A-6	X		X			3	C	SA	--	LRT ET-Q	01 07	ET-C	

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
0037BA	2	L-2	X		X			3	C	SA	--	LRT ET-Q	01 07	ET-C	
0037BB	2	L-4	X		X			3	C	SA	--	LRT ET-Q	01 07	ET-C	
0037BC	2	L-5	X		X			3	C	SA	--	LRT ET-Q	01 07	ET-C	
0037BD	2	L-6	X		X			3	C	SA	--	LRT ET-Q	01 07	ET-C	
RV-291A	2	A-1	X		X			1	R	SA	--	LRT ET-Q	01		
RV-291B	2	K-1	X		X			1	R	SA	--	LRT ET-Q	01		

RELIEF REQUEST

01

System:	RBCLCW
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	2
Function:	Containment Isolation
Test Requirement:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. Spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System:	RBCLCW
Valve:	MOV-033 A & B, MOV-034 A & B
Category:	B
Class:	3
Function:	Isolate non-essential cooling loads during a LOCA
Test Requirement:	Exercise valves for operability quarterly.
Basis for Relief:	To test these valves would require interruption of cooling water flow to the RWCU Non-Regenerative Heat exchangers and pumps, CRD pumps and drywell coolers. Failure of these valves to reopen could cause damage to equipment being cooled or excessive drywell temperatures.
Alternate Testing:	These valves will be exercised for operability during cold shutdowns.

RELIEF REQUEST

03

System: RBCLCW

Valve ID: AOV-282

Valve Category: C

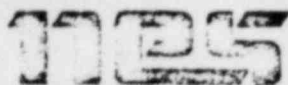
ASME Class: 3

Function: Return Isolation check valve

Test Requirement: Exercise test quarterly

Basis for Relief: Testing valve requires securing flow to the recirculation pump M-G set oil cooling, this could cause oil to overheat and cause a possible plant shutdown.

Alternate testing: Exercise test at cold shutdown.



RELIEF REQUEST

04

System: RBCLCW

Valve: MOV-035, 036, 047, 048

Category: A

Class: 2

Function: Inlet and outlet isolation valves to recirc. pump seal cooler, motor bearing cooler and motor winding cooler

Test Requirement: Exercise valves for operability quarterly

Basis for Relief: Loss of cooling for more than 10 minutes could damage recirculation pumps. Loss of cooling requires shutdown by plant procedures.

Alternate Testing: These valves will be exercised for operability during cold shutdowns.

RELIEF REQUEST

05

System:	RBCLCW
Valve:	AOV-293 & AOV-294
Category:	C
Class:	3
Function:	Isolate non-essential cooling loads during a LOCA
Test Requirement:	Exercise valves for operability quarterly
Basis for Relief:	To test these valves would require interruption of cooling water flow to the RWCU Non-Regenerative Heat exchangers and pumps, CRD pumps and drywell coolers. Failure of these valves to reopen could cause damage to equipment being cooled or excessive drywell temperatures.
Alternate Testing:	These valves will be exercised for operability during cold shutdowns. (Reverse flow test only.)

RELIEF REQUEST

06

System:	RBCLCW
Valve:	MOV-147 & 148
Category:	A
Class:	2
Function	Cooling water discharge isolation valves
Test Requirement:	Exercise valves for operability every three months
Basis for Relief:	To test these valves would require interruption of cooling water flow to 1/2 of the Drywell Cooling System. Failure of these valves to reopen will cause excessive containment temperature and plant shutdown.
Alternate Testing:	These valves will be exercised for operability during cold shutdowns.

RELIEF REQUEST

07

System:	RBCLCW
Valve:	0037 AA, AB, AC, AD, BA, BB, BC, BD
Category:	A - C
Class:	2
Function:	Containment isolation valves.
Test Requirement:	Exercise valves for operability every three months.
Basis for Relief:	Valves are located inside containment and are inaccessible for testing during plant operation.
Alternate Testing:	Valves will be exercised for operability during cold shutdown.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
EV-010A	1	D-5	X			X		1½	E	E	C	XT			
EV-010B	1	D-7	X			X		1½	E	E	C	XT			
RV-021A	2	F-5			X			1	R	SA	--	SRT			
RV-021B	2	F-7			X			1	R	SA	--	SRT			
0008	1	A-6	X		X			1½	C	SA	--	LRT ET-Q	01 02	ET-R	
0010	1	B-6	X		X			1½	C	SA	--	LRT ET-Q	01 02	ET-R	
0007A	2	F-5			X			1½	C	SA	--	ET-Q			Exercise during pump test
0007B	2	G-7			X			½	C	SA	--	ET-Q			Exercise during pump test



RELIEF REQUEST

01

System: Standby Liquid Control

Valve: Containment Isolation Valves (as listed)

Category: A

Class: 1

Function: Containment Isolation

Test Requirement: Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI

Basis for Relief: Appendix J leak rate testing meets the intent of the ASME requirements.

Alternate Testing: Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System:	Standby Liquid Control
Valve:	0008 & 0010
Category:	A - C
Class:	1
Function:	Injection line check valves
Test Requirement:	Exercise valves for operability every three months
Basis for Relief:	To exercise the valve would require the closing of a manual valve which would cause a loss of system function.
Alternate Testing:	Exercise during refueling with standby liquid control injection test and Appendix J leak rate test.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks	
			A	B	C	D										
AOV-081A	1	E-3	X		X		X	10	C	AO	C	LRT ET-Q	01 03	ET-C		
AOV-081B	1	F-3	X		X		X	10	C	AO	C	LRT ET-Q	01 03	ET-C		
MOV-033A	1	D-3	X				X	10	GT	MO	C	LRT ET-Q	01 02	ET-C		
MOV-033B	1	F-3	X				X	10	GT	MO	C	LRT ET-Q	01 02	ET-C		
MOV-035A	2	C-4	X					10	GL	MO	C	LRT ET-Q	01	Exercise during pump test		
MOV-035B	2	G-4	X					10	GL	MO	C	LRT ET-Q	01			Exercise during pump test
MOV-034A	2	B-6	X					3	GT	MO	O	LRT ET-Q	01			Exercise during pump test
MOV-034B	2	I-6	X					3	GT	MO	O	LRT ET-Q	01			Exercise during pump test

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
0013A	2	A-5			X			12	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0013B	2	J-5			X			12	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
MOV-31A	2	C-7	X					14	GT	MO	O	LRT ET-Q	01		
MOV-31B	2	G-7	X					14	GT	MO	O	LRT ET-Q	01		
MOV-081A	1	E-3	X				X	2	GL	MO	C	LRT ET-Q	01		
MOV-081B	1	F-3	X				X	2	GL	MO	C	LRT ET-Q	01		
RV-093A	2	B-3		X				1½	R	SA	--	SRT			
RV-093B	2	H-3		X				1½	R	SA	--	SRT			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
0018B	2	H-2			X			1	C	SA	--	ET-Q			
0015B	2	H-2			X			2	C	SA	--	ET-Q			
0018A	2	C-2			X			1	C	SA	--	ET-Q			
0015B	2	C-2			X			2	C	SA	--	ET-Q			



RELIEF REQUEST

01

System: Core Spray

Valve: Containment Isolation Valves (as listed)

Category: A

Class: 1 & 2

Function: Containment Isolation

Test Requirements: Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI

Basis for Relief: Appendix J leak rate testing meets the intent of the ASME requirements.

Alternate Testing: Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System:	Core Spray
Valve ID:	MOV-033 A & B
Valve Category:	A
ASME Class:	1
Function:	Core spray injection valve
Test Requirement:	Exercise test quarterly
Basis for Relief:	Valves are interlocked with reactor pressure at 500 psig.
Alternate testing:	Exer test at cold shutdown.

RELIEF REQUEST

03

System:	Core Spray
Valve ID:	AOV-081 A & B
Category:	A - C
ASME Class:	1
Function:	Core Spray injection valves
Test Requirements:	Exercise test during normal operation
Basis for Relief:	Valve cannot be exercised during normal operation since this would leave only one isolation valve between a high and low pressure system.
Alternate Testing:	Exercise test (part-stroke open, full-stroke close) during cold shutdown.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-033	1	F-6	X					6	GT	MO	O	LRT ET-Q	01		
MOV-034	1	F-6	X					6	GT	MO	O	LRT ET-Q	01		
0050A	1	A-1			X			6	C	SA	C	ET-Q			Reverse flow test only
0050B	1	A-2			X			6	C	SA	C	ET-Q			Reverse flow test only
0036A	1	B-1			X			6	C	SA	C	ET-Q			Reverse flow test only
0036B	1	B-2			X			6	C	SA	C	ET-Q			Reverse flow test only

RELIEF REQUEST

01

System	Reactor Water Clean-up
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class	1
Functions:	Containment Isolation
Test Requirements:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-248	2	A-5	X					3	GT	MO	O	LRT ET-Q	01		FM-46A
MOV-249	2	A-5	X					3	GT	MO	O	LRT ET-Q	01		FM-46A
MOV-246	2	J-5	X					4	GT	MO	O	LRT ET-Q	01		FM-46B
MOV-247	2	J-5	X					4	GT	MO	O	LRT ET-Q	01		FM-46B
MOV-639	2	D-6	X					3	GT	MO	C	LRT ET-Q	01		FM-46B
2105	2	D-6	X	X				3	C	SA	—	LRT ET-Q	01		FM-46B

RELIEF REQUEST

01

System:	Radwaste
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class	1 & 2
Function:	Containment Isolation
Test Requirement:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-031	I	F-7	X					3	GT	MO	O	LRT ET-Q	01		
MOV-032	I	H-7	X					3	GT	MO	O	LRT ET-Q	01		
AOV-081A	I	F-4	X					24	GL	AO	O	LRT ET-Q	01		
AOV-081B	I	F-4	X					24	GL	AO	O	LRT ET-Q	01		
AOV-081C	I	F-5	X					24	GL	AO	O	LRT ET-Q	01		
AOV-081D	I	F-6	X					24	GL	AO	O	LRT ET-Q	01		
AOV-082A	I	H-4	X					24	GL	AO	O	LRT ET-Q	01		
AOV-082B	I	H-4	X					24	GL	AO	O	LRT ET-Q	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Request	Alternate Tests Performed	Remarks
			A	B	C	D									
AOV-082C	I	H-5	X					24	GL	AO	O	LRT ET-Q	01		
AOV-082D	I	H-6	X					24	GL	AO	O	LRT ET-Q	01		
RV-092A	I	C-3		X				6	R	SA	--	SRT ET-Q	02	ET-R	ADS Valve
RV-092B	I	C-3		X				6	R	SA	--	SRT ET-Q	02	ET-R	ADS Valve
RV-092C	I	C-4		X				6	R	SA	--	SRT			
RV-092D	I	C-4		X				6	R	SA	--	SRT			
RV-092E	I	C-4		X				6	R	SA	--	SRT ET-Q	02	ET-R	ADS Valve
RV-092L	I	C-4		X				6	R	SA	--	SRT ET-Q	02	ET-R	ADS Valve

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
RV-092F	I	C-5			X			6	R	SA	--	SRT			
RV-092G	I	C-5			X			6	R	SA	--	SRT			
RV-092K	I	C-5			X			6	R	SA	--	SRT ET-Q	02	ET-R	ADS Valve
RV-092H	I	C-6			X			6	R	SA	--	SRT ET-Q	02	ET-R	ADS Valve
RV-092J	I	C-6			X			6	R	SA	--	SRT ET-Q	02	ET-R	ADS Valve
MOV-061	I	H-3	X					2	GL	MO	O	LRT ET-Q	01		
MOV-062	I	H-4	X					2	GL	MO	O	LRT ET-Q	01		
MOV-063	I	H-5	X					2	GL	MO	O	LRT ET-Q	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-064	1	H-6	X					2	GL	MO	O	LRT ET-Q	01		
RV-093A	2	A-7			X			24	R	SA	--	SRT			
RV-093B	2	A-7			X			24	R	SA	--	SRT			
RV-093C	2	A-7			X			24	R	SA	--	SRT			
RV-093D	2	A-7			X			24	R	SA	--	SRT			
RV-093E	2	A-7			X			24	R	SA	--	SRT			
RV-093F	2	A-7			X			24	R	SA	--	SRT			
RV-093G	2	A-7			X			24	R	SA	--	SRT			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
RV-093H	2	A-7			X			24	R	SA	--	SRT			
RV-093J	2	A-7			X			24	R	SA	--	SRT			
RV-093K	2	A-7			X			24	R	SA	--	SRT			
RV-093L	2	A-7			X			24	R	SA	--	SRT			
RV-093M	2	A-7			X			24	R	SA	--	SRT			
RV-095A	3	D-7			X			6	R	SA	--	SRT			
RV-096A	3	D-7			X			6	R	SA	--	SRT			
RV-095B	3	D-7			X			6	R	SA	--	SRT			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
RV-096B	3	D-7			X			6	R	SA	--	SRT			
RV-095C	3	D-7			X			6	R	SA	--	SRT			
RV-096C	3	D-7			X			6	R	SA	--	SRT			
RV-095D	3	D-7			X			6	R	SA	--	SRT			
RV-096D	3	D-7			X			6	R	SA	--	SRT			
RV-095E	3	D-7			X			6	R	SA	--	SRT			
RV-096E	3	D-7			X			6	R	SA	--	SRT			
RV-095F	3	G-7			X			6	R	SA	--	SRT			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
RV-096F	3	G-7			X			6	R	SA	--	SRT			
RV-095G	3	G-7			X			6	R	SA	--	SRT			
RV-096G	3	G-7			X			6	R	SA	--	SRT			
RV-095H	3	C-7			X			6	R	SA	--	SRT			
RV-096H	3	C-7			X			6	R	SA	--	SRT			
RV-095J	3	C-7			X			6	R	SA	--	SRT			
RV-096J	3	C-7			X			6	R	SA	--	SRT			
RV-095K	3	C-7			X			6	R	SA	--	SRT			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
RV-096K	3	C-7			X			6	R	SA	--	SRT			
RV-095L	3	C-7			X			6	R	SA	--	SRT			
RV-096L	3	C-7			X			6	R	SA	--	SRT			
MOV-083	1	A-4		X				2	GL	MO	C	PV			
MOV-084	1	A-4		X				2	GL	MO	C	PV			

RELIEF REQUEST

01

System: Main and Auxiliary Steam

Valve: Containment Isolation Valves (as listed)

Category: A

Class: 1 & 2

Function: Containment Isolation

Test Requirement: Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.

Basis for Relief: Appendix J leak rate testing meets the intent of the ASME requirements.

Alternate Testing: Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System: Main and Auxiliary Steam

Valve: ADS Valves

Category: C

Class: 1

Function: Main Steam Relief Valves

Test Requirement: Exercise test quarterly

Basis for Relief: If valves were to fail in the open position it would put the plant in a LOCA condition. In addition, stroke time is a function of reactor pressure and, therefore, shall not be measured during exercise testing.

Alternate Testing: Exercise test at refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
MOV-035A	I	D-4			X		20	-	MO	O	ET-Q	02	ET-C	Reverse flow test only
MOV-035B	I	D-5			X		20	C	MO	O	ET-Q	02	ET-C	Reverse flow test only
AOV-036A	I	C-4	X		X		18	C	AO	O	LRT ET-Q	01 02	ET-C	Reverse flow test only
AOV-036B	I	C-5	X		X		18	C	AO	O	LRT ET-Q	01 02	ET-C	Reverse flow test only
1103A	I	C-4	X		X		18	C	SA	--	LRT ET-Q	01 03	ET-R	Reverse flow test only
1103B	I	C-5	X		X		18	C	SA	--	LRT ET-Q	01 03	ET-R	Reverse flow test only

RELIEF REQUEST

01

System:	Feedwater
Valve:	Containment Isolation Valves (as listed)
Category:	A - C
Class	1
Function:	Containment Isolation
Test Requirement:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Appendix J, type C testing performed during refueling outages.

RELIEF REQUEST

02

System:	Feedwater
Valve:	MOV-035 A & B; AOV-036 A & B
Category:	A - C
Class:	1
Function:	Feedwater isolation valve
Test Requirement:	Exercise test quarterly
Basis for Relief:	Testing valves requires stopping one line of feed-water and reducing reactor power
Alternate Testing:	Exercise test at cold shutdown

RELIEF REQUEST

03

System:	Feedwater
Valve:	1103 A & B
Category:	A - C
Class:	1
Function:	Containment Isolation Valves
Test Requirement:	Exercise valves quarterly
Basis for Relief:	The valves are located inside containment and are inaccessible for testing during plant operation. The only way to verify closure is by leak testing during Appendix J test.
Alternate Testing:	Exercise valves (reverse flow test only) during Appendix J test at refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-031A	3	G-6		X				15	B	MO	O/C	ET-Q			
MOV-031B	3	I-6		X				15	B	MO	O/C	ET-Q			
MOV-031C	3	F-6		X				15	B	MO	O/C	ET-Q			
MOV-031D	3	J-6		X				15	B	MO	O/C	ET-Q			
MOV-032A	3	H-3		X				24	B	MO	O	ET-Q			
MOV-032B	3	H-5		X				24	B	MO	O	ET-Q			
MOV-035A	3	J-5		X				24	B	MO	O/C	ET-Q			
MOV-035B	3	J-5		X				24	B	MO	O/C	ET-Q			



Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-033A	3	E-5		X				20	B	MO	LC	ET-Q			
MOV-033B	3	D-6		X				20	B	MO	LC	ET-Q			
MOV-033C	3	D-5		X				20	B	MO	LC	ET-Q			
MOV-033D	3	C-6		X				20	B	MO	LC	ET-Q			
MOV-039A	3	D-6		X				1	D	MO	LO	ET-Q			
MOV-039B	3	D-6		X				1	D	MO	LO	ET-Q			
MOV-034A	3	D-7		X				20	B	MO	C	ET-Q			
MOV-034B	3	B-7		X				20	B	MO	C	ET-Q			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-037A	3	B-5		X				16	B	MO	O/C	ET-Q			
MOV-037B	3	B-4		X				16	B	MO	O/C	ET-Q			
AOV-016A	3	H-1		X				6	GT	AO	C	ET-Q			
AOV-016B	3	F-1		X				6	GT	AO	C	ET-Q			
AOV-016C	3	G-1		X				6	GT	AO	C	ET-Q			
MOV-036A	3	J-3		X				10	GT	MO	O	ET-Q			
MOV-036B	3	K-3		X				10	GT	MO	O	ET-Q			
MOV-036C	3	K-3		X				12	B	MO	O	ET-Q			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
0002A	3	G-6			X		18	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0002B	3	H-6			X		18	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0002C	3	F-6			X		18	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0002D	3	J-6			X		18	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
20V-0020	3	C-6			X		20	C	SA	--	ET-Q			
0008A	3	A-7			X		20	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0008B	3	A-7			X		20	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0010A	3	A-6			X		16	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
0010B	3	A-6			X			16	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
6V/0013A	3	G-3			X			6	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
6V/0013B	3	E-3			X			6	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
6V/0013C	3	F-3			X			6	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
6V/0014A	3	H-3			X			6	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
6V/0014B	3	F-3			X			6	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
6V/0014C	3	G-3			X			6	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
MOV-042A	3	E-4	X					6	B	MO	C	PV			

SYSTEM

Service Water (P-41)

FM-47A

PGID NO.

PAGE

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (Inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-042B	3	E-4		X				6	B	MO	C	PV			
MOV-043	3	E-4		X				3	D	MO	O	PV			
MOV-129A	3	D-3		X				10	B	MO	O	ET-Q			
MOV-129B	3	A-2		X				10	B	MO	O	ET-Q			



NUCLEAR ENERGY SERVICES, INC.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
0179A	3	C-2			X			6	C	SA	--	ET-Q			
0140A	3	C-5			X			6	C	SA	--	ET-Q			
0178A	3	C-2			X			6	C	SA	--	ET-Q			
0139A	3	C-5			X			6	C	SA	--	ET-Q			
0007A	3	E-3			X			6	C	SA	--	ET-Q			Forward flow test only
0008A	3	E-5			X			6	C	SA	--	ET-Q			Forward flow test only
AOV-062A	3	E-3		X				6	GT	AO	O	PV			
AOV-063A	3	E-5		X				6	GT	AO	O	PV			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-034A	3	A-3		X				10	B	MO	C	ET-Q			
MOV-033A	3	A-4		X				10	B	MO	C	ET-Q			
MOV-032A	3	A-4		X				10	B	MO	O/C	ET-Q			
MOV-031A	3	A-4		X				10	B	MO	O/C	ET-Q			
AOV-069A	3	A-3		X				2	GT	MO	O	ET-Q			
AOV-068A	3	A-4		X				2	GT	MO	O	ET-Q			
0019A	3	E-4			X			6	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)
0020A	3	E-6			X			6	C	SA	--	ET-Q			Exercise during pump operation (forward flow test only)

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
0140B	3	C-5			X			6	C		--	ET-Q			
0139B	3	C-5			X			6	C		--	ET-Q			
0179B	3	C-2			X			6	C		--	ET-Q			
0178B	3	C-2			X			6	C		--	ET-Q			
0007B	3	D-3			X			6	C		--	ET-Q			
0008B	3	D-5			X			6	C		--	ET-Q			
AOV-062B	3	E-2		X				6	GT	AO	O	PV			
AOV-063B	3	E-5		X				6	GT	AO	O	PV			

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
MOV-034B	3	A-3		X			10	B	MO	C	ET-Q			
MOV-033B	3	A-4		X			10	B	MO	C	ET-Q			
MOV-032B	3	A-4		X			10	B	MO	O	ET-Q			
MOV-031B	3	A-4		X			10	B	MO	O	ET-Q			
AOV-069B	3	A-3		X			2	GT	MO	O	ET-Q			
AOV-068B	3	A-4		X			2	GT	MO	O	ET-Q			
0019B	3	E-4			X		6	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)
0020B	3	E-6			X		6	C	SA	--	ET-Q			Exercise during pump test (forward flow test only)

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-021A	1	D-4	X					1.5	GL	MO	C	LRT ET-Q	01 02	ET-C	
MOV-021B	1	D-4	X					1.5	GL	MO	C	LRT ET-Q	01 02	ET-C	
MOV-021C	1	E-2	X					1.5	GL	MO	C	LRT ET-Q	01 02	ET-C	
MOV-021D	1	E-3	X					1.5	GL	MO	C	LRT ET-Q	01 02	ET-C	
MOV-022A	2	D-4		X				1.5	GL	MO	C	ET-Q	02	ET-C	
MOV-022B	2	D-5		X				1.5	GL	MO	C	ET-Q	02	ET-C	
MOV-022C	2	E-2		X				1.5	GL	MO	C	ET-Q	02	ET-C	
MOV-022D	2	E-3		X				1.5	GL	MO	C	ET-Q	02	ET-C	

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
MOV-023A	2	E-6	X				1.5	GL	MO	C	ET-Q	02	ET-C	
MOV-023B	2	D-6	X				1.5	GL	MO	C	ET-Q	02	ET-C	
MOV-023C	2	G-6	X				1.5	GL	MO	C	ET-Q	02	ET-C	
MOV-023D	2	F-6	X				1.5	GL	MO	C	ET-Q	02	ET-C	
MOV-024	2	C-4	X				2	GL	MO	C	ET-Q	03	ET-C	
MOV-025	2	C-5	X				2	GL	MO	C	ET-Q	03	ET-C	
MOV-026	2	B-4	X				2	GL	MO	C	ET-Q	03	ET-C	
MOV-027	2	B-5	X				2	GL	MO	C	ET-Q	03	ET-C	

RELIEF REQUEST

01

System:	MSIV Leakage Control System
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class	I
Function:	Containment Isolation
Test Requirement:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System:	MSIV Leakage Control System
Valve:	MOV-021 A, B, C & D; MOV-022 A, B, C & D, MOV-023 A,B,C,D
Category:	A
Class:	1
Function:	Upstream Bleed Line Isolation Valves.
Test Requirement:	Exercise valves for operability every three months.
Basis for Relief:	Operation of these valves shall only be performed while the reactor is shut down (< 35 psig) in order to preclude inadvertent steam discharge.
Alternate Testing:	Valves will be exercised for operability during cold shutdown.

RELIEF REQUEST

03

System:	MSIV Leakage Control System
Valve:	MOV-024, 025, 026 & 027
Category:	B
Class:	2
Function:	Downstream Bleed Isolation Valve (MOV-024) Downstream Depressurization Valve (MOV-026).
Test Requirements:	Exercise valves for operability every three months.
Basis for Relief:	Operation of these valves shall only be performed while the reactor is shut down (< 35 psig) in order to preclude inadvertent steam discharge.
Alternate Testing:	Valves will be exercised for operability during cold shutdown.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-031A	1	E-7		X				28	GT	MO	O	ET-Q	02	ET-C	
MOV-032A	1	H-6		X				28	GT	MO	O	ET-Q	02	ET-C	
0002A	2	J-5	X					3/4	C	SA	—	LRT ET-Q	01 03	ET-C	



Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
AOV-081	2	E-1	X				3/4	GL	AO	O	LRT ET-Q	01		
AOV-082	2	D-1	X				3/4	GL	AO	O	LRT ET-Q	01		
MOV-31B	1	F-7		X			28	GT	MO	O	ET-Q	02	ET-C	
MOV-032B	1	C-7		X			28	GT	MO	O	ET-Q	02	ET-C	
0002B	2	B-5	X				3/4	C	SA	—	LRT ET-Q	01 03	ET-C	



RELIEF REQUEST

01

System:	Reactor Water Recirculation
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	1
Function:	Containment Isolation
Test Requirement:	Leak Rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System:	Reactor Water Recirculation
Valve:	MOV-031 A & B, MOV-032 A & B
Category:	B
Class:	1
Function:	Reactor recirculation pump isolation valves.
Test Requirements:	Exercise valves for operability every three months.
Basis for Relief:	The stroking of these valves is not practical during normal operation. Full stroking these valves causes the loss of flow to the recirculation pumps causing adverse plant operations such as changes in reactivity, power transients and a possible reactor trip, during normal plant operations.
Alternate Testing:	Exercise valves for operability at cold shutdown.

RELIEF REQUEST

03

System: Reactor Water Recirculation

Valve: 0002 A, B

Category: A

Class: 2

Function: Check valve inside drywell to recirculation pump seal cooling from CRD pump.

Test Requirements: Exercise valves for operability every three months.

Basis for Relief: Due to inerted containment, valve is not accessible.

Alternate Testing: Exercise at cold shutdown.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-034A	2	C-6	X					10	GT	MO	C	LRT ET-Q	01		
MOV-034B	2	C-6	X					10	GT	MO	C	LRT ET-Q	01		
MOV-033B	2	A-7	X					6	GT	MO	C	LRT ET-Q	01		
MOV-033A	2	A-6	X					6	GT	MO	C	LRT ET-Q	01		



RELIEF REQUEST

01

System:	Fuel Pool Cooling and Cleanup
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	1 & 2
Function:	Containment Isolation
Test Requirements:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
1028A	2	L-2	X					3/4 C	SA	SA	--	LRT ET-Q	01		
1028B	2	L-4	X					3/4 C	SA	SA	--	LRT ET-Q	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
AOV-127	2	B-2		X			3/4	GT	AO	C	ET-Q	02		
AOV-126	2	B-4		X			1/2	GT	AO	C	ET-Q	02		
HCU-114	2	E-2			X		3/4	C	SA	C	ET-Q	02		
HCU-115	2	G-4			X		1/2	C	SA	C	ET-Q	02		
HCU-138	2	B-5		X			1/2	C	SA	C	ET-Q	02		



Valve No.	Class	Coord. nates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
AOV-081	2	E-1		X			1	GT	AO	O	ET-Q			
AOV-082	2	B-5		X			2	GT	AO	O	ET-Q			
RV-096	2	D-4			X		3/4	R	SA	C	SRT			



RELIEF REQUEST

01

System:	Control Rod Drive
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	2
Function:	Containment Isolation
Test Requirement:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST BASIS

02

System: Control Rod Drive

Valve: AOV-126, AOV-127, HCU 138, HCU 114, HUC 115
(to be done for all 137 HUC's)

Cateogry: B (AOV-126/127)
C (138, 114, 115)

Class: 2

Function: Reactor Shutdown

Test Requirement: Exercise Test Quarterly

Basis for Relief: Control Rod Scram Insertion time testing meets the intent
of the ASME requirements.

Alternate Testing: Tech. Spec. Control Rod Scram Insertion time testing serves
to exercise the above valves. To be performed on 10% of the
HCU's each 120 days; on each individual control rod after
any maintenance or modification to that rod or system was
performed which could affect the scram insertion time for
this rod; for all rods prior to thermal power exceeding
40% of rated thermal power following core alterations or
after a reactor shutdown that is greater than 120 days.

RELIEF REQUEST BASIS

02

System: Control Rod Drive

Valve: AOV-126, AOV-127, HCU 138, HCU 114, HUC 115
(to be done for all 137 HUC's)

Category: B (AOV-126/127)
C (138, 114, 115)

Class : 2

Function: Reactor Shutdown

Test Requirement: Exercise Test Quarterly

Basis for Relief: Control Rod Scram Insertion time testing meets
the intent of the ASME requirements.

Alternate Testing: Tech. Spec. Control Rod Scram Insertion time testing
serves to exercise the above valves. To be performed
on 10% of the HCU's each 120 days; on each individual
control rod after any maintenance or modification to
that rod or system was performed which could affect
the scram insertion time for this rod; for all rods
prior to thermal power exceeding 40% of rated thermal
power following core alterations or after a reactor
shutdown that is greater than 120 days.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
SOV-126A	2	F-3	X					3/4	GT	EM	C	LRT ET-Q	01		
SOV-126B	2	F-3	X					3/4	GT	EM	C	LRT ET-Q	01		
SOV-127A	2	C-7	X					3/4	GT	EM	C	LRT ET-Q	01		
SOV-127B	2	C-7	X					3/4	GT	EM	C	LRT ET-Q	01		
SOV-128A	2	E-3	X					3/4	GT	EM	C	LRT ET-Q	01		
SOV-128B	2	E-3	X					3/4	GT	EM	C	LRT ET-Q	01		
SOV-129A	2	H-7	X					3/4	GT	EM	C	LRT ET-Q	01		
SOV-129B	2	H-7	X					3/4	GT	EM	C	LRT ET-Q	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
SOV-130	2	I-5	X					3/4	GT	EM	C	LRT ET-Q	01		Drywell Inerting (FM-84A) Connection
SOV-131	2	C-5	X					3/4	GT	EM	C	LRT ET-Q	01		
MOV-031A	2	F-5	X					6	GT	MO	C	ET-Q LRT	01		
MOV-031B	2	E-5	X					6	GT	MO	C	PV LRT	01		
MOV-032A	2	F-5	X					6	GT	MO	C	PV LRT	01		
MOV-032B	2	E-5	X					6	GT	MO	C	PV LRT	01		
MOV-033A	2	F-6	X					6	GT	MO	C	PV LRT	01		
MOV-033B	2	E-6	X					6	GT	MO	C	PV LRT	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
MOV-034A	2	G-8	X				6	GT	MO	C	PV LRT	01		
MOV-034B	2	E-8	X				6	GT	MO	C	PV LRT	01		
MOV-035A	2	G-5	X				6	GT	MO	C	PV LRT	01		
MOV-035B	2	F-5	X				6	GT	MO	C	PV LRT	01		
MOV-037A	2	G-6	X				6	GT	MO	C	PV LRT	01		
MOV-037B	2	E-6	X				6	GT	MO	C	PV LRT	01		
MOV-038A	2	G-6	X				6	GT	MO	C	PV LRT	01		
MOV-038B	2	D-6	X				6	GT	MO	C	PV LRT	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-040A	2	G-8	X					6	GT	MO	C	PV LRT	01		
MOV-040B	2	D-8	x					6	GT	MO	C	PV LRT	01		
AOV-001A	2	F-4	X					4	GT	AO	C	LRT ET-Q	01		System T-24
AOV-001B	2	F-4	X					4	GT	AO	C	LRT ET-Q	01		System T-24
0016B	2	C-5	X		X			3/4	C	SA	--	LRT ET-Q	01 02	ET-R	
0016A	2	H-5	X		X			3/4	C	SA	--	LRT ET-Q	01 02	ET-R	
AOV-004A	2	D-8	X					4	GL	AO		LRT ET-Q	01		System T-24 P & ID FM-84A
AOV-004B	2	D-8	X					4	GL	AO		LRT ET-Q	01		System T-24 P & ID FM-84A

RELIEF REQUEST

01

System:	Primary Containment Atmospheric Control
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	2
Function:	Containment Isolation
Test Requirements:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System:	Primary Containment Atmospheric Control
Valve:	0016A & 0016B
Category:	A - C
Class:	2
Function:	Containment Isolation Valve
Test Requirements:	Exercise test quarterly (reverse flow test only)
Basis for Relief:	The system as designed does not provide a method to verify valve closure. Therefore these valves cannot be reverse flow tested during normal operation or routine plant shutdown.
Alternate Testing:	Reverse flow test will be performed during the Appendix J leak rate test at refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-104	2	C-7	X					1	GL	MO	C	LRT ET-Q	01		
MOV-106	2	H-7	X					1	GL	MO	C	LRT ET-Q	01		
MOV-103A	2	G-5	X					1½	GL	MO	O	LRT ET-Q	01		
MOV-103B	2	C-5	X					1½	GL	MO	O	LRT ET-Q	01		
0695A	2	F-5	X		X			1½	C	SA	—	LRT ET-Q	01 02	ET-R	
0695B	2	D-5	X		X			1½	C	SA	—	LRT ET-Q	01 02	ET-R	
0811	2	H-7	X		X			1	C	SA	—	LRT ET-Q	01		
0821	2	C-7	X		X			1	C	SA	—	LRT ET-Q	01		
0603	2	E-7	X		X			½	C	SA	—	LRT PV	01		FM-38D



RELIEF REQUEST

01

System:	Instrument and Service Air (P-50)
Valve:	Containment Isolation Valves (as listed)
Category:	A / A - C
Class:	2
Function:	Containment Isolation
Test Requirement:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. Spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System: Instrument & Service Air

Valve: 0695 A & B,

Category: A - C

Class: 2

Function: Containment Isolation Valves

Test Requirement: Exercise valves quarterly

Basis for Relief: The valves are located inside containment and are inaccessible for testing during plant operation. The only way to verify closure is by leak testing during Appendix J test.

Alternate Testing: Exercise valves (reverse flow test only) during Appendix J test at refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
AOV-038A	2	H-8	X					18	B	AO	C	LRT PV	01		
AOV-038B	2	H-8	X					18	B	AO	C	LRT PV	01		
AOV-038C	2	H-8	X					18	B	AO	C	LRT PV	01		
AOV-038D	2	H-8	X					18	B	AO	C	LRT PV	01		
AOV-039A	2	G-8	X					18	B	AO	C	LRT PV	01		
AOV-039B	2	F-8	X					18	B	AO	C	LRT PV	01		
AOV-039C	2	H-8	X					18	B	AO	C	LRT PV	01		
AOV-039D	2	H-8	X					18	B	AO	C	LRT PV	01		



Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
AOV-078A	2	G-8	X					6	GT	AO	C	LRT ET-Q	01		
AOV-078B	2	G-8	X					6	GT	AO	C	LRT ET-Q	01		
AOV-079A	2	F-8	X					6	GT	AO	C	LRT ET-Q	01		
AOV-079B	2	F-8	X					6	GT	AO	C	LRT ET-Q	01		

RELIEF REQUEST

01

System:	Reactor Building Normal Vent.
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	2
Function:	Containment Isolation
Test Requirements:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

SYSTEM

Drywell Floor Seal Press Monitor (4-23)

PCID NO. FM-33A

PAGE

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-031A	2	C-2	X					1/2	GL	MO	O	LRT PV	01		
MOV-031B	2	C-G	X					1/2	GL	MO	O	LRT PV	01		



NUCLEAR ENERGY SERVICES INC.

RELIEF REQUEST

01

System:	Drywell Floor Seal Press Monitoring
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	2
Function:	Containment Isolation
Test Requirements:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
MOV-032A	2	B-6	X					1	GL	MO	O	LRT ET-Q	01		
MOV-032B	2	B-6	X					1	GL	MO	O	LRT ET-Q	01		
MOV-033A	2	B-8	X					1	GL	MO	O	LRT ET-Q	01		
MOV-033B	2	B-8	X					1	GL	MO	O	LRT ET-Q	01		

RELIEF REQUEST

01

System:	Radiation Monitoring
Valve:	Containment Isolation Valves (as listed)
Category:	A
Class:	2
Function:	Containment Isolation
Test Requirement:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
SOV- (Later)	2		X				Later			EM	O	LRT	01		
EV-801A	2	F-4	X			X				E	O	XT			
EV-801B	2	F-4	X			X				E	O	XT			
EV-801C	2	F-4	X			X				E	O	XT			
EV-801D	2	F-4	X			X				E	O	XT			
SOV-801A	2	F-4	X							EM	C	LRT PV	01		
SOV-801B	2	F-4	X							EM	C	LRT PV	01		
SOV-801C	2	F-4	X							EM	C	LRT PV	01		

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation	Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D									
SOV-201D	2	F-4	X							RM	C	LRT PV	01		
Check	2	F-4	X		X			.375		SA	--	LRT	01		



RELIEF REQUEST

01

System: Neutron Monitoring

Valve: Containment Isolation Valves (as listed)

Category: A / A - C

Class: 2

Function: Containment Isolation

Test Requirements: Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.

Basis for Relief: Appendix J leak rate testing meets the intent of the ASME requirements.

Alternate Testing: Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

Valve No.	Class	Coordinates	Valve Category				Pressure Isolation Size (inches)	Valve Type	Actuator Type	Normal Position	Test Requirements	Relief Requests	Alternate Tests Performed	Remarks
			A	B	C	D								
SOV-313A	2	A-4	X				3/4	GT	EM	O	LRT ET-Q	01		System B-21
SOV-313B	2	A-4	X				3/4	GT	EM	O	LRT ET-Q	01		System-B-21
SOV-168	2	A-4	X				3/4	GT	EM	O	LRT ET-Q	01		System E-11
SOV169	2	A-3	X				3/4	GT	EM	O	LRT ET-Q	01		System E-11
0048	2	A-3	X	X			3/4	C	SA	--	LRT ET-Q	01 02	ET-R	System E-11
0047	2	A-4	X	X			3/4	C	SA	--	LRT ET-Q	01 02	ET-R	System E-11

RELIEF REQUEST

01

System:	Post Accident Sample System
Valve:	Containment Isolation Valves (as listed)
Category:	A / A - C
Class:	2
Function:	Containment Isolation
Test Requirements:	Leak rate testing per IWV-3420 ASME Boiler and Pressure Vessel Code Section XI.
Basis for Relief:	Appendix J leak rate testing meets the intent of the ASME requirements.
Alternate Testing:	Leak rate testing per Tech. spec. requirements based on Appendix J to be performed during refueling.

RELIEF REQUEST

02

System:	Post Accident Sample System
Valve:	Checks (2)
Category:	A - C
Class:	2
Function:	Containment Isolation Valve
Test Requirements:	Exercise test quarterly (reverse flow test only)
Basis for Relief:	The system as designed does not provide a method to verify valve closure. Therefore these valves cannot be reverse flow tested during normal operation or routine plant shutdown.
Alternate Testing:	Reverse flow test will be performed during the Appendix J leak rate test at refueling.