A Subsidiary of RGS Energy Group, Inc.

ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001 • 716 546-2700 www.rge.com

ROBERT C. MECREDY
Vice President
Nuclear Operations

April 20, 2000

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Guy S. Vissing
Project Directorate I
Washington, D.C. 20555

Subject: IST 4th Interval Program, Revision 1
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Vissing:

RG&E wishes to clarify or modify several relief requests presented in our November 24, 1999 submittal. Attachment 1 provides a summary of questions and responses discussed during our March 13, 2000 telecon with the NRC reviewer, Margaret Kotzalas. Attachment 2 is a copy of Revision 1 of our Inservice Testing program document, including the revised relief requests (denoted by revision bars). Additional changes made to the program, independent of those resulting from this information exchange, are also included and listed in the "Summary of Changes" in Attachment 2.

Please note that the information provided in relief request VR-12 is consistent with testing procedure developed as a result of NRC approval of the 10CFR50 Appendix J Option B test program. We trust these responses fully satisfy the NRC questions in regard to RG&E Inservice Testing program.

Very truly yours,

Robert C. Mecredy

Attachments
gjw\549
1000134

A047 1/1

xc: Mr. Guy S. Vissing (Mail Stop 8C2)
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

U.S. NRC Ginna Senior Resident Inspector

ATTACHMENT 1

VR-1 and VR-2 REQUEST

Is a sample disassembly and inspection frequency of one valve every other refueling outage being proposed? If so, what is the argument for extreme hardship?

RESPONSE

The sample disassembly and inspection frequency for these valves is that one valve will be disassembled, full-stroke exercised, and inspected once every 18 months on a rotating basis (as opposed to once every 36 months as stated in our November 24, 1999 submittal).

VR-3 REQUEST

Are these solenoid valves? What is the acceptance criteria for the proposed alternative testing method?

RESPONSE

These are solenoid valves. The acceptance criteria for operability of these valves consists of the following:

- verifying locally that the valve has de-energized and tripped open
- verifying the presence of steady stream of water flow at the affected floor drain funnel
- verifying that the main control board associated annunciator alarms.

VR-8 REQUEST

From what paragraphs of OM-1 is relief being requested?

RESPONSE

Relief is being requested from paragraph 7.3.2.2 of OM-1. This paragraph applies to typical bench testing performed on relief valves. This valve is a welded in-line air-operated valve which also performs a relief function at a specific differential pressure. The tests listed in this paragraph cannot practically be performed on the valve in question.

VR-9 and VR-10

Several requests and responses relating to these relief requests are discussed below.

1) How is reverse flow verification performed for these valves?

Response: When steam generator pressure is greater than approximately 700 psia, the auxiliary or standby auxiliary feedwater pump tests are conducted. At the conclusion of the tests, the pumps are stopped. Successful "prompt closure" of these valves is verified when acceptable differential pressure (~50 psid) is found to exist across the valves at that time.

2) What conditions exist when progressing from Mode 4 to Mode 3 which preclude performance of this test?

Response: The differential pressure across the valves is insufficient (~100 psi) to provide a reliable indication of the "prompt closure" capability of these check valves. Additional information is provided in response 5 below.

3) Are these valves tested quarterly at power? If so, how is the test performed?

Response: Yes, the valves are tested quarterly in PT-16Q-A, PT-16Q-B, PT-16Q-T, PT-36Q-C and PT-36Q-D. As noted in response 1, the test is performed in conjunction with the quarterly test of the AFW and SBAFW pumps and is a prompt closure test that verifies acceptable differential pressure (steam generator pressure relative to decaying pump discharge pressure) exists across the valves once the pump is secured and flow is terminated.

4) Do the Technical Specifications require these valves to be tested during cold shutdown or refueling outages?

Response: The Technical Specifications (section 3.7.5) do not require testing of the check valves when in Cold Shutdown or Refueling Outage.

5) What part of the Code do you feel you can't comply with and why?

Response: Code requirement 4.3.2.4 of OM-10 , "Valve Obturator Movement", has a requirement that, if any of these check valves had maintenance performed on them while in Mode 4 or lower, which brought into question their ability to open or close, the check valve opening capability test (CV-O) and check valve closing capability test (CV-C) would be required. Since the CV-O test can be done regardless of what the S/G pressure is, it would be performed. However, as stated in response 2, the pressure which exists in the steam generators when transitioning from Mode 4 to Mode 3 is insufficient to support the CV-C test. These VRs request that the CV-C test be deferred until the requisite test conditions would exist (prior to exceeding 5% reactor power).

6) In the basis for relief what is meant by the word "retest" in the last sentence?

Response: The term "retest" was meant to denote that the CV-C test referred to in response 4 would be performed at the next scheduled performance of the quarterly pump test. Note that this term has been deleted since we now prepare to perform this testing during startup, but only deferred until a reactor power of approximately 5% is reached.

VR-11 and VR-12 REQUESTS

Please clarify what testing requirements relief is requested from (i.e., leak testing per OM-10 paragraph 4.2.2.3(e) and (f), Appendix J). It is not clear what is being proposed.

RESPONSE

VR-11 is being withdrawn.

VR-12 is being requested because the test conditions cannot be made to completely match postulated post-accident conditions. The check valve being tested normally has some water at the disk. RG&E attempts to remove the water by blowing air through the system, but some small amount of water cannot be guaranteed to be removed. Post-LOCA, it would be expected that the heated environment would evaporate any water at the disk. Thus, a small difference may exist between the tested and post-accident condition. RG&E performs the test at a pressure slightly above containment design pressure (60.3 psig - 61.3 psig vs. 60 psig) to compensate for this small amount of water potentially left at the valve disk.

SUMMARY OF CHANGES
INSERVICE TESTING PROGRAM DOCUMENT
4TH TEN-YEAR INTERVAL
REVISION 1

Section	**Change**
Table of Contents	Updated page numbering due to reformatting
Section 9.0	Added Cold Shutdown Justification CS-32. (page 18) Added Safety Injection (Addendum 1) and CS-32 on pages 26-27
Section 10.0	In ROJ-9 in the last sentence, added "either" and the phrase "...or utilizing an RFO frequency procedure." (page 31)
Section 11.0	In VR-1 and VR-2, under ALTERNATE TESTING, 36 months was changed to 18 months to clarify the original intent of testing frequency. (pages 38 & 39) In VR-3, under ALTERNATE TESTING, in the second sentence, modified the phrase "...based on visual verification of the initiation and isolation of cooling water flow at the affected floor drain...." to "...based on: verifying locally that the valve has de-energized and tripped open; verifying the presence of a steady stream of water from the affected floor drain; and verifying that the associated main control board annunciator alarms." (page 41) In VR-8, changed the BASIS FOR RELIEF in its entirety. In VR-9 and VR-10, under BASIS FOR RELIEF, added the second and third sentences. Deleted the following sentences, "During normal operation the IST Program requires quarterly full flow pump tests. To retest the Auxiliary Feedwater pumps after achieving sufficient steam generator pressure would be an unwarranted burden on the plant and equipment." Added the last sentence, "Relief is requested from paragraph 4.3.2.4 of OM-10 until plant startup, yet prior to exceeding 5% reactor power, at which time steam generator pressure will be sufficient to perform a reverse flow verification." Under ALTERNATE TESTING, changed the frequency from "...at the next regularly scheduled quarterly pump operability test..." to "...prior to exceeding 5% reactor power...." (pages 50 & 51) Withdraw Valve Relief Request VR-11 pertaining to containment spray valves 859A, 859B, 859C, 864A, 864B, 2829, and 2830. (page 32).

SUMMARY OF CHANGES
INSERVICE TESTING PROGRAM DOCUMENT
4TH TEN-YEAR INTERVAL
REVISION 1

Section	Change
	In VR-12, replaced the previous TEST REQUIREMENT in its entirety with, "In accordance with paragraph 6.3 of ANS/ANSI 56.8-1994, the line downstream of the check valve shall be drained for testing."
Attachment. B	Page 2: For valve 4000C, added the CV-C test, Quarterly frequency, PT-16.3A procedure, Relief Request VR-9, and Remarks "(If performed during Mode change)".
	Page 3: For valve 4000D, added the CV-C test, Quarterly frequency, PT-16.3B procedure, Relief Request VR-9, and Remarks "(If performed during Mode change)".
	Page 9: For valve 651 corrected procedure number to RSSP-13 from RSSP-12.1
Attachment B	Page 22: For valves 845C and 845D corrected procedure number to RSSP-13 from RSSP-12.1
	Page 23: Deleted containment spray valves 859A, 859B, and 859C pursuant to withdrawn Relief Request VR-11.
	Page 24: For valves 864A and 864B changed frequency to "R" (Refueling) from Q (Quarterly), changed procedure to PTT-23.18A and PTT-23.18B, respectively, from PT-3Q, .and removed Relief Request VR-11, which has been withdrawn.
	Page 26: For valves 897 and 898 corrected procedure number to PT-39 from PT-8.12 for the LT-X test.
	Page 28: Deleted containment spray valves 2829 and 2830 pursuant to withdrawn Relief Request VR-11.
	Page 45: For valve 5393 updated procedure number to PT-2.10 from PTT-23.32 for the CV-C test, and added the remarks for that test, "CV-C coordinated with PTT-23.32 during LLRT."
	Page 72: For valve 841 revised Exercise (EX) and Stroke Closed (ST-C) frequency to (CS) Cold Shutdown from (Q) Quarterly. Updated procedure

Section	Change
	number to PT-2.4 from PT-2.3 for these tests. Added CS-32 to Relief Request column.
	Page 73: For valve 865 revised Exercise (EX) and Stroke Closed (ST-C) frequency to (CS) Cold Shutdown from (Q) Quarterly. Updated procedure number to PT-2.4 from PT-2.3 for these tests. Added CS-32 to Relief Request column.
	Page 76: For valves 878G and 878J corrected procedure number to PT-2.10.4 from PT-2.1Q for the CV-C test.
	Page 90: For valves 8614 and 8654, added procedure number PT-33B to the procedure column in addition to PT-33A.
Attachment B	Page 93: For valve 9704A, added CV-C test, Quarterly frequency, procedure PT-36.2C, Relief Request VR-10, and Remarks "(If performed during Mode change)."
	Page 93: For valve 9704B, added CV-C test, Quarterly frequency, procedure PT-36.2D, Relief Request VR-10, and Remarks "(If performed during Mode change)."
	Page 93: For valve 9705A, added CV-C test, Quarterly frequency, procedure PT-36.2C, Relief Request VR-10, and Remarks "(If performed during Mode change)."
	Page 94: For valve 9705B, added CV-C test, Quarterly frequency, procedure PT-36.2D, Relief Request VR-10, and Remarks "(If performed during Mode change)."

INSERVICE TESTING PROGRAM

4th TEN-YEAR INTERVAL

Robert E. Ginna Nuclear Power Plant

Effective Date: 4/18/00

Prepared by: Glen Hermes Date: 3/23/00

Quality Assurance Review by: R T Davis Date: 3/23/00

Approved by: Thomas A. Marlow Date: 4/18/00

Table of Contents

1.0 INTRODUCTION 4

2.0 REFERENCES 4

3.0 TERMS AND DEFINITIONS 5

4.0 GENERAL REQUIREMENTS 6

5.0 PUMP TESTING PROGRAM 7
- 5.1 Scope 7
- 5.2 Exemptions 8
- 5.3 Test Requirements 8
- 5.4 Pump Testing Program Plan Description 9

6.0 VALVE TESTING PROGRAM 10
- 6.1 Scope 10
- 6.2 Exemptions 10
- 6.3 Test Requirements 11
- 6.4 Valve Testing Program Plan Description 13

7.0 RECORDS 15

8.0 SYSTEM INDEX 16

9.0 COLD SHUTDOWN JUSTIFICATIONS 18

10.0 REFUELING OUTAGE JUSTIFICATIONS 28

11.0 RELIEF REQUESTS 32

12.0 TECHNICAL JUSTIFICATIONS 54

Table 1 Table of Acronyms 56

Attachment A: Pump Testing Program Plan . . . . . .

Attachment B: Valve Testing Program Plan . . . . . .

1.0 INTRODUCTION

1.1 This document establishes and defines the Inservice Pump and Valve Testing Program for Ginna Station's fourth ten-year interval from January 1, 2000 through December 31, 2009. This program has been developed as required by Title 10 Code of Federal Regulations Part 50, Paragraph 50.55a(f), in accordance with the 1989 Edition of the ASME Boiler and Pressure Vessel Code - Section XI - "Rules for Inservice Inspection of Nuclear Power Plant Components". This edition refers directly to the ASME/ANSI OMa-1988 standard for pump testing (Part 6) and for valve testing (Part 10). Additionally, OMa-1988, Part 10 refers to ASME/ANSI OM-1987, Part 1 for relief device testing. Program requirements for the fourth ten-year interval are developed in accordance with these standards.

1.2 The purpose of this Inservice Testing Program is to verify operational readiness of those pumps and valves whose function is required for safety. It is not intended to place Ginna Station in a degraded safety condition for the purpose of conducting system or component tests. Therefore, as normally viewed for Code compliance, testing of a safety train will not be performed when any redundant train is out of service. Instead, equipment will be positioned to provide for safe plant operation. Pumps and valves included in this program are those in systems or portions of systems (Section 8.0 - System Index) which are required to accomplish specified safety functions or tasks, as identified within Ginna Station's licensing basis.

1.3 Ginna Station is licensed for a safe shutdown condition of hot shutdown. As such, all references to achieving or maintaining the cold shutdown condition, as delineated by the Code, are modified to achieving or maintaining the hot shutdown condition in accordance with Section 2.2 of Reference 2.9.

1.4 In addition to those pumps and valves required to be tested by the Code, other components are administratively included in the program from a good engineering and management practice standpoint. These components are identified with an asterisk (*) and need not be tested to specific Code criteria.

2.0 REFERENCES

2.1 ASME Boiler & Pressure Vessel Code - Section XI Division 1, "Rules for Inservice Inspection and Testing of Nuclear Power Plant Components", 1989 Edition (herein referred to as the Code).

2.2 ASME/ANSI OMa-1988, "Operation and Maintenance of Nuclear Power Plants" Parts 6 and 10.

2.3 ASME/ANSI OM-1987, "Operation and Maintenance of Nuclear Power Plants" Part 1.

2.4 Nuclear Directive ND-IIT, Inservice Inspection and Testing.

2.5 Interface Procedure IP-IIT-2, Inservice Testing Program for Pumps and Valves.

2.6 Interface Procedure IP-IIT-3, Containment Leakage Rate Testing Program.

2.7 Ginna Station Technical Specifications.

2.8 Ginna Station Updated Final Safety Analysis Report (UFSAR).

2.9 NUREG-1482, Guidelines for Inservice Testing at Nuclear Power Plants.

2.10 NUREG-0821, Systematic Evaluation Program (SEP) topics.

2.11 Title 10 Code of Federal Regulations Part 50 Para. 50.55a, Codes and standards.

2.12 USNRC Generic Letter 89-04, Guidance on Developing Acceptable Inservice Testing Programs, April 3, 1989.

2.13 Minutes of the Public Meetings on Generic Letter 89-04, October 25, 1989.

2.14 Supplement to Minutes of the Public Meetings on Generic Letter 89-04, September 26, 1991.

2.15 Supplement 1 to USNRC Generic Letter 89-04, Guidance on Developing Acceptable Inservice Testing Programs, April 4, 1995.

3.0 TERMS AND DEFINITIONS

3.1 Obturator - Valve closure member (e.g., disk, gate, plug, ball, etc.)

3.2 Operational readiness - the ability of a pump or valve to perform its intended function when required.

3.3 Reference values - one or more values of test parameters measured or determined when the equipment is known to be operating acceptably.

3.4 Active valves - valves required to change obturator position to accomplish a safety function.

3.5 Passive valves - valves that maintain obturator position and are not required to change obturator position to accomplish required safety functions.

3.6 Testing Frequencies - specified as follows:

Weekly - at least once per 7 days
Monthly - at least once per 31 days
Quarterly or every 3 months - at least once per 92 days
Semiannually or every 6 months - at least once per 184 days
Every 9 months - at least once per 276 days
Yearly or annually - at least once per 366 days
Biennially or every 2 years - at least once per 731 days

4.0 GENERAL REQUIREMENTS

4.1 Inservice pump and valve testing shall be performed in accordance with ASME/ANSI OMa-1988, Parts 6 and 10 and OM-1987, Part 1 to the extent practicable within limits of design, geometry and materials of construction of the components. The guidelines from the referenced regulatory documents have also been used in the development of this program.

4.1.1 Code requirements related to Enforcement Authority, Authorized Inspection Agency, Authorized Nuclear Inspector Supervisors and Inspectors are excluded, as Ginna Station is located in the state of New York which has not endorsed ASME Codes. Nuclear Directive ND-IIT shall be used in lieu of Code administrative functions to provide controls to verify implementation. However, ANII services will be used for the review of this program and documentation generated as a result of this program.

4.1.2 Where a Code test requirement is determined to be impractical, this Program Document identifies applicable Relief Requests, Cold Shutdown Justifications or Refueling Outage Justifications which describe the bases for determination and alternative test methods and/or frequencies.

4.2 Implementation of the program shall be controlled in accordance with the Nuclear Directive ND-IIT, Inservice Inspection and Testing, and Interface Procedure IP-IIT-2, Inservice Testing Program for Pumps and Valves, including but not limited to responsibilities, procedures, specifications, personnel qualifications, test performance and evaluation, and records.

4.3 Changes to this program subject to NRC review and approval, in accordance with the guidance provided by Reference 2.13, should not be implemented prior to review and approval by the Nuclear Regulatory Commission.

4.4 This program and/or implementing procedures shall be revised as necessary following applicable changes to Technical Specifications or plant modifications.

4.5 IST Program requirements shall not supersede the requirements of Technical Specifications. Any identified conflicts between the requirements of the IST Program and Technical Specifications shall be rectified.

5.0 PUMP TESTING PROGRAM

5.1 Scope

This Inservice Pump Testing Program includes all safety related centrifugal, vertical line shaft and positive displacement type pumps that are provided with an emergency power source, and are not exempt by paragraph 5.2, and which function to:

a. mitigate the consequences of an accident

b. shutdown the reactor to a hot shutdown condition

c. maintain the reactor in a hot shutdown condition

5.2 Exemptions

The following are exempt from requirements of this program:

a. pumps that are supplied with emergency power solely for operating convenience.

b. drivers of pumps, except where the pump and driver form an integral unit and the pump bearings are in the driver.

5.3 Test Requirements

5.3.1 Inservice pump tests shall be conducted in accordance with ASME/ANSI OMa-1988, Part 6, unless specific relief is granted by the NRC.

5.3.2 Inservice pump tests shall be conducted nominally every three months during normal plant operation, except as follows:

a. For pumps in systems declared inoperable or not required to be operable, test schedules need not be followed. Within three months prior to returning a system to operable status, the affected pumps shall be tested and the test schedule followed. Pumps which can only be tested during plant operation shall be tested within one week following plant startup.

5.3.3 Inservice pump test intervals may be extended by 25% to accommodate normal test schedules. The total combined interval for any three consecutive tests should not exceed 3.25 times the specified interval.

5.3.4 After a pump has been replaced, or when pump repairs or maintenance may have affected any reference value, the pump shall be tested prior to declaring it operable to determine new reference values or reconfirm previous values. Deviations between the previous and new sets of reference values shall be identified and verified to represent acceptable pump operation.

5.3.5 The instrumentation requirements of OMa-1988, Part 6 shall be met.

5.3.6 All test data shall be analyzed within 96 hours after completion of a test, however when data is recorded which exceeds the Required Action range, the pump shall immediately be declared inoperable.

5.4 Pump Testing Program Plan Description

Pumps that are required to be tested for the program are identified in Attachment A - Pump Testing Program Plan. The plan is organized as a table to provide the following information:

a. System - plant system of which the pump is a component.

b. Pump ID - pump identification number.

c. Drawing (Dwg) - Piping and Instrumentation Diagram (P&ID) where the pump is located (RG&E Drawing Number 33013 series).

d. Coordinates (Coor) - P&ID coordinates.

e. Safety Class - designated safety class of the pump (SS = safety significant, NS = non-safety).

f. Frequency (Freq) - test frequency

g. Measured Parameters - these columns show applicable pump testing parameters that shall be measured. When an "X" is shown in a particular column, that parameter shall be measured or observed during inservice pump testing in accordance with the Code. If alternate testing is planned or if a test is being waived, the applicable pump relief request (PR) number will be shown.

Measured Parameters include the following:

Pump Speed (if variable) N
Differential Pressure
Pd
Discharge Pressure
P

Flow Rate
Q
Vibration (Peak Velocity)
V

6.0 VALVE TESTING PROGRAM

6.1 Scope

This Inservice Valve Testing Program includes all safety related valves that are not exempt by paragraph 6.2, and which function to:

a. mitigate the consequences of an accident

b. shutdown the reactor to a hot shutdown condition and maintain the hot shutdown condition

c. provide overpressure protection to a system or component which performs (a) or (b) above.

6.2 Exemptions

The following are exempt from requirements of this program:

a. Maintenance Valves - valves that are used only to isolate components to perform maintenance.

b. Operating Convenience Valves - valves used only for operating convenience, such as manual vent, drain, instrument and test valves.

c. System Control Valves - valves such as pressure regulating, flow control and manual throttle valves.

d. External Control and Protection Systems -valves in systems responsible for sensing plant conditions and providing signals for valve operation.

6.3 Test Requirements

6.3.1 Inservice valve tests shall be conducted in accordance with ASME/ANSI OMa-1988, Part 10 and OM-1987, Part 1 unless specific relief is granted by the NRC.

6.3.2 Inservice valve tests shall be conducted nominally every three months during normal plant operation, except as follows:

a. For a valve in a system declared inoperable or not required to be operable, the exercising test schedule need not be followed. Within 3 months prior to returning the system to operable status, exercising tests shall be conducted and test schedules followed.

6.3.3 Inservice valve test intervals may be extended by 25% to accomodate normal test schedules. The total combined interval for any three consecutive tests should not exceed 3.25 times the specified interval.

6.3.4 When a valve or its control system has been replaced or repaired or has undergone maintenance that could affect its performance, and prior to declaring the valve operable, it shall be retested to demonstrate that the performance parameters which could be affected by the replacement, repair or maintenance are within acceptable limits. Deviations between the previous and new reference values shall be identified and verified to represent acceptable valve operation.

6.3.5 Valve testing that is specified in Attachment B to be conducted during cold shutdowns, shall commence within 48 hours of achieving cold shutdown (as defined in plant Technical Specifications), and continue until all testing is complete or the plant is ready to return to power. However, it is not required to keep the plant in cold shutdown in order to complete all cold shutdown testing. If the time period since the last test for a particular valve is less than 3 months, then cold shutdown testing for that valve is not required. Any testing not completed at one cold shutdown due to outage duration, shall commence and continue as above during any subsequent cold shutdown that may occur before the next refueling outage to meet the specified testing frequency.

6.3.6 For extended outages, testing need not commence within 48 hours provided that all valves required to be tested during cold shutdown will be tested prior to plant startup.

6.3.7 All valve testing required to be performed during a refueling outage shall be completed prior to returning the plant to operation.

6.3.8 Containment Isolation Valves shall be tested in accordance with 10CFR50 Appendix J, Option B (LT-J) and controlled in accordance with the Containment Leakage Rate Testing Program (Reference 2.6).

6.3.9 Those valves which perform both a containment isolation function and a pressure isolation function shall be tested to both 10CFR50 Appendix J and OMa-1988, Part 10 requirements.

6.3.10 Relief Test (RT) - relief valves shall be tested in accordance with ASME/ANSI OM-1987 Part 1, to verify set pressure and seat tightness.

6.3.11 Exercising check valves to the full open position utilizing flow is acceptable if the maximum required accident flowrates are passed through the valves undergoing tests.

6.3.12 Where system design or operation prevents full stroke check valve exercising, the valve may be disassembled and manually exercised as an alternative. When a check valve is disassembled and manually exercised a partial stroke test shall be performed upon reassembly, if possible (NRC GL 89-04, Position 2).

6.3.13 Valve test results, other than stroke timing, which do not meet the prescribed acceptance criteria shall result in the valve immediately being declared inoperable. Valves with measured stroke times which do not meet acceptance criteria shall be evaluated to verify acceptable valve operation or declared inoperable as described in Relief Request GR-2.

6.3.14 Check valves whose obturator movement will be verified by a mechanical exerciser shall be demonstrated operable by comparing a breakaway force to reference value as described by OMa-1988, Part 10.

6.3.15 All motor-operated valves, except for certain auxiliary feedwater valves have lock-in actuation circuits and do not permit partial stroke exercising.

6.4 Valve Testing Program Plan Description

Valves that are required to be tested for the program are identified in Attachment B - Valve Testing Program Plan. The plan is organized as a table to provide the following information:

a) System - Dwg Number: each page of the valve plan contains a heading which identifies the plant system and associated Piping and Instrumentation Diagram (P&ID) for valves on the page.

b) Valve Number - valve identification number.

c) Coor./P&ID - location coordinates of the valve on the P&ID and the P&ID Number (RG&E Drawing Number 33013 series).

d) Type/Size - valve design type as indicated by the following abbreviations, and nominal size of the valve in inches.

BAV - Ball Valve
BFV - Butterfly Valve
CV - Check Valve
DIV - Diaphragm Valve
GTV - Gate Valve
GLV - Globe Valve
REV - Relief Valve
SCV - Stop Check Valve
TWV - Three-way Valve

e) Actuator - type of valve actuator as indicated by the following abbreviations:

MOV - Motor Operator
AOV - Air Operator
SOV - Solenoid Operator
MAN - Manual Operator
HYD - Hydraulic Operator
SAV - Self Actuated

f) Normal Position (Norm Pos) - position of the valve during normal plant operation as indicated by the following:

O - Open
C - Closed

g) Safety Class - designated safety class of the valve (SS = safety siginificant, NS = non-safety).

h) Category/Act-Pas - ASME category A, B, C, BC, or AC assigned to the valve, and identification of the valve as ACTIVE or PASSIVE.

i) Required Tests - required inservice test to be performed are indicated by the following:

LT-J - Leak test per 10CFR50 Appendix J, Option B
LT-X - Leak test per ASME Section XI
EX - Exercising test (for Category A or B valves)
ST (O,C) - Stroke Time (O=open, C=closed)
FS (O,C) - Fail Safe Test (O=open, C=closed)
PIT - Position Indication Test
CV-C - Check Valve Exercise - Fullclosed
CV-O - Check Valve Exercise - Full open
CV-P - Check Valve Exercise - Partial open
RT - Relief Valve Test

j) Frequency (Freq) - test frequency described by:

Quarterly (Q) - at least once every three months.

Cold Shutdown (CS) - during cold shutdowns.

Refueling (R) - nominally at least once every 18 months not to exceed two years.

Relief valve (5Y/10Y), 5 year interval for Safety Class 1 and Main Steam Safety Valves; 10 year interval for Safety Classes 2 and 3, excluding Main Steam Safety Valves.

k) Procedure - identifies applicable procedure that accomplishes the required test.

l) Relief Requests - identifies applicable Relief Request, Refueling Outage or Cold Shutdown Justification number, where:

CS = Cold Shutdown Justification
ROJ= Refueling Outage Justification
GR = Generic Relief Request
VR = Valve Relief Request
TJ = Technical Position Justification

m) Remarks - applicable pertinent clarification or additional information is provided or referenced.

7.0 RECORDS

Records of the Inservice Pump and Valve Testing Program shall be developed and maintained in accordance with criteria established by the Code as delineated by ND-IIT, IP-IIT-2 and IP-IIT-3.

8.0 SYSTEM INDEX

SYSTEM	PI&D Number	Attachment B Page
Main Steam	33013-1231	48
Main Feedwater	33013-1236-1,2	46
Auxiliary Feedwater	33013-1237	2
Standby Auxiliary Feedwater	33013-1238	92
Diesel Generators	33013-1239-1,2	36
Component Cooling Water	33013-1245	9
Component Cooling Water	33013-1246-1	10
Residual Heat Removal	33013-1247	65
Spent Fuel Pool Cooling	33013-1248	90
Service Water	33013-1250-1,2,3	80
Reactor Coolant Pressurizer	33013-1258	62
Reactor Coolant	33013-1260	61
Containment Spray	33013-1261	22
Safety Injection & Accumulators	33013-1262-1,2	71
RCS Overpressure Protection	33013-1263	59
CVCS Letdown	33013-1264	34
CVCS Charging	33013-1265-1,2	30
Reactor Coolant Drain Tank	33013-1272-2	57
Waste Disposal - Gas	33013-1273-2	95
Hydrogen Recombiners	33013-1275-1,2	42
Steam Generator Blowdown	33013-1277-1	70
Nuclear Sampling	33013-1278-1,2	52
Post Accident Sampling	33013-1279	55
Containment HVAC, Recirculation	33013-1863	16
Containment HVAC, Purge Supply	33013-1865	21
Containment HVAC, Purge Exhaust	33013-1866	20
Auxiliary/Intermediate Bldg HVAC	33013-1870	1
Containment Vessel Air Test	33013-1882	29
Service Air	33013-1886-2	79
Instrument Air	33013-1887	46
Instrument Air	33013-1893	45
Primary Water Treatment - DI Water	33013-1908-3	56
Fire ProtectionPlant Systems	33013-1989	41

Fire Protection: Construction		
Fire Service Water	33013-1991	15
Auxiliary Feedwater Lube Oil Skid	33013-2285	8

9.0 COLD SHUTDOWN JUSTIFICATIONS

CS No.	Valve ID
CS-1	590, 591, 592, 593
CS-2	430, 431C
CS-3	8616A, 8616B, 8619A, 8619B, 8630A, 8630B
CS-4	697A, 697B
CS-5	700, 721
CS-6	701, 720
CS-7	702
CS-8	710A, 710B
CS-9	852A, 852B
CS-10	853A, 853B
CS-11	856
CS-12	4297, 4298, 4480, 4481
CS-13	896A, 896B
CS-14	897, 898
CS-15	112B, 357, 358
CS-16	142, 370B, 393, 9315
CS-17	200A, 200B, 202, 371
CS-18	304A, 304B, 270A, 270B
CS-19	313, 386
CS-20	383B
CS-21	4619C, 4620B, 4622A, 4739B, 9634B
CS-22	749A, 749B, 759A, 759B
CS-23	750A, 750B, 753A, 753B
CS-24	951C, 953C, 955C
CS-25	1819A, 1819B, 1819C, 1819D, 1819E, 1819F, 1819G
CS-26	3410, 3411
CS-27	3506, 3507
CS-28	3516, 3517
CS-29	3518, 3519
CS-30	3992, 3993
CS-31	4269, 4270, 4271, 4272
CS-32	841, 865

Cold Shutdown Justifications

Reactor Coolant System

CS-1 Solenoid-operated valves 590, 591, 592 and 593 are reactor vessel head vent valves. Full or partial stroking of these valves during power operation cannot be performed since exercising these valves would allow discharge of reactor coolant into the Containment atmosphere. Also, exercising the inboard valve at power tends to burp the system, which could possibly unseat the closed valve. Furthermore, failure of any one of these valves in the open direction would reduce the pressure boundary status from double-valve protection to single-valve-protection between the Reactor Coolant System (RCS) and the Containment building atmosphere. Testing will be performed during cold shutdown.

CS-2 Air-operated valves 430 and 431C are pressurizer power operated relief valves (PORV). Normally closed, these valves open to protect against excessive pressure surges. Since the associated inlet block valves are not required to be Category A valves and their seat tightness is not credited in the licensing basis, full or partial exercising of the PORVs during power operation could cause unplanned pressure transients in the RCS resulting in a reactor trip. When the plant is in a cold shutdown condition, testing will be performed on a quarterly (92 day) basis. Testing will also be performed prior to reaching low temperature overpressure protection (LTOP) conditions when cooling down from power operations and it has been greater than 92 days since the last test.

CS-3 Solenoid-operated valves 8616A and 8616B are Overpressure Protection System (OPS) surge tank charging valves. Solenoid-operated valves 8619A and 8619B are nitrogen three way valves for the PORVs. Valves 8630A and 8630B are the PORV actuating line check valves. Full or partial exercising of these valves during power operation would actuate the power operated relief valves. Since the associated inlet block valves are not required to be Category A valves and their seat tightness is not credited in the licensing basis, actuation of the PORVs during power operation could cause unplanned pressure transients in the RCS resulting in a reactor trip. Valve testing will be performed at cold shutdown in conjunction with the PORV exercising conducted at cold shutdown.

Residual Heat Removal

CS-4 Valves 697A and 697B are residual heat removal (RHR) heat exchanger outlet check valves. These valves open to allow low-head safety injection flow to the reactor vessel. Full or partial exercising of these valves during power operation is not possible as RHR pump discharge is insufficient to overcome RCS pressure. These valves will be partial stroke exercised at cold shutdown and full stroke exercised during refueling outages.

CS-5 Motor-operated valves 700 and 721 are the inboard isolation valves isolating the RCS from the RHR suction and return lines. Exercising these valves is not possible due to a high pressure interlock which prevents the valves from opening when RCS pressure is above 410 psig. Valve testing will be performed during cold shutdown.

CS-6 Motor-operated valves 701 and 720 are outboard isolation valves isolating the RCS from the RHR suction and return lines. Exercising these valves during power operation is impractical. Failure of one of these valves in the open position would reduce the system from double to single-valve-protection between the RCS and RHR systems. Leakage of the associated inboard valve could cause an inter-system loss of coolant accident (LOCA). Valve testing will be performed during cold shutdown.

CS-7 Check valve 702 provides a flow path from the RHR discharge line to the letdown header for pressure relief. Full or partial exercising this check valve during power operation would require isolating letdown which could cause perturbations in or result in a loss of pressurizer level control and cause a reactor trip. Valve testing will be performed during cold shutdown.

CS-8 Valves 710A and 710B are RHR pump discharge check valves. These valves close to prevent reverse flow during cold shutdown when the pump discharge headers are crosstied. Prompt closure testing of valves during power operation is not practical as this would require crosstying the discharge headers thus rendering both trains of RHR inoperable. In accordance with NUREG 1482, Section 3.1.2, entry into multiple LCOs is to be avoided. Valve testing will be performed during cold shutdown.

CS-9 Valves 852A and 852B are RHR discharge motor-operated valves to the reactor vessel. These valves open to provide safety injection flow to the reactor vessel. These valves should not be exercised during normal power operation as this would reduce the system to single-valve (check valve) protection between the RCS and RHR system and could result in an intersystem LOCA outside of Containment. Valve testing will be performed during cold shutdown.

CS-10 Valves 853A and 853B are RHR discharge check valves to deluge the reactor vessel core. These check valves are normally closed valves and open with differential pressure to provide a flow path for reactor vessel low-head safety injection flow. In the closed position, they serve as reactor coolant system pressure isolation valves. Full or partial stroking during power operation is not possible because RHR pump discharge pressure is insufficient to overcome RCS pressure. These valves cannot be full-stroke exercised during cold shutdown because establishing required safety analysis flow through them could result in excessive RCS cooldown rates. These valves will be partial stroke exercised at cold shutdown and full stroke exercised during refueling outages.

CS-11 Valve 856 is the RHR pump suction supply motor-operated valve from the RWST. This valve should not be exercised during power operation as this would isolate both trains of the RHR system from the RWST. This would render both RHR trains inoperable which would require plant shutdown. In accordance with NUREG 1482, Section 3.1.2, entry into multiple LCOs is to be avoided. Testing will be performed during cold shutdown.

Auxiliary Feedwater

CS-12 Air-operated valves 4297 and 4298 open to provide and control auxiliary feedwater flow from the turbine-driven auxiliary feedwater pump to the steam generators. Air-operated valves 4480 and 4481 are bypass flow control valves from the motor-driven auxiliary feedwater pumps that close on an safety injection (SI) signal to isolate the steam generators. During startup, valves 4480 and 4481 are used to provide better flow control to the steam generators. These valves are hand control valves which operate using a variable set air signal. They do not have a typical control switch. Position indication is not directly indicated, only the control air signal is indicated. Stroke time testing of these valves is not possible in the present configuration. Lifting of leads or jumpers for the valve controls would be necessary. As a result of the de-termination of valve control leads, stroke timing during power operation would require rendering these valves inoperable and entering an LCO from which prompt restoration would be impractical. Valves 4297 and 4298 perform their safety function by opening, are normally open and fail open. Valves 4480 and 4481 perform their safety function by closing, are normally closed and fail close. Measurement and evaluation of stroke times shall be performed during cold shutdown. These valves will be excercised and fail-safe tested quarterly.

Safety Injection

CS-13 Valves 896A and 896B are RWST outlet isolation valves. Exercising these valves during power operation is impractical. These valves should not be exercised during power operation as this would isolate the RWST from the Containment spray and safety injection systems rendering all trains of these systems inoperable and would require initiation of plant shutdown. In accordance with NUREG 1482, Section 3.1.2, entry into multiple LCOs is to be avoided. Valve testing will be performed during cold shutdown.

CS-14 Motor-operated valves 897 and 898 serve as return isolation valves to the RWST from the recirculation piping for the safety injection pumps. These normally-open valves must remain open to provide low flow recirculation for the SI pumps during accident mitigation. The close function is credited during post accident recirculation to isolate the recirculation path from the RWST. During power operation, these valves are maintained open to provide minimum flow protection for the high head SI pumps. Closing of either of these valves renders all three high head SI pumps inoperable. In accordance with NUREG 1482, Section 3.1.2, entry into multiple LCOs is to be avoided. Testing of these valves will be performed during cold shutdown.

Chemical and Volume Control

CS-15 Air-operated valve 112B is the charging supply valve, valve 357 is the charging supply check valve from the RWST and valve 358 is the manual bypass valve for 112B. Full or partial exercising of these valves during power operation would cause a sudden increase in the RCS boron inventory, and thereby cause a plant transient and possible shutdown. Valve testing will be performed in transition to or during cold shutdown.

CS-16 Valves 142 and 370B are the charging flow control valve and charging header check valve, respectively. Valves 393 & 9315 are charging line to RCS Loop B hot leg check valves. Full or partial exercising of these valves during power operation would isolate charging flow to the RCS which could result in loss of pressurizer level control and a reactor trip. In addition, exercising these valves during power operation may result in excessive thermal cycles to the regenerative heat exchanger which could cause premature equipment failure and reduction in its expected service life. Valve testing will be performed in transition to or during cold shutdown.

CS-17 Air-operated valves 200A, 200B, 202 and 371 are letdown isolation and Containment isolation valves. Full or partial exercising of AOV 371 during power operation would isolate letdown flow from the RCS which would result in loss of pressurizer level control and, potentially, a reactor trip. Full or partial exercising of AOVs-200A, 200B or 202 during power operation could result in severe letdown flow perturbations which may result in adverse pressurizer level and RCS pressure transients. Valve testing will be performed during cold shutdown.

CS-18 Valves 304A and 304B are reactor coolant pump (RCP) seal injection line check valves. Air-operated valves 270A and 270B are RCP seal water return line isolation valves. Full or partial exercising these valves would require isolation of seal injection/return to RCP seals which could damage seals and require the plant to shut down. Full flow capability will be verified quarterly based on normal operating seal injection flow, and valve exercising will be performed during cold shutdown.

CS-19 Motor-operated valve 313 and air-operated valve 386 are seal water return and seal bypass return line isolation valves, respectively. Closing 313 during power operation would interrupt flow from RCP seals and opening 386 during power operation would divert flow from the RCP seals which could result in RCP seal damage and require the plant to shut down. Valve testing will be performed during cold shutdown.

CS-20 Valve 383B is the Containment isolation check valve for the alternate charging line. Reverse flow exercising of this valve is impractical during power operation because this test would result in substantial radiation exposure to test personnel since the valve is located inside Containment raising ALARA concerns. This valve will be reverse flow exercised at cold shutdowns.

Service Water

CS-21 Manual valves 4619C, 4620B, 4622A, 4739B and 9634B are redundant service water (SW) outlet valves from component cooling water heat exchangers, spent fuel pit heat exchangers, Safety Injection Pump motor coolers and Standby Auxiliary Feedwater room coolers, respectively. These valves are required to open to provide a flowpath for service water to the Deer Creek discharge pipe. These flowpaths would only be required when the normal discharge canal became blocked. Due to New York State imposed environmental restrictions on discharges of chlorine, potential radioactive fluid and other organisms to Deer Creek, quarterly testing is not practical. Valve testing will be performed during cold shutdown.

Component Cooling Water

CS-22 Motor-operated valves 749A and 749B are component cooling water (CCW) supply valves to the RCP thermal barriers. Motor-operated valves 759A and 759B are CCW return valves from the RCP thermal barriers. Full or partial stroking of these valves to the closed position during power operation would interrupt cooling flow to the RCP thermal barriers. This could result in damage to an operating reactor coolant pump and a reactor trip. Valve testing will be performed in transition to or during cold shutdown.

CS-23 Valves 750A, 750B, 753A and 753B are CCW supply check valves to the reactor coolant pump thermal barriers. Reverse flow exercising of these valves would require isolation of CCW to the thermal barriers. This could result in damage to an operating reactor coolant pump and a reactor trip. Valve testing will be performed during cold shutdown.

Plant Sampling

CS-24 Check valves 951C, 953C and 955C serve as pressure relief check valves for penetrations 207, 206 and 205 respectively. In response to NRC Generic Letter 96-06, pressure relief loops with check valves, isolation valves and test connections were installed to provide overpressure protection from thermal expansion under accident conditions. Full or partial exercising of these check valves quarterly requires entry into Containment inside the missle barrier which, under power operating conditions, is a high radiation area to connect test equipment, perform the test and disconnect test equipment. Since the personnel safety risks and ALARA concerns far outweigh the benefit achieved with a quarterly test, testing of these check valves will be performed during cold shutdown.

Containment

CS-25 Manual valves 1819A thru G are Containment pressure transmitter isolation valves. These normally open valves function as Containment isolation valves. Full or partial exercising of these valves during power operation would result in the disabling of associated pressure channels and cause a plant trip function to be inoperable and increase the potential for an inadvertent safeguards actuation. In order to obtain positive indication of valve obturator movement, the pressure sensing lines must be pressurized and the downstream pressure indication verified. Additionally, it would be necessary to perform this testing from inside Containment during power operation raising ALARA concerns. Valve testing will be performed during cold shutdown.

Main Steam

CS-26 Air-operated valves 3410 and 3411 are atmospheric relief valves (ARVs). Since the associated inlet block valves are not required to be Category A valves and their seat tightness is not credited in the licensing basis, full or partial exercising of the atmospheric relief valves during power operation could cause severe system pressure transients which may result in a plant trip. This testing would require the manual operation of the associated ARV at power which creates the unnecessary potential for a reactor power excursion due to excessive heat removal. Valve testing will be performed during cold shutdown.

CS-27 Manual valves 3506 and 3507 serve as main steam inlet block valves to the atmospheric relief valves (ARVs 3410 and 3411) for both steam generators. Each valve must close to isolate its respective ARV, if failed. Each valve must open to permit emergency heat removal from the RCS through its respective ARV. During power operation, these normally-open valves are exposed to steam generator steam pressure. These valves also have bypass valves installed around them. Although branch connections that could be used for testing are currently installed downstream of each set of inlet block valves and bypass valves, quarterly testing at power is impractical since this testing would require costly modifications to install test manifolds to minimize the potential for test personnel injury. This testing would require the manual operation of the associated ARV at power which creates the unnecessary potential for a reactor power excursion due to excessive heat removal. A safety hazard would always exist if periodic exercising of these valves under high pressure steam were performed due to the unknown potential for leakage past either the inlet or bypass valve. Radiographic testing has been performed for valves 3506 and 3507 and proven to successfully demonstrate positive indication of disk position. Exercising of these valves will be performed during cold shutdown employing radiographic testing of the valves in both the open and closed positions which provides positive indication of the required change of disk position and meets the intent of OM-10, Paragraph 4.2.1.3.

CS-28 Valves 3516 and 3517 are main steam isolation valves. These reverse-mounted check valves cannot be fully or partially stroked during power operation and closure of these valves during power operation very likely would result in a reactor trip. Valve testing will be performed during cold shutdown.

CS-29 Check valves 3518 and 3519 are main steam line non-return valves. Full or partial exercising of these valves to the closed position is not possible without isolating the main steam header. This would require a power reduction and undesirable system transients that could result in a reactor trip. These valves will be verified to be capable of closing during normal plant shutdown to cold shutdown, following closure of the main steam isolation valves. If the plant shutdown is a result of a plant trip, these valves will be verified to be capable of closing subsequent to the plant trip.

Main Feedwater

CS-30 Valves 3992 and 3993 are the main feedwater check valves to the steam generators. During power operation there is no practical means to exercise these valves. These valves are tested only enroute to a cold/refueling shutdown not caused by a reactor trip. Due to the time required to dispatch personnel and obtain differential pressure data, this test cannot be performed at the time of an unplanned reactor trip. During cold shutdowns resulting from a plant trip, valves 3992 and 3993 cannot be exercised due to system operating conditions. Testing of these valves will be performed during normal plant shutdowns to cold shutdown when feedwater flow is transferred to auxiliary feedwater system. If the valves cannot be tested during normal cold shutdown they will be tested for closure during refueling outages.

CS-31 Air-operated valves 4269 and 4270 are the main feedwater flow control valves. Air-operated valves 4271 and 4272 are their respective bypass valves. During power operation, full or partial exercising of these valves is impractical since closing the flow control valves during operation would isolate feedwater to the steam generators and opening the bypass valves would result in feedwater flow perturbation and potentially severe transients including loss of RCS heat sink, loss of steam generator level control and a reactor trip. Valve testing will be performed during cold shutdown or in transition to hot shutdown.

Safety Injection (Addendum 1)

CS-32 Motor-operated valves 841 and 865 are Safety Injection (SI) accumulator isolation valves. The principal safety function of these normally locked-open valves is to remain open to allow accumulator discharge during a LOCA. However, these valves are also stroke-closed to isolate the SI accumulators during a Reactor Coolant System (RCS) cooldown. Exercising these valves during power operation is not practical because it would unnecessarily place the plant in a more risk-significant configuration (even though

it is not a significant risk contributor, the isolated accumulator could not inject during a LOCA sequence) without a corresponding increase in safety. NUREG-1482 provides guidance regarding examples of valves to be excluded from exercise testing during plant operations, specifically mentioning those in the accumulator discharge lines in PWRs. No increase in system reliability is expected to result from this testing since these valves historically have been stroke-tested at cold shutdown with no degradation evident. Furthermore, failure of these valves in a closed position could require shutting down the reactor. Testing will be performed during cold shutdown.

10.0 REFUELING OUTAGE JUSTIFICATIONS

ROJ No.	Valve ID
ROJ-1	8606A, 8606B
ROJ-2	710A, 710B
ROJ-3	853A, 853B
ROJ-4	854
ROJ-5	878G, 878J
ROJ-6	889A, 889B
ROJ-7	870A, 870B
ROJ-8	5392
ROJ-9	5393

Refueling Outage Justifications

Reactor Coolant

ROJ-1 Check valves 8606A and 8606B provide pressure isolation for the overpressure protection system nitrogen accumulators. When these valves are in operation, there is no practical means to test valve closure. Valve closure cannot be verified due to system design. To perform a closure verification constitutes a leak test which presents a significant hardship during cold shutdown. Leak testing requires an extended period of time where the overpressure protection system would be out of service. Valve closure verification will be performed in conjunction with ASME XI leak tests conducted during refueling outages.

Residual Heat Removal

ROJ-2 Valves 710A and 710B are RHR pump discharge check valves. These check valves must open to allow full rated flow from each RHR pump for low pressure safety-injection. These valves cannot be full-stroke exercised during power operation since downstream valves to the RCS cannot open against the higher RCS pressure. These valves cannot be full-stroke exercised during cold shutdown because establishing required safety analysis flow thru them could result in excessive RCS cooldown rates. These check valves are partial-flow exercised quarterly during RHR system testing. Full-stroke testing of these valves shall be performed during each refueling outage.

ROJ-3 Valves 853A and 853B are RHR discharge check valves to deluge the reactor vessel core. These check valves are normally closed valves and open with differential pressure to provide a flow path for reactor vessel low-head safety injection flow. In the closed position, they serve as reactor coolant system pressure isolation valves. During power operation, there is no practical means to test valve closure due to system design. To perform a closure verification constitutes a leak test which presents significant hardships during cold shutdown, such as excessive radiation exposure to test personnel and extended outage time. Verification of valve closure will be made in conjunction with ASME XI leak tests conducted during refueling outages.

ROJ-4 Check valve 854 opens with differential pressure to provide a flow path from the RWST to low head safety injection pumps (RHR) during safety injection. This valve is normally closed during power operation. Should MOV 856 fail to close, 854 provides backup isolation. Valve stroking is not possible during power operation since RHR pump discharge pressure is insufficient to overcome RCS pressure. This valve cannot be full-stroke exercised during cold shutdown because establishing required safety analysis flow through it could result in excessive RCS cooldown rates.
Closure verification is not possible since this would require isolation of the vital flowpath from the RWST. Valve 854 will be full stroke exercised and closure verified tested during refueling outages. Radiographic testing has been performed for valve 854 and proven to successfully demonstrate positive indication of the valve disk in the closed position. Employing radiographic testing of this valve in the closed position provides positive indication of the required change of disk position and meets the intent of OM-10, Paragraph 4.2.1.3.

Safety Injection

ROJ-5 Check valves 878G and 878J provide the flowpath from the safety injection pumps to the RCS cold leg injection lines. Full or partial stroking during power operation is not possible because safety injection pump discharge pressure is insufficient to overcome reactor coolant system pressure. Exercising during cold shutdowns could cause low temperature overpressurization of the reactor coolant system. These valves will be full-stroke exercised open and closed during refueling outages.

ROJ-6 Valves 889A and 889B are SI Pump A and B discharge check valves, respectively. These normally closed valves open with differential pressure to provide a flow path from SI Pumps A and B to the RCS. During operation, the safety injection pump discharge pressure is insufficient to overcome RCS pressure. SI pump recirculation test line size is insufficient to allow full stroke exercising during operation. Exercising during cold shutdowns could cause low temperature overpressurization of the Reactor Coolant System. These valves will be part-stroke exercised quarterly during operation and full-stroke exercised during transition from hot shutdown to cold shutdown.

ROJ-7 Valves 870A and 870B are SI Pump C discharge check valves. These normally closed valves open with differential pressure to provide a flow path from SI Pump C to the RCS. During operation, the safety injection pump discharge pressure is insufficient to overcome RCS pressure. SI pump recirculation test line size is insufficient to allow full stroke exercising during operation. Exercising during cold shutdowns could cause low temperature overpressurization of the Reactor Coolant System. These valves will be part-stroke exercised quarterly during operation and full-stroke exercised during transition from hot shutdown to cold shutdown.

Instrument Air

ROJ-8 Valve 5392 is the outside Containment air-operated valve providing Containment isolation. Stroking valve 5392 during operation and cold shutdown is impractical because it would interrupt instrument air to Containment and be disruptive to air-operated valves inside Containment. Loss of instrument air would cause all air-operated valves to be actuated to their fail-safe position. During power operation, this would lead to a reactor trip and, during cold shutdowns, this would compromise plant operation due to the loss of various components used in maintaining the reactor in a cold shutdown condition. This valve will be full-stroke exercised during refueling outages.

ROJ-9

Valve 5393 is the inside Containment check valve providing Containment isolation. When this valve is in operation there is no practical means to test valve closure. Full or partial valve closure cannot be verified externally due to system design. To perform a closure verification constitutes a leak test which presents a significant hardship during cold shutdown. Loss of instrument air would cause all air-operated valves to be actuated to their fail-safe position. During power operation, this would lead to a reactor trip and, during cold shutdowns, this would compromise plant operation due to the loss of various components used in maintaining the reactor in a cold shutdown condition. Verification of valve closure will be done each refueling outage either in conjunction with the 10 CFR 50 Appendix J, Option B surveillance or utilizing an RFO frequency procedure.

11.0 RELIEF REQUESTS

Relief No.	Topic
PR-1	D/G Fuel Oil Transfer System Flowrate
GR-1	RCPB Isolation Valves - Leak Testing
GR-2	Stroke Time Methodology
VR-1	5960A, 5960B
VR-2	9627A, 9627B
VR-3	4324, 4325, 4326
VR-4	434, 435
VR-5	842A, 842B
VR-6	867A, 867B
VR-7	8616A, 8616B, 8619A, 8619B
VR-8	392A
VR-9	3998, 4000C, 4000D, 4003, 4004
VR-10	9704A, 9704B, 9705A, 9705B
VR-11	Withdrawn. (Written for containment spray system valves 859A, 859B, 859C, 864A, 864B, 2829, and 2830)
VR-12	9229

RELIEF REQUEST NO. PR-1

SYSTEM:	D/G Fuel Oil Transfer System
PUMPS:	Diesel Fuel Oil Transfer Pumps (PDG02A, PDG02B)
SAFETY CLASS:	3
FUNCTION:	Various
TEST REQUIREMENT:	Flow rate shall be measured using a rate or quantity meter installed in the pump test circuit. (OM-6, 4.6.5).
BASIS FOR RELIEF:	Measurement of diesel fuel oil transfer pump flowrate is determined by observing the rate of change in the diesel generator day tanks as they are being filled. A graduated sight glass located on the day tank is the only practical means available to calculate flow rates.
ALTERNATE TESTING:	Flow rate will be determined by calculation of day tank level increase vs. time utilizing the accuracy documented in design analysis DA-EWR-4526-ME-20.

RELIEF REQUEST NO. GR - 1

SYSTEM:	See Attachment
VALVES:	See Attachment
CATEGORY:	See Attachment
SAFETY CLASS:	See Attachment
FUNCTION:	Provide reactor coolant system pressure isolation.
TEST REQUIREMENT:	Valve leak rate testing per OM-10, 4.2.2.3.
BASIS FOR RELIEF:	Leakage testing, including testing requirements is governed by plant Technical Specifications. Testing criteria utilized meets the intent of OM-10 leak rate testing. Per NUREG 1482, Section 4.1.1, testing of the pair of valves would be acceptable if the configuration does not require two valves and the safety analysis for such a configuration would credit either of the two valves. Since individual testing of two sets of check valves is not possible due to lack of test connections and since testing of these valves with their adjacent MOVs is specified adequately by Technical Specifications, it is impractical to perform separate leak rate tests.
ALTERNATE TESTING:	These valves will be leak rate tested in accordance with RCS Pressure Isolation Valve leak rate testing per Technical Specification 3.4.14.

GR - 1 Attachment

Valve	System	Category	Safety Class	
853A	RHR	A/C	1	Single CV
853B	RHR	A/C	1	Single CV
867A	SI	A/C	1	Event V
867B	SI	A/C	1	Event V
878G	SI	A/C	1	Event V
878J	SI	A/C	1	Event V
878A	SI	A	2	MOV
878C	SI	A	2	MOV
877A	SI	A/C	1	Event V
877B	SI	A/C	1	Event V
878F	SI	A/C	1	Event V
878H	SI	A/C	1	Event V

RELIEF REQUEST NO. GR - 2

SYSTEM:	Various
VALVES:	All Power-Operated Valves
CATEGORY:	Various
SAFETY CLASS:	Various
FUNCTION:	Various
TEST REQUIREMENT:	Valves with measured stroke times which do not meet the acceptance criteria of OM-10, Paragraph 4.2.1.8 shall be immediately retested or declared inoperable.
BASIS FOR RELIEF:	During its third interval IST Program (based on the 1986 Edition of ASME Section XI), RG&E has implemented an alternate approach with regard to stroke time acceptance criteria for power-operated valves. This approach has resulted in the highly reliable and repeatable assessment of stroke time performance. In lieu of simply utilizing the OM-10, Paragraph 4.2.1.8 acceptance criteria and the OM-10, Paragraph 4.2.1.9 corrective actions, which RG&E believes would result in imprudent delays associated with retesting and then analyzing within 96 hours when assessing the condition of power-operated valves, RG&E has established two sets of stroke time limits with independent corrective actions. RG&E's methodology immediately requires an analysis within our Corrective Action Program, rather than delaying the analysis by first specifying a required retest. The first stroke time limit criteria against which measured stroke time data is assessed is the ACTION LIMIT which incorporates the OM-10, Paragraph 4.2.1.8 acceptance criteria. If any of the ACTION limiting values are exceeded, corrective action documentation is submitted and the data shall be analyzed within 96 hours to verify that the

RELIEF REQUEST NO. GR - 2 (con't)

measured stroke time represents acceptable valve operation. The second stroke time limit criteria against which measured stroke time data is assessed is the LIMITING VALUE which incorporates either the design-basis operability stroke time value which ensures safety function performance or the owner-established limiting value of full-stroke time, whichever is less. If any of the LIMITING values are exceeded, the valve is immediately declared inoperable and the appropriate Technical Specification action statement is entered, if applicable.

RG&E believes this stroke time assessment approach provides an acceptable level of quality and safety which has been demonstrated by ten years of successful and safe operation of its power-operated valve population and is conservative with respect to OM-10 paragraphs 4.2.1.8 and 4.2.1.9 when taken as a whole.

ALTERNATE TESTING: Power-operated valves with measured stroke times that do not meet the ACTION LIMIT stroke time acceptance criteria will be documented in accordance with the Ginna Station Corrective Action Program and the data shall be analyzed within 96 hours to verify that the measured stroke time represents acceptable valve operation. If, following analysis, the measured stroke time that was found to have exceeded the ACTION LIMIT does not represent acceptable valve operation, the valve shall be immediately declared inoperable.

RELIEF REQUEST NO. VR - 1

SYSTEM:	Emergency Diesel Generator Fuel Oil
VALVES:	5960A, 5960B
CATEGORY:	C
SAFETY CLASS:	3
FUNCTION:	These check valves open to provide a flow path for overflow from the fuel oil day tank to the fuel oil storage tank. These valves close to prevent reverse flow into the fuel oil day tank during recirculation of the fuel oil storage tank.
TEST REQUIREMENT:	Check valves shall be exercised at least once every three months, except as provided by 4.3.2.2 et al. (OM-10, 4.3.2.1)
BASIS FOR RELIEF:	During any mode of plant operation there is no practical means to exercise these valves. Valve closure cannot be verified due to system design. To perform a closure verification would require disassembly of mechanical joints in the piping, which would place the diesel in an inoperable condition.
ALTERNATE TESTING:	One valve will be disassembled, full-stroke exercised and inspected once every 18 months on a rotating basis. If that valve fails, the remaining valve will be disassembled, full-stroke exercised and inspected for operability at that same time. (re: Generic Letter 89-04, Attachment 1 - Position 2)

RELIEF REQUEST NO. VR - 2

SYSTEM:	Standby Auxiliary Feedwater
VALVES:	9627A, 9627B
CATEGORY:	C
SAFETY CLASS:	3
FUNCTION:	These service water suction check valves close to prevent reverse flow from Standby Auxiliary Feedwater System (SAFW) piping back into the Service Water (SW) System and open to provide a flow path for service water to the SAFW pumps.
TEST REQUIREMENT:	Check valves shall be exercised at least once every three months except as provided by 4.3.2.2 et al. (OM-10, 4.3.2.1)
BASIS FOR RELIEF:	Full-stroke exercising cannot be accomplished during power operation or cold shutdown as this would introduce Service Water to the Standby Auxiliary Feedwater system. Service water does not meet water purity requirements for the system or steam generators. Service water would be supplied to steam generators during the required quarterly pump tests if exercising valves 9627A and B was performed.
ALTERNATE TESTING:	Partial stroke exercising will be performed each quarter. One valve will be disassembled, full-stroke exercised and inspected once every 18 months on a rotating basis. If that valve fails, the remaining valve will be disassembled, full-stroke exercised and inspected for operability at that same time. (re. Generic Letter 89-04 - Position 2).

RELIEF REQUEST NO. VR - 3

SYSTEM:	Station Service Water System
VALVES:	4324, 4325, 4326
CATEGORY:	B
SAFETY CLASS:	3
FUNCTION:	Valves open upon an auxiliary feedwater pump bearing cooling water supply high strainer differential pressure to provide cooling water to the driver's bearings.
TEST REQUIREMENT:	Stroke time of power-operated valves shall be measured and evaluated per OM-10, 4.2.1.8 and 4.2.1.9.
BASIS FOR RELIEF:	These are rapid acting valves. These valves automatically actuate on high differential pressure across the supply strainer. Measurement of stroke times during manual actuation, for testing, is not practical and would not produce consistent, meaningful or trendable results. Stroke timing of these valves using conventional methods would be extremely difficult and unrepeatable. It would be necessary to disassemble the respective differential pressure switch in order to control actuation of these valves and as a result of the this disassembly, stroke timing during power operation would require rendering these valves inoperable and entering an LCO from which prompt restoration would be impractical. On a quarterly basis, these valves are tested during auxiliary feedwater pump testing. This testing includes strainer cleaning, strainer isolation, high differential pressure simulation, verification of valve operation and flow observation. Failure of these valves to stroke in conjunction with a clogged strainer would result in a lack of pressure at the bearing cooler inlet and a high DP alarm, to which an Operator would be dispatched who would manually trip the respective valve.

RELIEF REQUEST NO. VR - 3 (con't)

ALTERNATE TESTING: These valves will be stroke tested during associated auxiliary feedwater pump testing by closing the valve downstream of the strainer. Acceptable valve operation will be based on:

- Verifying locally that the valve has de-energized and tripped open
- verifying the presence of a steady stream of water from the affected floor drain funnel
- verifying that the associated main control board annunciator alarms

RELIEF REQUEST NO. VR - 4

SYSTEM:	Reactor Coolant Pressurizer
VALVES:	434, 435
CATEGORY:	C
SAFETY CLASS:	1
FUNCTION:	Pressurizer Safety Relief valves provide overpressurization protection for the reactor coolant system/pressurizer.
TEST REQUIREMENT:	Determination of operation and electrical characteristics of position indication shall be done prior to maintenance or set pressure adjustment for Class 1 safety valves (OM-1, 7.3.1.1(g).
BASIS FOR RELIEF:	These valves are mechanical spring-actuated valves with an externally-mounted LVDT stem position indicator. The position indicator must be removed in order to permit removal of the safeties each refueling outage for shipment to an off-site vendor for set pressure testing. It would be necessary to intentionally challenge RCS pressure limits to actuate these safety valves in order to perform position indication testing prior to removal for set pressure testing. Also, if these safety valves were actuated for a position indication test following re-installation, they would again need to be retested to ensure the set pressure has not been adversely affected. This involves increased testing and unnecessary radiation exposure to testing personnel. In accordance with plant administrative procedures, channel checks for pressurizer safety valve position indication are performed once per shift and validated by comparison with tailpipe temperature indication.

RELIEF REQUEST NO. VR - 4 (con't)

ALTERNATE TESTING: These valves will be simulated to actuate using existing station calibration procedures. The procedure utilizes movement of the valve's coil (up/down) and verifies position via an alarm in the Control Room. Calibration of these position indicators is governed by plant calibration procedures and is performed on a refueling basis. These procedures verify that the proper clearance is obtained to ensure obturator motion is accurately represented.

RELIEF REQUEST NO. VR - 5

SYSTEM:	Safety Injection
VALVES:	842A, 842B
CATEGORY:	A/C
SAFETY CLASS:	1
FUNCTION:	These valves open to provide flow from the safety injection (SI) accumulators to the reactor coolant system (RCS).
TEST REQUIREMENT:	Check valves shall be exercised at least once every three months except as provided by 4.3.2.2 et al. (OM-10, 4.3.2.1) As part of RG&E's third interval program, prior relief had been granted initially for valve disassembly once every six years as the alternative position (NRC GL 89-04, Position 2) and subsequently for full stroke exercising once every three refueling outages.
BASIS FOR RELIEF:	Full-stroke open and close exercising during normal power operation cannot be accomplished since system pressures required to perform the test are not enough to overcome RCS pressure. A test method that permits and confirms full-stroke exercising of these check valves during cold shutdown has been implemented at Ginna Station. To perform the test, the plant must be maintained in an off-normal condition with a risk for nitrogen injection and possible entrainment in the RCS. The performance of this test also involves added personnel radiological exposure. Additionally, this test method requires extensive planning and setup and substantially impacts refueling outage schedule at the start of the shutdown.

RELIEF REQUEST NO. VR - 5 (CONT)

As a result of the implementation of this check valve test method, the need for periodic disassembly to satisfy Code requirements no longer exists thereby eliminating the potential for improper reassembly. The maintenance history of these check valves documents that the valves have been found in excellent mechanical condition upon disassembly. With an excellent mechanical condition baseline verified by periodic part-stroke (quarterly) and full-stroke testing, the operability of check valves 842A and 842B will continue to be ensured.

ALTERNATE TESTING: These valves will be part-stroke exercised quarterly using the SI test header.

Full-stroke exercising of 842A and 842B will be performed in conjunction with full-stroke exercising of 867A and 867B at a frequency of once every three refueling outages.

RELIEF REQUEST NO. VR - 6

SYSTEM:	Safety Injection
VALVES:	867A, 867B
CATEGORY:	A/C
SAFETY CLASS:	1
FUNCTION:	These valves open to provide a flowpath from the safety injection (SI) accumulators or the SI pumps to the reactor coolant system (RCS) cold legs.
TEST REQUIREMENT:	Check valves shall be exercised at least once every three months except as provided by 4.3.2.2 et al. (OM-10, 4.3.2.1) As part of RG&E's third interval program, prior relief had been granted initially for valve disassembly once every six years as the alternative position (NRC GL 89-04, Position 2) and subsequently for full stroke exercising once every three refueling outages.
BASIS FOR RELIEF:	Full-stroke or part-stroke open and close exercising during normal power operation cannot be accomplished since system pressures required to perform the test are not enough to overcome RCS pressure. A test method that permits and confirms full- stroke exercising of these check valves during cold shutdown has been implemented at Ginna Station. To perform the test, the plant must be maintained in an off-normal condition with a risk for nitrogen injection and possible entrainment in the RCS. The performance of this test also involves added personnel radiological exposure. Additionally, this test method requires extensive planning and setup and substantially impacts refueling outage schedule at the start of the shutdown.

RELIEF REQUEST NO. VR - 6 (CONT)

As a result of the implementation of this check valve test method, the need for periodic disassembly to satisfy Code requirements no longer exists thereby eliminating the potential for improper reassembly. The maintenance history of these check valves documents that these valves are found in excellent mechanical condition upon disassembly. With an excellent mechanical condition baseline verified by periodic part-stroke and full-stroke testing, the operability of check valves 867A and 867B will continue to be ensured.

ALTERNATE TESTING: These valves will be part-stroke exercised each refueling outage using actual SI flow into the RCS.

Full-stroke exercising of 867A and 867B will be performed in conjunction with full-stroke exercising of 842A and 842B at a frequency of once every three refueling outages.

RELIEF REQUEST NO. VR - 7

SYSTEM:	Overpressure Protection Nitrogen Supply System
VALVES:	8616A, 8616B, 8619A, 8619B
CATEGORY:	B
SAFETY CLASS:	2
FUNCTION:	These valves open to provide nitrogen to cycle power operated relief valves (PORV) providing Reactor Coolant System (RCS) overpressure protection.
TEST REQUIREMENT:	Stroke time of power-operated valves shall be measured and evaluated per OM-10, 4.2.1.8 and 4.2.1.9.
BASIS FOR RELIEF:	These are rapid acting valves whose design prohibits visual observance of stroking. These valves do not have remote position indicators. PORV stroke times are affected by stroke times of 8616A, 8616B, 8619A and 8619B.
ALTERNATE TESTING:	Valve stroke testing is performed during plant shutdown in conjunction with PORV overpressure protection testing. Valve stroking parameters will be considered acceptable if the associated PORV cycling is acceptable.

RELIEF REQUEST NO. VR - 8

SYSTEM:	CVCS Charging
VALVES:	392A
CATEGORY:	B/C
SAFETY CLASS:	2
FUNCTION:	Valve 392A functions as a relief valve when closed to provide a charging system flowpath to the reactor coolant system loop B hot leg.
TEST REQUIREMENT:	Safety and relief valves shall meet the inservice test requirements of Part 1.
BASIS FOR RELIEF:	Paragraph 7.3.2.2 of OM-1 requires that certain typical bench testing be performed on relief valves. This valve is a welded in-line air-operated valve which also performs a relief function at a specific differential pressure. The bench tests listed in this paragraph cannot practically be performed on valve 392A.
ALTERNATE TESTING:	Valve 392A will be tested in place each refueling outage by verifying that it will open and pass the required flow at design differential pressure.

RELIEF REQUEST NO. VR - 9

SYSTEM:	Auxiliary Feedwater
VALVES:	3998, 4000C, 4000D, 4003, 4004
CATEGORY:	BC/C
SAFETY CLASS:	2/3
FUNCTION:	These check valves open to allow Auxiliary Feedwater flow to the steam generators. These valves close to prevent reverse flow thus preventing steam binding of the Auxiliary Feedwater Pumps.
TEST REQUIREMENT:	Check valves shall be exercised at least once every three months, except as provided by 4.3.2.2 et al. (OM-10, 4.3.2.1)
BASIS FOR RELIEF:	Plant Technical Specifications require the Auxiliary Feedwater System to be operable prior to progressing from Mode 4 to Mode 3. If a quarterly test came due during an outage, testing of these valves would be necessary to prove system operability at this time. Testing of the pumps and testing of the valves to prove opening capability can be performed at this time. However, at this condition there is insufficient pressure in the steam generators to perform a reverse flow verification of these valves. Relief is requested from paragraph 4.3.2.4 of OM-10 until plant startup, yet prior to exceeding 5% reactor power, at which time steam generator pressure will be sufficient to perform a reverse flow verification.
ALTERNATE TESTING:	During startup from cold shutdown or refueling outages when plant conditions do not exist to perform a reverse flow verification together with the normal pump operability test, the reverse flow verification will be performed prior to exceeding 5% reactor power, when the required plant conditions exist.

RELIEF REQUEST NO. VR - 10

SYSTEM:	Standby Auxiliary Feedwater (SAFW)
VALVES:	9704A, 9704B, 9705A, 9705B
CATEGORY:	BC/C
SAFETY CLASS:	2
FUNCTION:	These check valves open to allow Standby Auxiliary Feedwater flow to the steam generators. These valves close to prevent reverse flow thus preventing steam binding of the pumps.
TEST REQUIREMENT:	Check valves shall be exercised at least once every three months, except as provided by 4.3.2.2 et al. (OM-10, 4.3.2.1)
BASIS FOR RELIEF:	Plant Technical Specifications require the Standby Auxiliary Feedwater System to be operable prior to progressing from Mode 4 to Mode 3. If a quarterly test came due during an outage, testing of these valves would be necessary to prove system operability at this time. Testing of the pumps and testing of the valves to prove opening capability can be performed at this time. However, at this condition there is insufficient pressure in the steam generators to perform a reverse flow verification of these valves. Relief is requested from paragraph 4.3.2.4 of OM-10 until plant startup, yet prior to exceeding 5% reactor power, at which time the steam generator pressure will be sufficient to perform a reverse flow verification.
ALTERNATE TESTING:	During startup from cold shutdown or refueling outages when plant conditions do not exist to perform a reverse flow verification together with the normal pump operability test, the reverse flow verification will be performed prior to exceeding 5% reactor power, when the required plant conditions exist.

RELIEF REQUEST NO. VR - 11 (Withdrawn)

SYSTEM: Containment Spray

VALVES: 859A, 859B, 859C, 864A, 864B, 2829, 2830

RELIEF REQUEST NO. VR - 12

SYSTEM:	Fire Service Water
VALVES:	9229
CATEGORY:	AC
SAFETY CLASS:	2
FUNCTION:	Valve 9229 is a 4 inch check valve in the Fire Service Water System inside the Containment Building and must provide Containment isolation.
TEST REQUIREMENT:	In accordance with paragraph 6.3 of ANS/ANSI 56.8-1994, the line downstream of the check valve shall be drained for testing.
BASIS FOR RELIEF:	Fire Service Water penetration 307 contains check valve 9229 which is located inside Containment. 9229 is leak tested; however, it cannot be assured that all water has been drained from the valve seat prior to Appendix J testing. Its location with respect to the penetration and the fire service water header inside Containment and the lack of available drain lines prohibit the complete draining of residual water downstream of the check valve, although RG&E does blow air into the line to remove virtually all of the water. RG&E estimates that it would cost a significant amount to install the necessary drain line to ensure downstream line drainage prior to the Appendix J test, and this would not result in a compensating increase in quality or safety. Since the containment temperature is expected to evaporate any water in this line, the post-accident condition and the tested condition cannot be guaranteed to be identical. Upstream AOV 9227 is fully tested and normally closed during power operation. Closure of AOV 9227 meets all requirements for Ginna Station Technical Specification 3.6.3 if check valve 9229 were declared inoperable.

ALTERNATE TESTING: RG&E will continue to try and remove as much water as possible before testing 9229 to Appendix J. Furthermore, RG&E increases the test pressure slightly above design pressure (60.3-61.3 psig versus 60 psig) to compensate for the small amount of water anticipated to remain on the valve disk. RG&E will continue to prompt closure test 9229 quarterly which demonstrates that the valve will close when required.

12.0 TECHNICAL POSITION JUSTIFICATIONS

TJ No.	Valve ID
TJ-1	Flow Reference Value Tolerance
TJ-2	5933A, 5933B, 5934A, 5934B
TJ-3	5907, 5907A, 5908, 5908A

Technical Position Justifications

TJ-1 During performance of inservice testing of program pumps and although additional guidance is provided by OM-6, Paragraph 5.2(c), this justification documents the utilization of a total tolerance of ±2 percent of the reference value for flow as permitted by NUREG 1482, Section 5.3.

TJ-2 Solenoid-operated valves 5933A, 5933B, 5934A, 5934B open to provide starting air to the diesel generators. These are rapid acting solenoid valves whose design prohibits visual observance of stroking as there are no external indicators on these valves. Diesel start times are affected by valve stroke times. Measurement and evaluation of stroke times shall not be performed. Valve exercising is performed monthly in conjunction with diesel generator start testing. Per the guidance provided by NUREG 1482, Section 3.4, valve stroking parameters will be considered acceptable if the associated diesel generator start is acceptable. Additionally, diesel start and bus re-energization times are verified each refueling outage to be less than the Technical Specification acceptance criteria of 10 seconds.

TJ-3 Solenoid-operated valves 5907, 5907A, 5908, 5908A open and close to direct fuel oil to Diesel Generator (D/G) day tanks or back to the diesel fuel oil storage tanks. These are rapid acting solenoid valves whose design prohibits visual observation of stroking as there are no external indicators on these valves. These valves are automatically actuated as necessary based upon diesel fuel oil day tank levels. These valves do not have control switches. Diesel generators are tested monthly (per Technical Specifications), during which these valves actuate for filling the fuel oil day tanks and for diesel fuel oil recirculation. Measurement and evaluation of stroke time shall not be performed. These valves shall be exercised and fail safe tested at least quarterly during diesel generator testing. Per the guidance provided by NUREG 1482, Section 3.4, valve stroking parameters will be considered acceptable based upon satisfactory actuation as demonstrated by adequate fuel oil delivery during the D/G tests.

Table 1

PUMP AND VALVE TEST PROGRAM PLAN TABLE OF ACRONYMS

VALVE TYPE
BAV - Ball Valve
BFV - Butterfly Valve
CV - Check Valve
DIV - Diaphragm
GTV - Gate Valve
GLV - Globe Valve
REV - Relief Valve
SCV - Stop Check Valve
TWV - Three-way Valve

NORMAL POSITION
O - Open
C - Closed

REQUIRED TESTS
EX - Exercise for Category A or B Valves
ST (O,C) - Stroke Time (o-open, c-closed)
FS (O,C) - Fail Safe Test (o-open, c-closed)
PIT - Position Indication Test
LT-J - Leak Test - Appendix J
LT-X - Leak Test - ASME Section XI
RT - Relief Valve Setpoint Test
CV-P - Check Valve Exercise - partial
CV-O - Check Valve Exercise - Full Open
CV-C - Check Valve Exercise - Full Closed

ACTUATOR
MOV - Motor
AOV - Air
SOV - Solenoid
MAN - Manual
HYD - Hydraulic
SAV - Self Actuated

TEST FREQUENCY
Q - Quarterly
CS - Cold Shutdown
R - Refueling - not to exceed 2 years
3R - Once every 3 refueling outages
5y - At least once every five years
10y - At least once every ten years

SAFETY CLASS
1
2
3
NC - non class
SSC - safety significant

ASME CATEGORY
A
B
C
AC
BC

GR - Generic Relief Request
PR - Pump Relief Request
VR - Valve Relief Request
CS - Cold Shutdown Justifications
ROJ- Refueling Outage Justifications
TJ - Technical Justifications

MEASURE PUMP TEST PARAMETERS
N - Pump Speed
P - Discharge Pressure (Pos. Displ.)
Pd - Differential Pressure (Centrifugal)
Q - Flow Rate
V - Vibration Peak Velocity

EIN	System	PID	COOR	SC	Frequency	Speed	Press	PressDif	Flow	Vib
PAF01A	MOTOR AUX FEED	1237	B-5	3	Q	No	No	Yes	Yes	Yes
PAF01B	MOTOR AUX FEED	1237	E-5	3	Q	No	No	Yes	Yes	Yes
PAF03	TURBINE AUX FEED	1237	I-5	3	Q	Yes	No	Yes	Yes	Yes
PSF01B	STANDBY AUX FEED	1238	I-5	3	Q	No	No	Yes	Yes	Yes
PSF01A	STANDBY AUX FEED	1238	B-5	3	Q	No	No	Yes	Yes	Yes
PDG02A	D/G FUEL OIL	1239-1	I-3	3	Q	No	Yes	No	PR-1	Yes
PDG02B	D/G FUEL OIL	1239-2	I-9	3	Q	No	Yes	No	PR-1	Yes
PAC02A	COMPONENT COOLING	1245	D-5	3	Q	No	No	Yes	Yes	Yes
PAC02B	COMPONENT COOLING	1245	E-5	3	Q	No	No	Yes	Yes	Yes
PAC01B	RESIDUAL HT REMOVAL	1247	B-5	2	Q	No	No	Yes	Yes	Yes
PAC01A	RESIDUAL HT REMOVAL	1247	F-5	2	Q	No	No	Yes	Yes	Yes
PAC07A	SPENT FUEL POOL	1248	H-3	SSC	Q	No	No	Yes	Yes	Yes
PAC07B	SPENT FUEL POOL	1248	I-3	3	Q	No	No	Yes	Yes	Yes
PSW01D	SERVICE WATER	1250-1	G-2	3	Q	No	No	Yes	Yes	Yes
PSW01C	SERVICE WATER	1250-1	F-2	3	Q	No	No	Yes	Yes	Yes
PSW01A	SERVICE WATER	1250-1	D-2	3	Q	No	No	Yes	Yes	Yes
PSWO1B	SERVICE WATER	1250-1	E-2	3	Q	No	No	Yes	Yes	Yes

	EIN	System	PID	COOR	SC	Frequency	Speed	Press	PressDif	Flow	Vib
	PSI02A	CONTAINMENT SPRAY	1261	E-3	2	Q	No	No	Yes	Yes	Yes
	PSI02B	CONTAINMENT SPRAY	1261	I-3	2	Q	No	No	Yes	Yes	Yes
	PSI01A	SAFETY INJECTION	1262-1	C-4	2	Q	No	No	Yes	Yes	Yes
	PSI01B	SAFETY INJECTION	1262-1	F-4	2	Q	No	No	Yes	Yes	Yes
	PSI01C	SAFETY INJECTION	1262-1	D-4	2	Q	No	No	Yes	Yes	Yes
*	PCH01C	CHARGING	1265-2	H-5	2	Q	Yes	Yes	No	Yes	Yes
*	PCH01B	CHARGING	1265-2	G-5	2	Q	Yes	Yes	No	Yes	Yes
*	PCH01A	CHARGING	1265-2	E-5	2	Q	Yes	Yes	No	Yes	Yes

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
AUX/INT BUILDING HVAC											
7970	G-2	Butterfly	AOV	Closed	2	A	EX	Q	PT- 2. 5. 1		
	1870	6				ACTIVE	ST-C	Q	PT- 2. 5. 1		
							PIT	R	PT- 2. 5. 1		
							FS-C	Q	PT- 2. 5. 1		
							LT-J	R	PTT-23.34		
7971	G-4	Butterfly	AOV	Closed	2	A	EX	Q	PT- 2. 5		
	1870	6				ACTIVE	ST-C	Q	PT- 2. 5		
							PIT	R	PT- 2. 5		
							FS-C	Q	PT- 2. 5		
							LT-J	R	PTT-23.34		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
AUXILIARY FEEDWATER											
3996	I-6 / 1237	Stop Check / 5	MOV	Closed	3	BC / ACTIVE	EX	Q	PT-16Q-T		
							ST-O	Q	PT-16Q-T		
							ST-C	Q	PT-16Q-T		
							PIT	R	PT-16Q-T		
							CV-O	Q	PT-16Q-T		
3998	I-8 / 1237	Check / 5	SAV	Closed	3	C / ACTIVE	CV-O	Q	PT-16Q-T		
							CV-C	Q	PT-16Q-T	VR-9	
4000A	D-7 / 1237	Globe / 3	MOV	Closed	3	B / ACTIVE	EX	Q	PT-16Q-A		
							ST-O	Q	PT-16Q-A		
							ST-C	Q	PT-16Q-A		
							PIT	R	PT-16Q-A		
4000B	D-8 / 1237	Globe / 3	MOV	Closed	3	B / ACTIVE	EX	Q	PT-16Q-B		
							ST-O	Q	PT-16Q-B		
							ST-C	Q	PT-16Q-B		
							PIT	R	PT-16Q-B		
4000C	B-10 / 1237	Check / 3	SAV	Closed	2	C / ACTIVE	CV-O	Q	PT-16Q-A		
							CV-C	Q	PT-16Q-A		
							CV-C	Q	PT-16.3A	VR-9	(If performed during Mode change) 1

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4000D	E-10 / 1237	Check / 3	SAV	Closed	2	C / ACTIVE	CV-O CV-C CV-C	Q Q Q	PT-16Q-B PT-16Q-B PT-16.3B	 VR-9	 (If performed during Mode change) 1
4003	I-11 / 1237	Check / 3	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT-16Q-T PT-16Q-T	 VR-9	
4004	J-10 / 1237	Check / 3	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT-16Q-T PT-16Q-T	 VR-9	
4007	B-8 / 1237	Globe / 3	MOV	Open	3	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT-16Q-A PT-16Q-A PT-16Q-A PT-16Q-A		
4008	E-8 / 1237	Globe / 3	MOV	Open	3	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT-16Q-B PT-16Q-B PT-16Q-B PT-16Q-B		
4009	B-5 / 1237	Check / 3	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-16Q-A PT-16Q-B		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4010	E-5 / 1237	Check / 3	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-16Q-B PT-16Q-A		
4013	I-2 / 1237	Gate / 4	MOV	Closed	3	B / ACTIVE	EX ST-O PIT	Q Q R	PT-16Q-T PT-16Q-T PT-16Q-T		
4014	H-2 / 1237	Check / 4	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-16Q-T PT-16Q-A		
4016	E-2 / 1237	Check / 4	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-16Q-B PT-16Q-A		
4017	B-2 / 1237	Check / 4	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-16Q-A PT-16Q-A		
4020	I-3 / 1237	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	CMP37064020		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4021	B-2 / 1237	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
4022	E-3 / 1237	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	CMP37064022		
4023	I-5 / 1237	Check / 1.5	SAV	Closed	3	C / ACTIVE	CV-O	Q	PT-16Q-T		
4027	C-3 / 1237	Gate / 4	MOV	Closed	3	B / ACTIVE	EX ST-O PIT	Q Q R	PT-16Q-A PT-16Q-A PT-16Q-A		
4028	D-3 / 1237	Gate / 4	MOV	Closed	3	B / ACTIVE	EX ST-O PIT	Q Q R	PT-16Q-B PT-16Q-B PT-16Q-B		
4098	I-2 / 1237	Gate / 4	MAN	Closed	3	B / ACTIVE	EX	Q	PT-16Q-T		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
* 4291	H-5	Gate	AOV	Open	3	B	EX	R	PT-2.6.6		
	1237	1.5				ACTIVE	ST-O	R	PT-2.6.6		
							ST-C	R	PT-2.6.6		
							PIT	R	PT-2.6.6		
							FS-O	R	PT-2.6.6		
4297	I-10	Globe	AOV	Open	3	B	EX	Q	PT-16Q-T		
	1237	3				ACTIVE	ST-O	CS	PT-2.6.6	CS-12	
							PIT	R	PT-2.6.6		
							FS-0	Q	PT-16Q-T		
4298	J-8	Globe	AOV	Open	3	B	EX	Q	PT-16Q-T		
	1237	3				ACTIVE	ST-O	CS	PT-2.6.6	CS-12	
							PIT	R	PT-2.6.6		
							FS-O	Q	PT-16Q-T		
* 4304	C-6	Gate	AOV	Closed	3	B	EX	R	PT-2.6.6		
	1237	1				ACTIVE	ST-O	R	PT-2.6.6		
							ST-C	R	PT-2.6.6		
							PIT	R	PT-2.6.6		
							FS-O	R	PT-2.6.6		
* 4310	E-6	Gate	AOV	Closed	3	B	EX	R	PT-2.6.6		
	1237	1				ACTIVE	ST-O	R	PT-2.6.6		
							ST-C	R	PT-2.6.6		
							PIT	R	PT-2.6.6		
							FS-O	R	PT-2.6.6		
4324	J-3	Gate	SOV	Closed	3	B	EX	Q	PT-16Q-T		
	1237	.75				ACTIVE	ST-O	-	-	VR-3	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4325	C-4	Diaphgm	SOV	Closed	3	B	EX	Q	PT-16Q-A		
	1237	.5				ACTIVE	ST-O	-	-	VR-3	
4326	F-3	Diaphgm	SOV	Closed	3	B	EX	Q	PT-16Q-B		
	1237	.5				ACTIVE	ST-O	-	-	VR-3	
4344	E-3	Gate	MAN	Closed	3	B	EX	Q	PT-16Q-B		
	1237	4				ACTIVE					
4345	C-3	Gate	MAN	Closed	3	B	EX	Q	PT-16Q-A		
	1237	4				ACTIVE					
4480	B-6	Gate	AOV	Closed	3	B	EX	Q	PT-16Q-A		
	1237	1.5				ACTIVE	ST-C	CS	PT-2.6.6	CS-12	
							PIT	R	PT-2.6.6		
							FS-C	Q	PT-16Q-A		
4481	F-6	Gate	AOV	Closed	3	B	EX	Q	PT-16Q-B		
	1237	1.5				ACTIVE	ST-C	CS	PT-2.6.6	CS-12	
							PIT	R	PT-2.6.6		
							FS-C	Q	PT-16Q-B		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
AUXILIARY FEEDWATER LUBE OIL SKID											
5490J	G-3 / 2285	Relief / 1	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
5490N	E-5 / 2285	Relief / 1	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
COMPONENT COOLING WATER											
17	A-3 / 1245	Globe / 1	AOV	Open	3	B / ACTIVE	EX ST-C PIT FS-C	Q Q R Q	PT- 2. 5 PT- 2. 5 PT- 2. 5 PT- 2. 5		
651	A-3 / 1245	Relief / 2	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-13		11
723A	D-6 / 1245	Nozzle Check / 8	SAV	Open/Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT- 2.8Q PT- 2.8Q		
723B	E-6 / 1245	Nozzle Check / 8	SAV	Open/Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT- 2.8Q PT- 2.8Q		
732	A-3 / 1245	Relief / 3	SAV	Closed	3	C / ACTIVE	RT	10Y	CMP3706732		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
738A	F-3 / 1245	Gate / 10	MOV	Closed	3	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2.8Q PT- 2.8Q PT- 2.8Q		
738B	H-4 / 1245	Gate / 10	MOV	Closed	3	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2.8Q PT- 2.8Q PT- 2.8Q		
740A	G-3 / 1245	Relief / 1	SAV	Closed	3	C / ACTIVE	RT	10Y	CMP3706740A		
740B	I-3 / 1245	Relief / 1	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		
743	C-6 / 1246-1	Check / 2	SAV	Closed	2	AC / ACTIVE	LT-J CV-C	R Q	PTT-23.30 PT- 2. 9		
744	C-7 / 1246-1	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	CMP3706744		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
745	B-6 / 1246-1	Globe / 2	AOV	Closed	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5 PT- 2. 5 PT- 2. 5 PT- 2. 5 PTT-23.30		
749A	B-5 / 1246-1	Gate / 3	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-J	CS CS R R	PT- 2. 4 PT- 2. 4 PT- 2. 4 PTT-23.26	CS-22 CS-22	
749B	B-4 / 1246-1	Gate / 3	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-J	CS CS R R	PT- 2. 4 PT- 2. 4 PT- 2. 4 PTT-23.27	CS-22 CS-22	
750A	C-5 / 1246-1	Check / 4	SAV	Open	2	C / ACTIVE	CV-C	CS	PT- 2.10	CS-23	
750B	C-3 / 1246-1	Check / 4	SAV	Open	2	C / ACTIVE	CV-C	CS	PT- 2.10	CS-23	
753A	F-5 / 1246-1	Check / 1.5	SAV	Open	2	C / ACTIVE	CV-C	CS	PT- 2.10	CS-23	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
753B	F-2	Check	SAV	Open	2	C	CV-C	CS	PT- 2.10	CS-23	
	1246-1	1.5				ACTIVE					
755A	G-6	Relief	SAV	Closed	2	C	RT	10Y	CMP3706755A		
	1246-1	.75				ACTIVE					
755B	G-3	Relief	SAV	Closed	2	C	RT	10Y	CMP3706755B		
	1246-1	.75				ACTIVE					
758A	H-5	Relief	SAV	Closed	2	C	RT	10Y	RSSP 12		
	1246-1	2				ACTIVE					
758B	H-2	Relief	SAV	Closed	2	C	RT	10Y	RSSP 12		
	1246-1	2				ACTIVE					
759A	I-5	Gate	MOV	Open	2	A	EX	CS	PT- 2. 4	CS-22	
	1246-1	3				ACTIVE	ST-C	CS	PT- 2. 4	CS-22	
							PIT	R	PT- 2. 4		
							LT-J	R	PTT-23.28		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
759B	I-2	Gate	MOV	Open	2	A	EX	CS	PT- 2. 4	CS-22	
	1246-1	3				ACTIVE	ST-C	CS	PT- 2. 4	CS-22	
							PIT	R	PT- 2. 4		
							LT-J	R	PTT-23.29		
766	G-8	Relief	SAV	Closed	3	C	RT	10Y	CMP3706766		
	1246-2	.75				ACTIVE					
770	F-7	Relief	SAV	Closed	3	C	RT	10Y	CMP3706770		
	1245	.75				ACTIVE					
774A	D-5	Relief	SAV	Closed	3	C	RT	10Y	CMP3706774A		
	1246-2	.75				ACTIVE					
774B	C-3	Relief	SAV	Closed	3	C	RT	10Y	RSSP 12		
	1246-2	.75				ACTIVE					
774C	B-4	Relief	SAV	Closed	3	C	RT	10Y	CMP3706774C		
	1246-2	.75				ACTIVE					

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
774D	C-8 / 1246-2	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	CMP3706774D		
776	H-9 / 1246-2	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	CMP3706776		
813	B-8 / 1246-1	Gate / 6	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-J	Q Q R R	PT- 2. 3 PT- 2. 3 PT- 2. 3 PTT-23.24		
814	I-8 / 1246-1	Gate / 6	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-J	Q Q R R	PT- 2. 3 PT- 2. 3 PT- 2. 3 PTT-23.24		
* 817	A-4 / 1246-1	Gate / 8	MOV	Open	3	B / PASSIVE	EX ST-C PIT	R R R	PT- 2. 4 PT- 2. 4 PT- 2. 4		
818	H-8 / 1246-1	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	CMP3706818		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
* 823	D-2 / 1245	Gate / 2	MOV	Closed	3	B / PASSIVE	PIT	R	PT- 2. 4		
CONSTRUCTION FIRE SERV WATER											
5129	D-7 / 1991	Gate / 2	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.49		
9227	B-5 / 1991	Gate / 4	AOV	Closed	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PTT-23.52		
9229	C-5 / 1991	Check / 4	SAV	Closed	2	AC / ACTIVE	LT-J CV-C	R Q	PTT-23.52 PT- 2. 9	VR-12	
9230R	C-5 / 1991	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP 12		Added per NRC GL 96-06

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
CONTAINMENT HVAC & RECIRC											
1554	C-5 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		
1555	C-6 / 1863	Gate / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		
1556	C-5 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		
1557	C-5 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		
1558	C-5 / 1863	Gate / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
1559	C-4 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		
1560	D-5 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		
1561	D-5 / 1863	Gate / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		
1562	D-5 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50A		
1563	J-5 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50B		
1564	J-6 / 1863	Gate / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50B		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
1565	J-6 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50B		
1566	J-5 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50B		
1567	I-6 / 1863	Gate / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50B		
1568	J-6 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50B		
1569	B-11 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50B		
1570	B-11 / 1863	Gate / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50C		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
1571	B-11 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50C		
1572	B-12 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50C		
1573	B-12 / 1863	Gate / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50C		
1574	B-12 / 1863	Diaphgm / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.50C		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
CONTAINMENT HVAC PURGE EXHAUST											
1596	I-10 / 1866	Globe / 1	MAN	Open	2	A / ACTIVE	EX LT-J	Q R	PT- 2. 5. 5 PTT-23.15		
1597	I-9 / 1866	Diaphgm / 1	AOV	Open	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PTT-23.15		
1598	G-10 / 1866	Diaphgm / 1	AOV	Open	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PTT-23.14		
1599	G-10 / 1866	Diaphgm / 1	AOV	Open	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PTT-23.14		
5879	I-2 / 1866	Butterfly / 48	AOV	Closed	2	B / ACTIVE	EX ST-C PIT FS-C	R R R R	PT- 2. 6 PT- 2. 6 PT- 2. 6 PT- 2. 6		OOS with flange installed

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
CONTAINMENT HVAC PURGE SUPPLY											
5869	F-9	Butterfly	AOV	Closed	SSC	B	EX	R	PT- 2. 6		OOS with flange installed
	1865	48				ACTIVE	ST-C	R	PT- 2. 6		
							PIT	R	PT- 2. 6		
							FS-C	R	PT- 2. 6		
7445	H-7	Butterfly	AOV	Closed	2	A	EX	Q	PT- 2. 5. 5		
	1865	6				ACTIVE	ST-C	Q	PT- 2. 5. 5		
							PIT	R	PT- 2. 5. 5		
							FS-C	Q	PT- 2. 5. 5		
							LT-J	R	PTT-23.44		
7478	H-8	Butterfly	AOV	Closed	2	A	EX	Q	PT- 2. 5. 1		
	1865	6				ACTIVE	ST-C	Q	PT- 2. 5. 1		
							PIT	R	PT- 2. 5. 1		
							FS-C	Q	PT- 2. 5. 1		
							LT-J	R	PTT-23.44		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
CONTAINMENT SPRAY											
357	B-3 / 1261	Check / 4	SAV	Closed	2	C / ACTIVE	CV-O	CS	PT- 2. 6. 4	CS-15	
836A	H-3 / 1261	Globe / 2	AOV	Closed	2	B / ACTIVE	EX ST-O FS-O	Q Q Q	PT- 3Q PT- 3Q PT- 3Q		
836B	H-3 / 1261	Globe / 2	AOV	Closed	2	B / ACTIVE	EX ST-O FS-O	Q Q Q	PT- 3Q PT- 3Q PT- 3Q		
845C	F-4 / 1261	Relief / 2	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-13		1
845D	F-4 / 1261	Relief / 2	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-13		1

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
847A	G-5 / 1261	Check / 2	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT- 3Q PT- 3Q		
847B	H-5 / 1261	Check / 2	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT- 3Q PT- 3Q		
860A	E-7 / 1261	Gate / 6	MOV	Closed	2	A / ACTIVE	EX ST-O PIT LT-X	Q Q R R	PT- 3Q PT- 3Q PT- 3Q PT- 8.11		
860B	E-7 / 1261	Gate / 6	MOV	Closed	2	A / ACTIVE	EX ST-O PIT LT-X	Q Q R R	PT- 3Q PT- 3Q PT- 3Q PT- 8.11		
860C	I-7 / 1261	Gate / 6	MOV	Closed	2	A / ACTIVE	EX ST-O PIT LT-X	Q Q R R	PT- 3Q PT- 3Q PT- 3Q PT- 8.11		
860D	I-7 / 1261	Gate / 6	MOV	Closed	2	A / ACTIVE	EX ST-O PIT LT-X	Q Q R R	PT- 3Q PT- 3Q PT- 3Q PT- 8.11		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
861	J-2 / 1261	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP-12		
862A	E-8 / 1261	Check / 6	SAV	Closed	2	AC / ACTIVE	LT-J CV-O CV-C	R Q Q	PTT-23.18A PT- 3Q PT- 3Q		Mechanical excercise
862B	I-8 / 1261	Check / 6	SAV	Closed	2	AC / ACTIVE	LT-J CV-O CV-C	R Q Q	PTT-23.18B PT- 3Q PT- 3Q		Mechanical excercise
864A	E-8 / 1261	Globe / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18A		1
864B	H-8 / 1261	Globe / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18B		1
869A	E-9 / 1261	Globe / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18A		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
869B	I-9 / 1261	Globe / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18B		
* 875A	F-9 / 1261	Globe / 2	MOV	Closed	2	B / PASSIVE	EX ST-O PIT	R R R	PT- 2. 4 PT- 2. 4 PT- 2. 4		
* 875B	G-9 / 1261	Globe / 2	MOV	Closed	2	B / PASSIVE	EX ST-O PIT	R R R	PT- 2. 4 PT- 2. 4 PT- 2. 4		
* 876A	H-9 / 1261	Globe / 2	MOV	Closed	2	B / PASSIVE	EX ST-O PIT	R R R	PT- 2. 4 PT- 2. 4 PT- 2. 4		
* 876B	G-9 / 1261	Globe / 2	MOV	Closed	2	B / PASSIVE	EX ST-O PIT	R R R	PT- 2. 4 PT- 2. 4 PT- 2. 4		
896A	C-2 / 1261	Gate / 10	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-X	CS CS R R	PT- 2. 4 PT- 2. 4 PT- 2. 4 PT- 8.12	CS-13 CS-13	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
896B	D-2 / 1261	Gate / 10	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-X	CS CS R R	PT- 2. 4 PT- 2. 4 PT- 2. 4 PT- 8.12	CS-13 CS-13	
897	C-7 / 1261	Globe / 2	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-X	CS CS R R	PT- 2. 4 PT- 2. 4 PT- 2. 4 PT- 39	CS-14 CS-14	1
898	C-7 / 1261	Globe / 2	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-X	CS CS R R	PT- 2. 4 PT- 2. 4 PT- 2. 4 PT- 39	CS-14 CS-14	1
1802	F-3 / 1261	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
1819A	A-10 / 1261	Globe / .75	MAN	Open	2	A / ACTIVE	EX LT-J	CS R	PTT-23.17A PTT-23.17A	CS-25	
1819B	A-9 / 1261	Globe / .75	MAN	Open	2	A / ACTIVE	EX LT-J	CS R	PTT-23.17A PTT-23.17A	CS-25	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
1819C	B-10 / 1261	Globe / .75	MAN	Open	2	A / ACTIVE	EX LT-J	CS R	PTT-23.17B PTT-23.17B	CS-25	
1819D	B-9 / 1261	Globe / .75	MAN	Open	2	A / ACTIVE	EX LT-J	CS R	PTT-23.17B PTT-23.17B	CS-25	
1819E	C-10 / 1261	Globe / .75	MAN	Open	2	A / ACTIVE	EX LT-J	CS R	PTT-23.17C PTT-23.17C	CS-25	
1819F	C-9 / 1261	Globe / .75	MAN	Open	2	A / ACTIVE	EX LT-J	CS R	PTT-23.17C PTT-23.17C	CS-25	
1819G	C-10 / 1261	Globe / .75	MAN	Open	2	A / ACTIVE	EX LT-J	CS R	PTT-23.17C PTT-23.17C	CS-25	
2825	E-8 / 1261	Gate / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18A		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
2825A	F-8 / 1261	Ball / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18A		
2826	I-8 / 1261	Gate / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18B		
2826A	J-8 / 1261	Ball / .5	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18B		
2856	D-9 / 1261	Gate / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18A		
2858	I-9 / 1261	Gate / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.18B		
2863R	H-10 / 1261	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP 12		Added per NRC GL 96-06

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
CONTAINMENT VESSEL AIR TEST											
7443	E-10 / 1882	Butterfly / 6	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.43		
7444	I-5 / 1882	Butterfly / 6	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.42		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
CVCS CHARGING											
112B	F-3	Butterfly	AOV	Closed	2	B	EX	CS	PT- 2. 5. 2	CS-15	
	1265-2	4				ACTIVE	ST-O	CS	PT- 2. 5. 2	CS-15	
							PIT	R	PT- 2. 5. 2		
							FS-C	CS	PT- 2. 5. 2	CS-15	
* 112C	D-3	Butterfly	AOV	Open	SSC	B	EX	CS	PT- 2. 5. 2		
	1265-2	4				ACTIVE	ST-C	CS	PT- 2. 5. 2		
							PIT	R	PT- 2. 5. 2		
							FS-O	CS	PT- 2. 5. 2		
142	E-10	Globe	AOV	Open	2	B	EX	CS	PT- 2. 6	CS-16	
	1265-2	2				ACTIVE	ST-O	CS	PT- 2. 6	CS-16	
							PIT	R	PT- 2. 6		
							FS-O	CS	PT- 2. 6	CS-16	
* 257	A-4	Relief	SAV	Closed	SSC	C	RT	10Y	CMP3706257		
	1265-2	2				ACTIVE					
* 268	F-3	Butterfly	MAN	Open	SSC	B	EX	CS	PT- 2. 6. 4		
	1265-2	4				ACTIVE					

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
270A	F-3 / 1265-1	Globe / 2	AOV	Open	2	B / ACTIVE	EX ST-C PIT	CS CS R	PT- 2. 6 PT- 2. 6 PT- 2. 6	CS-18 CS-18	
270B	F-6 / 1265-1	Globe / 2	AOV	Open	2	B / ACTIVE	EX ST-C PIT	CS CS R	PT- 2. 6 PT- 2. 6 PT- 2. 6	CS-18 CS-18	
283	H-6 / 1265-2	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP-12		
284	F-6 / 1265-2	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	CMP3706284		
285	E-6 / 1265-2	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP-12		
302C	G-6 / 1265-1	Check / 2	SAV	Open	2	C / ACTIVE	CV-O	Q	PT-31		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
302D	G-3 / 1265-1	Check / 2	SAV	Open	2	C / ACTIVE	CV-O	Q	PT-31		
304A	H-3 / 1265-1	Check / 2	SAV	Open	2	AC / ACTIVE	LT-J CV-O CV-C	R Q CS	PTT-23.9A PT-31 PT- 2.10	 CS-18	
304B	H-6 / 1265-1	Check / 2	SAV	Open	2	AC / ACTIVE	LT-J CV-O CV-C	R Q CS	PTT-23.9B PT-31 PT- 2.10	 CS-18	
313	D-8 / 1265-2	Gate / 3	MOV	Open	2	A / ACTIVE	EX ST-C PIT LT-J	CS CS R R	PT- 2. 4 PT- 2. 4 PT- 2. 4 PTT-23.11	CS-19 CS-19	
314	B-4 / 1265-1	Relief / 2	SAV	Closed	2	C / ACTIVE	RT	10Y	CMP3706314		
358	F-3 / 1265-2	Butterfly / 4	MAN	Closed	2	B / ACTIVE	EX	CS	PT- 2. 6. 4	CS-15	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
370B	B-2	Check	SAV	Open	1	AC	LT-J	R	PTT-23. 8		
	1265-1	2				ACTIVE	LT-X	R	PT- 8. 4		
							CV-O	CS	PT- 2. 6. 4	CS-16	
							CV-C	CS	PT- 2.10	CS-16	
383B	H-2	Check	SAV	Closed	2	AC	LT-J	R	PTT-23.10		
	1265-1	2				ACTIVE	LT-X	R	PT- 8. 7		
							CV-C	CS	PT- 2.10	CS-20	
386	C-4	Gate	AOV	Closed	2	B	EX	CS	PT- 2. 6	CS-19	
	1265-1	1				ACTIVE	ST-C	CS	PT- 2. 6	CS-19	
							PIT	R	PT- 2. 6		
							FS-C	CS	PT- 2. 6	CS-19	
392A	A-9	Globe	AOV	Closed	1	BC	PIT	R	PT- 2. 6. 4		
	1265-1	2				ACTIVE	RT	R	PT- 2. 6. 4	VR-8	
393	A-10	Check	SAV	Closed	1	C	CV-O	CS	PT- 2. 6. 4	CS-16	
	1265-1	2				ACTIVE					
9315	A-9	Check	SAV	Closed	1	C	CV-O	CS	PT- 2. 6. 4	CS-16	
	1265-1	2				ACTIVE					

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
CVCS LETDOWN											
123	E-9	Globe	AOV	Closed	1	A	LT-X	R	PT- 8. 5		
	1264	.75				PASSIVE					
200A	B-11	Globe	AOV	Open/Closed	1	A	EX	CS	PT- 2. 6	CS-17	
	1264	2				ACTIVE	ST-C	CS	PT- 2. 6	CS-17	
							PIT	R	PT- 2. 6		
							FS-C	CS	PT- 2. 6	CS-17	
							LT-J	R	PTT-23. 6		
							LT-X	R	PT- 8. 1		
200B	B-10	Globe	AOV	Open/Closed	1	A	EX	CS	PT- 2. 6	CS-17	
	1264	2				ACTIVE	ST-C	CS	PT- 2. 6	CS-17	
							PIT	R	PT- 2. 6		
							FS-C	CS	PT- 2. 6	CS-17	
							LT-J	R	PTT-23. 6		
							LT-X	R	PT- 8. 1		
202	B-10	Globe	AOV	Closed	1	A	EX	CS	PT- 2. 6	CS-17	
	1264	2				ACTIVE	ST-C	CS	PT- 2. 6	CS-17	
							PIT	R	PT- 2. 6		
							FS-C	CS	PT- 2. 6	CS-17	
							LT-J	R	PTT-23. 6		
							LT-X	R	PT- 8. 1		
203	A-8	Relief	SAV	Closed	2	AC	LT-J	R	PTT-23. 6		
	1264	2				ACTIVE	RT	10Y	CMP3706203		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
* 310	C-9 / 1264	Globe / .75	AOV	Closed	1	B / PASSIVE	PIT	R	PT- 2. 6		
371	B-7 / 1264	Globe / 2	AOV	Open	2	A / ACTIVE	EX	CS	PT- 2. 6	CS-17	
							ST-C	CS	PT- 2. 6	CS-17	
							PIT	R	PT- 2. 6	CS-17	
							FS-C	CS	PT- 2. 6	CS-17	
							LT-J	R	PTT-23. 6		
* 427	E-2 / 1260	Globe / 2	AOV	Open	1	B / PASSIVE	PIT	R	PT- 2. 6		
702	A-10 / 1264	Check / .75	SAV	Closed	2	C / ACTIVE	CV-O	CS	PT- 2.10.12	CS-7	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
DIESEL GENERATOR											
5907	E-3	Gate	SOV	Open	3	B	EX	Q	PT-12. 1		
	1239-1	1				ACTIVE	ST-O	Q	-	TJ-3	
							ST-C	Q	-	TJ-3	
							FS-C	Q	PT-12. 1		
5907A	E-3	Gate	SOV	Closed	3	B	EX	Q	PT-12. 1		
	1239-1	.75				ACTIVE	ST-O	Q	-	TJ-3	
							ST-C	Q	-	TJ-3	
							FS-O	Q	PT-12. 1		
5908	E-9	Gate	SOV	Open	3	B	EX	Q	PT-12. 2		
	1239-2	1				ACTIVE	ST-O	Q	-	TJ-3	
							ST-C	Q	-	TJ-3	
							FS-C	Q	PT-12. 2		
5908A	E-9	Gate	SOV	Closed	3	B	EX	Q	PT-12. 2		
	1239-2	.75				ACTIVE	ST-O	Q	-	TJ-3	
							ST-C	Q	-	TJ-3	
							FS-O	Q	PT-12. 2		
5923	A-2	Relief	SAV	Closed	3	C	RT	10Y	RSSP-12		
	1239-1	.375				ACTIVE					

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
5924	A-10	Relief	SAV	Closed	3	C	RT	10Y	RSSP-12		
	1239-2	.375				ACTIVE					
5925	B-2	Relief	SAV	Closed	3	C	RT	10Y	RSSP-12		
	1239-1	.375				ACTIVE					
5926	B-10	Relief	SAV	Closed	3	C	RT	10Y	RSSP-12		
	1239-2	.375				ACTIVE					
5933A	G-11	Gate	SOV	Closed	3	B	EX	Q	PT-12. 1		
	1239-1	1.5				ACTIVE	ST-O	Q	-	TJ-2	
5933B	F-11	Gate	SOV	Closed	3	B	EX	Q	PT-12. 1		
	1239-1	1.5				ACTIVE	ST-O	Q	-	TJ-2	
5934A	C-2	Gate	SOV	Closed	3	B	EX	Q	PT-12. 2		
	1239-2	1.5				ACTIVE	ST-O	Q	-	TJ-2	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
5934B	B-2	Gate	SOV	Closed	3	B	EX	Q	PT-12. 2		
	1239-2	1.5				ACTIVE	ST-O	Q	-	TJ-2	
5941A	F-1	Check	SAV	Closed	3	C	CV-C	Q	PT-12. 7		
	1239-1	.75				ACTIVE					
5942A	F-11	Check	SAV	Closed	3	C	CV-C	Q	PT-12. 7		
	1239-2	.75				ACTIVE					
5943A	F-1	Relief	SAV	Closed	3	C	RT	10Y	CMP37065943A		
	1239-1	.75				ACTIVE					
5944A	F-11	Relief	SAV	Closed	3	C	RT	10Y	RSSP-12		
	1239-2	.75				ACTIVE					
5947B	F-1	Relief	SAV	Closed	3	C	RT	10Y	RSSP-12		
	1239-1	.75				ACTIVE					

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
5947C	G-1 / 1239-1	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
5948B	G-10 / 1239-2	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
5948C	F-10 / 1239-2	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
5955	I-1 / 1239-1	Check / 3	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-12. 1 PT-12. 6		
5956	I-10 / 1239-2	Check / 3	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-12. 2 PT-12. 6		
5959	G-3 / 1239-1	Relief / 1.5	SAV	Closed	3	C / ACTIVE	RT	10Y	CMP37065959		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
5960	G-8 / 1239-2	Relief / 1.5	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
5960A	C-1 / 1239-1	Check / 1.5	SAV	Closed	3	C / ACTIVE	CV-O CV-C	R R	M-37.126 M-37.126	VR-1 VR-1	Sample disassembly Sample disassembly
5960B	C-11 / 1239-2	Check / 1.5	SAV	Closed	3	C / ACTIVE	CV-O CV-C	R R	M-37.126 M-37.126	VR-1 VR-1	Sample disassembly Sample disassembly
5961	I-4 / 1239-1	Check / 2	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-12. 1 PT-12. 6		
5962	I-8 / 1239-2	Check / 2	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-12. 2 PT-12. 6		
5989	C-3 / 1239-1	Relief / 2.5	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
5990	C-9 / 1239-2	Relief / 2.5	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		
FIRE PROTECTION											
* 5133	C-8 / 1989	Check / 10	SAV	Closed	SSC	C / ACTIVE	CV-O	Q	PT-13		
* 5134	C-7 / 1989	Relief / 6	SAV	Closed	SSC	C / ACTIVE	RT	10Y	PT- 13. 1		
* 5135	H-2 / 1989	Relief / 6	SAV	Closed	SSC	C / ACTIVE	RT	10Y	PT- 13. 1		
* 5136	I-3 / 1989	Check / 10	SAV	Closed	SSC	C / ACTIVE	CV-O	Q	PT-13		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
H2 RECOMBINERS											
1076A	B-7 / 1275-1	Diaphgm / 1	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51A		
1076B	E-8 / 1275-1	Diaphgm / 1	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51B		
1080A	E-1 / 1275-1	Gate / 1	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51C		
1084A	D-7 / 1275-1	Diaphgm / 1	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51A		
1084B	G-8 / 1275-1	Diaphgm / 1	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51B		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
* 8423A	A-6 / 1275-2	Check / 1	SAV	Closed	3	C / ACTIVE	CV-O	R	PT- 2.10.13		
* 8425A	G-5 / 1275-2	Check / 2	SAV	Closed	3	C / ACTIVE	CV-O	R	PT- 2.10.13		
* 8427A	F-5 / 1275-2	Check / .75	SAV	Closed	3	C / ACTIVE	CV-O	R	PT- 2.10.13		
* 8433A	D-5 / 1275-2	Check / 2	SAV	Closed	3	C / ACTIVE	CV-O	R	PT- 2.10.13		
* 8435A	C-5 / 1275-2	Check / .75	SAV	Closed	3	C / ACTIVE	CV-O	R	PT- 2.10.13		
10205S1	B-7 / 1275-1	Gate / 1	SOV	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51A		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
10209S1	D-7 / 1275-1	Gate / 1	SOV	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51A		
10211S1	E-8 / 1275-1	Gate / 1	SOV	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51B		
10213S1	G-8 / 1275-1	Gate / 1	SOV	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51B		
10214S1	C-1 / 1275-1	Gate / 1	SOV	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51C		
10215S1	E-1 / 1275-1	Gate / 1	SOV	Closed	2	A / PASSIVE	LT-J	R	PTT-23.51C		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
INSTRUMENT AIR											
5392	A-11	Gate	AOV	Open	2	A	EX	R	PT- 2. 6	ROJ-8	
	1893	2				ACTIVE	ST-C	R	PT- 2. 6	ROJ-8	
							PIT	R	PT- 2. 6		
							FS-C	R	PT- 2. 6	ROJ-8	
							LT-J	R	PTT-23.32		
5393	D-4	Check	SAV	Open	2	AC	LT-J	R	PTT-23.32		
	1887	2				ACTIVE	CV-C	R	PT-2.10	ROJ-9	CV-C coordinated with PTT-23.32 during LLRT 11

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
MAIN FEEDWATER											
* 3976	I-6 / 1236-1	Stop Check / 14	MOV	Open	NC	B / ACTIVE	EX ST-C PIT	R R R	PT-2.10.9 PT-2.10.9 PT-2.10.9		
* 3977	B-6 / 1236-1	Stop Check / 14	MOV	Open	NC	B / ACTIVE	EX ST-C PIT	R R R	PT-2.10.9 PT-2.10.9 PT-2.10.9		
3992	J-3 / 1236-2	Check / 14	SAV	Open	2	C / ACTIVE	CV-C	CS	PT- 2.10. 9	CS-30	
3993	A-3 / 1236-2	Check / 14	SAV	Open	2	C / ACTIVE	CV-C	CS	PT- 2.10. 9	CS-30	
4269	D-3 / 1236-2	Globe / 12	AOV	Open	3	B / ACTIVE	EX ST-C PIT FS-C	CS CS R CS	RSSP- 1. 5 RSSP- 1. 5 RSSP- 1. 5 RSSP- 1. 5	CS-31 CS-31 CS-31	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4270	G-3	Globe	AOV	Open	3	B	EX	CS	RSSP- 1. 5	CS-31	
	1236-2	12				ACTIVE	ST-C	CS	RSSP- 1. 5	CS-31	
							PIT	R	RSSP- 1. 5		
							FS-C	CS	RSSP- 1. 5	CS-31	
4271	D-3	Globe	AOV	Closed	3	B	EX	CS	RSSP- 1. 5	CS-31	
	1236-2	4				ACTIVE	ST-C	CS	RSSP- 1. 5	CS-31	
							PIT	R	RSSP- 1. 5		
							FS-C	CS	RSSP- 1. 5	CS-31	
4272	H-3	Globe	AOV	Closed	3	B	EX	CS	RSSP- 1. 5	CS-31	
	1236-2	4				ACTIVE	ST-C	CS	RSSP- 1. 5	CS-31	
							PIT	R	RSSP- 1. 5		
							FS-C	CS	RSSP- 1. 5	CS-31	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
MAIN STEAM											
3410	I-5	Gate	AOV	Closed	2	B	EX	CS	PT- 2.6.1	CS-26	Manual excercise
	1231	6				ACTIVE	PIT	R	PT- 2. 6. 1		
							FS-C	CS	PT- 2. 6. 1	CS-26	
3411	C-5	Gate	AOV	Closed	2	B	EX	CS	PT- 2.6.1	CS-26	Manual excercise
	1231	6				ACTIVE	PIT	R	PT- 2. 6. 1		
							FS-C	CS	PT- 2. 6. 1	CS-26	
3504A	F-4	Gate	MOV	Closed	2	B	EX	Q	PT-16Q-T		
	1231	6				ACTIVE	ST-O	Q	PT-16Q-T		
							ST-C	Q	PT-16Q-T		
							PIT	R	PT-16Q-T		
3504B	E-4	Check	SAV	Closed	3	C	CV-O	Q	PT-16Q-T		Mechanical indication
	1231	6				ACTIVE	CV-C	Q	PT-16Q-T		
3505A	B-4	Gate	MOV	Closed	2	B	EX	Q	PT-16Q-T		
	1231	6				ACTIVE	ST-O	Q	PT-16Q-T		
							ST-C	Q	PT-16Q-T		
							PIT	R	PT-16Q-T		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
3505B	D-4	Check	SAV	Closed	3	C	CV-O CV-C	Q Q	PT-16Q-T PT-16Q-T		Mechanical indication
	1231	6				ACTIVE					
3506	H-4	Gate	MAN	Open	2	B	EX	CS	PT- 2.6.1	CS-27	Radiography
	1231	6				ACTIVE					
3507	C-4	Gate	MAN	Open	2	B	EX	CS	PT- 2.6.1	CS-27	Radiography
	1231	6				ACTIVE					
3508	G-5	Relief	SAV	Closed	2	C	RT	5Y	CMP37063508		
	1231	6				ACTIVE					
3509	A-5	Relief	SAV	Closed	2	C	RT	5Y	CMP37063509		
	1231	6				ACTIVE					
3510	G-6	Relief	SAV	Closed	2	C	RT	5Y	CMP37063510		
	1231	6				ACTIVE					

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
3511	A-6 / 1231	Relief / 6	SAV	Closed	2	C / ACTIVE	RT	5Y	CMP37063511		
3512	G-7 / 1231	Relief / 6	SAV	Closed	2	C / ACTIVE	RT	5Y	CMP37063512		
3513	A-7 / 1231	Relief / 6	SAV	Closed	2	C / ACTIVE	RT	5Y	CMP37063513		
3514	G-8 / 1231	Relief / 6	SAV	Closed	2	C / ACTIVE	RT	5Y	CMP37063514		
3515	A-7 / 1231	Relief / 6	SAV	Closed	2	C / ACTIVE	RT	5Y	CMP37063515		
3516	G-10 / 1231	Check / 30	AOV	Open	2	B / ACTIVE	EX	CS	PT- 2.10. 5	CS-28	
							ST-C	CS	PT- 2.10. 5	CS-28	
							PIT	R	PT- 2.10. 5		
							FS-C	CS	PT- 2.10. 5	CS-28	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
3517	A-11 / 1231	Check / 30	AOV	Open	2	B / ACTIVE	EX	CS	PT- 2.10. 5	CS-28	
							ST-C	CS	PT- 2.10. 5	CS-28	
							PIT	R	PT- 2.10. 5		
							FS-C	CS	PT- 2.10. 5	CS-28	
3518	G-10 / 1231	Check / 30	SAV	Open	3	C / ACTIVE	CV-C	CS	PT-2.10.15	CS-29	
3519	A-11 / 1231	Check / 30	SAV	Open	3	C / ACTIVE	CV-C	CS	PT-2.10.15	CS-29	
3652	D-2 / 1231	Gate / 3	HYD	Open	3	B / ACTIVE	EX	Q	PT-16Q-T		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
NUCLEAR SAMPLING											
921	G-1	Gate	SOV	Closed	2	A	EX	Q	PT- 2. 5. 5		
	1278-1	.375				ACTIVE	ST-O	Q	PT- 2. 5. 5		
							ST-C	Q	PT- 2. 5. 5		
							PIT	R	PTT-23.45/PT-2.5.5.1		
							FS-C	Q	PT- 2. 5. 5		
							LT-J	R	PTT-23.45		
922	H-2	Gate	SOV	Closed	2	A	EX	Q	PT- 2. 5. 5		
	1278-1	.375				ACTIVE	ST-O	Q	PT- 2. 5. 5		
							ST-C	Q	PT- 2. 5. 5		
							PIT	R	PTT-23.45/PT-2.5.5.1		
							FS-C	Q	PT- 2. 5. 5		
							LT-J	R	PTT-23.45		
923	J-1	Gate	SOV	Closed	2	A	EX	Q	PT- 2. 5. 5		
	1278-1	.375				ACTIVE	ST-O	Q	PT- 2. 5. 5		
							ST-C	Q	PT- 2. 5. 5		
							PIT	R	PTT-23.45/PT-2.5.5.1		
							FS-C	Q	PT- 2. 5. 5		
							LT-J	R	PTT-23.45		
924	I-2	Gate	SOV	Closed	2	A	EX	Q	PT- 2. 5. 5		
	1278-1	.375				ACTIVE	ST-O	Q	PT- 2. 5. 5		
							ST-C	Q	PT- 2. 5. 5		
							PIT	R	PTT-23.45/PT-2.5.5.1		
							FS-C	Q	PT- 2. 5. 5		
							LT-J	R	PTT-23.45		
* 951	E-8	Globe	AOV	Open	1	B	EX	Q	PT- 2. 5. 1		
	1278-1	.375				ACTIVE	PIT	R	PT- 2. 5. 1		
							FS-C	Q	PT- 2. 5. 1		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
951C	E-8 / 1278-1	Check / .375	SAV	Closed	1	C / ACTIVE	CV-O	CS	PT-2.10.16	CS-24	Added per NRC GL 96-06
* 953	D-8 / 1278-1	Globe / .375	AOV	Open	1	B / ACTIVE	EX PIT FS-C	Q R Q	PT- 2. 5. 1 PT- 2. 5. 1 PT- 2. 5. 1		
953C	D-8 / 1278-1	Check / .375	SAV	Closed	1	C / ACTIVE	CV-O	CS	PT-2.10.16	CS-24	Added per NRC GL 96-06
* 955	B-8 / 1278-1	Globe / .5	AOV	Closed	1	B / ACTIVE	EX PIT FS-C	Q R Q	PT- 2. 5. 1 PT- 2. 5. 1 PT- 2. 5. 1		
955C	B-8 / 1278-1	Check / .375	SAV	Closed	1	C / ACTIVE	CV-O	CS	PT-2.10.16	CS-24	Added per NRC GL 96-06
956D	B-9 / 1278-1	Globe / .375	MAN	Open	2	A / ACTIVE	EX LT-J	Q R	PT- 2. 5. 4 PTT-23.12C		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
956E	D-9 / 1278-1	Globe / .375	MAN	Open	2	A / ACTIVE	EX LT-J	Q R	PT- 2. 5. 4 PTT-23.12B		
956F	E-9 / 1278-1	Globe / .375	MAN	Open	2	A / ACTIVE	EX LT-J	Q R	PT- 2. 5. 4 PTT-23.12A		
959	C-3 / 1278-2	Globe / .375	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		
966A	E-9 / 1278-1	Globe / .375	AOV	Closed	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5. 4 PT- 2. 5. 4 PT- 2. 5. 4 PT- 2. 5. 4 PTT-23.12A		
966B	D-9 / 1278-1	Globe / .375	AOV	Closed	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5. 4 PT- 2. 5. 4 PT- 2. 5. 4 PT- 2. 5. 4 PTT-23.12B		
966C	B-9 / 1278-1	Gate / .375	AOV	Closed	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5. 4 PT- 2. 5. 4 PT- 2. 5. 4 PT- 2. 5. 4 PTT-23.12C		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
7448	G-1 / 1278-1	Gate / .375	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.45		
7452	H-2 / 1278-1	Gate / .375	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.45		
7456	I-1 / 1278-1	Gate / .375	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.45		
POST ACC SAMP											
1723	E-2 / 1279	Diaphgm / 3	AOV	Open	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5 PT- 2. 5 PT- 2. 5 PT- 2. 5 PTT-23.23		
1728	F-2 / 1279	Diaphgm / 3	AOV	Open	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5 PT- 2. 5 PT- 2. 5 PT- 2. 5 PTT-23.23		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
PRIMARY WATER TREATMENT											
8418	A-4	Globe	AOV	Closed	2	A	EX	Q	PT-2.5.5		
	1908-3	2				ACTIVE	ST-C	Q	PT-2.5.5		
							PIT	R	PT-2.5.5		
							FS-C	Q	PT-2.5.5		
							LT-J	R	PTT-23.39		
8419	A-5	Check	SAV	Closed	2	AC	LT-J	R	PTT-23.39		
	1908-3	2				ACTIVE	CV-C	Q	PT- 2. 9		
8421R	A-5	Relief	SAV	Closed	2	C	RT	10Y	RSSP 12		Added per NRC GL 96-06
	1908-3	.75				ACTIVE					

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
RCDT											
1003A	D-4 / 1272-2	Diaphgm / 3	AOV	Open	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5 PT- 2. 5 PT- 2. 5 PT- 2. 5 PTT-23.22		
1003B	E-4 / 1272-2	Diaphgm / 3	AOV	Open	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5 PT- 2. 5 PT- 2. 5 PT- 2. 5 PTT-23.22		
1655	B-2 / 1272-2	Globe / .375	MAN	Open	2	A / ACTIVE	EX LT-J	Q R	PT- 2. 5 PTT-23.21		
1709G	E-3 / 1272-2	Gate / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.22		
1713	A-3 / 1272-2	Check / 1	SAV	Closed	2	AC / ACTIVE	LT-J CV-C	R Q	PTT-23.20 PT- 2. 9		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
1721	D-3	Diaphgm	AOV	Open	2	A	EX	Q	PT- 2. 5		
	1272-2	3				ACTIVE	ST-C	Q	PT- 2. 5		
							PIT	R	PT- 2. 5		
							FS-C	Q	PT- 2. 5		
							LT-J	R	PTT-23.22		
1722	D-3	Diaphgm	MAN	Closed	2	A	LT-J	R	PTT-23.22		
	1272-2	4				PASSIVE					
1786	B-5	Diaphgm	AOV	Open	2	A	EX	Q	PT- 2. 5		
	1272-2	1				ACTIVE	ST-C	Q	PT- 2. 5		
							PIT	R	PT- 2. 5		
							FS-C	Q	PT- 2. 5		
							LT-J	R	PTT-23.20		
1787	B-5	Diaphgm	AOV	Open	2	A	EX	Q	PT- 2. 5		
	1272-2	1				ACTIVE	ST-C	Q	PT- 2. 5		
							PIT	R	PT- 2. 5		
							FS-C	Q	PT- 2. 5		
							LT-J	R	PTT-23.20		
1789	B-5	Diaphgm	AOV	Open	2	A	EX	Q	PT- 2. 5		
	1272-2	.75				ACTIVE	ST-C	Q	PT- 2. 5		
							PIT	R	PT- 2. 5		
							FS-C	Q	PT- 2. 5		
							LT-J	R	PTT-23.21		
1793	A-3	Diaphgm	MAN	Closed	2	A	LT-J	R	PTT-23.20		
	1272-2	1				PASSIVE					

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
RCS OVERPRESSURE PROTECTION											
8606A	B-4 / 1263	Check / 1	SAV	Closed	2	AC / ACTIVE	LT-X CV-C CV-O	R R Q	PT- 8. 2 PT- 8. 2 S-29.2	ROJ-1	OPS Acc Pressurization
8606B	G-4 / 1263	Check / 1	SAV	Closed	2	AC / ACTIVE	LT-X CV-C CV-O	R R Q	PT- 8. 2 PT- 8. 2 S-29.2	ROJ-1	OPS Acc Pressurization
8608A	C-4 / 1263	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP-12		
8608B	G-4 / 1263	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP-12		
8615A	B-6 / 1263	Relief / 1	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP-12		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
8615B	F-6	Relief	SAV	Closed	2	C	RT	10Y	RSSP-12		
	1263	1				ACTIVE					
8616A	B-7	Three Way	SOV	Closed	2	B	EX	CS	PT- 2 6 5SD	CS-3	
	1263	.75				ACTIVE	ST-O	CS	PT- 2.6.5SD	VR-7	
8616B	G-7	Three Way	SOV	Closed	2	B	EX	CS	PT- 2.6 5SD	CS-3	
	1263	.75				ACTIVE	ST-O	CS	PT- 2.6.5SD	VR-7	
8619A	C-9	Three Way	SOV	Closed	2	B	EX	CS	PT- 2 6.5SD	CS-3	
	1263	1				ACTIVE	ST-O	CS	PT- 2.6.5SD	VR-7	
							ST-C	CS	PT- 2.6.5SD	VR-7	
8619B	G-9	Three Way	SOV	Closed	2	B	EX	CS	PT- 2 6 5SD	CS-3	
	1263	1				ACTIVE	ST-O	CS	PT- 2.6.5SD	VR-7	
							ST-C	CS	PT- 2.6.5SD	VR-7	
8630A	C-9	Check	SAV	Closed	2	C	CV-O	CS	PT- 2. 6. 5	CS-3	By PORV test
	1263	1				ACTIVE	CV-C	CS	PT- 2. 6. 5	CS-3	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
8630B	G-9	Check	SAV	Closed	2	C	CV-O	CS	PT- 2. 6. 5	CS-3	By PORV test
	1263	1				ACTIVE	CV-C	CS	PT- 2. 6. 5	CS-3	
REACTOR COOLANT											
590	E-7	Globe	SOV	Closed	2	B	EX	CS	PT- 2. 6. 2	CS-1	
	1260	1				ACTIVE	ST-O	CS	PT- 2. 6. 2	CS-1	
							PIT	R	RSSP-16		
							FS-C	CS	PT- 2. 6. 2	CS-1	
591	E-8	Globe	SOV	Closed	2	B	EX	CS	PT- 2. 6. 2	CS-1	
	1260	1				ACTIVE	ST-O	CS	PT- 2. 6. 2	CS-1	
							PIT	R	RSSP-16		
							FS-C	CS	PT- 2. 6. 2	CS-1	
592	F-7	Globe	SOV	Closed	2	B	EX	CS	PT- 2. 6. 2	CS-1	
	1260	1				ACTIVE	ST-O	CS	PT- 2. 6. 2	CS-1	
							PIT	R	RSSP-16		
							FS-C	CS	PT- 2. 6. 2	CS-1	
593	F-8	Globe	SOV	Closed	2	B	EX	CS	PT- 2. 6. 2	CS-1	
	1260	1				ACTIVE	ST-O	CS	PT- 2. 6. 2	CS-1	
							PIT	R	RSSP-16		
							FS-C	CS	PT- 2. 6. 2	CS-1	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
REACTOR COOLANT PRZR											
430	B-8	Globe	AOV	Closed	1	B	EX	CS	PT- 2. 6. 5	CS-2	
	1258	3				ACTIVE	ST-O	CS	PT- 2. 6. 5	CS-2	Stroke using nitrogen
							ST-C	CS	PT- 2. 6. 5	CS-2	Stroke using nitrogen
							PIT	R	RSSP- 1. 4		
							FS-C	CS	PT- 2. 6. 5	CS-2	
431C	C-8	Globe	AOV	Closed	1	B	EX	CS	PT- 2. 6. 5	CS-2	
	1258	3				ACTIVE	ST-O	CS	PT- 2. 6. 5	CS-2	Stroke using nitrogen
							ST-C	CS	PT- 2. 6. 5	CS-2	Stroke using nitrogen
							PIT	R	RSSP- 1. 4		
							FS-C	CS	PT- 2. 6. 5	CS-2	
434	A-9	Relief	SAV	Closed	1	C	PIT	R	CPILVDT434	VR-4	
	1258	4				ACTIVE	RT	R	CMP3706434		Tested offsite
435	C-9	Relief	SAV	Closed	1	C	PIT	R	CPILVDT435	VR-4	
	1258	4				ACTIVE	RT	R	CMP3706435		Tested offsite
508	F-7	Diaphgrm	AOV	Closed	2	A	EX	Q	PT- 2. 5		
	1258	2				ACTIVE	ST-C	Q	PT- 2. 5		
							PIT	R	PT- 2. 5		
							FS-C	Q	PT- 2. 5		
							LT-J	R	PTT-23. 3		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
515	C-8 / 1258	Gate / 3	MOV	Open	1	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3 PT- 2. 3		
516	B-8 / 1258	Gate / 3	MOV	Open	1	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3 PT- 2. 3		
528	E-9 / 1258	Check / 2	SAV	Closed	2	AC / ACTIVE	LT-J CV-C	R Q	PTT-23. 2 PT- 2. 9		
529	F-9 / 1258	Check / 2	SAV	Closed	2	AC / ACTIVE	LT-J CV-C	R Q	PTT-23. 3 PT- 2. 9		
539	E-7 / 1258	Globe / .375	AOV	Closed	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5 PT- 2. 5 PT- 2. 5 PT- 2. 5 PTT-23. 1		
546	E-8 / 1258	Globe / .375	MAN	Open	2	A / ACTIVE	EX LT-J	Q R	PT- 2. 5 PTT-23. 1		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
547	E-8 / 1258	Globe / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23. 2		
568R	F-9 / 1258	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP 12		Added per NRC GL 96-06

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
RESIDUAL HEAT REMOVAL											
* 624	J-7 / 1247	Butterfly / 8	AOV	Open	2	B / PASSIVE	EX	Q	PT- 2. 5		Valve travel limited by PCR 98-068
* 625	I-8 / 1247	Butterfly / 8	AOV	Open	2	B / PASSIVE	EX	Q	PT- 2. 5		Valve travle limit by PCR 98-068
* 626	H-7 / 1247	Butterfly / 6	AOV	Closed	2	B / PASSIVE	EX	Q	PT- 2. 5		
697A	F-9 / 1247	Check / 8	SAV	Closed	2	C / ACTIVE	CV-P CV-O CV-C	CS R Q	PT- 2. 2A PT- 2.10.10 PT- 2. 2Q	CS-4 CS-4	
697B	B-9 / 1247	Check / 8	SAV	Closed	2	C / ACTIVE	CV-P CV-O CV-C	CS R Q	PT- 2. 2A PT- 2.10.10 PT- 2. 2Q	CS-4 CS-4	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
700	G-1 / 1247	Gate / 10	MOV	Closed	1	A / ACTIVE	EX ST-O PIT LT-X	CS CS R R	PT- 2. 4. 1 PT- 2. 4. 1 PT- 2. 4. 1 PT- 8. 0	CS-5 CS-5	
701	G-2 / 1247	Gate / 10	MOV	Closed	1	A / ACTIVE	EX ST-O PIT LT-X	CS CS R R	PT- 2. 4. 1 PT- 2. 4. 1 PT- 2. 4. 1 PT- 8. 0	CS-6 CS-6	
704A	D-4 / 1247	Gate / 10	MOV	Open	2	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
704B	C-4 / 1247	Gate / 10	MOV	Open	2	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
710A	F-6 / 1247	Check / 8	SAV	Closed	2	C / ACTIVE	CV-P CV-O CV-C	Q R CS	PT- 2. 2Q PT- 2.10.10 PT- 2. 2A	ROJ-2 ROJ-2 CS-8	
710B	B-6 / 1247	Check / 8	SAV	Closed	2	C / ACTIVE	CV-P CV-O CV-C	Q R CS	PT- 2. 2Q PT- 2.10.10 PT- 2. 2A	ROJ-2 ROJ-2 CS-8	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
720	I-2 / 1247	Gate / 10	MOV	Closed	1	A / ACTIVE	EX ST-O PIT LT-X	CS CS R R	PT- 2. 4. 1 PT- 2. 4. 1 PT- 2. 4. 1 PT- 8. 0	CS-6 CS-6	
721	I-1 / 1247	Gate / 10	MOV	Closed	1	A / ACTIVE	EX ST-O PIT LT-X	CS CS R R	PT- 2. 4. 1 PT- 2. 4. 1 PT- 2. 4. 1 PT- 8. 0	CS-5 CS-5	
850A	F-4 / 1247	Gate / 10	MOV	Closed	2	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
850B	B-4 / 1247	Gate / 10	MOV	Closed	2	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
* 851A	B-1 / 1247	Gate / 10	MOV	Open	2	B / PASSIVE	PIT	R	PT- 2. 4. 1		
* 851B	B-2 / 1247	Gate / 10	MOV	Open	2	B / PASSIVE	PIT	R	PT- 2. 4. 1		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
852A	F-4	Gate	MOV	Closed	1	A	EX	CS	PT- 2. 4	CS-9	
	1260	6				ACTIVE	ST-O	CS	PT- 2. 4	CS-9	
							ST-C	CS	PT- 2. 4	CS-9	
							PIT	R	PT- 2. 4		
							LT-X	R	PT- 8. 0		
852B	F-4	Gate	MOV	Closed	1	A	EX	CS	PT- 2. 4	CS-9	
	1260	6				ACTIVE	ST-O	CS	PT- 2. 4	CS-9	
							ST-C	CS	PT- 2. 4	CS-9	
							PIT	R	PT- 2. 4		
							LT-X	R	PT- 8. 0		
853A	F-5	Check	SAV	Closed	1	AC	LT-X	R	PT- 8. 0	GR-1	Tech Spec PIV
	1260	6				ACTIVE	CV-P	CS	PT- 2.10. 2	CS-10	
							CV-O	R	PT- 2.10.10	CS-10	CV-O at approx. 120 psid
							CV-C	R	PT- 8. 0	ROJ-3	
853B	F-5	Check	SAV	Closed	1	AC	LT-X	R	PT- 8. 0	GR-1	Tech Spec PIV
	1260	6				ACTIVE	CV-P	CS	PT- 2.10. 2	CS-10	
							CV-O	R	PT- 2.10.10	CS-10	CV-O at approx. 120 psid
							CV-C	R	PT- 8. 0	ROJ-3	
854	G-4	Check	SAV	Closed	2	C	CV-O	R	PT- 2.10.10	ROJ-4	
	1247	10				ACTIVE	CV-C	R	-	ROJ-4	Radiography
856	G-5	Gate	MOV	Open	2	B	EX	CS	PT- 2. 4	CS-11	
	1247	10				ACTIVE	ST-C	CS	PT- 2. 4	CS-11	
							PIT	R	PT- 2. 4		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
857A	C-11 / 1247	Gate / 6	MOV	Closed	2	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
857B	B-11 / 1247	Gate / 6	MOV	Closed	2	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
857C	B-11 / 1247	Gate / 6	MOV	Closed	2	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
1813A	E-3 / 1247	Gate / 6	MOV	Closed	2	A / PASSIVE	PIT LT-J	R R	PT- 2. 4 PTT-23.5A		
1813B	B-4 / 1247	Gate / 6	MOV	Closed	2	A / PASSIVE	PIT LT-J	R R	PT- 2. 4 PTT-23.5B		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
S/G BLOWDOWN											
5735	A-4	Gate	AOV	Open	2	A	EX	Q	PT- 2. 5. 3		
	1277-1	.75				ACTIVE	ST-C	Q	PT- 2. 5. 3		
							PIT	R	PT- 2. 5. 3		
							FS-C	Q	PT- 2. 5. 3		
							LT-X	R	PT- 8.10		In lieu of LT-J
5736	F-4	Gate	AOV	Open	2	A	EX	Q	PT- 2. 5. 3		
	1277-1	.75				ACTIVE	ST-C	Q	PT- 2. 5. 3		
							PIT	R	PT- 2. 5. 3		
							FS-C	Q	PT- 2. 5. 3		
							LT-X	R	PT- 8.10		In lieu of LT-J
5737	H-5	Gate	AOV	Open	2	A	EX	Q	PT- 2. 5. 3		
	1277-1	2				ACTIVE	ST-C	Q	PT- 2. 5. 3		
							PIT	R	PT- 2. 5. 3		
							FS-C	Q	PT- 2. 5. 3		
							LT-X	R	PT- 8. 9		In lieu of LT-J
5738	C-5	Gate	AOV	Open	2	A	EX	Q	PT- 2. 5. 3		
	1277-1	2				ACTIVE	ST-C	Q	PT- 2. 5. 3		
							PIT	R	PT- 2. 5. 3		
							FS-C	Q	PT- 2. 5. 3		
							LT-X	R	PT- 8. 9		In lieu of LT-J

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
SAFETY INJECTION AND ACCUMULATORS											
830A	A-6 / 1262-2	Relief / 1	SAV	Closed	2	C / ACTIVE	RT	10Y	CMP3706830A		
830B	E-6 / 1262-2	Relief / 1	SAV	Closed	2	C / ACTIVE	RT	10Y	CMP3706830B		
* 834A	A-5 / 1262-2	Globe / 1	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		
* 834B	E-5 / 1262-2	Globe / 1	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		
* 835A	C-4 / 1262-2	Globe / 1	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
* 835B	G-5 / 1262-2	Globe / 1	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		
* 839A	C-8 / 1262-2	Globe / .75	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		
* 839B	D-8 / 1262-2	Globe / .75	AOV	Closed	1	B / PASSIVE	PIT	R	PT- 2. 6		
* 840A	G-7 / 1262-2	Globe / .75	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		
* 840B	H-7 / 1262-2	Globe / .75	AOV	Closed	1	B / PASSIVE	PIT	R	PT- 2. 6		
841	C-7 / 1262-2	Gate / 10	MOV	Open	2	B / ACTIVE	EX ST-C PIT	CS CS R	PT- 2. 4 PT-2. 4 PT- 2. 4	CS-32 CS-32	1

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
842A	D-7 / 1262-2	Check / 10	SAV	Closed	1	AC / ACTIVE	LT-X CV-P CV-O CV-C	R Q 3R R	PT- 8. 8 PT-2.10.7 RSSP-24 PT-8. 8	VR-5	
842B	G-7 / 1262-2	Check / 10	SAV	Closed	1	AC / ACTIVE	LT-X CV-P CV-O CV-C	R Q 3R R	PT- 8. 8 PT-2.10.7 RSSP-24 PT-8. 8	VR-5	
* 844A	C-8 / 1262-2	Globe / 1	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		
* 844B	G-8 / 1262-2	Globe / 1	AOV	Closed	2	B / PASSIVE	PIT	R	PT- 2. 6		
846	A-6 / 1262-1	Globe / 1	AOV	Closed	2	A / ACTIVE	EX ST-C PIT FS-C LT-J	Q Q R Q R	PT- 2. 5 PT- 2. 5 PT- 2. 5 PT- 2. 5 PTT-23.46		
865	G-7 / 1262-2	Gate / 10	MOV	Open	2	B / ACTIVE	EX ST-C PIT	CS CS R	PT- 2. 4 PT-2. 4 PT- 2. 4	CS-32 CS-32	1

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
867A	D-7	Check	SAV	Closed	1	AC	LT-X	R	PT-2.10.4	GR-1	Event V Tech Spec PIV
	1262-2	10				ACTIVE	CV-P	R	PT-2.10.1	VR-6	
							CV-O	3R	RSSP-24	VR-6	
							CV-C	R	PT-2.10.4	VR-6	
867B	H-7	Check	SAV	Closed	1	AC	LT-X	R	PT-2.10.4	GR-1	Event V Tech Spec PIV
	1262-2	10				ACTIVE	CV-P	R	PT-2.10.1	VR-6	
							CV-O	3R	RSSP-24	VR-6	
							CV-C	R	PT-2.10.4	VR-6	
870A	C-7	Check	SAV	Closed	2	AC	LT-J	R	PTT-23.19		
	1262-1	3				ACTIVE	CV-P	Q	PT- 2.1Q	ROJ-7	
							CV-O	R	PT-2.10.1	ROJ-7	
							CV-C	Q	PT- 2.1Q		
870B	E-7	Check	SAV	Closed	2	AC	LT-J	R	PTT-23.19		
	1262-1	3				ACTIVE	CV-P	Q	PT- 2.1Q	ROJ-7	
							CV-O	R	PT-2.10.1	ROJ-7	
							CV-C	Q	PT- 2.1Q		
871A	D-7	Gate	MOV	Open	2	B	EX	Q	PT- 2. 3		
	1262-1	3				ACTIVE	ST-C	Q	PT- 2. 3		
							PIT	R	PT- 2. 3		
871B	E-7	Gate	MOV	Open	2	B	EX	Q	PT- 2. 3		
	1262-1	3				ACTIVE	ST-C	Q	PT- 2. 3		
							PIT	R	PT- 2. 3		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
872A	C-2 / 1262-2	Check / .75	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT- 2.1Q PT- 2.1Q		
872B	I-3 / 1262-2	Check / .75	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT- 2.1Q PT- 2.1Q		
877A	E-3 / 1262-2	Check / 2	SAV	Closed	1	AC / PASSIVE	LT-X	R	PT- 2.10. 4	GR-1	Event V Tech Spec PIV
877B	I-6 / 1262-2	Check / 2	SAV	Closed	1	AC / PASSIVE	LT-X	R	PT- 2.10. 4	GR-1	Event V Tech Spec PIV
878A	E-3 / 1262-2	Globe / 2	MOV	Closed	2	A / PASSIVE	PIT LT-X	R R	PT- 2.10. 4 PT- 2.10. 4	GR-1	Tech Spec PIV
* 878B	D-4 / 1262-2	Globe / 2	MOV	Open	2	B / PASSIVE	PIT	R	PT- 2.10. 4		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
878C	I-5 / 1262-2	Globe / 2	MOV	Closed	2	A / PASSIVE	PIT LT-X	R R	PT- 2.10. 4 PT- 2.10. 4	 GR-1	 Tech Spec PIV
* 878D	H-5 / 1262-2	Globe / 2	MOV	Open	2	B / PASSIVE	PIT	R	PT- 2.10. 4		
878F	E-3 / 1262-2	Check / 2	SAV	Closed	1	AC / PASSIVE	LT-X	R	PT- 2.10. 4	GR-1	Event V Tech Spec PIV
878G	D-5 / 1262-2	Check / 2	SAV	Closed	1	AC / ACTIVE	LT-X CV-O CV-C	R R R	PT- 2.10. 4 PT- 2.10. 1 PT- 2.10.4	GR-1 ROJ-5 ROJ-5	Event V Tech Spec PIV 11
878H	I-6 / 1262-2	Check / 2	SAV	Closed	1	AC / PASSIVE	LT-X	R	PT- 2.10. 4	GR-1	Event V Tech Spec PIV
878J	H-6 / 1262-2	Check / 2	SAV	Closed	1	AC / ACTIVE	LT-X CV-O CV-C	R R R	PT- 2.10. 4 PT- 2.10. 1 PT- 2.10.4	GR-1 ROJ-5 ROJ-5	Event V Tech Spec PIV 11

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
879	G-5 / 1262-1	Globe / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.19		
885A	C-7 / 1262-1	Globe / .75	MAN	Open	2	A / ACTIVE	EX LT-J	Q R	PT- 2.1Q PTT-23.19		
885B	F-8 / 1262-1	Gate / .75	MAN	Open	2	A / ACTIVE	EX LT-J	Q R	PT- 2.1Q PTT-23.19		
887	H-8 / 1262-2	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	RSSP-12		
889A	C-5 / 1262-1	Check / 3	SAV	Closed	2	AC / ACTIVE	LT-J CV-P CV-O CV-C	R Q R Q	PTT-23.19 PT- 2.1Q PT- 2.10. 1 PT- 2.1Q	 ROJ-6 ROJ-6	
889B	F-6 / 1262-1	Check / 3	SAV	Closed	2	AC / ACTIVE	LT-J CV-P CV-O CV-C	R Q R Q	PTT-23.19 PT- 2.1Q PT- 2.10. 1 PT- 2.1Q	 ROJ-6 ROJ-6	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
891A	B-3 / 1262-1	Check / 1.5	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT- 2.1Q PT- 2.1Q		
891B	D-5 / 1262-1	Check / 1.5	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT- 2.1Q PT- 2.1Q		
891C	E-5 / 1262-1	Check / 1.5	SAV	Closed	2	C / ACTIVE	CV-O CV-C	Q Q	PT- 2.1Q PT- 2.1Q		
1815A	D-4 / 1262-1	Gate / 4	MOV	Open	2	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
1815B	D-3 / 1262-1	Gate / 4	MOV	Open	2	B / ACTIVE	EX ST-O PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
1817	D-4 / 1262-1	Relief / .75	SAV	Closed	2	C / ACTIVE	RT	10Y	CMP37061817		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
8623	A-3 / 1262-2	Check / 1	SAV	Closed	2	AC / ACTIVE	LT-J CV-C	R Q	PTT-23.46 PT- 2. 9		
12406	B-7 / 1262-1	Gate / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.19		
12407	E-8 / 1262-1	Gate / .75	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.19		
SERVICE AIR											
7141	C-3 / 1886-2	Gate / 2	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.33		
7226	C-5 / 1886-2	Check / 2	SAV	Closed	2	AC / ACTIVE	LT-J CV-C	R Q	PTT-23.33 PT-2. 9		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
SERVICE WATER											
4561	G-9 / 1250-3	Butterfly / 14	AOV	Open	3	B / ACTIVE	EX ST-O PIT FS-O	Q Q R Q	PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5		
4562	G-10 / 1250-3	Butterfly / 14	AOV	Closed	3	B / ACTIVE	EX ST-O PIT FS-O	Q Q R Q	PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5 PT- 2. 5. 5		
4601	D-2 / 1250-1	Nozzle Check / 14	SAV	Open/Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT- 2. 7.1 PT- 2. 7.1		
4602	E-2 / 1250-1	Nozzle Check / 14	SAV	Open/Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT- 2. 7.1 PT- 2. 7.1		
4603	F-2 / 1250-1	Nozzle Check / 14	SAV	Open/Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT- 2. 7.1 PT- 2. 7.1		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4604	G-2 / 1250-1	Nozzle Check / 14	SAV	Open/Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT- 2. 7.1 PT- 2. 7.1		
4609	C-2 / 1250-1	Butterfly / 8	MOV	Open	3	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
4613	D-6 / 1250-1	Butterfly / 10	MOV	Open	3	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
4614	H-2 / 1250-3	Butterfly / 10	MOV	Open	3	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
4615	J-9 / 1250-1	Gate / 20	MOV	Open	3	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3 PT- 2. 3		
4616	A-9 / 1250-1	Gate / 20	MOV	Open	3	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3 PT- 2. 3		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4619C	F-6 / 1250-2	Gate / 12	MAN	Closed	3	B / ACTIVE	EX	CS	PT- 2.10.11	CS-21	
4620B	E-6 / 1250-2	Gate / 12	MAN	Closed	3	B / ACTIVE	EX	CS	PT- 2.10.11	CS-21	Manually operated MOV
* 4622	H-8 / 1250-2	Globe / 6	MAN	Open	3	B / ACTIVE	EX	3R	RSSP 25		
4622A	H-7 / 1250-2	Gate / 6	MAN	Closed	3	B / ACTIVE	EX	CS	PT- 2.10.11	CS-21	
4629	B-7 / 1250-3	Butterfly / 8	MAN	Open	2	A / PASSIVE	LT-X	R	RSSP- 2. 4		In lieu of LT-J
4630	C-7 / 1250-3	Butterfly / 8	MAN	Open	2	A / PASSIVE	LT-X	R	RSSP- 2. 4		In lieu of LT-J

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4636	F-7 / 1250-3	Butterfly / 2.5	MAN	Open	2	A / PASSIVE	LT-X	R	RSSP- 2. 8		In lieu of LT-J
4643	G-7 / 1250-3	Butterfly / 8	MAN	Open	2	A / PASSIVE	LT-X	R	RSSP- 2. 4		In lieu of LT-J
4644	H-7 / 1250-3	Butterfly / 8	MAN	Open	2	A / PASSIVE	LT-X	R	RSSP- 2. 4		In lieu of LT-J
4653	F-6 / 1250-2	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
4654	D-6 / 1250-2	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
4655	A-7 / 1250-3	Relief / .75	SAV	Closed	2	AC / PASSIVE	LT-X RT	R 10Y	RSSP- 2. 4 RSSP 12		In lieu of LT-J

EIN	Coordinates PID	Type Size	Actuator	Position	Safety Class	Category Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4656	C-7 1250-3	Relief .75	SAV	Closed	2	AC PASSIVE	LT-X RT	R 10Y	RSSP- 2. 4 RSSP 12		In lieu of LT-J
4657	H-8 1250-2	Relief .75	SAV	Closed	3	C ACTIVE	RT	10Y	RSSP-12		
4658	E-7 1250-3	Relief .75	SAV	Closed	2	AC PASSIVE	LT-X RT	R 10Y	RSSP- 2. 8 RSSP 12		In lieu of LT-J
4659	G-7 1250-3	Relief .75	SAV	Closed	2	AC PASSIVE	LT-X RT	R 10Y	RSSP- 2. 4 RSSP 12		In lieu of LT-J
4660	H-7 1250-3	Relief .75	SAV	Closed	2	AC PASSIVE	LT-X RT	R 10Y	RSSP- 2. 4 RSSP 12		In lieu of LT-J
4663	I-3 1250-3	Gate 6	MOV	Open	3	B ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4664	H-2 / 1250-3	Gate / 10	MOV	Open	3	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
4670	D-5 / 1250-1	Gate / 10	MOV	Open	3	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
4717	D-7 / 1250-1	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		
4718	H-5 / 1250-1	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		
4733	I-3 / 1250-3	Butterfly / 6	MOV	Open	3	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
4734	E-3 / 1250-2	Butterfly / 14	MOV	Open	3	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3 PT- 2. 3		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4735	B-2 / 1250-2	Butterfly / 18	MOV	Open	3	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3 PT- 2. 3		
4739B	B-11 / 1250-1	Gate / 3	MAN	Closed	3	B / ACTIVE	EX	CS	PT- 2.10.11	CS-21	
4758	D-7 / 1250-3	Butterfly / 2.5	MAN	Open	2	A / PASSIVE	LT-X	R	RSSP- 2. 8		In lieu of LT-J
4759	D-7 / 1250-3	Relief / .75	SAV	Closed	2	AC / PASSIVE	LT-X RT	R 10Y	RSSP- 2. 8 RSSP 12		In lieu of LT-J
4770	H-10 / 1250-1	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		
4770A	E-10 / 1250-1	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4770B	D-10 / 1250-1	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		
* 4770C	G-10 / 1250-1	Relief / .75	SAV	Closed	NC	C / ACTIVE	RT	10Y	RSSP 12		
* 4770D	G-10 / 1250-1	Relief / .75	SAV	Closed	NC	C / ACTIVE	RT	10Y	RSSP 12		
* 4770E	F-10 / 1250-1	Relief / .75	SAV	Closed	NC	C / ACTIVE	RT	10Y	RSSP 12		
4770F	E-10 / 1250-1	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		
4770G	F-10 / 1250-1	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
4780	C-2 / 1250-1	Butterfly / 8	MOV	Open	3	B / ACTIVE	EX ST-C PIT	Q Q R	PT- 2. 3 PT- 2. 3 PT- 2. 3		
8681	C-8 / 1250-2	Relief / .75	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP 12		
* 8689	E-9 / 1250-2	Butterfly / 10	MAN	Open	3	B / ACTIVE	EX	3R	RSSP 25		
9627A	B-9 / 1250-2	Check / 4	SAV	Closed	3	C / ACTIVE	CV-P CV-O CV-C	Q R R	PT-36Q-C M-37.85. 3 M-37.85. 3	VR-2 VR-2 VR-2	Also required after disassembly Sample disassembly Sample disassembly
9627B	B-10 / 1250-2	Check / 4	SAV	Closed	3	C / ACTIVE	CV-P CV-O CV-C	Q R R	PT-36Q-D M-37.85. 4 M-37.85. 4	VR-2 VR-2 VR-2	Also required after disassembly Sample disassembly Sample disassembly
9632A	E-9 / 1250-2	Gate / 1.5	AOV	Open	3	B / ACTIVE	EX ST-O FS-O	Q Q Q	PT-36Q-C PT-36Q-C PT-36Q-C		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
9632B	E-10 / 1250-2	Gate / 1.5	AOV	Open	3	B / ACTIVE	EX ST-O FS-O	Q Q Q	PT-36Q-D PT-36Q-D PT-36Q-D		
9633A	E-9 / 1250-2	Stop Check / 1.5	SAV	Closed	3	BC / ACTIVE	EX CV-O	Q Q	PT-36Q-C PT-36Q-C		
9633B	E-10 / 1250-2	Stop Check / 1.5	SAV	Closed	3	BC / ACTIVE	EX CV-O	Q Q	PT-36Q-D PT-36Q-D		
9634B	F-10 / 1250-2	Globe / 2	MAN	Closed	3	B / ACTIVE	EX	CS	PT- 2.10.11	CS-21	

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
SPENT FUEL POOL COOLING											
8152	C-5 / 1248	Gate / 1	MAN	Closed	2	A / PASSIVE	LT-J	R	PTT-23.54		
8614	H-8 / 1248	Gate / 4	MAN	Closed	3	B / ACTIVE	EX	Q	PT-33A PT-33B		1
8654	H-2 / 1248	Gate / 6	MAN	Closed	3	B / ACTIVE	EX	Q	PT-33A PT-33B		1
8655	H-4 / 1248	Check / 4	SAV	Closed	SSC	C / ACTIVE	CV-O CV-C	Q Q	PT-33A PT-33B		
8657	I-2 / 1248	Gate / 8	MAN	Open	3	B / ACTIVE	EX	Q	PT-33B		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
8658	I-4 / 1248	Check / 6	SAV	Open	3	C / ACTIVE	CV-O CV-C	Q Q	PT-33B PT-33A		
8663	I-9 / 1248	Gate / 8	MAN	Open	3	B / ACTIVE	EX	Q	PT-33B		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
STANDBY AUXILIARY FEEDWATER											
9629A	B-3 / 1238	Gate / 4	MOV	Closed	3	B / ACTIVE	EX ST-O PIT	Q Q R	PT-36Q-C PT-36Q-C PT-36Q-C		
9629B	I-3 / 1238	Gate / 4	MOV	Closed	3	B / ACTIVE	EX ST-O PIT	Q Q R	PT-36Q-D PT-36Q-D PT-36Q-D		
9700A	B-6 / 1238	Check / 3	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-36Q-C PT-36Q-C		
9700B	I-6 / 1238	Check / 3	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-36Q-D PT-36Q-D		
9701A	B-7 / 1238	Globe / 3	MOV	Open	3	B / ACTIVE	EX ST-O PIT	Q Q R	PT-36Q-C PT-36Q-C PT-36Q-C		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
9701B	I-7 / 1238	Globe / 3	MOV	Open	3	B / ACTIVE	EX	Q	PT-36Q-D		
							ST-O	Q	PT-36Q-D		
							PIT	R	PT-36Q-D		
9703A	F-8 / 1238	Globe / 3	MOV	Closed	3	B / ACTIVE	EX	Q	PT-36Q-C		
							ST-O	Q	PT-36Q-C		
							PIT	R	PT-36Q-C		
9703B	F-8 / 1238	Globe / 3	MOV	Closed	3	B / ACTIVE	EX	Q	PT-36Q-D		
							ST-O	Q	PT-36Q-D		
							PIT	R	PT-36Q-D		
9704A	B-9 / 1238	Stop Check / 3	MOV	Closed	2	BC / ACTIVE	EX	Q	PT-36Q-C		
							ST-O	Q	PT-36Q-C		
							ST-C	Q	PT-36Q-C		
							PIT	R	PT-36Q-C		
							CV-O	Q	PT-36Q-C		
							CV-C	Q	PT-36Q-C		
							CV-C	Q	PT-36.2C	VR-10	(If performed during Mode change) 1
9704B	I-9 / 1238	Stop Check / 3	MOV	Closed	2	BC / ACTIVE	EX	Q	PT-36Q-D		
							ST-O	Q	PT-36Q-D		
							ST-C	Q	PT-36Q-D		
							PIT	R	PT-36Q-D		
							CV-O	Q	PT-36Q-D		
							CV-C	Q	PT-36Q-D		
							CV-C	Q	PT-36.2D	VR-10	(If performed during Mode change) 1
9705A	B-10 / 1238	Check / 3	SAV	Closed	2	C / ACTIVE	CV-O	Q	PT-36Q-C		
							CV-C	Q	PT-36Q-C		
							CV-C	Q	PT-36.2C	VR-10	(If performed during Mode change) 1

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
9705B	I-10 / 1238	Check / 3	SAV	Closed	2	C / ACTIVE	CV-O CV-C CV-C	Q Q Q	PT-36Q-D PT-36Q-D PT-36.2D	 VR-10	 (If performed during Mode change) 1
9709A	B-3 / 1238	Relief / 1	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
9709B	I-3 / 1238	Relief / 1	SAV	Closed	3	C / ACTIVE	RT	10Y	RSSP-12		
* 9710A	C-7 / 1238	Globe / 1.5	AOV	Closed	3	B / ACTIVE	EX ST-O PIT FS-O	R R R R	PT-2.6.6 PT-2.6.6 PT-2.6.6 PT-2.6.6		
* 9710B	H-7 / 1238	Globe / 1.5	AOV	Closed	3	B / ACTIVE	EX ST-O PIT FS-O	R R R R	PT-2.6.6 PT-2.6.6 PT-2.6.6 PT-2.6.6		
9721A	C-3 / 1238	Check / .5	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-36Q-C PT-36Q-C		

EIN	Coordinates / PID	Type / Size	Actuator	Position	Safety Class	Category / Function	Required Tests	Freq	Procedure	Relief Request	Remarks
9721B	G-3 / 1238	Check / .5	SAV	Closed	3	C / ACTIVE	CV-O CV-C	Q Q	PT-36Q-D PT-36Q-D		
9746	I-8 / 1238	Gate / 3	MOV	Open	3	B / ACTIVE	EX ST-O ST-C PIT	Q Q Q R	PT-36Q-D PT-36Q-D PT-36Q-D PT-36Q-D		
WASTE DISPOSAL - GAS											
* 14	I-3 / 1273-2	Globe / 2	AOV	Closed	SSC	B / ACTIVE	EX PIT FS-C	Q R Q	PT- 2.5 PT- 2.5 PT- 2.5		