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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant – Units 1 and 2
Fifth Ten-Year Interval Inservice Testing Program Update

Ladies and Gentlemen:

In accordance with the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), Subsection ISTA-3200(a), "Administrative Requirements," attached for your information is a copy of version 1.0 of the Inservice Testing (IST) Program for the fifth ten-year interval. The fifth ten-year interval IST Program Plan complies with the requirements of the ASME OM Code 2004 Edition through the 2006 Addenda.

This letter contains no NRC commitments. If you have any questions, please contact Jamie Coleman at 205.992.6611.

Respectfully submitted,

C. A. Gayheart
Regulatory Affairs Director

CAG/RMJ

Enclosure: HNP- Units 1 and 2 Fifth Ten-Year Interval Inservice Testing Program, Version 1.0

Cc: Regional Administrator, Region II
NRR Project Manager – Hatch
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RTYPE: CHA02.004

A047
NRR

Edwin I. Hatch Nuclear Plant – Units 1 and 2
Fifth Ten-Year Interval Inservice Testing Program Update

Enclosure

HNP- Units 1 and 2 Fifth Ten-Year Interval Inservice Testing Program, Version 1.0

Edwin I. Hatch Nuclear Plant
Units 1 and 2
Inservice Testing Program Fifth Inspection Interval

Version	Date	Description
1.0	12/01/2015	Initial issue for the 5th 10 Year Interval to ASME OM Code 2004 Edition through Addenda OMb 2006.

Preparer: Michael Todd / [signature] Date: 12/1/15
Print Signature

Reviewer: Michael Keating / [signature] Date: 12-3-15
Print Signature

Approval: Darrell Callaway for Dharmesh Patel / [signature] Date: 12-4-15
Print Signature

Southern Nuclear Operating Company Inc
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Edwin I. Hatch Nuclear Plant
050-00321 (Unit 1) and 050-00366 (Unit 2)
11028 Hatch Parkway North
Baxley, GA 31513

Construction Permit Issue Date:	09/30/1969 (Unit 1) 12/27/1972 (Unit 2)
Commercial Service Date:	12/31/1975 (Unit 1) 09/05/1979 (Unit 2)

For Date of Document Completion/Version, refer to processed Licensing Document Change Request (LDCR)

Inservice Testing Program Summary of Changes

Purpose

Significant changes to the Hatch Inservice Testing (IST) Program Plan and Basis documents related to the update for the Fifth Ten year interval.

General

- Incorporated changes based on a thorough review of the existing program as well as due to the changes necessitated by adherence to the ASME OM Code 2004 Edition through Addenda OMb 2006.

TABLE OF CONTENTS

See Active Page List for complete listing of document contents.

ACTIVE PAGE LIST

Page Number	Version
Table of Contents	
1	1.0
Introduction	
1-1	1.0
1-2	1.0
1-3	1.0
Abbreviations	
2-1	1.0
2-2	1.0
2-3	1.0
Pump Testing	
3-1	1.0
3-2	1.0
Pump Notes	
4-1	1.0
4-2	1.0
Unit 1 Pump Tables	
5-1	1.0
5-2	1.0
5-3	1.0
5-4	1.0
5-5	1.0
5-6	1.0
Unit 2 Pump Tables	
6-1	1.0
6-2	1.0
6-3	1.0
6-4	1.0
6-5	1.0
6-6	1.0

Page Number	Version
Pump Relief Requests	
7-1	1.0
7-2	Deleted
7-3	Withdrawn
7-4	1.0
7-4a	1.0
7-5	1.0
7-5a	1.0
7-6	1.0
7-6a	1.0
7-7	1.0
7-7a	1.0
7-8	1.0
7-8a	1.0
7-9	1.0
7-10	1.0
7-10a	1.0
7-11	Deleted
7-12	1.0
7-12a	1.0
7-12b	1.0
7-12c	1.0
7-13	1.0
7-13a	1.0
7-14	1.0
7-14a	1.0
7-14b	1.0
7-14c	1.0
Valve Testing	
8-1	1.0
8-2	1.0
8-3	1.0
8-4	1.0
8-5	1.0
8-6	1.0
Valve Notes	
9-1	1.0
9-2	1.0
9-3	1.0
9-4	1.0

ACTIVE PAGE LIST

Page Number	Version	Page Number	Version
Unit 1 Valve Tables		48	1.0
1	1.0	49	1.0
2	1.0	50	1.0
3	1.0	51	1.0
4	1.0	52	1.0
5	1.0	53	1.0
6	1.0	54	1.0
7	1.0	55	1.0
8	1.0	56	1.0
9	1.0	57	1.0
10	1.0	58	1.0
11	1.0	59	1.0
12	1.0	60	1.0
13	1.0	61	1.0
14	1.0	62	1.0
15	1.0	63	1.0
16	1.0	64	1.0
17	1.0	65	1.0
18	1.0	66	1.0
19	1.0	67	1.0
20	1.0	68	1.0
21	1.0	69	1.0
22	1.0	70	1.0
23	1.0	71	1.0
24	1.0	72	1.0
25	1.0	73	1.0
26	1.0	74	1.0
27	1.0	75	1.0
28	1.0	76	1.0
29	1.0	77	1.0
30	1.0	78	1.0
31	1.0	79	1.0
32	1.0	80	1.0
33	1.0	81	1.0
34	1.0	82	1.0
35	1.0		
36	1.0		
37	1.0		
38	1.0		
39	1.0		
40	1.0		
41	1.0		
42	1.0		
43	1.0		
44	1.0		
45	1.0		
46	1.0		
47	1.0		

ACTIVE PAGE LIST

Page Number	Version	Page Number	Version
Unit 2 Valve Tables		48	1.0
1	1.0	49	1.0
2	1.0	50	1.0
3	1.0	51	1.0
4	1.0	52	1.0
5	1.0	53	1.0
6	1.0	54	1.0
7	1.0	55	1.0
8	1.0	56	1.0
9	1.0	57	1.0
10	1.0	58	1.0
11	1.0	59	1.0
12	1.0	60	1.0
13	1.0	61	1.0
14	1.0	62	1.0
15	1.0	63	1.0
16	1.0	64	1.0
17	1.0	65	1.0
18	1.0	66	1.0
19	1.0	67	1.0
20	1.0	68	1.0
21	1.0	69	1.0
22	1.0	70	1.0
23	1.0	71	1.0
24	1.0	72	1.0
25	1.0	73	1.0
26	1.0	74	1.0
27	1.0	75	1.0
28	1.0	76	1.0
29	1.0	77	1.0
30	1.0	78	1.0
31	1.0	79	1.0
32	1.0	80	1.0
33	1.0	81	1.0
34	1.0	82	1.0
35	1.0	83	1.0
36	1.0	84	1.0
37	1.0	85	1.0
38	1.0		
39	1.0		
40	1.0	Valve Relief Requests	
41	1.0	12-1	1.0
42	1.0	12-2	1.0
43	1.0	12-2a	1.0
44	1.0	12-3	Withdrawn
45	1.0	12-4	Withdrawn
46	1.0	12-5	Deleted
47	1.0	12-6	1.0

ACTIVE PAGE LIST

Page Number	Version
12-6a	1.0
12-7	Deleted
12-8	Deleted
12-9	1.0
12-9a	1.0
12-9b	1.0
12-9c	1.0
12-10	1.0
12-10a	1.0
12-10b	1.0
12-10c	1.0
12-10d	1.0
12-10e	1.0
12-11	1.0
12-11a	1.0
12-11b	1.0
12-11c	1.0

Valve Cold Shutdown Justifications

Page Number	Version
13-1	1.0
13-2	1.0
13-3	Not Used
13-4	Not Used
13-5	Not Used
13-6	1.0
13-7	1.0
13-8	1.0
13-9	1.0
13-10	1.0
13-11	1.0
13-12	1.0
13-13	1.0

Valve Refueling Outage Justifications

Page Number	Version
14-1	1.0
14-2	1.0
14-3	1.0
14-4	Not Used
14-5	1.0
14-6	1.0
14-7	1.0
14-8	1.0
14-9	1.0
14-10	1.0
14-11	1.0
14-12	1.0

Page Number	Version
14-13	Not Used
14-14	1.0
14-14a	1.0
14-15	1.0
14-16	1.0
14-17	Not Used
14-18	Not Used
14-19	Not Used
14-20	Not Used
14-21	Not Used
14-22	Not Used
14-23	Not Used
14-24	Not Used
14-25	Not Used
14-26	1.0
14-27	1.0
14-28	Not Used
14-29	1.0
14-30	1.0
14-30a	1.0
14-31	1.0
14-32	1.0
14-32a	1.0
14-33	1.0
14-34	Not Used
14-35	1.0
14-36	1.0
14-37	1.0

1.0 IST PROGRAM INTRODUCTION

1.1 GENERAL

This document describes the Inservice Testing (IST) Program for Edwin I. Hatch Nuclear Plant, Units 1 and 2. The below table identifies important dates associated with the Inservice Testing Program.

	Hatch Unit 1	Hatch Unit 2
Construction Permit	09-30-1969	12-27-1972
Commercial Operation	12-31-1975	09-05-1979
1st 10 Year Interval	01-01-1975 to 12-31-1985	09-06-1979 to 12-31-1985*
2nd 10 Year Interval	01-01-1986 to 12-31-1995	01-01-1986 to 12-31-1995
3rd 10 Year Interval	01-01-1996 to 12-31-2005	01-01-1996 to 12-31-2005
4th 10 Year Interval	01-01-2006 to 12-31-2015	01-01-2006 to 12-31-2015
5th 10 Year Interval	01-01-2016 to 12-31-2025	01-01-2016 to 12-31-2025

*Hatch Unit 2 was optionally updated at the same time as Unit 1 for the 2nd 10 Year Interval in order to place both units on the same edition of the code.

The edition of 10 CFR 50.55a current on January 1, 2015, was used to determine the applicable Code(s) for this program update. This 10 CFR 50.55a edition identified the ASME OM Code, 2004 Edition with Addenda through OMb 2006 (as referenced in §50.55a(b)(3)), as the applicable Code for pump and valve testing.

This document includes inservice testing requirements for pumps and valves. The inservice testing of dynamic restraints (snubbers) Subsection ISTD of the OM Code is not included in this program plan. The Snubber Program is currently documented and maintained under the Inservice Inspection Program.

NUREG-1482, Guidelines for Inservice Testing at Nuclear Power Plants, Revision 2 was used, to the extent practical, for guidance in the development of this program.

1.2 EFFECTIVE DATE

The IST Program, for the 5th 10 year interval will become effective on January 1, 2016 and will be utilized through December 31, 2025 unless the federal regulations are revised otherwise.

1.3 SCOPE

This document is a description of the IST Program to be implemented for Units 1 and 2 at Plant Hatch. This document describes only the IST surveillance testing applicable to pumps and valves included in the program.

1.4 COMPONENT UPGRADING

Plant components have been reviewed to determine the appropriate classification for inservice testing. Regulatory Guide 1.26 (September 1974) was used for guidance in determining component classifications.

Note that the classification of pumps and valves as ASME Class 1, 2, or 3 equivalents for this program does not imply that the components were designed in accordance with ASME requirements. Pump and valve design remains as stated in the FSAR.

1.5 SUBSEQUENT PROGRAM REVISIONS

It is anticipated that this Program will be reviewed again near the end of the 120 month interval and compared to a later NRC approved edition and addenda of the ASME Code applicable for IST. At that time, the program will be modified, if required, to comply to the extent practical with the later code edition. Any additional relief requests for alternative testing or impractical requirements will be submitted in accordance with the applicable federal regulations.

1.6 RESPONSIBILITY

Southern Nuclear Operating Company (SNC), as Owner, bears the overall responsibility for the implementation of the inservice testing activities contained in this program per OM Code, ISTA 1500.

1.7 RECORDS

Records and documentation of information and testing results, which provide the basis for evaluation and which facilitate comparison with results from previous and subsequent tests, will be maintained and available for the active life of the component or system in accordance with OM Code, ISTA 9000.

1.8 METHODS OF TESTING

The method of testing applicable to pumps and valves is listed adjacent to each component identification in the pump and valve test tables contained in this program plan. The OM Code does not stipulate any specific training/certification requirements for personnel involved in pump and valve testing. At Plant Hatch, all pump and valve testing is performed by operations, maintenance or engineering department personnel who have been trained to perform specific testing tasks.

1.9 STANDARDS FOR TESTING EVALUATION

The acceptance criteria applicable for each pump and valve to be tested have been developed in accordance with OM Code requirements as modified by any applicable relief requests. Acceptance criteria are not provided in the IST Program, but are provided in the IST Basis and the applicable surveillance testing procedures which are available for review at the plant site.

ABBREVIATION	DEFINITION
A	Active
A	OM Code Category "A" Valve (See OM Code)
AC	OM Code Category "AC" Valve (See OM Code)
Accum	Accumulator
Act	Actuation
AD	OM Code Category "AD" Valve (See OM Code)
ADS	Automatic Depressurization System
AP	Category A, Passive Valve (See OM Code)
AO	Air Operated
AOV	Air Operated Valve
App-J	10 CFR 50, Appendix J
Analy	Analysis
Aug	Augmented
BFV	Butterfly Valve
Bldg	Building
Brker	Breaker
BV	Ball Valve
C	Closed
Cat	Category
CC	Code Classification
Cham	Chamber
CIV	Containment Isolation Valve
Cond	Condensate
Cnmt	Containment
Cont	Control
Coord	Coordinate
CS	Cold Shutdown
CS	Core Spray
CSJ	Cold Shutdown Justification
CV	Check Valve
CTC	Check Valve Test Close
CTO	Check Valve Test Open
CVCM	Check Valve Condition Monitoring
ΔP	Differential Pressure
Depress	Depressurization
DG	Diesel Generator
DIME	Disassemble, Inspect and Mechanical Exercise
Disc	Discharge
Disch	Discharge
DNO	During Normal Operation
Drn	Drain
DRW	Dirty Rad Waste
DW	Drywell
EFCV	Excess Flow Check Valve
Equip	Equipment
ETC	Exercise Test Close
ETO	Exercise Test Open
Exh	Exhaust
Expl	Explosive
FW	Feedwater
Flr	Floor
Gen	Generator
GlV	Globe Valve
GV	Gate Valve
H2	Hydrogen
HCU	Hydraulic Control Unit

ABBREVIATION	DEFINITION
HNEL	Hatch Nuclear Engineering and Licensing (now Regulatory Affairs)
HOV	Hydraulic Operated Valve
HPCI	High Pressure Coolant Injection
HVAC	Heating, Ventilating and Air Conditioning
Hx	Heat Exchanger
ID	Identification
Inbrd	Inboard
Inj	Injection
Injec	Injection
Inst	Instrument
ISO	Isolation
JP	Jockey Pump
LC	Locked Closed
LPCI	Low Pressure Coolant Injection
LT	Leakage Test
LTV	Leak Tight Valve (Other than OM Code or Appendix J)
Man	Manual
Maint	Maintenance
MCR	Main Control Room
Min	Minimum
Mon	Monitoring
MOV	Motor Operated Valve
MSIV	Main Steam Isolation Valve
MSRV	Main Steam Relief Valve
Mtr	Motor
N	Pump Speed
NA	Not Applicable
N2	Nitrogen
NIT	Non-intrusive Testing
NP	Normal Position
O	Open
O/C	Open/Closed
O2	Oxygen
Outbrd	Outboard
P	Passive
Pd	Discharge Pressure
Pi	Inlet Pressure
Po	Outlet Pressure
P&ID	Piping and Instrumentation Diagram
PASS	Post Accident Sampling System
PCV	Pressure Control Valve
PEQ	Partial Exercise Quarterly
PIT	Position Indication Test
PIV	Pressure Isolation Valve
Press	Pressure
Prod	Products
Purif	Purification
Q	Flowrate
Qtr	Quarterly
RBCCW	Reactor Building Closed Cooling Water
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
RD	Rupture Disk
Recirc	Recirculation
Recom	Recombiner
Redun	Redundant

ABBREVIATION	DEFINITION
Reqd	Required
RF	Refueling Floor
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water
Rm	Room
RO	Refueling Outage
ROJ	Refueling Outage Justification
ROS	Refueling Outage Sample
RPV	Reactor Pressure Vessel
RR	Relief Request
RW	Radwaste
RWCU	Reactor Water Clean Up
RV	Relief Valve
Rx	Reactor
SA	Semi-Annual
SDC	Shutdown Cooling
SDSW	Standby Diesel Service Water
SDV	Scram Discharge Volume
Ser	Service
SGTS	Standby Gas Treatment System
SLC	Standby Liquid Control
SOV	Solenoid Operated Valve
SP	Safety Position
SPC	Suppression Pool Cooling
ST	Stroke Time
STC	Stroke Time Close
STO	Stroke Time Open
Stg	Storage
Stm	Steam
Stor	Storage
Suc	Suction
Suct	Suction
Supp	Suppression
SW	Service Water
Sys	System
TBL	Table
Test	Testable
TIP	Tranversing Incore Probe
TP	Technical Position
TRM	Technical Requirements Manual
Turb	Turbine
V	Vibration
Vac	Vacuum
VB	Vacuum Breaker
Vlv	Valve
Wkly	Weekly
Wtr	Water
2Y	2-Year
2YS	2-Year Sample

3.0 INSERVICE TESTING OF PUMPS

3.1 GENERAL

This IST program was developed to comply with the requirements of 10 CFR 50.55a(f) which delineate the testing requirements for ASME Class 1, 2, and 3 pumps. The Code of record required by 10 CFR 50.55a(b)(3) for 5th Interval pump IST is the ASME OM Code-2004 Edition with Addenda through OMb-2006. The supplemental guidance of NRC NUREG-1482, Revision 2 has been applied to the extent practicable. For pumps which are within the scope of IST, as stipulated in 10 CFR 50.55a, where specific Code requirements cannot be met, relief has been requested from the specific Code requirements.

As required by OM Code, ISTB-1300, pumps within the scope of this program shall be categorized as either Group A or Group B pumps.

Group A pumps are defined as pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operation.

Group B pumps are defined as pumps in standby systems that are not operated routinely except for testing.

Group A and Group B pump testing is required quarterly. In addition, to the quarterly Group A or Group B pump tests, the OM Code imposes a biennial Comprehensive Pump Test and a Preservice Pump Test for pumps that are overhauled or replaced. The IST Program Pump Tables list the parameters measured during Group A, Group B, and Comprehensive Pump Testing.

Preservice Testing is equivalent to Comprehensive Pump Testing, except Preservice Testing requires the development of a five point pump curve for centrifugal and vertical line shaft pumps in which flow and differential pressure is measured. Vibration measurements are only required to be taken at the reference value(s).

The Preservice Test for Standby Liquid Control pumps is equivalent to the Comprehensive Pump Test.

3.2 SCOPE

Safety-related ASME Class 1, 2, and 3 pumps meeting the criteria of the ASME OM Code and falling under the Regulatory Position of Regulatory Guide 1.26 (September 1974) are included within the scope of this program. Special scope features of the Hatch IST Program are discussed below.

It is recognized that 10 CFR 50 Appendix A, GDC-1, and Appendix B, Criterion XI intend that all pumps necessary for safe operation of the plant be tested to demonstrate that they will perform satisfactorily in service. This testing is to be performed to a level commensurate with the function of the pump. This testing is generally performed per the requirements of the plant Technical Specifications or other requirements. In cases where Code requirements are impractical for certain pumps, or an alternate testing method is considered an improvement over OM Code requirements, a relief request has been developed. Pump relief requests are located under a separate tab.

3.2 Scope (Cont.)

No credit is taken in any of the accident analyses for the RCIC system (re: NRC SER dated 8/21/97). Therefore, the RCIC pumps have been included in this Program as augmented components to provide a readily accessible, documented method of testing. This testing will be performed in a manner similar to the OM Code testing and should adequately detect degradation. The Diesel Generator Fuel Oil Transfer Pumps are not ASME classed components and are not included within the scope of Regulatory Guide 1.26 (September 1974). These pumps have been included in this Program as Augmented components to provide a readily accessible, documented method of testing. This testing will be performed in a method similar to that found in the OM Code, and should adequately detect degradation in these particular pumps.

Testing methods and test intervals for Augmented components are established and justified within the IST Program. Where deviations from strict Code compliance exists, the IST Engineer is responsible for ensuring the overall adequacy of the testing. Obtaining relief from the NRC for such deviations is not required for Augmented components.

The Spent Fuel Pool Cooling Pumps have not been included in this Program because they are not safety-related. Credit is taken in the FSAR for Plant Service Water as the safety-grade makeup source to the spent fuel pool with the RHR system available as a safety-grade backup cooling source.

The Core Spray Jockey Pumps and associated valves have not been included in this Program because they are not considered to have an active safety-related function as described in ISTA-1100. The valves which form the boundary between the Core Spray Jockey sub-system and the Core Spray / Residual Heat Removal systems are included in IST scope.

PUMP TEST NOTES

1. Deleted.

2. Differential pressure for this pump is calculated by measuring the discharge pressure and the river level and computing the required pressure. The Pump IST Basis and the surveillance test procedure include the equation used to calculate the differential pressure. This measurement method is acceptable per ISTB-3520 and NUREG-1482, Rev.2, paragraph 5.5.3.

3. As discussed in the "SCOPE" section of this program document (para. 3.2), the RCIC system is not required to be included in the IST Program. However, it is desirable to maintain the system in a documented testing program. Testing will be performed in a manner as close as practical to OM Code test requirements. (re: NRC SER dated 8/21/97)

4. RCIC Pump suction pressure gauges, 1(2)E51-PI-R604, exceed the range limit of 3 times the reference value. However, the gages are calibrated to ±1% full scale accuracy which results in the final variance being within the maximum allowable tolerance of the OM Code (i.e. 1.62 psig (.02 X 81) versus 1 psig (.01 X 100) for Unit 1 and 1.44 psig (.02 X 72) versus 1 psig (.01 X 100) for Unit 2).

5. RCIC Pump flow instruments, 1(2)E51-FI-R612, exceed the maximum Code allowable total loop accuracy, however, the indicator used has a full scale range less than the Code allowable. The maximum variance allowed by the Code would be 24 gpm (.02 X 1200) whereas the actual maximum variance is 10.6 gpm (.0212 X 500). Therefore, the actual accuracy of the instrument loop is better than that required by the Code.

6. This system does not fall within the scope requirements of the ASME OM Code as implemented by 10 CFR 50.55a (i.e. not ASME Class 1, 2 or 3), is not covered by the Regulatory Position of Regulatory Guide 1.26 (September 1974), and was not designed to facilitate performance of OM Code type pump testing. Therefore, it is only included in this program document to provide a readily accessible, controlled mechanism for testing. As discussed in Section 3.2 of this document, testing will be performed in a manner similar to that of the OM Code, and such testing should adequately detect degradation.

7. Instrumentation was not provided to measure flow. A portable ultrasonic type instrument is used to measure flowrate. The inlet pressure is calculated and the discharge pressure is throttled to set the reference differential pressure and then the flowrate is measured. If the flowrate decreases below a specified value, which is determined taking into account the repeatability of the flow measuring device and the design parameters of the pump, the pump will be declared inoperable.

Notes (cont.)

8. The Diesel Generator Fuel Oil Transfer Pumps are located inside the storage tanks with the motor and pump coupling area located above the tank. This arrangement provides inherent deficiencies for detection of degradation through vibration testing. Therefore, best effort motor vibration measurements will be taken to assist in the detection of degradation in the pumps.

9. Operational readiness is confirmed by numerous Technical Specifications surveillance requirements. The frequency of these tests vary from monthly to each operating cycle. Therefore, flowrate and vibration monitoring every 6 months should adequately detect any degradation detrimental to operational readiness.

10. RCIC pump discharge pressure indications, 1(2)E51-PI-R601, do not satisfy the OM Code requirement for full scale range (i.e., 0-1500 psig versus 0-1800 psig). However, the indicators have a sufficient margin to ensure accurate and repeatable measurement of pump discharge pressure.

11. Deleted

HNP-1 PUMP TESTING TABLES

Quarterly Group A and Group B Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameters	Test Frequency	RR/Remarks
1C41-C001A	Standby Liquid Control (Positive Displacement)	H-16061 E-6	2	Pd	Qtr	RR-P-13
1C41-C001B	Group B	H-16061 F-6		Q	Qtr	N/A
				V	N/A	N/A
				N	NA	NA
				ΔP	NA	NA
1E11-C002A	Residual Heat Removal (Centrifugal)	H-16330 H-9	2	Pd	NA	RR-P-3
1E11-C002B	Group A	H-16329 H-3		Q	Qtr	RR-P-4 RR-P-13
1E11-C002C		H-16330 H-11		V	Qtr	N/A
1E11-C002D		H-16329 H-1		N	NA	NA
				ΔP	Qtr	RR-P-3 RR-P-11
1E11-C001A	RHR Service Water (Vertical Line Shaft)	D-11004 A-7	3	Pd	NA	NA
1E11-C001B	Group A	D-11004 D-7		Q	Qtr	RR-P-13
1E11-C001C		D-11004 C-7		V	Qtr	RR-P-5
1E11-C001D		D-11004 E-7		N	NA	NA
				ΔP	Qtr	Note 2

Pump ID	Description/Group	P&ID Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
1E21-C001A 1E21-C001B	Core Spray (Centrifugal) Group B	H-16331 H-9 H-16331 H-10	2	Pd	NA	RR-P-6
				Q	Qtr	RR-P-13
				V	N/A	N/A
				N	NA	NA
				ΔP	Qtr	RR-P-6 RR-P-11
1E41-C001	High Pressure Coolant Injection (Centrifugal) Group B	H-16333 E-8	2	Pd	NA	N/A
				Q	Qtr	RR-P-8 RR-P-13
				V	N/A	N/A
				N	Qtr	N/A
				ΔP	Qtr	RR-P-7
1E51-C001 (Note 3)	Reactor Core Isolation Cooling (Centrifugal) Group B (Augmented)	H-16335 D-6	2	Pd	NA	Note 10
				Q	Qtr	Note 5 RR-P-13
				V	N/A	N/A
				N	Qtr	N/A
				ΔP	Qtr	Note 4

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
1P41-C001A	Plant Service Water (Vertical Line Shaft)	D-11001 F-2	3	Pd	NA	NA
1P41-C001B	Group A	D-11001 F-5		Q	Qtr	RR-P-13
1P41-C001C		D-11001 F-3		V	Qtr	RR-P-5
1P41-C001D		D-11001 F-6		N	NA	NA
				ΔP	Qtr	Note 2
1Y52-C001A	Diesel Fuel Oil Transfer	H-11037 NA	NA	Pd	6 months	RR-P-13
1Y52-C001B	(Vertical line shaft) (Note 6)	H-11037 NA		Q	6 months	Note 7, 9
1Y52-C001C	Group B (Augmented)	H-11037 NA		V	6 months	Note 8, 9
1Y52-C101A		H-11037 NA		N	NA	NA
1Y52-C101B		H-11037 NA		ΔP	6 months	NA
1Y52-C101C		H-11037 NA				

HNP-1 PUMP TESTING TABLES
Biennial Comprehensive Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameters	Test Frequency	RR/Remarks
1C41-C001A	Standby Liquid Control (Positive Displacement)	H-16061 E-6	2	Pd	Biennially	RR-P-13
1C41-C001B	Group B	H-16061 F-6		Q	Biennially	N/A
				V	Biennially	N/A
				N	NA	NA
				ΔP	NA	NA
1E11-C002A	Residual Heat Removal (Centrifugal)	H-16330 H-9	2	Pd	NA	RR-P-3
1E11-C002B	Group A	H-16329 H-3		Q	Biennially	RR-P-4 RR-P-13
1E11-C002C		H-16330 H-11		V	Biennially	N/A
1E11-C002D		H-16329 H-1		N	NA	NA
				ΔP	Biennially	RR-P-3
1E11-C001A	RHR Service Water (Vertical Line Shaft)	D-11004 A-7	3	Pd	NA	NA
1E11-C001B	Group A	D-11004 D-7		Q	Biennially	RR-P-13
1E11-C001C		D-11004 C-7		V	Biennially	RR-P-5
1E11-C001D		D-11004 E-7		N	NA	NA
				ΔP	Biennially	Note 2

HNP-1 PUMP TESTING TABLES
Biennial Comprehensive Pump Tests

Pump ID	Description/Group	P&ID Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
1E21-C001A 1E21-C001B	Core Spray (Centrifugal) Group B	H-16331 H-9 H-16331 H-10	2	Pd	NA	NA
				Q	Biennially	RR-P-13
				V	Biennially	N/A
				N	NA	NA
				ΔP	Biennially	NA
1E41-C001	High Pressure Coolant Injection (Centrifugal) Group B	H-16333 E-8	2	Pd	NA	N/A
				Q	Biennially	RR-P-8 RR-P-13
				V	Biennially	NA
				N	Biennially	N/A
				ΔP	Biennially	N/A
1E51-C001 (Note 3)	Reactor Core Isolation Cooling (Centrifugal) Group B (Augmented)	H-16335 D-6	2	Pd	NA	Note 10
				Q	Biennially	Note 5 RR-P-13
				V	Biennially	N/A
				N	Biennially	N/A
				ΔP	Biennially	Note 4

HNP-1 PUMP TESTING TABLES
Biennial Comprehensive Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
1P41-C001A	Plant Service Water (Vertical Line Shaft)	D-11001 F-2	3	Pd	NA	NA
1P41-C001B	Group A	D-11001 F-5		Q	Biennially	RR-P-13
1P41-C001C		D-11001 F-3		V	Biennially	RR-P-5
1P41-C001D		D-11001 F-6		N	NA	NA
				ΔP	Biennially	Note 2

HNP-2 PUMP TESTING TABLES
Quarterly Group A and Group B Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
2C41-C001A	Standby Liquid Control (Positive Displacement)	H-26009 F-5	2	Pd	Qtr	RR-P-13
2C41-C001B	Group B	H-26009 G-5		Q	Qtr	N/A
				V	N/A	N/A
				N	NA	NA
				ΔP	NA	NA
2E11-C002A	Residual Heat Removal (Vertical Line Shaft)	H-26015 H-8	2	Pd	NA	RR-P-3
2E11-C002B	Group A	H-26014 H-3		Q	Qtr	RR-P-4 RR-P-13
2E11-C002C		H-26015 H-9		V	Qtr	N/A
2E11-C002D		H-26014 H-2		N	NA	NA
				ΔP	Qtr	RR-P-3 RR-P-11
2E11-C001A	RHR Service Water (Vertical Line Shaft)	H-21039 B-4	3	Pd	NA	NA
2E11-C001B	Group A	H-21039 F-4		Q	Qtr	RR-P-13
2E11-C001C		H-21039 D-3		V	Qtr	RR-P-5
2E11-C001D		H-21039 G-3		N	NA	NA
				ΔP	Qtr	Note 2

HNP-2 PUMP TESTING TABLES

Quarterly Group A and Group B Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
2E21-C001A 2E21-C001B	Core Spray (Vertical Line Shaft) Group B	H-26018 F-7 H-26018 F-9	2	Pd	NA	RR-P-6
				Q	Qtr	RR-P-13
				V	N/A	N/A
				N	NA	NA
				ΔP	Qtr	RR-P-6 RR-P-11
2E41-C001	High Pressure Coolant Injection (Centrifugal) Group B	H-26021 D-7	2	Pd	NA	N/A
				Q	Qtr	RR-P-8 RR-P-13
				V	N/A	N/A
				N	Qtr	N/A
				ΔP	Qtr	RR-P-7
2E51-C001 (Note 3)	Reactor Core Isolation Cooling (Centrifugal) Group B (Augmented)	H-26024 C-6	2	Pd	NA	Note 10
				Q	Qtr	Note 5 RR-P-13
				V	N/A	N/A
				N	Qtr	N/A
				ΔP	Qtr	Note 4

HNP-2 PUMP TESTING TABLES

Quarterly Group A and Group B Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
2P41-C001A 2P41-C001B 2P41-C001C 2P41-C001D	Plant Service Water (Vertical Line Shaft) Group A	H-21033 B-2 H-21033 E-2 H-21033 C-2 H-21033 G-2	3	Pd	NA	NA
				Q	Qtr	RR-P-13
				V	Qtr	RR-P-5
				N	NA	NA
				ΔP	Qtr	Note 2
2P41-C002	Standby Diesel Gen. Service Water (Vertical Line Shaft) Group B	H-21033 J-2	3	Pd	NA	NA
				Q	Qtr	RR-P-12 RR-P-13
				V	N/A	N/A
				N	NA	NA
				ΔP	Qtr	Note 2
2Y52-C001A 2Y52-C001C 2Y52-C101A 2Y52-C101C	Diesel Fuel Oil Transfer (Vertical Line Shaft) (Note 6) Group B (Augmented)	H-21074 (F-10) H-21074 (H-10) H-21074 (F-10) H-21074 (H-10)	NA	Pd	6 months	RR-P-13
				Q	6 months	Note 7, 9
				V	6 months	Note 8, 9
				N	NA	NA
				ΔP	6 months	NA

HNP-2 PUMP TESTING TABLES

Biennial Comprehensive Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
2C41-C001A	Standby Liquid Control	H-26009	2	Pd	Biennially	RR-P-13
	(Positive Displacement)	F-5				
2C41-C001B	Group B	H-26009		Q	Biennially	N/A
		G-5				
				V	Biennially	N/A
				N	NA	NA
				ΔP	NA	NA
2E11-C002A	Residual Heat Removal	H-26015	2	Pd	NA	RR-P-3
	(Vertical Line Shaft)	H-8				
2E11-C002B	Group A	H-26014		Q	Biennially	RR-P-4 RR-P-13
		H-3				
2E11-C002C		H-26015		V	Biennially	N/A
		H-9				
2E11-C002D		H-26014		N	NA	NA
		H-2				
				ΔP	Biennially	RR-P-3
2E11-C001A	RHR Service Water	H-21039	3	Pd	NA	NA
	(Vertical Line Shaft)	B-4				
2E11-C001B	Group A	H-21039		Q	Biennially	RR-P-13
		F-4				
2E11-C001C		H-21039		V	Biennially	RR-P-5
		D-3				
2E11-C001D		H-21039		N	NA	NA
		G-3				
				ΔP	Biennially	Note 2

HNP-2 PUMP TESTING TABLES
Biennial Comprehensive Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
2E21-C001A 2E21-C001B	Core Spray (Vertical Line Shaft) Group B	H-26018 F-7 H-26018 F-9	2	Pd	NA	NA
				Q	Biennially	RR-P-13
				V	Biennially	N/A
				N	NA	NA
				ΔP	Biennially	NA
2E41-C001	High Pressure Coolant Injection (Centrifugal) Group B	H-26021 D-7	2	Pd	NA	N/A
				Q	Biennially	RR-P-8 RR-P-13
				V	Biennially	N/A
				N	Biennially	N/A
				ΔP	Biennially	N/A
2E51-C001 (Note 3)	Reactor Core Isolation Cooling (Centrifugal) Group B (Augmented)	H-26024 C-6	2	Pd	NA	Note 10
				Q	Biennially	Note 5 RR-P-13
				V	Biennially	N/A
				N	Biennially	N/A
				ΔP	Biennially	Note 4

HNP-2 PUMP TESTING TABLES
Biennial Comprehensive Pump Tests

Pump ID	Description/Group	P&ID/ Coord	Code Class	Test Parameter	Test Frequency	RR/Remarks
2P41-C001A	Plant Service Water (Vertical Line Shaft)	H-21033 B-2	3	Pd	NA	NA
2P41-C001B	Group A	H-21033 E-2		Q	Biennially	RR-P-13
2P41-C001C		H-21033 C-2		V	Biennially	RR-P-5
2P41-C001D		H-21033 G-2		N	NA	NA
				ΔP	Biennially	Note 2
2P41-C002	Standby Diesel Gen. Service Water (Vertical Line Shaft)	H-21033 J-2	3	Pd	NA	NA
				Q	Biennially	RR-P-12 RR-P-13
	Group B			V	Biennially	RR-P-9
				N	NA	NA
				ΔP	Biennially	Note 2

7.0 PUMP RELIEF REQUEST LOG

Relief Request	Component	Status *
RR-P-1	All Pumps	Deleted
RR-P-2	1/2C41-C001A&B	Withdrawn
RR-P-3	1/2E11-C002A,B,C&D	Approved by SER dated December 30, 2015
RR-P-4	1/2E11-C002A,B,C&D	Approved by SER dated December 30, 2015
RR-P-5	1/2E11-C001A,B,C&D 1/2P41-C001A,B,C&D	Approved by SER dated December 30, 2015
RR-P-6	1/2E21-C001A&B	Approved by SER dated December 30, 2015
RR-P-7	1/2E41-C001	Approved by SER dated December 30, 2015
RR-P-8	1/2E41-C001	Approved by SER dated December 30, 2015
RR-P-9	2P41-C002	Approved by SER dated December 30, 2015
RR-P-10	1/2E41-C001	Deleted
RR-P-11	1/2E11-C002A,B,C&D 1/2E21-C001A&B	Approved by SER dated December 30, 2015
RR-P-12	2P41-C002	Approved by SER dated December 30, 2015
RR-P-13	1/2C41-C001A&B 1/2E11-C001A,B,C&D 1/2E11-C002A,B,C&D 1/2E21-C001A&B 1/2E41-C001 1/2E51-C001 1/2P41-C001A,B,C,&D 2P41-C002 1Y52-C001A,B,&C 1Y52-C101A&B 2Y52-C001A&C 2Y52-C101A&C	Approved by SER dated December 30, 2015

* Status as result of latest revision to IST Program.

RR-P-1

Deleted

Withdrawn

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-P-3

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: 1E11-C002A,B,C,D (Centrifugal Pumps) – Group A
2E11-C002A,B,C,D (Vertical Line Shaft Pumps) – Group A

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ISTB-3510(b)(1) requires that the full-scale range for each analog instrument shall not be greater than three times the reference value. The Residual Heat Removal (RHR) system pump discharge pressure indicators 1(2)E11-PI-R003A-D exceed this Code allowable range limit.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-3 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-3, is based on the ASME OM Code - 2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-3).

The original installed instrumentation associated with these pumps was not designed with the instrument range limits of OM Code ISTB-3510(b)(1) taken into consideration. The actual instrument ranges are itemized below.

INSTRUMENT	RANGE	REF VALUE	ALLOWED RANGE *	ACCURACY
1E11-PI-R003A-D	0-600 psig	171–185 psig	0-513 psig	± 0.5%
2E11-PI-R003A-D	0-600 psig	180–195 psig	0-540 psig	± 0.5%

* - Allowed Range corresponds to 3 times the lowest reference value

PROPOSED ALTERNATIVE AND BASIS: Hatch proposes to use the existing installed instrumentation during Group A pump testing. Even though 1(2)E11-PI-R003A-D exceed the Code allowable range limit of three times the reference value, this additional gage range coupled with the better-than-Code-required accuracy of 0.5% results in only a 3 psi (600 x 0.005) maximum variance compared with the Code allowable variance of 10.26 psi (513 x 0.02).

Using other (temporary) instrumentation during Group A testing is not justifiable considering the difficulty and dose associated with such a requirement. The installed pressure indicators will provide data that is sufficiently accurate to allow assessment of pump condition and to detect degradation during the performance of the Group A IST pump testing. Highly accurate M&TE, which meets all Code requirements, will be installed during Comprehensive and Preservice testing.

The above proposed alternative provides an acceptable level of quality and safety since the variance in the actual test results is less than the maximum variance allowed by the Code. Based on the determination that the use of installed instrumentation provides an acceptable level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(1).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-3 for the Fourth 10 Year IST Interval

REFERENCES: NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-P-4

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: 1E11-C002A,B,C,D (Centrifugal Pumps) – Group A
2E11-C002A,B,C,D (Vertical Line Shaft Pumps) – Group A

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ISTB-3510(b)(1) requires that the full-scale range for each analog instrument shall not be greater than three times the reference value. RHR pump flow indicators 1(2)E11-FI-R608A&B exceed this Code allowable range limit.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-4 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-4, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-4).

The original installed instrumentation associated with these pumps was not designed with the instrument range limits of OM Code ISTB-3510(b)(1) taken into consideration. The actual instrument ranges and loop accuracies are itemized below.

INSTRUMENT	RANGE	TEST RANGE	ALLOWED RANGE	ACCURACY
1E11-FI-R608A&B	0-25000gpm	≈7700gpm	0-23100gpm	± 0.87%
2E11-FI-R608A&B	0-25000gpm	≈7700gpm	0-23100gpm	± 0.87%

COMPONENT/ ACCURACY	COMPONENT/ ACCURACY	COMPONENT/ ACCURACY	LOOP ACCURACY PER ISTA-2000
1E11-FT-N015A,B 0.5%	1E11-K600A,B 0.5%	1E11-FI-R608A,B 0.5%	0.87%
2E11-FT-N015A,B 0.5%	2E11-K600A,B 0.5%	2E11-FI-R608A,B 0.5%	0.87%

1(2)E11-FI-R608A(B) exceed the Code allowable full scale range limit of three times the reference value. The design of the indicator range includes consideration for LPCI flow rate (17,000 gpm for two pumps), whereas the minimum IST pump flow rate reference value is 7,700 gpm for Unit 1 and Unit 2. The Code maximum allowable inaccuracy in measured flow rate would be 462 gpm (i.e., .02 x 23,100) for Units 1 and 2, whereas the actual maximum inaccuracy in measured flow is 218 gpm (i.e., .0087 x 25,000) for both Unit 1 and Unit 2. Therefore, the actual accuracy of the installed flow indicators is better than required by the Code, thus the range of the indicator exceeding the Code limit of three times the reference value is of no consequence.

PROPOSED ALTERNATIVE AND BASIS: Hatch proposes to use the existing installed instrumentation for Group A, Comprehensive Pump, and Preservice Testing.

Even though 1(2)E11-FI-R608A&B exceed the Code allowable range limit of three times the reference value, the overall loop accuracy is better than required by the Code. Therefore, the measured parameter is more accurately displayed than the Code requires. The above proposed alternative is acceptable since the variance in the actual test results is more conservative than that allowed by the Code.

Based on the determination that this alternative provides an acceptable level of quality and safety, the proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(1).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-4 for the Fourth 10 Year IST Interval

REFERENCES:

1. NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627
2. NUREG-1482 Revision 2 Section 5.5.1 "Range and Accuracy of Analog Instruments"

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(2)
RR-P-5

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED:
1E11-C001A,B,C,D (RHRSW Vertical Line Shaft Pumps) – Group A
2E11-C001A,B,C,D (RHRSW Vertical Line Shaft Pumps) – Group A
1P41-C001A,B,C,D (PSW Vertical Line Shaft Pumps) – Group A
2P41-C001A,B,C,D (PSW Vertical Line Shaft Pumps) – Group A

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ISTB-3540(b) requires that vibration measurements on vertical line shaft pumps be taken on the upper motor-bearing housing in three approximately orthogonal directions, one of which is the axial direction.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-5 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-5, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-5).

The Code required vibration measurements on the upper motor bearing housing on these vertical line shaft pumps are impractical because of the following reasons.

1. Plant design did not include permanent scaffolding or ladders which provide access to the top of the motors for the subject pumps.

2. Physical layout of the pumps and interference with adjacent components does not allow for the installation of temporary scaffolding or ladders which are adequate and safe for routine use.

3. There is a thin cover plate bolted to the top-center of each motor which prevents measurements in line with the motor bearing. Measurement on the edge of the motor housing would be influenced by eccentricity and may not be representative of actual axial vibration.

4. Special tools (extension rod) for placing the vibration transducers are not practical because placement would not be sufficiently accurate for trending purposes.

5. Research within the industry has indicated that vibration monitoring of vertical line shaft pumps has been of limited benefit for detecting mechanical degradation due to problems inherent with pump design. The OM Code imposes more stringent hydraulic acceptance criteria on these pumps than for centrifugal pumps. These more stringent hydraulic acceptance criteria place more emphasis on detection of degradation through hydraulic test data than through mechanical test data.

PROPOSED ALTERNATIVE AND BASIS: Vibration measurements will be taken in three orthogonal directions, one of which is in the axial direction in the area of the pump to motor mounting flange when conducting Group A, Comprehensive Pump and Preservice Testing. This is the closest accessible location to a pump bearing housing and this location is easily and safely accessible for test personnel which should ensure repeatable vibration data and should provide readings which are at least as representative of pump mechanical condition as those required by the Code.

The above proposed alternative provides reasonable assurance of operational readiness since vibration measurements will be taken in three orthogonal directions at the pump to motor mounting flange which will provide information as to the mechanical integrity of the pump. Based on the determination that compliance with the Code requirement results in a hardship without a compensating increase in the level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR50.55a(z)(2).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-5 for the Fourth 10 Year IST Interval

REFERENCES: NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-P-6

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: 1E21-C001A&B (Centrifugal Pumps) – Group B
2E21-C001A&B (Vertical Line Shaft Pumps) – Group B

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: Table ISTB-3510-1 requires a total instrument loop accuracy for pressure indicators of ± 2% of full scale for Group B pump tests. This request is only applicable to the Group B pump test.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-6 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-6, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-6).

Core Spray pump pressure indicators 1(2)E21-PI-R600A(B) exceed the maximum code allowable total loop accuracy of ± 2%. The actual instrument ranges and loop accuracies are itemized below.

INSTRUMENT ACCURACY	**RANGE**	**REFERENCE VALUE**	**ALLOWED RANGE**	
1E21-PI-R600A&B	0-500psi	273-282.6 psi	0-847.8 psi	± 2.06%
2E21-PI-R600A&B	0-500psi	332.3-335 psi	0-1005 psi	± 2.06%

COMPONENT/ ACCURACY ACCURACY	**COMPONENT/ ACCURACY PER ISTA-2000**	**COMPONENT/ ACCURACY**	**LOOP**
1E21-PT-N001A,B 0.5%	1E21-PI-R600A,B 2%	N/A N/A	2.06%
2E21-PT-N001A,B 0.5%	2E21-PI-R600A,B 2%	N/A N/A	2.06%

The indicators used have full scale ranges less than that allowed by the Code. The maximum code allowable variance in measurement is 16.96 psig (.02 x 847.8) for Unit 1 and 20.1 psig for Unit 2 (.02 x 1005). Even considering the lower reference values of 273 psi and 332.5 psi respectively, the code allowable variances would still be met. By using an indicator with a range less than the allowed limit, the actual maximum variance is 10.5 psig (.021 x 500) which is more accurate than required by the Code. Therefore, the actual accuracy of the instruments is within the Code allowable as specified in Table ISTB-3510-1 for a Group B pump test.

PROPOSED ALTERNATIVE AND BASIS: None, the installed instruments are more accurate than required by the Code for the range of application when performing a quarterly Group B pump test. Temporary pressure instruments that meet code requirements will be used during Comprehensive Pump and Preservice Testing.

The above proposed alternative provides an acceptable level of quality and safety since the variance in the actual test results is less than the maximum variance allowed by the Code. Based on the determination that the use of installed instrumentation provides an acceptable level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(1).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-6 for the Fourth 10 Year IST Interval

REFERENCES:

1. NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627
2. NUREG-1482 Revision 2 Section 5.5.1 "Range and Accuracy of Analog Instruments"

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-P-7

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: 1E41-C001 (Centrifugal Pump) – Group B
2E41-C001 (Centrifugal Pump) – Group B

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ISTB-3510(b)(1) requires that the full-scale range for each analog instrument shall not be greater than three times the reference value. Unit 1 and 2 HPCI pump suction pressure indicators 1(2)E41-PI-R004 exceed this Code allowable range limit. This request is only applicable to the Group B pump test.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-7 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-7, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-7).

HPCI pump suction pressure gauges 1(2)E41-PI-R004 exceed the range limit of three times the reference value. The actual instrument ranges are itemized below.

INSTRUMENT	FULL SCALE	REFERENCE VALUE	ALLOWED RANGE	ACCURACY
1E41-PI-R004	30"Hg -100 psig	32.2 psig	0-96.6 psig	± 1%
2E41-PI-R004	30"Hg -100 psig	26.4 psig	0-79.2 psig	± 1%

The indicators are calibrated to ± 1 % full scale accuracy, resulting in a maximum inaccuracy of +/- 1 psig (100 * 0.01). The Code allowable inaccuracy, based on a gauge with a full scale exactly 3 x Reference value calibrated to +/- 2%, would be +/-1.93 psig for Unit 1 (96.6 * 0.02) and +/- 1.58 psig for Unit 2 (79.2 * 0.02). The better than required accuracy of the indicators overcomes the inaccuracy created by the full scale range being greater than 3 x reference values.

PROPOSED ALTERNATIVE AND BASIS: None, the installed pressure indicators provide measurements which are within the Code allowable accuracy specified in Table ISTB-3510-1 for quarterly Group B pump tests. Pressure instruments that meet the code requirements will be used during Comprehensive Pump and Preservice Testing.

The above proposed alternative provides an acceptable level of quality and safety since the variance in the actual test results is less than the maximum variance allowed by the Code. Based on the determination that the use of installed instrumentation provides an acceptable level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(1).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-7 for the Fourth 10 Year IST Interval

REFERENCES: NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627

RR-P-8

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: 1E41-C001 (Centrifugal Pump) – Group B
2E41-C001 (Centrifugal Pump) – Group B

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: Table ISTB-3510-1 requires a total instrument loop accuracy for flow indicators of ± 2% of full scale for pump Inservice Testing. HPCI flow indicators 1(2)E41-FI-R612 do not meet this requirement.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-8 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-8, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-8).
Flow indicators 1(2)E41-FI -R612 exceed the maximum code allowable total loop accuracy. The actual instrument loop accuracies are itemized below.

INSTRUMENT	RANGE	REFERENCE VALUE	ALLOWED RANGE	ACCURACY
1E41-FI-R612	0-5000gpm	4250 gpm	0-12750 gpm	± 2.12%
2E41-FI-R612	0-5000gpm	4250gpm	0-12750gpm	± 2.12%

COMPONENT/ ACCURACY	COMPONENT/ ACCURACY	COMPONENT/ ACCURACY	LOOP ACCURACY PER ISTA-2000
1E41-FT-N008 0.5%	1E41-FI-R612 2%	1E41-K601 0.5%	2.12%
2E41-FT-N008 0.5%	2E41-FI-R612 2%	2E41-K601 0.5%	2.12%

The indicator used has a full scale range less than that allowed. Therefore, the maximum variance allowable by the Code is 255 gpm (.02 x 12750) whereas the actual maximum variance is 106 gpm (.0212 x 5000). Therefore, the actual accuracy of the instrument loop is better than that allowable by the Code.

PROPOSED ALTERNATIVE AND BASIS: None, the installed flow indicators provide measurements which are within the Code allowable accuracy as specified in Table ISTB-3510-1 for flow testing. These flow indicators will be used during the Group B, Comprehensive Pump, and Preservice Test.

The above proposed alternative provides an acceptable level of quality and safety since the variance in the actual test results is less than the maximum variance allowed by the Code. Based on the determination that the use of installed instrumentation provides an acceptable level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(1).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-8 for the Fourth 10 Year IST Interval

REFERENCES:

1. NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627
2. NUREG-1482 Revision 2 Section 5.5.1 "Range and Accuracy of Analog Instruments"

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(2)
RR-P-9

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: 2P41-C002 (Vertical Line Shaft Pump) – Group B

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ISTB-3540(b) requires that vibration measurements on vertical line shaft pumps be taken on the upper motor-bearing housing in three approximately orthogonal directions, one of which is the axial direction.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-9 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-9, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-9).

The Code required vibration measurements on the upper motor-bearing housing on this Unit 2 Standby Diesel Generator Service Water vertical line shaft pump are impractical because of the following reasons.

1. The motor has a cooling fan mounted at the top which is attached to the rotating shaft. The fan is protected by a relatively thin cover plate which prevents access to the motor housing for vibration measurements. Removing the cover does not provide for transducer placement since the rotating fan would still be in the way.

2. Research within the industry has indicated that vibration monitoring of vertical line shaft pumps has been of limited benefit for detecting mechanical degradation due to problems inherent with pump design. The OM Code imposes more stringent hydraulic acceptance criteria on these pumps than for centrifugal pumps. These more stringent hydraulic acceptance criteria place more emphasis on detection of degradation through hydraulic test data than through mechanical test data.

PROPOSED ALTERNATIVE AND BASIS: Vibration measurements will be taken in three orthogonal directions, one of which is in the axial direction in the area of the pump to motor mounting flange. This is the closest accessible location to a pump bearing housing and this location is easily accessible for test personnel which should ensure repeatable vibration data and should provide readings which are at least as representative of pump mechanical condition as those required by the Code.

Therefore, application of the OM Code hydraulic testing criteria along with radial and axial vibration monitoring in the area of the pump to motor mounting flange should provide adequate data for assessing the condition of the subject pumps and for monitoring degradation. This request is only applicable to Comprehensive Pump and Preservice Testing. The above proposed alternative provides reasonable assurance of operational readiness since vibration measurements will be taken in three orthogonal directions at the pump to motor mounting flange which will provide information as to the mechanical integrity of the pump. Based on the determination that compliance with the Code requirements results in a hardship without a compensating increase in the level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR50.55a(z)(2).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-9 for the Fourth 10 Year IST Interval

REFERENCES: NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627

RR-P-10

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SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(2)
RR-P-11

PLANT/UNIT:	Edwin I Hatch Nuclear Plant/Unit 1 and 2.
INTERVAL:	5th Interval beginning January 1, 2016 and ending December 31, 2025.
COMPONENTS AFFECTED:	1E11-C002A-D (Residual Heat Removal - Centrifugal Pumps) – Group A 1E21-C001A&B (Core Spray - Centrifugal Pumps) – Group B 2E11-C002A-D (Residual Heat Removal - Vertical Line Shaft Pumps) – Group A 2E21-C001A&B (Core Spray - Vertical Line Shaft Pumps) – Group B
CODE EDITION AND ADDENDA:	ASME OM Code-2004 Edition with Addenda through OMb-2006
REQUIREMENTS:	ISTB-3520(b) requires that differential pressure be determined by the difference between the pressure at a point in the inlet pipe and the pressure at a point in the discharge pipe if a direct indicating instrument is not provided.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-11 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-11, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-11).

The RHR and CS pumps are aligned to the suppression pool (torus) during all modes of normal plant operation. The installed suction pressure gauges do not meet Code requirements. Suction pressure to these pumps is primarily a function of suppression pool level, which is controlled within a 4 inch range, and this results in a virtually constant suction pressure. IST is performed utilizing a full flow test line which circulates water to and from the suppression pool.

The Plant's Technical Specifications require that the suppression pool be maintained within a narrow range of level, temperature, and internal pressure during plant operation which results in a suction pressure of approximately 5 psig. The Unit 1 and 2 Technical Specification operability limits for the suppression pool are itemized below:

Level	≥ 146" & ≤ 150"
Internal Pressure	≤ 1.75 psig
Water Temperature	≤ 100°F

REASON FOR REQUEST (cont.): These Technical Specification operability limits for the suppression pool result in a maximum difference in calculated pump suction pressure of < 2 psig.

This 2 psig variance (ΔPi) is insignificant in relation to nominal discharge pressure and the calculation of differential pressure (ΔP = Po-Pi) when considering the Group A pump test acceptable operating range (i.e., 95-110% for vertical line shaft pumps from Table ISTB-5221-1 and 90-110% for centrifugal pumps from Table ISTB-5121-1) and the allowable ± 2% instrument accuracy from Table ISTB-3510-1; or when considering the Group B pump test acceptable operating range (i.e., 90-110% for centrifugal and vertical line shaft pumps from Table ISTB-5121-1 and Table ISTB-5221-1) and the allowable ± 2% instrument accuracy from Table ISTB-3510-1. Therefore, direct suction pressure measurement for differential pressure derivation provides no added benefit for determining pump operational readiness or for monitoring pump degradation.

PUMP	LOWEST REFERENCE DISCHARGE PRESSURE (Po)	MAXIMUM VARIANCE (ΔPi/Po)
Unit 1 RHR	171 psig	1.17% max
Unit 1 CS	273 psig	0.73% max
Unit 2 RHR	180 psig	1.11% max
Unit 2 CS	332.3 psig	0.60% max

The following table summarizes several years' worth of IST pump suction pressure data. This summary confirms that the RHR and Core Spray pump's suction pressures are consistent and are relatively insignificant in comparison with the pumps' discharge pressure. Applying an average suction pressure of 5 psig, when calculating differential pressure, will provide data that is meaningful for assessing operational readiness and for monitoring pump degradation.

PUMP MPL No.	MIN. PRESS.	MAX. PRESS.	AVG. PRESS.	REFERENCE VALUES
1E11-C002A	3.9	6.8	5.1 (52)	Qr = 8000 gpm, ΔPr = 166 psid
1E11-C002B	3.2	6.25	4.8 (47)	Qr = 7700 gpm, ΔPr = 175 psid
1E11-C002C	3.0	6.2	4.8 (46)	Qr = 7700 gpm, ΔPr = 176 psid
1E11-C002D	3.4	6.0	4.6 (40)	Qr = 7700 gpm, ΔPr = 180 psid
1E21-C001A	2.5	5.8	4.1 (68)	Qr = 4620 gpm, ΔPr = 277.6 psid
1E21-C001B	1.7*	5.9	3.7 (47)	Qr = 4300 gpm, ΔPr = 268 psid

REASON FOR REQUEST (cont.):

2E11-C002A	3.0	6.8	5.2 (50)	Qr = 7700 gpm, ΔPr = 184.6 psid
2E11-C002B	4.3	7.1	5.3 (48)	Qr = 7800 gpm, ΔPr = 190 psid
2E11-C002C	3.0	6.9	5.3 (55)	Qr = 7700 gpm, ΔPr = 184.9 psid
2E11-C002D	3.8	6.2	4.9 (47)	Qr = 7700 gpm, ΔPr = 175 psid
2E21-C001A	4.15	6.9	5.1 (43)	Qr = 4250 gpm, ΔPr = 327.3 psid
2E21-C001B	3.3	6.4	5.0 (53)	Qr = 4250 gpm, ΔPr = 330 psid

AVERAGE	3.3	6.4	4.9	N/A

Number in parenthesis "()" indicates the number of test values averaged to get indicated value.
* One time occurrence only.

The permanently installed pump suction pressure gages encompass a wider range of pressures than does IST and thus exceed the OM Code allowable range limit (3 times the reference value). The installed RHR pump gages must account for the pressure experienced with the RHR loop in the shutdown cooling mode of operation. The installed CS pump gages must account for the pressure experienced with the CS suction aligned to the Condensate Storage Tank. Therefore, a temporary test gage which satisfies the Code range limits would have to be installed each time that IST is required.

Applying a constant pump suction pressure, when calculating differential pressure, will allow the Group A and B testing to be performed with the installed pressure gages, thus lessening the burden on operations personnel responsible for the testing. Since temporary test gages are required to be calibrated both prior to and after usage, it also eliminates the possibility of invalidating test data due to a gage being damaged during transportation, installation or removal.

Mechanical degradation of centrifugal pumps which experience significant differences in suction (inlet) pressure would be indicated by changes in the differential pressure. However, for these pumps, the suction pressure variance is insignificant in comparison to the developed head (pressure).

Therefore, monitoring discharge pressure and calculating differential pressure assuming a constant 5 psig suction pressure provides an adequate method to determine operational readiness and detect potential degradation.

PROPOSED ALTERNATIVE AND BASIS: Pump suction pressure will be assumed to be 5 psig based on a review of several years of IST data which support suction pressure being virtually constant when performing Group A and Group B testing. During these tests pump differential pressure will be calculated by measuring pump discharge pressure and subtracting 5 psig. This value will then be compared to the corresponding reference value. The acceptance criteria of Tables ISTB-5121-l and ISTB-5221-1 will be applied for assessing pump operational readiness and for monitoring potential pump degradation during the applicable Group A or Group B pump test. This testing method meets the intent of the Code for monitoring pump operational readiness and degradation, and relieves the Licensee of the burden associated with the use of temporary test gages.

This request is not applicable to Comprehensive Pump or Preservice Testing. The above proposed alternative provides an acceptable means of evaluating pump performance without a substantial decrease in the ability to monitor operational readiness. Based on the determination that compliance with the Code requirements, results in a hardship or unusual difficulty without a compensating increase in the level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(2).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-11 for the Fourth 10 Year IST Interval

REFERENCES: NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-P-12

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: 2P41-C002 (Vertical Line Shaft Pump) - Group B

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ISTB-3510(b)(1) requires that the full-scale range of analog instruments shall not be greater than three times the reference value, and Table ISTB-3510-1 requires an accuracy of ± 2% full scale.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-P-12 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-P-12, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-P-12).

The flowrate for the Unit 2 Standby Diesel Generator Service Water (SDSW) pump is determined by measuring the differential pressure (dp), in inches of water, across a flow element and then using the vendor correlation chart to convert dp to flowrate in gallons-per-minute (gpm). The dp indicator (2P41-R383) has a full-scale range of - 178 inches of water to + 178 inches (356 inches total range) of water, which is greater than three times the reference value, and is calibrated to ± 4 inches of water (i.e., ± 1.125% of full-scale). The indicator has a range which allows measurement of the flowrate in either direction across the flow element, thus the negative and positive scale ranges. The vendor supplied dp to flow correlation chart has a range of 50 - 145 inches of water which corresponds to a flowrate range of 500 – 850 gpm.

The reference flow for this pump is 707 gpm which corresponds to 100 inches of water. The OM Code would allow a full-scale range of 0 - 300 inches of water (i.e., 3 X 100) and a calibration accuracy of ± 6.0 inches of water (i.e., 0.02 X 300).

The combined range and accuracy of the installed instruments is within the maximum allowable of ISTB-3510(b)(1) and Table-3510-1. The maximum Code allowable dp variance would be ± 6.0 inches of water whereas the actual dp variance is ± 4.0 inches of water. Therefore, use of the existing dp indicators and the vendor correlation chart provides flowrate measurements for IST that are at least as accurate as required by the OM Code.

RR-P-12 (Cont.)

PROPOSED ALTERNATIVE AND BASIS: None, the installed instrumentation will be utilized to determine flowrate for the SDSW pump test. The use of this instrumentation is supported by the guidance contained in NRC NUREG-1482, Revision 2 Section 5.5.1, since the combined range and accuracy variance of the installed instrumentation is within the maximum allowable variance of the OM Code. This request applies to flowrate measurements for Group B, Comprehensive Pump, and Preservice Testing.

The above proposed alternative is acceptable since the accuracy of the instrumentation is better than the absolute accuracy required by the Code. Based on the determination that this alternative provides an acceptable level of quality and safety, the proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(1).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-P-12 for the Fourth 10 Year IST Interval

REFERENCES: NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-P-13

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED:

Pump Number	Description	Pump Type	Code Class	OM Code Category
1(2) C41-C001A & B	STANDBY LIQUID CONTROL PUMPS	Pos. Displacement	2	Group B
1(2) E11-C001A-D	RHR SERVICE WATER PUMPS	Vertical Line Shaft	3	Group A
1E11-C002A-D	RESIDUAL HEAT REMOVAL PUMPS	Centrifugal	2	Group A
2E11-C002A-D	RESIDUAL HEAT REMOVAL PUMPS	Vertical Line Shaft	2	Group A
1E21-C001A & B	CORE SPRAY PUMPS	Centrifugal	2	Group B
2E21-C001A & B	CORE SPRAY PUMPS	Vertical Line Shaft	2	Group B
1(2) E41-C001	HIGH PRESSURE COOLANT INJECTION PUMPS	Centrifugal	2	Group B
1(2) E51-C001	REACTOR CORE ISOLATION COOLING PUMPS (1)	Centrifugal	2	Group B
1(2) P41-C001A-D	PLANT SERVICE WATER PUMPS	Vertical Line Shaft	3	Group A
1Y52-C001A-C 1Y52-C101A & B 2Y52-C001A & C 2Y52-C101A & C	DIESEL FUEL OIL TRANSFER PUMPS (1)	Vertical Line Shaft	N/A	Group B
2P41-C002	STANDBY DIESEL SERVICE WATER PUMP	Vertical Line Shaft	3	Group B

Note (1) – These are augmented components but the relief commitments will also apply to these pumps.

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: Applicable Code Requirements:

ISTB-5121, "Group A Test Procedure" ISTB-5121(b) states that "The resistance of the system shall be varied until the flow rate equals the reference point".

ISTB-5122, "Group B Test Procedure" ISTB-5122(c) states that "System resistance may be varied as necessary to achieve the reference point".

ISTB-5123, "Comprehensive Test Procedure" ISTB-5123(b) states that "For centrifugal and vertical line shaft pumps, the resistance of the system shall be varied until the flow rate equals the reference point".

ISTB-5221, "Group A Test Procedure" ISTB-5221(b) states that "The resistance of the system shall be varied until the flow rate equals the reference point".

ISTB-5222, "Group B Test Procedure" ISTB-5222(c) states that "System resistance may be varied as necessary to achieve the reference point".

ISTB-5223, "Comprehensive Test Procedure" ISTB-5223(b) states that "The resistance of the system shall be varied until the flow rate equals the reference point."

ISTB-5321, Group A Test Procedure, ISTB-5321(b) states that, "The resistance of the system shall be varied until the discharge pressure equals the reference point."

ISTB-5322, Group B Test Procedure, ISTB-5322(c) states that, "System resistance may be varied as necessary to achieve the reference point."
ISTB-5323, Comprehensive Test Procedure, ISTB-5323(b) states that, "The resistance of the system shall be varied until the discharge pressure equals the reference point."

REASON FOR REQUEST: Pursuant to 10 CFR 50.55a, "Codes and standards," paragraph (z)(1), an alternative is proposed to the pump testing reference value requirements of the ASME OM Code. The basis of the request is that the proposed alternative would provide an acceptable level of quality and safety. Specifically, this alternative is requested for all inservice testing of IST Program pumps listed in this Relief Request.

For pump testing, there is difficulty adjusting system throttle valves with sufficient precision to achieve exact flow reference values during subsequent IST exams. Section ISTB of the ASME OM Code does not allow for variance from a fixed reference value for pump testing.

However, NUREG-1482, Revision 2, Section 5.3, acknowledges that certain pump system designs do not allow for the licensee to set the flow or pressure at an exact value because of limitations in the instruments and controls for maintaining steady flow.

ASME OM Code Case OMN-21 provides guidance for adjusting reference flow/pressure to within a specified tolerance during Inservice Testing. The Code Case states "It is the opinion of the Committee that when it is impractical to operate a pump at a specified reference point and adjust the resistance of the system to a specified reference point for either flow rate, differential pressure or discharge pressure, the pump may be operated as close as practical to the specified reference point with the following requirements. The Owner shall adjust the system resistance to as close as practical to the specified reference point where the variance from the reference point does not exceed + 2% or - 1% of the reference point when the reference point is flow rate, or + 1% or – 2% of the reference point when the reference point is differential pressure or discharge pressure. The NRC also discusses this ASME Code change in NUREG-1482, Revision 2, Section 5.3.

PROPOSED ALTERNATIVE AND BASIS: Hatch seeks to perform future Pump Inservice Testing in a manner consistent with the requirements as stated in ASME OM Code Case OMN-21. Specifically, testing of all centrifugal pumps identified in this Relief Request will be performed such that flow rate is adjusted as close as practical to the reference value and within proceduralized limits of +2% / -1% of the reference value. For positive displacement pumps the discharge pressure will be adjusted as close as practical to the reference value and within proceduralized limits of +1% / -2% of the reference value.

Hatch plant operators will still strive to achieve the exact test reference values during testing. Typical test guidance will be to adjust flow/pressure to the specific reference value with additional guidance that if the reference value cannot be achieved with reasonable effort, then the test will be considered valid if the steady state flow rate is within the proceduralized limits of +2% / -1% of the reference value or discharge pressure is within the proceduralized limits of +1% / -2% of the reference value.

Using the provisions of this request as an alternative to the specific requirements of ISTB-5121, ISTB-5122, ISTB-5123, ISTB-5221, ISTB-5222, ISTB-5223, ISTB-5321, ISTB-5322, and ISTB-5323 as described above will provide adequate indication of pump performance and continue to provide an acceptable level of quality and safety. Based on the determination that the use of controlled reference value ranges provides an acceptable level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR 50.55a(z)(1).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: Callaway Relief Request PR-06, approved by the NRC via letter dated July 15, 2014 (ML14178A769)

REFERENCES:

1. ASME Code Case OMN-21, "Alternate Requirements for Adjusting Hydraulic Parameters to Specified Reference Points"
2. NUREG-1482, Revision 2, Section 5.3 "Allowable Variance from Reference Points and Fixed-Resistance Systems"

8.0 INSERVICE TESTING OF VALVES

8.1 GENERAL

This IST Program was developed to comply with the testing provisions of 10 CFR 50.55a(f) which delineates the testing requirements for ASME Class 1, 2, and 3 valves. The Code of record required by 10 CFR 50.55a(b)(3) for 5th Interval Valve IST is the ASME OM Code-2004 Edition with Addenda through OMb-2006 (, hereafter referred to as the OM Code. The supplemental guidance of NRC NUREG-1482, Revision 2 have been applied to the extent practicable. In cases where specific Code requirements cannot be met, relief has been requested from these requirements.

Valves in the program are listed by MPL Number in tables for Units 1 and 2, respectively, and will be tested in accordance with the Code unless otherwise specified in this program.

8.2 SCOPE

Safety related ASME Class 1, 2, and 3 valves with functions described in ISTA-1100 are included within the scope of this program and are tested using the provisions of the OM Code. Containment isolation valves located in non safety related systems are considered safety related for containment purposes and are, therefore, tested under the provisions of the OM Code and 10 CFR 50, Appendix J, as applicable. In cases where Code requirements are impractical or an alternate testing method is considered an improvement over OM Code requirements, a relief request has been developed. Valve relief requests are located under a separate tab.

It is recognized that 10 CFR 50 Appendix A, GDC-1, and Appendix B, Criterion XI intend that all valves necessary for safe operation of the plant be tested to demonstrate that they will perform satisfactorily in service. This testing is required to be performed at a level commensurate with the safety function of the valve, and is generally performed per the requirements of the plant Technical Specifications or other regulatory requirements.

<u>RCIC System (1E51 and 2E51)</u>

No credit is taken in any of the accident analyses for the RCIC system (re: NRC SER dated 08/21/1997). Some RCIC System valves that do not perform a containment isolation function are still considered to be important and thus require a certain level of testing and have, therefore, been included in this program as Augmented Components. This testing will be performed in a manner similar to the OM Code testing and should adequately detect degradation. The testing of these valves is included in this program only to provide a readily accessible, documented method of testing. Subsequently, relief requests are not considered to be required.

Diesel Generator Fuel Oil Transfer and Air Start Systems (1R43 and 2R43)

The Diesel Generator Fuel Oil Transfer and Air Start System valves are not ASME Class components and are not included in the scope as defined in Regulatory Guide 1.26 (September 1974). However, these valves are considered to be essential valves requiring a high level of testing and have, therefore, been included in this program as Augmented Components.. Testing of these valves will be performed in a manner similar to that found in the OM Code, which should adequately detect degradation in these particular valves. While similar to OM Code testing requirements, the testing of these valves is included in this program only to provide a readily accessible, documented method of testing. Subsequently, relief requests are not considered to be required.

Spent Fuel Pool Cooling (1G51 and 2G51)

The Spent Fuel Pool Cooling System valves have not been included in this Program because they are not considered to be safety related. Credit is taken in the FSAR for Plant Service Water as the safety grade makeup source for the spent fuel pool, and the RHR system is available as the backup cooling source. Although credit is taken in the FSAR for Plant Service Water as the safety grade makeup source for the spent fuel pool, the numerous manual valves that would be required to change position to facilitate this alignment will not be included in the IST program scope. This position is based on the fact that various makeup supply sources are available (e.g. demin, fire protection, etc.), the relatively long timeframe available to re-align the system and the amount of makeup that would be required is relatively small.

Jockey Pump System (1E21 and 2E21)

The Core Spray Jockey system is not within the IST scope (see Pump Basis for justification). Only the Jockey Pump to RHR and Core Spray isolation valves are included in the IST Program. Safety related instrumentation provides an alarm in the main control room if water inventory is depleted in the RHR and Core Spray System piping. Therefore, testing of other Jockey Pump System valves is not warranted because they do not have an active safety function as described in ISTA-1100.

Control Rod Drive System (1C11 and 2C11)

As described in Section 4.4.6 of NUREG-1482. Revision 2, certain individual CRD Valves should be tested to the extent practical. All subject valves except the scram discharge volume vent and drain valves will be tested using the technical specification frequency. Specific frequencies for each valve and the bases for the frequency are given in the valve basis.

The Unit 1 scram discharge volume vent and drain valves do not operate independently of one another. One switch operates all six valves and the valves are required to operate in a particular sequence to provide closure of all valves within a Technical Specification allowable time. Therefore, quarterly individual stroke time testing of these valves is not practical. As an alternative test, these valves will be exercised quarterly but not timed. For Unit 1, the total valve sequence response time will be verified to be within Technical Specification requirements each refueling outage.See Relief Request RR-V-1For Unit 2, the valves will be stroke timed each refueling outage. and Refueling Outage Justification ROJ-V-29.

The scram insert and withdraw valves are solenoid valves that full stroke rapidly. Measuring the full stroke required by the OM Code is impractical for these valves; therefore, verification that the associated control rod meets the required scram insertion time will be used as the alternate method to detect degradation of these valves. See Technical Position TP-09 for additional description. The scram discharge volume check valves are required to open to fulfill their safety function. Required flow is achieved through these valves during the technical specification control rod drive insertion tests.

The charging water HCU check valves are required to open and to close to fulfill their safety function. Forward flow operability is proven during Technical Specification testing and reverse flow closure will be proven by a leakage/pressure decay test.

The cooling water header HCU check valves and the drive water insert and withdraw valves are exercised to their safety related position (closed) during weekly CRD exercise testing.

Nitrogen Inerting System (1T48 and 2T48)

The only portions of the 1(2)T48 system (Nitrogen Inerting System) which are considered to be within the scope of inservice testing are those associated with primary containment and vacuum relief. The Hatch Unit 1 primary containment is inerted during normal operation to minimize the potential of hydrogen combustion for a LOCA, where hydrogen is produced due to the zirconium and steam reaction. However, this function is considered to be outside the scope of consideration for inservice testing.

An evaluation is included in the IST Bases Document for certain components which do not provide a containment isolation or vacuum relief function due to the nature of the particular component. These evaluations are included for convenience and information.

Architect Engineer review of the boundaries for ASME Section XI scope resulted in inclusion of components only associated with containment isolation. Therefore, since components associated with nitrogen purge, venting, and nitrogen makeup were not included in the ASME XI ISI boundaries, containment isolation and vacuum relief are considered to be the only safety related functions for IST.

8.3 LEAKAGE RATE TESTING

8.3.1 PRESSURE ISOLATION VALVES (PIV)

Pressure isolation valves (PIVs) are defined as two normally closed valves in series that isolate the Reactor Coolant System (RCS) from the attached low pressure system. Event V pressure isolation valves (Wash 1400) are defined in Section 4.4.4 of NUREG-1482, Revision 2 as "two check valves in series at a low pressure/RCS interface whose failure may result in a LOCA that bypasses containment." At Plant Hatch, there are no normal operating conditions in which two check valves function as the RCS/low pressure interface, therefore, Event V PIVs are not applicable.

Pressure isolation valves are not listed in the Technical Specifications; therefore, they were selected using the above definition. Each pressure isolation valve is designated "PIV" in the "Frequency" column in the valve tables. Some valves function as both pressure and containment isolation valves, and are designated as "PIV/CIV."

Instrumentation to monitor the leakage downstream of each pressure isolation valve during power operation was not a design requirement of Plant Hatch. Also, while it is practical to test several of the valves individually, the ability to isolate and test each valve separately was not a design consideration. Subsequently, all valves cannot be practically tested on an individual basis. A leakage test will be performed at least every 24 months or each refueling outage (unless the valve has been classified as a good performer as defined in Relief Request RR-V-10 and the testing interval has been extended) as follows:

a. A valve that serves only as a pressure isolation valve is tested at operating differential pressure or at a reduced pressure as allowed by ISTC-3630(b)(4), using water as a test medium. The leakage observed during a reduced pressure test is then adjusted to a "function maximum pressure differential value" as required by ISTC-3630(b)(4). The allowable leakage at operating differential pressure for RCS/low pressure piping interface valves is 0.5 gpm (1892 cc/min) per inch of valve size up to a maximum of 5 gpm. The allowable leakage for the Feedwater interface valves, optionally included as PIVs, is specified by SNC for each specific valve.

b. An RCS/low pressure piping interface valve that also functions as a containment isolation valve (CIV) is Appendix J, Type C tested using CIV acceptance criteria since these criteria are more stringent. Acceptable leakage for these valves is always less than the PIV criterion of 1892 cc/min per inch of valve size, even when the adjustment to the "function maximum pressure differential value" is performed. A Feedwater/low pressure piping interface valve that also functions as a containment isolation valve (CIV) is Appendix J, Type C tested using CIV acceptance criteria.

8.3.2 <u>CONTAINMENT ISOLATION VALVES (CIV)</u>

All containment isolation valves that receive a Type C, Appendix J test are included in this Program and are identified as "CIV" in the "Frequency" column in the valve tables. Any changes in the Appendix J, Type C testing scope will be reflected in this document with appropriate changes to the tables. CIVs that do not require Type C leakage testing have not been included in the Program Tables as Category A valves. CIVs that are Type A tested only are included in the applicable Integrated Leak Rate Test procedure and CIVs that do not require any leakage testing (e.g., water sealed) are listed as Category B or C valves.

SNC conforms to the requirements of ISTC-3630(e) to the extent practical by assigning a specific leakage limit to each valve or penetration assembly. Limits are based on the type and size of each valve, the number of valves within the test boundary, and historical leakage data. Administrative leakage limits for all Category A valves not referenced in the Technical Specifications or that reference a note in 42IT-TET-001-1/2 are determined by the guidance in 42EN-INS-002-0. See Technical Position 10 for further information.

As a rule, test configurations have the least number of boundary valves practical to perform the Type C test; however, the piping arrangement at Plant Hatch generally requires the pressurization of a combination of CIVs and block valves simultaneously. In these cases, a leakage limit is applied to each penetration test configuration. During the testing of the penetration, if the measured leakage exceeds the limit for the penetration, causes are investigated and repairs made to specific valves as necessary.

The intent of OM Code to detect degradation (and repair if necessary) of each valve due to service related conditions is therefore met.

8.3.3 LEAK TIGHT VALVES (LTV)

The RCS Excess Flow Check Valves do not have specific allowable leakage rates. They are included in the IST Program and are reverse-leakage tested to confirm closure only. They are tested in accordance with the Technical Specifications as defined in Relief Request RR-V-9.

8.3.4 LEAK TEST TYPE AND FREQUENCY DESIGNATION

- All valves that require any type of Leakage Test are designated by "LT" in the "Test" Column in the Valve Test Tables.
- "LTV: in the "Freq" Column indicates an EFCV which is tested at the frequency described in ROJ-V-2.
- "CIV" in the "Freq" Column indicates a leakage test frequency in accordance with 10 CFR 50 Appendix J, Option B.
- "PIV" in the "Freq" Column indicates a leakage test is required at least once every 24 months or each refueling outage (unless the valve qualifies as a "good performer" and the interval is extended per Relief Request RR-V-10).
- "PIV/CIV" in the "Freq" Column indicates a leakage test is required at least once every 24 months or each refueling outage.
- If the leakage test frequency is different than described above, the required frequency is listed in the "Freq" Column (e.g. some CIVs have a test frequency of every 24 months (2Y) or each Refueling Outage (RO) in order to confirm closure).

8.4 FAIL SAFE VALVES

Unless otherwise specified in the program tables, additional fail safe testing will not be performed. Stroking the valve full cycle during normal testing causes loss of power to the actuator as required by ISTC-3560. Therefore, additional testing to provide the fail safe capability is not required. See Technical Position TP-04 for additional guidance.

8.5 PASSIVE POWER OPERATED VALVES

A passive power operated valve does not perform a mechanical motion during the course of accomplishing a system safety function. These valves are identified as such in the "AP" Column in the Valve Tables. Per Table ISTC-3500-1, passive Category B valves do not require any exercise testing and verification that actual valve position is indicated by remote position indication lights every two years is the only testing required. Passive Category B power operated valves that are deenergized in their safety position under administrative controls during power operation will not have remote position indication verification.
See Technical Position TP-03 for additional guidance.

8.6 CHECK VALVES

It is SNC's position to extend the test frequency of any non safety direction tests to refueling outage without a Refueling Outage Justification (ROJ) or without a Cold Shutdown Justification (CSJ).

Valve Notes

1. Deleted

2. Typical of 137 Control Rod Drive mechanisms.

3. The CRD cooling water check valves are exercised to their safety related position (closed) during monthly CRD exercise tests (notch in/notch out). Insertion of the CRD verifies that the required pressure boundary is intact and the check valve is closed. Open exercising is confirmed during normal operation. If the check valve did not open adequately, a HIGH Temperature ALARM would be received in the MCR for the respective CRD.

4. This containment isolation valve is not required to be leak rate tested due to the line it is on terminating below the water level of the torus. No leakage test is necessary to satisfy Appendix J requirements as the torus is postulated to remain water filled during post LOCA conditions. See the Appendix J Program for additional details.

5. Deleted

6. Closure of this pump discharge check valve is proven during pump surveillance testing. There are two pumps on each train; therefore, when one pump is being tested the other is not operating. For the pump being tested to pass the required hydraulic parameters, the discharge check valve on the non operating pump must close to prevent diverted flow. If the valve remained open, the pump test would be unsuccessful. This is consistent with the guidelines provided in Section 4.1.5.1 of NUREG-1482, Revision 2.

7. This check valve is exercised to the position required to perform its safety function in the open direction during quarterly surveillance testing or during normal operation of the associated pump.

8. This is a passive valve which does not require quarterly exercise testing. At least once every two years, the actual valve position is confirmed to agree with the remote position indicating lights.

9. Deleted

10. Deleted

11. Deleted – See Technical Position TP-01

12. This check valve is verified to be in the closed position constantly by lack of control room annunciator, and quarterly in conjunction with testing of the associated pump by monitoring control room annunciator after pump is stopped. Annunciator initiates if pump discharge piping is not completely filled with water. Check valve is also confirmed to be closed and annunciator is confirmed operable at least every 31 days by the technical specification requirement to confirm that the pump discharge piping is completely filled.
13. Deleted

14. Non reclosing pressure relief devices (rupture disks) are visually inspected and periodically replaced in accordance with the OM Code 2004 Edition, Appendix I.

15. Closure is proven each refueling outage by leakrate testing.

Valve Notes continued

16. This component has been included in the IST Program as an Augmented Component to provide a readily accessible, documented method of testing.

17. Deleted

18. Valve closure is confirmed during quarterly HPCI pump surveillance testing by monitoring the barometric condenser level.

19. This valve will be disassembled and inspected on a frequency determined to provide adequate assurance that the valve is operable.

20. These RCIC valves will be tested in a comparable manner to the test required by ROJ-V-24 for comparable function HPCI valves.

21. These valves are air operated valves without indicating lights or control switches. Measurement of stroke times will be performed by observation of the stem movement when the RCIC room cooler is placed into service.

22. This check valve has a safety function in both the open and closed directions. Testing need only be performed on an interval when it is practicable to perform both the open and closed tests.

23. Each diesel fuel oil transfer pump is tested semi-annually using an ultrasonic flow instrument to monitor flow. The flow rate required for the valve to fulfill its safety related open function will be verified during this semi-annual pump test. The discharge piping from each Diesel Fuel Oil Transfer Pump is supplied with two check valves in series. There are two pumps located in each 40,000 gallon storage tank which discharge into a single line to the associated Day Tank. Satisfactory performance of a fuel oil transfer pump test also proves closure of at least one of the in series check valves on the associated idle transfer pump.

24. Stroke times cannot be measured for these valves because there are no position indicators and visual observation is not possible due to the valve design. These valves will be tested as part of the Diesel Generator Air Start Test. Acceptable diesel generator start during monthly manual start tests will be used to verify valve operability. Stroke time will be verified to be acceptable semi-annually and each refueling outage by system timing during diesel generator auto start testing. This is consistent with the Code allowed exemption for skid mounted components. (re; ISTC-1200(c))

25. The air receiver inlet check valves are tested quarterly for reverse flow closure using a gross leakage test and each refueling outage using a pressure decay test.

26. This testable check valve is exercised quarterly to the open position using the test switch. Each refueling outage the valve is visually inspected and the force required to open the disk is measured to ensure operability and monitor degradation.

27. This is a passive containment isolation valve, Category A. This valve is never opened except for quarterly exercising of the associated torus to drywell vacuum breaker (1(2)T48-F323s). Therefore, quarterly exercising and stroke timing of these solenoid valves is not required.

Valve Notes continued

28. These valves (1P52-F261, 1P52-F262) will be leak rate tested at least once every two cycles to ensure that its leakage rate is ≤ 0.4 SCFH.

29. These valves (1P52-F263, 1P52-F264, 1P52-F265, 1P52-F266, 1P52-F267, 1P52-F549, 1P52-F552, 1P52-F553 & 1P52-F556) will be tested at least once every three cycles to prove that the valves close and maintain their associated accumulator air pressure for a minimum of ten (10) minutes.

30. These valves are not within the scope of valves required to be tested by the ASME OM Code. These valves are included in the IST Program to provide a method of tracking the testing commitment. Valves were included in the IST Program per SNC commitment to NRC Generic Letter 88-14. (Letter Reference HL-1187)

31. These valves (2P52-F346, 2P52-F349) will be leak rate tested at least once every two cycles to ensure that its leak rate is ≤ 0.4 SCFH.

32. These valves (2P52-F340, 2P52-F343, 2P52-F416, 2P52-F419, 2P52-F458, 2P52-F461, 2P52-F681 and 2P52-F971) will be tested at least once every three cycles to prove that the valves close and maintain their associated accumulator air pressure for a minimum of ten (10) minutes.

33. Vacuum breaker testing is performed in accordance with the ASME OM Code, 2004 Edition, Appendix I.

34. Since this relief valve is not within the required scope of the IST Program, the ASME OM Code-2004 Edition, Appendix I, will be used to the extent practical for guidance.

35. Reverse flow closure is confirmed by monitoring the SBDG service water pump (2P41-C002) discharge pressure (1P41-PI-R613 or 2P41-PI-R613) when the pump is idle. The discharge piping is provided with a keep fill line and if the check valve is not closed the discharge pressure will decrease to zero.

36. Open exercise testing of this check valve is satisfied by process flow during normal plant operation at power.

37. Valve is exercised to open position required to fulfill safety function during monthly and quarterly emergency diesel generator testing.

38. This valve provides thermal overpressure protection for the associated penetration. If a check valve is used as a pressure relief device it shall be tested in accordance with Appendix I of the OM Code only if it is capacity certified. If a check valve used to limit pressure is not capacity certified then it shall be tested in accordance with ISTC of the OM Code.

Valve Notes continued

39. The bi-directional open test for this check valve is proven during normal operation during charging of accumulators.

40. Deleted.

41. Explosive Actuated Valves are tested in accordance with ASME OM, ISTC-5260.

42. Valve testing, testing basis and tests (s) frequencies are defined in the Check Valve Condition Monitoring Plan.

43. Deleted

Version 1.0

HATCH UNIT 1

B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F010A FW Inbrd CIV	1	N	AC	ACTIVE	18"	CV	NA	H-16062(F-3)	O	O/C	NA	CTO	DNO		42EN-PPM-001-1N	Note 36
												CTC	RO	ROJ - V-1	42SV-TET-001-1	
												LT	RO		42SV-TET-001-1	
1B21-F010B FW Inbrd CIV	1	N	AC	ACTIVE	18"	CV	NA	H-16062(E-3)	O	O/C	NA	CTO	DNO		42EN-PPM-001-1N	Note 36
												CTC	RO	ROJ - V-1	42SV-TET-001-1	
												LT	RO		42SV-TET-001-1	
1B21-F013A Main Steam Safety/Relief	1	N	C	ACTIVE	6"	RV	NA	H-16062(C-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013B Main Steam ADS	1	N	C	ACTIVE	6"	RV	NA	H-16062(C-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013C Main Steam Safety/Relief	1	N	C	ACTIVE	6"	RV	NA	H-16062(F-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013D Main Steam ADS	1	N	C	ACTIVE	6"	RV	NA	H-16062(F-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013E Main Steam ADS	1	N	C	ACTIVE	6"	RV	NA	H-16062(F-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F013F	1	N	C	ACTIVE	6"	RV	NA	H-16062(F-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013G	1	N	C	ACTIVE	6"	RV	NA	H-16062(F-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam Safety/Relief												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013H	1	N	C	ACTIVE	6"	RV	NA	H-16062(G-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam Safety/Relief												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013J	1	N	C	ACTIVE	6"	RV	NA	H-16062(G-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013K	1	N	C	ACTIVE	6"	RV	NA	H-16062(F-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F013L	1	N	C	ACTIVE	6"	RV	NA	H-16062(F-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-1	
												RV	5Y		52GM-B21-005-0	
1B21-F015A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(D-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F015B Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(C-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015C Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(D-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015D Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(D-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015E Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(F-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015F Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(F-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015G Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(F-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015H Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(F-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F015J	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(F-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015K	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(F-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015L	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(F-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015M	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(F-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015N	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(G-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015P	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(G-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F015R	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(G-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F015S	1	N	AC	ACTIVE	1"	EFCV	NA	H-16062(G-8)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F016	1	N	A	ACTIVE	3"	GV	MO	H-16062(E-8)	C	C	AI	PIT	2Y		34SV-SUV-008-1	NA
Main Steam Line Drn Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1B21-F019	1	N	A	ACTIVE	3"	GV	MO	H-16062(E-9)	C	C	AI	PIT	2Y		34SV-SUV-008-1	NA
Main Steam Line Drn Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1B21-F021	2	N	B	ACTIVE	3"	GLV	MO	H-16062(E-10)	C	O	AI	PIT	2Y		34IT-B21-001-1	NA
MS Line Drain Vlv												STO	Qtr		34IT-B21-001-1	
1B21-F022A	1	N	A	ACTIVE	24"	GLV	AO	H-16062(C-7)	O	C	C	PIT	2Y		34SV-B21-001-1	NA
MSIV												PIT	2Y		34SV-B21-002-1	
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-1	34SV-B21-001-1	
												STC	CS	CSJ - V-1	34SV-B21-002-1	
1B21-F022B	1	N	A	ACTIVE	24"	GLV	AO	H-16062(E-7)	O	C	C	PIT	2Y		34SV-B21-001-1	NA
MSIV												PIT	2Y		34SV-B21-002-1	
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-1	34SV-B21-001-1	
												STC	CS	CSJ - V-1	34SV-B21-002-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F022C	1	N	A	ACTIVE	24"	GLV	AO	H-16062(F-7)	O	C	C	PIT	2Y		34SV-B21-001-1	NA
MSIV												PIT	2Y		34SV-B21-002-1	
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-1	34SV-B21-001-1	
												STC	CS	CSJ - V-1	34SV-B21-002-1	
1B21-F022D	1	N	A	ACTIVE	24"	GLV	AO	H-16062(G-7)	O	C	C	PIT	2Y		34SV-B21-001-1	NA
MSIV												PIT	2Y		34SV-B21-002-1	
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-1	34SV-B21-001-1	
												STC	CS	CSJ - V-1	34SV-B21-002-1	
1B21-F024A	3	N	C	ACTIVE	1"	CV	NA	H-16062(B-7)	O/C	O/C	NA	CTO	CS		34SV-B21-001-1	
MSIV Accumulator CV												CTO	CS		34SV-B21-002-1	
												CTC	RO	ROJ - V-31	42SV-TET-001-1	
1B21-F024B	3	N	C	ACTIVE	1"	CV	NA	H-16062(B-7)	O/C	O/C	NA	CTO	CS		34SV-B21-001-1	
MSIV Accumulator CV												CTO	CS		34SV-B21-002-1	
												CTC	RO	ROJ - V-31	42SV-TET-001-1	
1B21-F024C	3	N	C	ACTIVE	1"	CV	NA	H-16062(B-7)	O/C	O/C	NA	CTO	CS		34SV-B21-001-1	
MSIV Accumulator CV												CTO	CS		34SV-B21-002-1	
												CTC	RO	ROJ - V-31	42SV-TET-001-1	
1B21-F024D	3	N	C	ACTIVE	1"	CV	NA	H-16062(B-7)	O/C	O/C	NA	CTO	CS		34SV-B21-001-1	
MSIV Accumulator CV												CTO	CS		34SV-B21-002-1	
												CTC	RO	ROJ - V-31	42SV-TET-001-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F028A	1	N	A	ACTIVE	24"	GLV	AO	H-16062(C-9)	O	C	C	PIT	2Y		34SV-B21-001-1	NA
MSIV												PIT	2Y		34SV-B21-002-1	
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-1	34SV-B21-001-1	
												STC	CS	CSJ - V-1	34SV-B21-002-1	
1B21-F028B	1	N	A	ACTIVE	24"	GLV	AO	H-16062(F-9)	O	C	C	PIT	2Y		34SV-B21-001-1	NA
MSIV												PIT	2Y		34SV-B21-002-1	
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-1	34SV-B21-001-1	
												STC	CS	CSJ - V-1	34SV-B21-002-1	
1B21-F028C	1	N	A	ACTIVE	24"	GLV	AO	H-16062(F-9)	O	C	C	PIT	2Y		34SV-B21-001-1	NA
MSIV												PIT	2Y		34SV-B21-002-1	
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-1	34SV-B21-001-1	
												STC	CS	CSJ - V-1	34SV-B21-002-1	
1B21-F028D	1	N	A	ACTIVE	24"	GLV	AO	H-16062(G-9)	O	C	C	PIT	2Y		34SV-B21-001-1	NA
MSIV												PIT	2Y		34SV-B21-002-1	
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-1	34SV-B21-001-1	
												STC	CS	CSJ - V-1	34SV-B21-002-1	
1B21-F029A	3	N	C	ACTIVE	1"	CV	NA	H-16062(B-9)	O/C	O/C	NA	CTO	CS		34SV-B21-001-1	
MSIV Accum CV												CTO	CS		34SV-B21-002-1	
												CTC	RO	ROJ - V-31	42SV-TET-001-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F029B	3	N	C	ACTIVE	1"	CV	NA	H-16062(B-9)	O/C	O/C	NA	CTO	CS		34SV-B21-001-1	
MSIV Accum CV												CTO	CS		34SV-B21-002-1	
												CTC	RO	ROJ - V-31	42SV-TET-001-1	
1B21-F029C	3	N	C	ACTIVE	1"	CV	NA	H-16062(B-9)	O/C	O/C	NA	CTO	CS		34SV-B21-001-1	
MSIV Accum CV												CTO	CS		34SV-B21-002-1	
												CTC	RO	ROJ - V-31	42SV-TET-001-1	
1B21-F029D	3	N	C	ACTIVE	1"	CV	NA	H-16062(B-9)	O/C	O/C	NA	CTO	CS		34SV-B21-001-1	
MSIV Accum CV												CTO	CS		34SV-B21-002-1	
												CTC	RO	ROJ - V-31	42SV-TET-001-1	
1B21-F032A	1	N	AC	ACTIVE	18"	CV	NA	H-16062(F-2)	O	C	NA	LT	CIV		42SV-TET-001-1	Note 36
FW Outbrd CIV												CTC	RO	ROJ - V-3	42SV-TET-001-1	
												CTO	DNO		NA	
1B21-F032B	1	N	AC	ACTIVE	18"	CV	NA	H-16062(F-1)	O	C	NA	LT	CIV		42SV-TET-001-1	Note 36
FW Outbrd CIV												CTC	RO	ROJ - V-3	42SV-TET-001-1	
												CTO	DNO		NA	
1B21-F036A	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036B	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036C	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	

HATCH UNIT 1
B21

Valve ID / Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F036D	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036E	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036F	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036G	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036H	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036J	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036K	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F036L	2	N	C	ACTIVE	1"	CV	NA	H-16299 H-16062(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-1	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
1B21-F037A VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037B VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F037C VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037D VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037E VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037F VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037G VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037H VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037J VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037K VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F037L VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-6)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F041 Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(B-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F043A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(C-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F043B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(C-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F045A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(C-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F045B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(C-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F047A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(F-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F047B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F049A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(F-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID						Valve	Act.	Drawing	Position			Required				
Description	Clas	Aug.	Cat.	A/P	Size	Type	Type	& Coord	Normal	Safety	Fail-Safe	Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F049B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F051A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F051B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F051C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F051D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F053A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(J-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F053B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(J-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F053C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(J-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F053D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(J-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F055	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(J-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F057	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(J-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F059D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059E	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059F	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059G	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059H	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059L	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059M	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F059N	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059P	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059R	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059S	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059T	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F059U	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063 H-16145(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B21-F061	1	N	AC	ACTIVE	1"	EFCV	NA	H-16063(J-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B21-F110A VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F110C VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F110G VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F110H VB MSRV Disch	3	N	C	ACTIVE	10"	VB	NA	H-16062(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-1	NA
1B21-F111 PASS Sample Vlv	2	N	A	ACTIVE	1"	GV	AO	H-26384(E-2)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1B21-F112 PASS Sample Vlv	2	N	A	ACTIVE	1"	GV	AO	H-26384(E-2)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	

HATCH UNIT 1
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B31-F003A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(G-2)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F003B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(G-2)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F004A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(G-2)	O	C	NA	PIT	2Y		57SV-SUV-004-1	
Inst EFCV												LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
1B31-F004B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(G-2)	O	C	NA	CTC	2Y	RR - V-9	57SV-SUV-004-1	
Inst EFCV												PIT	2Y		57SV-SUV-004-1	
												LT	LTV		57SV-SUV-004-1	
1B31-F009A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(D-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F009B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(E-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F009C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(D-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B31-F009D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(F-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F010A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(D-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F010B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(E-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F010C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(D-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F010D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(F-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F011A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(D-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F011B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(E-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B31-F011C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(E-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F011D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(F-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F012A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(D-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F012B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(F-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F012C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(E-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F012D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(G-10)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F013A	1	N	AC	ACTIVE	3/4"	CV	NA	H-16066(F-3)	O	C	NA	LT	CIV		42SV-TET-001-1	Note 36
Recir Pump Seal Wtr CIV												CTC	RO	ROJ - V-5	42SV-TET-001-1	
												CTO	DNO		NA	

HATCH UNIT 1
B31

Valve ID / Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B31-F013B	1	N	AC	ACTIVE	3/4"	CV	NA	H-16066(F-3)	O	C	NA	LT	CIV		42SV-TET-001-1	Note 36
Recir Pump Seal Wtr CIV												CTC	RO	ROJ - V-5	42SV-TET-001-1	
												CTO	DNO		NA	
1B31-F017A	2	N	AC	ACTIVE	3/4"	CV	NA	H-16066(F-2)	O	C	NA	LT	CIV		42SV-TET-001-1	Note 36
Recir Pump Seal Wtr CIV												CTC	RO	ROJ - V-5	42SV-TET-001-1	
												CTO	DNO		NA	
1B31-F017B	2	N	AC	ACTIVE	3/4"	CV	NA	H-16066(F-2)	O	C	NA	LT	CIV		42SV-TET-001-1	Note 36
Recir Pump Seal Wtr CIV												CTC	RO	ROJ - V-5	42SV-TET-001-1	
												CTO	DNO		NA	
1B31-F019	1	N	A	ACTIVE	3/4"	GLV	AO	H-16066(D-3)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
Rx Sample Sys Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1B31-F020	2	N	A	ACTIVE	3/4"	GLV	AO	H-16066(D-1)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
Rx Sample Sys Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1B31-F031A	1	N	B	ACTIVE	28"	GV	MO	H-16066(G-7)	O	C	AI	PIT	2Y		34SV-B31-001-1	NA
Recirc Pump Disch Iso												STC	RO	ROJ - V-33	34SV-B31-001-1	
1B31-F031B	1	N	B	ACTIVE	28"	GV	MO	H-16066(H-7)	O	C	AI	PIT	2Y		34SV-B31-001-1	NA
Recirc Pump Disch Iso												STC	RO	ROJ - V-33	34SV-B31-001-1	
1B31-F040A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(G-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1B31-F040B Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F040C Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(G-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1B31-F040D Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-16066(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-1	
												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
C11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1C11-F010A	2	N	B	ACTIVE	1"	GLV	AO	H-16065(A-5)	O	C	C	PIT	2Y		34SV-C11-001-1	NA
SDV Vent Vlv												PIT	2Y		34SV-C11-002-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-001-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-002-1	
1C11-F010B	2	N	B	ACTIVE	1"	GLV	AO	H-16065(A-6)	O	C	C	PIT	2Y		34SV-C11-001-1	NA
SDV Vent Vlv												PIT	2Y		34SV-C11-002-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-001-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-002-1	
1C11-F011	2	N	B	ACTIVE	2"	GLV	AO	H-16065(D-8)	O	C	C	PIT	2Y		34SV-C11-001-1	NA
SDV Drain Vlv												PIT	2Y		34SV-C11-002-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-001-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-002-1	
1C11-F012	2	N	C	ACTIVE	3/4"	RV	NA	H-16065(D-8)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	
SDV Header relief valve																
1C11-F035A	2	N	B	ACTIVE	1"	GLV	AO	H-16065(A-5)	O	C	C	PIT	2Y		34SV-C11-001-1	NA
SDV Vent Vlv												PIT	2Y		34SV-C11-002-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-001-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-002-1	
1C11-F035B	2	N	B	ACTIVE	1"	GLV	AO	H-16065(A-6)	O	C	C	PIT	2Y		34SV-C11-001-1	NA
SDV Vent Vlv												PIT	2Y		34SV-C11-002-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-001-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-002-1	

HATCH UNIT 1
C11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1C11-F037 SDV Drain Vlv	2	N	B	ACTIVE	2"	GLV	AO	H-16065(C-4)	O	C	C	PIT	2Y		34SV-C11-001-1	NA
												PIT	2Y		34SV-C11-002-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-001-1	
												STC	Qtr/RO	RR - V-1	34SV-C11-002-1	
1C11-HCU-114 SDV HCU CV	2	N	C	ACTIVE	3/4"	CV	NA	H-16064(A-6)	C	O	NA	CTO	RO	ROJ - V-6	42SV-C11-003-0	Note 2
1C11-HCU-115 Charging Water HCU CV	2	N	C	ACTIVE	1/2"	CV	NA	H-16064(C-6)	C	C	NA	CTC	RO	ROJ - V-7	34SV-C11-005-1	Note 2
												CTO	DNO		NA	
1C11-HCU-126 Scram Insert HCU Control Vlv	1	N	B	ACTIVE	1"	GLV	AO	H-16064(C-4)	C	O	O	PIT	2Y		42SV-C11-003-0	Note 2
												ETO	RO	ROJ - V-8	42SV-C11-003-0	
1C11-HCU-127 Scram Disch HCU Control Vlv	1	N	B	ACTIVE	3/4"	GLV	AO	H-16064(A-4)	C	O	O	PIT	2Y		42SV-C11-003-0	Note 2
												ETO	RO	ROJ - V-8	42SV-C11-003-0	
1C11-HCU-138 Cooling Water Header HCU CV	1	N	C	ACTIVE	1/2"	CV	NA	H-16064(C-4)	C	C	NA	CTC	Monthly		34SV-C11-003-1	Notes 2, 3
												CTO	DNO		NA	

HATCH UNIT 1
C41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1C41-F004A	2	N	D	ACTIVE	1-1/2"	Expl Act	NA	H-16061(E-3)	C	O	NA	RD	2R		34SV-C41-003-1	NA
SLC Expl Act												RD	2R		52PM-C41-105-1	
1C41-F004B	2	N	D	ACTIVE	1-1/2"	Expl Act	NA	H-16061(E-3)	C	O	NA	RD	2R		34SV-C41-003-1	NA
SLC Expl Act												RD	2R		52PM-C41-105-1	
1C41-F006	1	N	AC	ACTIVE	1-1/2"	CV	NA	H-16061(E-2)	C	O/C	NA	CTO	RO	ROJ - V-9	34SV-C41-003-1	Note 22
SLC Outbrd CIV												CTC	RO	ROJ - V-9	42SV-TET-001-1	
												LT	RO		42SV-TET-001-1	
1C41-F007	1	N	AC	ACTIVE	1-1/2"	CV	NA	H-16061(E-2)	C	O/C	NA	CTO	RO	ROJ - V-9	34SV-C41-003-1	Note 22
SLC Inbrd CIV												CTC	RO	ROJ - V-9	42SV-TET-001-1	
												LT	RO		42SV-TET-001-1	
1C41-F029A	2	N	C	ACTIVE	1"	RV	NA	H-16061(D-6)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
SLC Pump Disch RV																
1C41-F029B	2	N	C	ACTIVE	1"	RV	NA	H-16061(G-6)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
SLC Pump Disch RV																
1C41-F033A	2	N	C	ACTIVE	1-1/2"	CV	NA	H-16061(E-5)	C	O	NA	CTO	CVCM		34SV-C41-002-1	Note 42
SLC Pump Disch												CTC	CVCM		42SV-SUV-040-1	
1C41-F033B	2	N	C	ACTIVE	1-1/2"	CV	NA	H-16061(G-5)	C	O	NA	CTO	CVCM		34SV-C41-002-1	Note 42
SLC Pump Disch												CTC	CVCM		42SV-SUV-040-1	

HATCH UNIT 1
C51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1C51-Ball A	2	N	A	ACTIVE	N/A	Ball	SO	H-16070(C-3)	O	C	NA	PIT	2Y		34SV-C51-005-0	NA
TIP Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-C51-005-0	
1C51-Ball B	2	N	A	ACTIVE	N/A	Ball	SO	H-16070(C-3)	O	C	NA	PIT	2Y		34SV-C51-005-0	NA
TIP Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-C51-005-0	
1C51-Ball C	2	N	A	ACTIVE	N/A	Ball	SO	H-16070(C-3)	O	C	NA	PIT	2Y		34SV-C51-005-0	NA
TIP Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-C51-005-0	
1C51-Ball D	2	N	A	ACTIVE	N/A	Ball	SO	H-16070(C-3)	O	C	NA	PIT	2Y		34SV-C51-005-0	NA
TIP Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-C51-005-0	
1C51-F3017	2	N	AC	ACTIVE	N/A	CV	NA	H-16561(F-6)	O	C	NA	LT	CIV		42SV-TET-001-1	Note 36
TIP N2 Purge CIV												CTC	RO	ROJ - V-10	42SV-TET-001-1	
												CTO	DNO		NA	
1C51-Shear A	2	N	AD	ACTIVE	N/A	Expl Shear	NA	H-16070(C-3)	O	C	NA	RD	Note 41		52PM-C51-001-1	NA
TIP Outbrd CIV																
1C51-Shear B	2	N	AD	ACTIVE	N/A	Expl Shear	NA	H-16070(C-3)	O	C	NA	RD	Note 41		52PM-C51-001-1	NA
TIP Outbrd CIV																
1C51-Shear C	2	N	AD	ACTIVE	N/A	Expl Shear	NA	H-16070(C-3)	O	C	NA	RD	Note 41		52PM-C51-001-1	NA
TIP Outbrd CIV																

HATCH UNIT 1
C51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1C51-Shear D TIP Outbrd CIV	2	N	AD	ACTIVE	N/A	Expl Shear	NA	H-16070(C-3)	O	C	NA	RD	Note 41		52PM-C51-001-1	NA

HATCH UNIT 1
D11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1D11-F050	2	N	A	ACTIVE	1"	GV	SO	H-16173(E-4)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
Fission Prod Mon CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1D11-F051	2	N	A	ACTIVE	1"	GV	SO	H-16173(C-5)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
Fission Prod Mon CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1D11-F052	2	N	A	ACTIVE	1"	GV	SO	H-16173(E-5)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
Fission Prod Mon CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1D11-F053	2	N	A	ACTIVE	1"	GV	SO	H-16173(C-6)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
Fission Prod Mon CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	

HATCH UNIT 1
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F003A RHR Hx Shell Side Outlet	2	N	B	ACTIVE	16"	GV	MO	H-16330(D-4)	O	O	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
1E11-F003B RHR Hx Shell Side Outlet	2	N	B	ACTIVE	16"	GV	MO	H-16329(D-10)	O	O	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
1E11-F004A RHR Pump Suct Torus Iso	2	N	B	ACTIVE	24"	GV	MO	H-16330(F-10)	O	O/C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F004B RHR Pump Suct Torus Iso	2	N	B	ACTIVE	24"	GV	MO	H-16329(F-4)	O	O/C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F004C RHR Pump Suct Torus Iso	2	N	B	ACTIVE	24"	GV	MO	H-16330(F-10)	O	O/C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F004D RHR Pump Suct Torus Iso	2	N	B	ACTIVE	24"	GV	MO	H-16329(F-4)	O	O/C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F005A RHRSW Pump Disch CV	3	N	C	ACTIVE	14"	CV	NA	D-11004 (ISI)(A-7)	C	O/C	NA	CTC	Qtr		34SV-E11-004-1	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-004-1	
1E11-F005B RHRSW Pump Disch CV	3	N	C	ACTIVE	14"	CV	NA	D-11004(D-7)	C	O/C	NA	CTC	Qtr		34SV-E11-004-1	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-004-1	

HATCH UNIT 1
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F005C RHRSW Pump Disch CV	3	N	C	ACTIVE	14"	CV	NA	D-11004(C-7)	C	O/C	NA	CTC	Qtr		34SV-E11-004-1	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-004-1	
1E11-F005D RHRSW Pump Disch CV	3	N	C	ACTIVE	14"	CV	NA	D-11004(E-7)	C	O/C	NA	CTC	Qtr		34SV-E11-004-1	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-004-1	
1E11-F006A RHR SDC Suct	2	N	B	ACTIVE	20"	GV	MO	H-16330(F-9)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F006B RHR SDC Suct	2	N	B	ACTIVE	20"	GV	MO	H-16329(F-5)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F006C RHR SDC Suct	2	N	B	ACTIVE	20"	GV	MO	H-16330(F-11)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F006D RHR SDC Suct	2	N	B	ACTIVE	20"	GV	MO	H-16329(F-3)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F007A RHR Pump Min Flow Torus Iso	2	N	B	ACTIVE	4"	GV	MO	H-16330(E-7)	O	O/C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F007B RHR Pump Min Flow Torus Iso	2	N	B	ACTIVE	4"	GV	MO	H-16329(D-6)	O	O/C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	

HATCH UNIT 1
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F008	1	N	A	ACTIVE	20"	GV	MO	H-16329(D-3)	C	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
RHR SDC Inbrd CIV												LT	PIV/CIV	RR - V-10	42SV-TET-001-1	
												STO	RO	ROJ - V-14	34SV-SUV-016-1	
												STC	CS	ROJ - V-14	34SV-SUV-016-1	
1E11-F009	1	N	A	ACTIVE	20"	GV	MO	H-16329(D-3)	C	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
RHR SDC Inbrd PIV												LT	PIV	RR - V-10	42SV-TET-001-1	
												STO	RO	ROJ - V-14	34SV-SUV-016-1	
												STC	RO	ROJ - V-14	34SV-SUV-016-1	
1E11-F011A	2	N	B	ACTIVE	4"	GV	MO	H-16330(D-3)	C	C	AI	PIT	2Y		34SV-E11-002-1	Note 4
RHR Cond Disch to Torus												STC	Qtr		34SV-E11-002-1	
1E11-F011B	2	N	B	ACTIVE	4"	GV	MO	H-16329(D-10)	C	C	AI	PIT	2Y		34SV-E11-002-1	Note 4
RHR Cond Disch to Torus												STC	Qtr		34SV-E11-002-1	
1E11-F015A	1	N	A	ACTIVE	24"	GV	MO	H-16330(C-8)	C	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
LPCI Inbrd CIV												LT	PIV/CIV	RR - V-10	42SV-TET-001-1	
												STO	RO	ROJ - V-14	34SV-SUV-016-1	
												STC	RO	ROJ - V-14	34SV-SUV-016-1	
1E11-F015B	1	N	A	ACTIVE	24"	GV	MO	H-16329(D-5)	C	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
LPCI Inbrd CIV												LT	PIV/CIV	RR - V-10	42SV-TET-001-1	
												STO	RO	ROJ - V-14	34SV-SUV-016-1	
												STC	RO	ROJ - V-14	34SV-SUV-016-1	

HATCH UNIT 1
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F016A Cnmt Spray Inbrd CIV	2	N	A	ACTIVE	16"	GLV	MO	H-16330(B-9)	C	O/C	AI	LT	CIV		42SV-TET-001-1	NA
												PIT	2Y		34SV-E11-002-1	
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F016B Cnmt Spray Inbrd CIV	2	N	A	ACTIVE	16"	GLV	MO	H-16329(B-5)	C	O/C	AI	LT	CIV		42SV-TET-001-1	NA
												PIT	2Y		34SV-E11-002-1	
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F017A LPCI	2	N	B	ACTIVE	24"	GLV	MO	H-16330(C-8)	O	O	AI	PIT	2Y		34SV-SUV-016-1	NA
												STO	Qtr		34SV-E11-002-1	
1E11-F017B LPCI	2	N	B	ACTIVE	24"	GLV	MO	H-16329(C-6)	O	O	AI	PIT	2Y		34SV-SUV-016-1	NA
												STO	Qtr		34SV-E11-002-1	
1E11-F021A Cnmt Spray	2	N	B	ACTIVE	16"	GV	MO	H-16330(B-11)	C	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
												STO	RO	ROJ - V-28	34SV-SUV-016-1	
												STC	RO	ROJ - V-28	34SV-SUV-016-1	
1E11-F021B Cnmt Spray	2	N	B	ACTIVE	16"	GV	MO	H-16329(B-3)	C	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
												STO	RO	ROJ - V-28	34SV-SUV-016-1	
												STC	RO	ROJ - V-28	34SV-SUV-016-1	
1E11-F024A SPC	2	N	B	ACTIVE	16"	GLV	MO	H-16330(C-7)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	

HATCH UNIT 1
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F024B SPC	2	N	B	ACTIVE	16"	GLV	MO	H-16329(C-7)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F025A LPCI RV	2	N	C	ACTIVE	1"	RV	NA	H-16330(C-8)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
1E11-F025B LPCI RV	2	N	C	ACTIVE	1"	RV	NA	H-16329(B-6)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
1E11-F027A Supp Pool Spray	2	N	B	ACTIVE	6"	GLV	MO	H-16330(C-8)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F027B Supp Pool Spray	2	N	B	ACTIVE	6"	GLV	MO	H-16329(C-6)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F028A Supp Pool Spray Inbrd CIV	2	N	A	ACTIVE	16"	GV	MO	H-16330(B-8)	C	O/C	AI	LT	CIV		42SV-TET-001-1	NA
												PIT	2Y		34SV-E11-002-1	
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F028B Supp Pool Spray Inbrd CIV	2	N	A	ACTIVE	16"	GV	MO	H-16329(B-6)	C	O/C	AI	LT	CIV		42SV-TET-001-1	NA
												PIT	2Y		34SV-E11-002-1	
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	

HATCH UNIT 1

E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F029 RHR Pump Suc RV	2	N	C	ACTIVE	1"	RV	NA	H-16329(E-1)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
1E11-F031A RHR Pump Disch	2	N	C	ACTIVE	20"	CV	NA	H-16330(H-6)	C	O/C	NA	CTC	Qtr		34SV-E11-001-1	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-001-1	
1E11-F031B RHR Pump Disch	2	N	C	ACTIVE	20"	CV	NA	H-16329(H-7)	C	O/C	NA	CTC	Qtr		34SV-E11-001-1	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-001-1	
1E11-F031C RHR Pump Disch	2	N	C	ACTIVE	20"	CV	NA	H-16330(H-10)	C	O/C	NA	CTC	Qtr		34SV-E11-001-1	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-001-1	
1E11-F031D RHR Pump Disch	2	N	C	ACTIVE	20"	CV	NA	H-16329(H-4)	C	O/C	NA	CTC	Qtr		34SV-E11-001-1	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-001-1	
1E11-F040 RHR to RW Drain	2	N	B	ACTIVE	4"	GLV	MO	H-16329(E-6)	C	C	AI	PIT	2Y		34SV-E11-002-1	NA
												STC	Qtr		34SV-E11-002-1	
1E11-F046A RHR Min Flow Line	2	N	C	ACTIVE	3"	CV	NA	H-16330(H-7)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
												CTO	CVCM		42SV-SUV-040-1	
1E11-F046B RHR Min Flow Line	2	N	C	ACTIVE	3"	CV	NA	H-16329(H-6)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
												CTO	CVCM		42SV-SUV-040-1	
1E11-F046C RHR Min Flow Line	2	N	C	ACTIVE	3"	CV	NA	H-16330(H-11)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
												CTO	CVCM		42SV-SUV-040-1	
1E11-F046D RHR Min Flow Line	2	N	C	ACTIVE	3"	CV	NA	H-16329(H-3)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
												CTO	CVCM		42SV-SUV-040-1	

HATCH UNIT 1
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F047A RHR Hx Shell Side Inlet	2	N	B	ACTIVE	16"	GV	MO	H-16330(E-6)	O	O	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
1E11-F047B RHR Hx Shell Side Inlet	2	N	B	ACTIVE	16"	GV	MO	H-16329(E-8)	O	O	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
1E11-F048A RHR Hx Shell Side Bypass	2	N	B	ACTIVE	24"	GLV	MO	H-16330(D-6)	O	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F048B RHR Hx Shell Side Bypass	2	N	B	ACTIVE	24"	GLV	MO	H-16329(D-8)	O	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F049 RHR to RW Drn	2	N	B	ACTIVE	4"	GLV	MO	H-16329(E-5)	C	C	AI	PIT	2Y		34SV-E11-002-1	NA
												STC	Qtr		34SV-E11-002-1	
1E11-F050A LPCI PIV	1	N	AC	ACTIVE	24"	CV	NA	H-16330(C-10)	C	O/C	NA	LT	PIV	RR - V-10	42SV-TET-001-1	Note 22
												CTO	RO	ROJ - V-30	34SO-E11-006-1	
												CTO	RO	ROJ - V-30	42SV-SUV-003-0	
												CTC	RO	ROJ - V-30	42SV-TET-001-1	
1E11-F050B LPCI PIV	1	N	AC	ACTIVE	18"	CV	NA	H-16329(C-4)	C	O/C	NA	LT	PIV	RR - V-10	42SV-TET-001-1	Note 22
												CTO	RO	ROJ - V-30	34SO-E11-006-1	
												CTO	RO	ROJ - V-30	42SV-SUV-003-0	
												CTC	RO	ROJ - V-30	42SV-TET-001-1	
1E11-F055A RHR Hx Shell RV	2	N	C	ACTIVE	4"	RV	NA	H-16330(F-5)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4

HATCH UNIT 1
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F055B RHR Hx Shell RV	2	N	C	ACTIVE	4"	RV	NA	H-16329(E-9)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
1E11-F065A RHR Pump Suct Maint	2	N	B	PASSIVE	24"	BFV	AO	H-16330(E-10)	O	O	O	PIT	2Y		34SV-E11-002-1	Note 8
1E11-F065B RHR Pump Suct Maint	2	N	B	PASSIVE	24"	BFV	AO	H-16329(F-4)	O	O	O	PIT	2Y		34SV-E11-002-1	Note 8
1E11-F065C RHR Pump Suct Maint	2	N	B	PASSIVE	24"	BFV	AO	H-16330(E-10)	O	O	O	PIT	2Y		34SV-E11-002-1	Note 8
1E11-F065D RHR Pump Suct Maint	2	N	B	PASSIVE	24"	BFV	AO	H-16329(F-3)	O	O	O	PIT	2Y		34SV-E11-002-1	Note 8
1E11-F068A RHR Hx Ser Wtr Disc	3	N	B	ACTIVE	10"	Ball Vlv	MO	H-16330(H-5)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F068B RHR Hx Ser Wtr Disc	3	N	B	ACTIVE	10"	Ball Vlv	MO	H-16329(H-8)	C	O/C	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
												STC	Qtr		34SV-E11-002-1	
1E11-F073A RHRSW to RHR Crosstie	2	N	NA	PASSIVE	10"	GV	MO	H-16330(G-2)	C	NA	AI	PIT	2Y		34SV-E11-002-1	NA
1E11-F073B RHRSW to RHR Crosstie	2	N	NA	PASSIVE	10"	GV	MO	H-16329(G-9)	C	NA	AI	PIT	2Y		34SV-E11-002-1	NA
1E11-F103A RHR Hx Vent Iso	2	N	B	ACTIVE	1"	GLV	MO	H-16330(E-5)	C	C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STC	Qtr		34SV-E11-002-1	

HATCH UNIT 1
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E11-F103B RHR Hx Vent Iso	2	N	B	ACTIVE	1"	GLV	MO	H-16329(E-9)	C	C	AI	PIT	2Y		34SV-E11-002-1	Note 4
												STC	Qtr		34SV-E11-002-1	
1E11-F119A RHR SW Crosstie	3	N	B	ACTIVE	18"	GV	MO	H-16330(H-3)	C	O	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
1E11-F119B RHR SW Crosstie	3	N	B	ACTIVE	18"	GV	MO	H-16329(H-10)	C	O	AI	PIT	2Y		34SV-E11-002-1	NA
												STO	Qtr		34SV-E11-002-1	
1E11-F122A Passive PIV	1	N	A	PASSIVE	1"	Plug	AO	H-16330(D-10)	C	C	C	PIT	2Y		42SV-TET-001-1	Note 8
												LT	PIV	RR - V-10	42SV-TET-001-1	
1E11-F122B Passive PIV	1	N	A	PASSIVE	1"	Plug	AO	H-16329(D-4)	C	C	C	PIT	2Y		42SV-TET-001-1	Note 8
												LT	PIV	RR - V-10	42SV-TET-001-1	
1E11-F125A RHR to JP Isolation	2	N	C	ACTIVE	2"	CV	NA	H-16328(F-6)	O/C	C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
												CTO	CVCM		42SV-SUV-040-1	
1E11-F125B RHR to JP Isolation	2	N	C	ACTIVE	2"	CV	NA	H-16328(F-4)	O/C	C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
												CTO	CVCM		42SV-SUV-040-1	
1E11-F3079A RHR Hx Thermal RV	3	N	C	ACTIVE	3/4"	RV	NA	H-16330(H-4)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
1E11-F3079B RHR Hx Thermal RV	3	N	C	ACTIVE	3/4"	RV	NA	H-16329(H-9)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
1E11-F3090 SDC Suct Relief/Check Vlv	1	N	AC	ACTIVE	3/4"	CV	NA	H-16329(D-2)	C	O/C	NA	CTC	RO	ROJ - V-27	42SV-TET-001-1	Notes 22, 38
												CTO	RO	ROJ - V-27	42SV-TET-001-1	
												LT	RO		42SV-TET-001-1	

HATCH UNIT 1
E21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E21-F001A	2	N	B	ACTIVE	16"	GV	MO	H-16331(H-8)	O	O/C	AI	PIT	2Y		34SV-E21-002-1	Note 4
CS Pump Suct Iso												STO	Qtr		34SV-E21-002-1	
												STC	Qtr		34SV-E21-002-1	
1E21-F001B	2	N	B	ACTIVE	16"	GV	MO	H-16331(J-8)	O	O/C	AI	PIT	2Y		34SV-E21-002-1	Note 4
CS Pump Suct Iso												STO	Qtr		34SV-E21-002-1	
												STC	Qtr		34SV-E21-002-1	
1E21-F003A	2	N	C	ACTIVE	12"	CV	NA	H-16331(F-9)	C	O/C	NA	CTC	Note 12		34SV-E21-001-1	Notes 7, 22
CS Pump Disch												CTO	Qtr		34SV-E21-001-1	
1E21-F003B	2	N	C	ACTIVE	12"	CV	NA	H-16331(F-10)	C	O/C	NA	CTC	Note 12		34SV-E21-001-1	Notes 7, 22
CS Pump Disch												CTO	Qtr		34SV-E21-001-1	
1E21-F004A	1	N	B	ACTIVE	10"	GV	MO	H-16331(E-7)	O	O	AI	PIT	2Y		34SV-E21-002-1	NA
CS Outbrd Injection												STO	Qtr		34SV-E21-002-1	
1E21-F004B	1	N	B	ACTIVE	10"	GV	MO	H-16331(B-7)	O	O	AI	PIT	2Y		34SV-E21-002-1	NA
CS Outbrd Injection												STO	Qtr		34SV-E21-002-1	
1E21-F005A	1	N	A	ACTIVE	10"	GV	MO	H-16331(E-6)	C	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
CS Inbrd Injection												LT	PIV/CIV	RR - V-10	42SV-TET-001-1	
												STO	CS	CSJ - V-5	34SV-SUV-016-1	
												STC	CS	CSJ - V-5	34SV-SUV-016-1	
1E21-F005B	1	N	A	ACTIVE	10"	GV	MO	H-16331(B-6)	C	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
CS Inbrd Injection												LT	PIV/CIV	RR - V-10	42SV-TET-001-1	
												STO	CS	CSJ - V-5	34SV-SUV-016-1	
												STC	CS	CSJ - V-5	34SV-SUV-016-1	

HATCH UNIT 1
E21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E21-F006A	1	N	AC	ACTIVE	10"	CV	NA	H-16331(D-4)	C	O/C	NA	LT	PIV	RR - V-10	42SV-TET-001-1	Note 22
CS Injection												CTO	RO	ROJ - V-12	34SO-E21-001-1	
												CTC	RO	ROJ - V-12	42SV-SUV-003-0	
1E21-F006B	1	N	AC	ACTIVE	10"	CV	NA	H-16331(C-4)	C	O/C	NA	LT	PIV	RR - V-10	42SV-TET-001-1	Note 22
CS Injection												CTO	RO	ROJ - V-12	34SO-E21-001-1	
												CTC	RO	ROJ - V-12	42SV-SUV-003-0	
1E21-F012A	2	N	C	ACTIVE	2"	RV	NA	H-16331(E-9)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
CS Pump Disch RV																
1E21-F012B	2	N	C	ACTIVE	2"	RV	NA	H-16331(E-11)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
CS Pump Disch RV																
1E21-F015A	2	N	B	ACTIVE	10"	GLV	MO	H-16331(D-8)	C	C	AI	PIT	2Y		34SV-E21-002-1	Note 4
Core Spray Test Bypass Iso												STC	Qtr		34SV-E21-002-1	
1E21-F015B	2	N	B	ACTIVE	10"	GLV	MO	H-16331(C-8)	C	C	AI	PIT	2Y		34SV-E21-002-1	Note 4
Core Spray Test Bypass Iso												STC	Qtr		34SV-E21-002-1	
1E21-F018A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16331(B-4)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E21-F018B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16331(A-4)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
E21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E21-F018C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16331(B-4)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E21-F019A	2	N	B	PASSIVE	16"	BFV	AO	H-16331(H-6)	O	O	O	PIT	2Y		34SV-E21-002-1	Note 8
CS Suct																
1E21-F019B	2	N	B	PASSIVE	16"	BFV	AO	H-16331(H-6)	O	O	O	PIT	2Y		34SV-E21-002-1	Note 8
CS Suct																
1E21-F030A	2	N	C	PASSIVE	2"	CV	NA	H-16331(F-7)	C	C	NA	CTC	CVCM	ROJ - V-34	42SV-SUV-040-1	Note 42
Core Spray System Isolation												CTO	CVCM	ROJ - V-34	42SV-SUV-040-1	
1E21-F030B	2	N	C	PASSIVE	2"	CV	NA	H-16331(A-7)	C	C	NA	CTC	CVCM	ROJ - V-34	42SV-SUV-040-1	Note 42
Core Spray System Isolation												CTO	CVCM	ROJ - V-34	42SV-SUV-040-1	
1E21-F031A	2	N	B	ACTIVE	3"	GV	MO	H-16331(F-9)	O	O/C	AI	PIT	2Y		34SV-E21-002-1	Note 4
CS Pump Min Flow												STO	Qtr		34SV-E21-002-1	
												STC	Qtr		34SV-E21-002-1	
1E21-F031B	2	N	B	ACTIVE	3"	GV	MO	H-16331(F-10)	O	O/C	AI	PIT	2Y		34SV-E21-002-1	Note 4
CS Pump Min Flow												STO	Qtr		34SV-E21-002-1	
												STC	Qtr		34SV-E21-002-1	
1E21-F036A	2	N	C	ACTIVE	3"	CV	NA	H-16331(E-9)	C	O/C	NA.	CTC	CVCM		42SV-SUV-040-1	Note 42
CS Min Flow Iso												CTO	CVCM		42SV-SUV-040-1	
1E21-F036B	2	N	C	ACTIVE	3"	CV	NA	H-16331(E-10)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
CS Min Flow Iso												CTO	CVCM		42SV-SUV-040-1	

HATCH UNIT 1
E21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E21-F037A	1	N	A	PASSIVE	1"	Plug Vlv	AO	H-16331(D-5)	C	C	C	PIT	2Y		42SV-TET-001-1	Note 8
Passive Isolation												LT	PIV	RR - V-10	42SV-TET-001-1	
1E21-F037B	1	N	A	PASSIVE	1"	Plug Vlv	AO	H-16331(C-5)	C	C	C	PIT	2Y		42SV-TET-001-1	Note 8
Passive Isolation												LT	PIV	RR - V-10	42SV-TET-001-1	
1E21-F039A	2	N	C	ACTIVE	1-1/2"	CV	NA	H-16328(F-6)	O/C	C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
CS to JP Isolation												CTO	CVCM		42SV-SUV-040-1	
1E21-F039B	2	N	C	ACTIVE	1-1/2"	CV	NA	H-16328(F-4)	O/C	C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
CS to JP Isolation												CTO	CVCM		42SV-SUV-040-1	
1E21-F044A	2	N	C	ACTIVE	2"	Stop CV	NA	H-16328(F-5)	O	C	NA	CTC	RO	ROJ - V-13	42SV-TET-001-1	Notes 4, 36
Jockey Pump Bypass Iso												CTO	DNO		NA	
1E21-F044B	2	N	C	ACTIVE	2"	Stop CV	NA	H-16328(F-5)	C	C	NA	CTC	RO	ROJ - V-13	42SV-TET-001-1	Notes 4, 36
Jockey Pump Bypass Iso												CTO	DNO		NA	

HATCH UNIT 1
E41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E41-D003 Turbine Exhaust RD	2	N	D	ACTIVE	16"	RD	NA	H-16333(F-7)	C	O/C	NA	RD	Note 14	RR - V-5	52PM-E41-002-0	NA
1E41-D004 Turbine Exhaust RD	2	N	D	ACTIVE	16"	RD	NA	H-16333(F-7)	C	O/C	NA	RD	Note 14	RR - V-5	52PM-E41-002-0	NA
1E41-F001 Steam Supply Shutoff	2	N	B	ACTIVE	10"	GV	MO	H-16332(E-12)	C	O	AI	PIT	2Y		34SV-E41-001-1	NA
												STO	Qtr		34SV-E41-001-1	
1E41-F002 Steam Supply Inbrd CIV	1	N	A	ACTIVE	10"	GV	MO	H-16332(C-3)	O	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-6	34SV-SUV-016-1	
1E41-F003 Steam Supply Outbrd CIV	1	N	A	ACTIVE	10"	GV	MO	H-16332(C-4)	O	O/C	AI	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-E41-001-1	
1E41-F004 Pump Suc from Cond Stor	2	N	B	ACTIVE	16"	GV	MO	H-16332(D-9)	O	O/C	AI	PIT	2Y		34SV-E41-001-1	NA
												STC	Qtr		34SV-E41-001-1	
1E41-F005 Pump Disch	2	N	AC	ACTIVE	14"	CV	NA	H-16332(F-6)	C	O/C	NA	CTC	Note 12		42SV-TET-001-1	Note 15
												LT	PIV	RR - V-10	42SV-TET-001-1	
												CTO	Qtr		34SV-E41-002-1	
1E41-F006 Pump Outbrd Disch Iso	2	N	A	ACTIVE	14"	GV	MO	H-16332(F-5)	C	O/C	AI	PIT	2Y		34SV-E41-001-1	NA
												LT	PIV/CIV	RR - V-10	42SV-TET-001-1	
												STO	Qtr		34SV-E41-001-1	
												STC	Qtr		34SV-E41-001-1	

HATCH UNIT 1
E41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E41-F007	2	N	B	ACTIVE	14"	GV	MO	H-16332(F-5)	O	O	AI	PIT	2Y		34SV-E41-001-1	NA
Pump Outbrd Disch												STO	Qtr		34SV-E41-001-1	
1E41-F008	2	N	B	ACTIVE	10"	GLV	MO	H-16332(D-7)	C	C	AI	PIT	2Y		34SV-E41-001-1	NA
Pump Test Bypass												STC	Qtr		34SV-E41-001-1	
1E41-F011	2	Y	B	ACTIVE	10"	GV	MO	H-16332(C-7)	C	C	AI	PIT	2Y		34SV-E41-001-1	Note 16
Pump Test Bypass												STC	Qtr		34SV-E41-001-1	
1E41-F012	2	N	B	ACTIVE	4"	GLV	MO	H-16332(F-7)	C	O/C	AI	PIT	2Y		34SV-E41-001-1	Note 4
Pump Min Flow Inbrd Iso												STO	Qtr		34SV-E41-001-1	
												STC	Qtr		34SV-E41-001-1	
1E41-F019	2	N	C	ACTIVE	16"	CV	NA	H-16332(D-9)	C	O	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
Pump Suc Cond Stg												CTO	CVCM		34SV-E41-002-1	
1E41-F020	2	N	C	ACTIVE	2x1"	RV	NA	H-16332(E-8)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
Pump Suct RV																
1E41-F021	2	N	C	ACTIVE	12"	Stop CV	NA	H-16332(G-4)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Notes 4, 7, 22, 42
Turb Exh Inbrd Iso												CTO	CVCM		42SV-SUV-040-1	
1E41-F024A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16332(C-4)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E41-F024B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16332(D-4)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	

HATCH UNIT 1
E41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E41-F024C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16332(C-4)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E41-F024D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16332(E-4)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E41-F028	2	N	B	ACTIVE	1"	GLV	AO	H-16332(G-13)	O	O/C	C	PIT	2Y		34SV-E41-001-1	NA
Drain Pot Drain												STC	Qtr		34SV-E41-001-1	
1E41-F029	2	N	B	ACTIVE	1"	GLV	AO	H-16332(G-13)	O	O/C	C	PIT	2Y		34SV-E41-001-1	NA
Drain Pot Drain												STC	Qtr		34SV-E41-001-1	
1E41-F041	2	N	B	ACTIVE	16"	GV	MO	H-16332(D-8)	C	O/C	AI	PIT	2Y		34SV-E41-001-1	NA
Pump Suc Supply												STO	Qtr		34SV-E41-001-1	
1E41-F042	2	N	B	ACTIVE	16"	GV	MO	H-16332(J-6)	C	O/C	AI	PIT	2Y		34SV-E41-001-1	Note 4
Pump Suc Torus Outbrd Iso												STO	Qtr		34SV-E41-001-1	
												STC	Qtr		34SV-E41-001-1	
1E41-F045	2	N	C	ACTIVE	16"	CV	NA	H-16332(J-7)	C	O	NA	CTO	CVCM		42SV-SUV-040-1	Note 42
Pump Suct												CTC	CVCM		42SV-SUV-040-1	
1E41-F046	2	N	C	ACTIVE	4"	CV	NA	H-16332(F-7)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Notes 4, 42
Pump Min Flow Outbrd Iso												CTO	CVCM		42SV-SUV-040-1	
1E41-F048	2	N	C	ACTIVE	2"	CV	NA	H-16333(G-8)	C	O	NA	CTO	CVCM		42SV-SUV-040-1	Notes 42
Cond. Pump Rtr. Line CV												CTC	CVCM		42SV-SUV-040-1	

Version 1.0

HATCH UNIT 1
E41

Valve ID / Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E41-F049	2	N	C	ACTIVE	20"	CV	NA	H-16332(G-4)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Notes 4, 7, 22, 42
Turb Exh Outbrd Iso												CTO	CVCM		42SV-SUV-040-1	
1E41-F050	2	N	C	ACTIVE	2"	RV	NA	H-16333(G-7)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
Lube Oil Cooler RV																
1E41-F051	2	N	B	ACTIVE	16"	BFV	AO	H-16332(J-5)	O	O/C	O	PIT	2Y		34SV-E41-001-1	Note 4
Pump Suc Torus Inbrd Iso												STO	Qtr		34SV-E41-001-1	
												STC	Qtr		34SV-E41-001-1	
1E41-F052	2	N	C	ACTIVE	2"	CV	NA	H-16333(H-9)	C	C	NA	CTO	DNO		NA	Notes 18, 36
Barometric Cond Pump Disch												CTC	Qtr		34SV-E41-002-1	
1E41-F057	2	N	C	ACTIVE	2"	CV	NA	H-16333(G-9)	C	O	NA	CTO	CVCM		42SV-SUV-040-1	Note 42
Lube Oil Cooling Wtr Return CV												CTC	CVCM		42SV-SUV-040-1	
1E41-F059	2	N	B	ACTIVE	2"	GLV	MO	H-16333(F-7)	C	O	AI	PIT	2Y		34SV-E41-001-1	NA
Turb Lube Oil Cooling												STO	Qtr		34SV-E41-001-1	
1E41-F102	2	N	C	ACTIVE	1"	CV	NA	H-16332(G-3)	C	O/C	NA	CTC	RO	ROJ - V-24	42SV-TET-001-1	Note 22
Vacuum RV												CTO	RO	ROJ - V-24	42SV-TET-001-1	
1E41-F103	2	N	C	ACTIVE	1"	CV	NA	H-16332(G-3)	C	O/C	NA	CTC	RO	ROJ - V-24	42SV-TET-001-1	Note 22
Vacuum RV												CTO	RO	ROJ - V-24	42SV-TET-001-1	
1E41-F104	2	N	A	ACTIVE	2"	GV	MO	H-16332(G-3)	O	O/C	AI	PIT	2Y		34SV-E41-001-1	NA
Vac Relief Inbrd Torus CIV												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-E41-001-1	
												STC	Qtr		34SV-E41-001-1	

HATCH UNIT 1
E41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E41-F111 Vac Relief Inbrd Torus CIV	2	N	A	ACTIVE	2"	GV	MO	H-16332(G-3)	O	O/C	AI	PIT	2Y		34SV-E41-001-1	NA
												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-E41-001-1	
												STC	Qtr		34SV-E41-001-1	
1E41-F121 Pass Sample Return	2	N	A	ACTIVE	3/8"	GLV	SO	H-26384(H-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1E41-F122 Pass Sample Return	2	N	A	ACTIVE	3/8"	GLV	SO	H-26384(H-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	

Version 1.0

HATCH UNIT 1
E51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E51-F001	2	N	C	ACTIVE	10"	Stop CV	NA	H-16334(G-5)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Notes 4, 7, 22, 42
Turb Exh Inbrd Iso												CTO	CVCM		42SV-SUV-040-1	
1E51-F002	2	N	C	ACTIVE	2"	Stop CV	NA	H-16334(G-6)	C	C	NA	CTC	CVCM		42SV-SUV-040-1	Notes 4, 11, 42
Turb Exh Drn Torus Iso												CTO	CVCM		42SV-SUV-040-1	
1E51-F003	2	N	B	ACTIVE	6"	BFV	AO	H-16334(J-6)	O	O/C	O	PIT	2Y		34SV-E51-001-1	Note 4
Pump Suct Torus Inbrd Iso												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	
1E51-F007	1	N	A	ACTIVE	4"	GV	MO	H-16334(C-5)	O	C	AI	PIT	2Y		34SV-SUV-016-1	NA
Steam Supply Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-6	34SV-SUV-016-1	
1E51-F008	1	N	A	ACTIVE	4"	GV	MO	H-16334(C-6)	O	C	AI	PIT	2Y		34SV-SUV-016-1	NA
Steam Supply Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-E51-001-1	
1E51-F010	2	Y	B	ACTIVE	6"	GV	MO	H-16334(C-8)	O	O/C	AI	PIT	2Y		34SV-E51-001-1	Note 16
Pump Suc from Cond Stor												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	
1E51-F011	2	Y	C	ACTIVE	6"	CV	NA	H-16334(D-8)	C	O	NA	CTC	CVCM		42SV-SUV-040-1	Notes 16, 42
Pump Suc from Cond Stor												CTO	CVCM		34SV-E51-002-1	
1E51-F012	2	Y	B	ACTIVE	4"	GV	MO	H-16334(E-7)	O	O	AI	PIT	2Y		34SV-E51-001-1	Note 16
Pump Outbrd Disch												STO	Qtr		34SV-E51-001-1	

HATCH UNIT 1
E51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E51-F013 Pump Outbrd Disch Iso	2	N	A	ACTIVE	4"	GV	MO	H-16334(E-6)	C	O/C	AI	LT	PIV/CIV	RR - V-10	42SV-TET-001-1	NA
												PIT	2Y		34SV-E51-001-1	
												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	
1E51-F014 Pump Disch	2	N	AC	ACTIVE	4"	CV	NA	H-16334(E-7)	C	O/C	NA	CTC	Note 12		42SV-TET-001-1	Notes 15, 22
												LT	PIV	RR - V-10	42SV-TET-001-1	
												CTO	Qtr		34SV-E51-002-1	
1E51-F017 Pump Suct RV	2	Y	C	ACTIVE	1"	RV	NA	H-16335(C-6)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 16
1E51-F019 Pump Min Flow Inbrd Iso	2	N	B	ACTIVE	2"	GLV	MO	H-16334(F-7)	C	O/C	AI	PIT	2Y		34SV-E51-001-1	Note 4
												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	
1E51-F021 Pump Min Flow Outbrd Iso	2	N	C	ACTIVE	2"	CV	NA	H-16334(F-8)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Notes 4, 42
												CTO	CVCM		42SV-SUV-040-1	
1E51-F022 Pump Test Bypass	2	Y	B	ACTIVE	4"	GLV	MO	H-16334(C-6)	C	C	AI	PIT	2Y		34SV-E51-001-1	Note 16
												STC	Qtr		34SV-E51-001-1	
1E51-F028 Turb Exh Drn	2	N	C	ACTIVE	2"	CV	NA	H-16334(G-7)	C	C	NA	CTC	CVCM		42SV-SUV-040-1	
												CTO	CVCM		42SV-SUV-040-1	
1E51-F029 Pump Suc Shutoff	2	Y	B	ACTIVE	6"	GV	MO	H-16334(D-8)	C	O/C	AI	PIT	2Y		34SV-E51-001-1	Note 16
												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	

HATCH UNIT 1
E51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E51-F030	2	Y	C	ACTIVE	6"	CV	NA	H-16334(J-7)	C	O	NA	CTO	CVCM		42SV-SUV-040-1	Notes 16, 42
Pump Suct												CTC	CVCM		42SV-SUV-040-1	
1E51-F031	2	N	B	ACTIVE	6"	GV	MO	H-16334(J-6)	C	O/C	AI	PIT	2Y		34SV-E51-001-1	Note 4
Pump Suct Torus Outboard Iso												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	
1E51-F040	2	N	C	ACTIVE	10"	CV	NA	H-16334(G-5)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Notes 4, 7, 22, 42
Turb Exh Outbrd Iso												CTO	CVCM		42SV-SUV-040-1	
1E51-F044A	1	N	AC	ACTIVE	1"	EFCV	NA	H-16334(B-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E51-F044B	1	N	AC	ACTIVE	1"	EFCV	NA	H-16334(D-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E51-F044C	1	N	AC	ACTIVE	1"	EFCV	NA	H-16334(B-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E51-F044D	1	N	AC	ACTIVE	1"	EFCV	NA	H-16334(D-5)	O	C	NA	LT	LTV		57SV-SUV-004-1	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-1	
												PIT	TS		57SV-SUV-004-1	
1E51-F045	2	Y	B	ACTIVE	4"	GLV	MO	H-16335(D-11)	C	O/C	AI	PIT	2Y		34SV-E51-001-1	Note 16
Steam Supply Shutoff												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	

HATCH UNIT 1
E51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1E51-F046 Turb Lube Oil Cooling	2	Y	B	ACTIVE	2"	GLV	MO	H-16335(E-6)	C	O	AI	PIT	2Y		34SV-E51-001-1	Note 16
												STO	Qtr		34SV-E51-001-1	
1E51-F047 Cond. Pump Rtr. Line CV	2	Y	C	ACTIVE	2"	CV	NA	H-16335(G-8)	C	C	NA	CTC	CVCM		42SV-SUV-040-1	Notes 16, 42
												CTO	CVCM		42SV-SUV-040-1	
1E51-F102 Vacuum RV	2	Y	C	ACTIVE	1 1/2"	CV	NA	H-16334(F-5)	C	O/C	NA	CTC	RO		42SV-TET-001-1	Notes 16, 20, 22
												CTO	RO		42SV-TET-001-1	
1E51-F103 Vacuum RV	2	Y	C	ACTIVE	1 1/2"	CV	NA	H-16334(F-5)	C	O/C	NA	CTC	RO		42SV-TET-001-1	Notes 16, 20, 22
												CTO	RO		42SV-TET-001-1	
1E51-F104 Vac RV Outbrd Torus CIV	2	N	A	ACTIVE	1 1/2"	GV	MO	H-16334(G-5)	O	O/C	AI	LT	CIV		42SV-TET-001-1	NA
												PIT	2Y		34SV-E51-001-1	
												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	
1E51-F105 Vac RV Inbrd Torus CIV	2	N	A	ACTIVE	1 1/2"	GV	MO	H-16334(G-5)	O	O/C	AI	LT	CIV		42SV-TET-001-1	NA
												PIT	2Y		34SV-E51-001-1	
												STO	Qtr		34SV-E51-001-1	
												STC	Qtr		34SV-E51-001-1	

HATCH UNIT 1
G11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1G11-F003 DW Flr Drns CIV	2	N	A	ACTIVE	3"	GV	AO	H-16176(B-3)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1G11-F004 DW Flr Drns CIV	2	N	A	ACTIVE	3"	GV	AO	H-16176(B-3)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1G11-F019 DW Equip Drns CIV	2	N	A	ACTIVE	3"	GV	AO	H-16176(E-3)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1G11-F020 DW Equip Drns CIV	2	N	A	ACTIVE	3"	GV	AO	H-16176(E-4)	O	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1G11-F2027 DW Floor Drn Disch Relief	3	N	C	ACTIVE	1"	RV	NA	H-16176(B-2)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	
1G11-F2028 DW Equip Drn Disch Relief	3	N	C	ACTIVE	1"	RV	NA	H-16176(E-3)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	

HATCH UNIT 1
G31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1G31-F001 RWCU Pump Suc Inbrd CIV	1	N	A	ACTIVE	6"	GV	MO	H-16188(C-2)	O	C	AI	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-7	34SV-SUV-016-1	
1G31-F004 RWCU Pump Suc Outbrd CIV	1	N	A	ACTIVE	6"	GV	MO	H-16188(C-3)	O	C	AI	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-7	34SV-SUV-016-1	
1G31-F039 RWCU Disch CIV	1	N	AC	ACTIVE	3"	CV	NA	H-16188(A-4)	O	C	NA	CTC	RO	ROJ - V-25	42SV-TET-001-1	Note 36
												LT	RO		42SV-TET-001-1	
												CTO	DNO		NA	
1G31-F203 RWCU Disch CIV	1	N	AC	ACTIVE	3"	CV	NA	H-16188(A-4)	O	C	NA	CTC	RO	ROJ - V-25	42SV-TET-001-1	Note 36
												LT	RO		42SV-TET-001-1	
												CTO	DNO		NA	

HATCH UNIT 1
P21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P21-F353 Passive CIV	2	N	A	PASSIVE	2"	Man GV	NA	H-16015(F-7)	LC	C	NA	LT	CIV		42SV-TET-001-1	NA
1P21-F420 Passive CIV	2	N	A	PASSIVE	1-1/2"	Man GV	NA	H-16015(F-8)	LC	C	NA	LT	CIV		42SV-TET-001-1	NA

HATCH UNIT 1
P33

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P33-F002 H2 & O2 Analy CIV	2	N	A	ACTIVE	1"	GLV	AO	H-16276(B-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F003 H2 & O2 Analy CIV	2	N	A	ACTIVE	1"	GLV	AO	H-16276(D-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F004 H2 & O2 Analy CIV	2	N	A	ACTIVE	1"	GLV	AO	H-16276(F-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F005 H2 & O2 Analy CIV	2	N	A	ACTIVE	1/2"	GLV	SO	H-16276(E-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F006 H2 & O2 Analy CIV	2	N	A	ACTIVE	1"	GLV	AO	H-16276(G-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	

HATCH UNIT 1
P33

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P33-F007	2	N	A	ACTIVE	1"	GLV	AO	H-16276(H-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F010	2	N	A	ACTIVE	1"	GLV	AO	H-16276(B-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F011	2	N	A	ACTIVE	1"	GLV	AO	H-16276(D-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F012	2	N	A	ACTIVE	1"	GLV	AO	H-16276(F-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F013	2	N	A	ACTIVE	1/2"	GLV	SO	H-16276(E-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	

HATCH UNIT 1
P33

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P33-F014 H2 & O2 Analy CIV	2	N	A	ACTIVE	1"	GLV	AO	H-16276(G-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1P33-F015 H2 & O2 Analy CIV	2	N	A	ACTIVE	1"	GLV	AO	H-16276(H-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	

HATCH UNIT 1
P41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P41-F035A HPCI Pump Rm Cooler	3	N	B	ACTIVE	2"	GLV	AO	H-16011(B-9)	C	O	O	STO	Qtr		34SV-E41-001-1	NA
1P41-F035B HPCI Pump Rm Cooler	3	N	B	ACTIVE	2"	GLV	AO	H-16011(C-9)	C	O	O	STO	Qtr		34SV-E41-001-1	NA
1P41-F036A RHR & CS Pump Rm Cooler	3	N	B	ACTIVE	3"	GLV	AO	H-16011(D-9)	C	O	O	STO	Qtr		34SV-E21-001-1	NA
1P41-F036B RHR & CS Pump Rm Cooler	3	N	B	ACTIVE	3"	GLV	AO	H-16011(D-9)	C	O	O	STO	Qtr		34SV-E21-001-1	NA
1P41-F037A RHR Pump Cooler	3	N	B	ACTIVE	1-1/2"	GLV	AO	H-16011(H-8)	C	O	O	STO	Qtr		34SV-E11-001-1	NA
1P41-F037B RHR Pump Cooler	3	N	B	ACTIVE	1-1/2"	GLV	AO	H-16011(E-9)	C	O	O	STO	Qtr		34SV-E11-001-1	NA
1P41-F037C RHR Pump Cooler	3	N	B	ACTIVE	1-1/2"	GLV	AO	H-16011(J-8)	C	O	O	STO	Qtr		34SV-E11-001-1	NA
1P41-F037D RHR Pump Cooler	3	N	B	ACTIVE	1-1/2"	GLV	AO	H-16011(E-9)	C	O	O	STO	Qtr		34SV-E11-001-1	NA
1P41-F039A RHR & CS Pump Rm Cooler	3	N	B	ACTIVE	3"	GLV	AO	H-16011(G-8)	C	O	O	STO	Qtr		34SV-E21-001-1	NA
1P41-F039B RHR & CS Pump Rm Cooler	3	N	B	ACTIVE	3"	GLV	AO	H-16011(G-8)	C	O	O	STO	Qtr		34SV-E21-001-1	NA
1P41-F040A RCIC Pump Rm Cooler Cont	3	Y	B	ACTIVE	1 1/2"	GLV	AO	H-16011(H-2)	C	O	O	STO	Qtr		34SV-E51-001-1	Notes 16, 21

HATCH UNIT 1
P41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P41-F040B RCIC Pump Rm Cooler Cont	3	Y	B	ACTIVE	1 1/2"	GLV	AO	H-16011(H-3)	C	O	O	STO	Qtr		34SV-E51-001-1	Notes 16, 21
1P41-F049 Drywell Air Cooler CIV	2	N	A	ACTIVE	8"	GV	MO	H-16011(F-6)	O	C	AI	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-8	34SV-SUV-016-1	
1P41-F050 Drywell Air Cooler CIV	2	N	A	ACTIVE	8"	GV	MO	H-16011(D-2)	O	C	AI	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-8	34SV-SUV-016-1	
1P41-F064 Division 2 SW Supply	3	N	C	ACTIVE	6"	CV	NA	H-16011(F-10)	O	O	NA	CTO	CVCM		42SV-SUV-040-1	Note 42
												CTC	CVCM		42SV-SUV-040-1	
1P41-F065 Division 1 SW Supply	3	N	C	ACTIVE	8"	CV	NA	H-16011(G-10)	O	O	NA	CTO	CVCM		42SV-SUV-040-1	Note 42
												CTC	CVCM		42SV-SUV-040-1	
1P41-F066 SW to ESF Cooler Iso	3	N	B	PASSIVE	6"	BFV	AO	H-16011(F-10)	O	O	O	PIT	2Y		34SV-SUV-016-1	Note 8
1P41-F067 SW to ESF Cooler Iso	3	N	B	PASSIVE	8"	BFV	AO	H-16011(G-10)	O	O	O	PIT	2Y		34SV-SUV-016-1	Note 8
1P41-F1074 Cont Rm HVAC	3	N	C	ACTIVE	4"	CV	NA	H-11609(E-1)	O	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
												CTO	CVCM		42SV-SUV-040-1	
1P41-F1075 Cont Rm HVAC	3	N	C	ACTIVE	4"	CV	NA	H-11609(E-1)	O	O/C	NA	CTC	CVCM		42SV-SUV-040-1	Note 42
												CTO	CVCM		42SV-SUV-040-1	

HATCH UNIT 1
P41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P41-F310A SW to Turbine Bldg Shutoff	3	N	B	ACTIVE	30"	BFV	MO	H-11600(D-6)	O	C	AI	PIT STC	2Y CS	 CSJ - V-9	34SV-SUV-016-1 34SV-SUV-016-1	NA
1P41-F310B SW to Turbine Bldg Shutoff	3	N	B	ACTIVE	30"	BFV	MO	H-11600(F-5)	O	C	AI	PIT STC	2Y CS	 CSJ - V-9	34SV-SUV-016-1 34SV-SUV-016-1	NA
1P41-F310C SW to Turbine Bldg Shutoff	3	N	B	ACTIVE	30"	BFV	MO	H-11600(D-6)	O	C	AI	PIT STC	2Y CS	 CSJ - V-9	34SV-SUV-016-1 34SV-SUV-016-1	NA
1P41-F310D SW to Turbine Bldg Shutoff	3	N	B	ACTIVE	30"	BFV	MO	H-11600(F-5)	O	C	AI	PIT STC	2Y CS	 CSJ - V-9	34SV-SUV-016-1 34SV-SUV-016-1	NA
1P41-F311A SW Pump Discharge	3	N	C	ACTIVE	18"	CV	NA	D-11001(D-2)	O/C	O/C	NA	CTO CTC	CVCM CVCM		34SV-P41-001-1 42SV-SUV-040-1	Notes 7, 22, 42
1P41-F311B SW Pump Discharge	3	N	C	ACTIVE	18"	CV	NA	D-11001(D-5)	O/C	O/C	NA	CTO CTC	CVCM CVCM		34SV-P41-001-1 42SV-SUV-040-1	Notes 7, 22, 42
1P41-F311C SW Pump Discharge	3	N	C	ACTIVE	18"	CV	NA	D-11001(D-3)	O/C	O/C	NA	CTO CTC	CVCM CVCM		34SV-P41-001-1 42SV-SUV-040-1	Notes 7, 22, 42
1P41-F311D SW Pump Discharge	3	N	C	ACTIVE	18"	CV	NA	D-11001(D-6)	O/C	O/C	NA	CTO CTC	CVCM CVCM		34SV-P41-001-1 42SV-SUV-040-1	Notes 7, 22, 42
1P41-F420B Cont Rm HVAC Cross-tie	3	N	B	PASSIVE	2 1/2"	GLV	MO	H-11609(B-2)	C	C	AI	PIT	2Y		34SV-SUV-016-1	Note 8
1P41-F421A Cont Rm HVAC Iso	3	N	B	PASSIVE	2 1/2"	GLV	MO	H-11609(C-2)	O	O	AI	PIT	2Y		34SV-SUV-016-1	Note 8

HATCH UNIT 1
P41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P41-F421B Cont Rm HVAC Cross-tie	3	N	B	PASSIVE	2 1/2"	GLV	MO	H-11609(C-2)	C	C	AI	PIT	2Y		34SV-SUV-016-1	Note 8
1P41-F422A Cont Rm HVAC Iso	3	N	B	PASSIVE	2 1/2"	GLV	MO	H-11609(B-2)	O	O	AI	PIT	2Y		34SV-SUV-016-1	Note 8

HATCH UNIT 1
P42

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P42-F051 RBCCW to Recir CIV	2	N	A	ACTIVE	4"	GV	MO	H-16009(B-9)	O	C	AI	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-10	34SV-SUV-016-1	
1P42-F052 RBCCW to Recir CIV	2	N	A	ACTIVE	4"	GV	MO	H-16009(E-9)	O	C	AI	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-10	34SV-SUV-016-1	
1P42-F083 Thermal RV	2	N	C	ACTIVE	1"	RV	NA	H-16009(D-6)	C	O	NA	RV	10Y		42SV-SUV-004-0	NA

HATCH UNIT 1
P51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P51-F513 Passive CIV	2	N	A	PASSIVE	2"	Man GLV	NA	H-16013(F-3)	LC	C	NA	LT	CIV		42SV-TET-001-1	NA
1P51-F514 Passive CIV	2	N	A	PASSIVE	2"	Man GLV	NA	H-16013(F-3)	LC	C	NA	LT	CIV		42SV-TET-001-1	NA

HATCH UNIT 1
P52

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P52-F261	NA	Y	C	ACTIVE	1"	CV	NA	H-11667(C-7)	O/C	C	NA	LT	Note 28		42SV-TET-004-1	Notes 30, 36
Accum A014 Inlet CV												CTC	Note 28		NA	
												CTO	DNO		NA	
1P52-F262	NA	Y	C	ACTIVE	1"	CV	NA	H-11667(C-7)	O/C	C	NA	LT	Note 28		42SV-TET-004-1	Notes 30, 36
Accum A015 Inlet CV												CTC	Note 28		NA	
												CTO	DNO		NA	
1P52-F263	NA	Y	C	ACTIVE	1"	CV	NA	H-11667(C-4)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A032 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	
1P52-F264	NA	Y	C	ACTIVE	1"	CV	NA	H-11667(C-4)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A033 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	
1P52-F265	NA	Y	C	ACTIVE	1"	CV	NA	H-11667(C-4)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A035 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	
1P52-F266	NA	Y	C	ACTIVE	1"	CV	NA	H-11667(C-4)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A034 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	
1P52-F267	NA	Y	C	ACTIVE	1"	CV	NA	H-11667(C-4)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A036 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	

HATCH UNIT 1
P52

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P52-F549	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11667(F-13)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A011 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	
1P52-F552	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11667(F-12)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A011 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	
1P52-F553	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11667(F-13)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A012 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	
1P52-F556	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11667(F-12)	O/C	C	NA	LT	Note 29		42SV-TET-004-1	Notes 30, 36
Accum A012 Inlet CV												CTC	Note 29		NA	
												CTO	DNO		NA	

HATCH UNIT 1
P70

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1P70-F002 DW Pneumatic CIV	2	N	A	PASSIVE	1"	GLV	AO	H-16286(F-8)	C	C	C	PIT	2Y		34SV-SUV-008-1	Note 8
												LT	CIV		42SV-TET-001-1	
1P70-F003 DW Pneumatic CIV	2	N	A	PASSIVE	1"	GLV	AO	H-16286(F-8)	C	C	C	PIT	2Y		34SV-SUV-008-1	Note 8
												LT	CIV		42SV-TET-001-1	
1P70-F004 DW Pneumatic CIV	2	N	A	ACTIVE	2"	GLV	SO	H-16286(B-8)	O	O/C	O	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-12	34SV-SUV-016-1	
1P70-F005 DW Pneumatic CIV	2	N	A	ACTIVE	2"	GLV	SO	H-16286(B-8)	O	O/C	O	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-12	34SV-SUV-016-1	
1P70-F066 DW Pneumatic CIV	2	N	A	ACTIVE	2"	GLV	SO	H-16286(D-8)	O	O/C	O	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-12	34SV-SUV-016-1	
1P70-F067 DW Pneumatic CIV	2	N	A	ACTIVE	2"	GLV	SO	H-16286(D-8)	O	O/C	O	PIT	2Y		34SV-SUV-016-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	CS	CSJ - V-12	34SV-SUV-016-1	

HATCH UNIT 1
R43

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1R43-F009A	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(C-2)	C	O/C	NA	CTC	SA		34SV-R43-002-1/2	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-002-1/2	
												CTC	SA		34SV-R43-005-1/2	
												CTO	SA		34SV-R43-005-1/2	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
												CTC	SA		34SV-R43-012-2	
												CTO	SA		34SV-R43-012-2	
1R43-F009B	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(C-2)	C	O/C	NA	CTC	SA		34SV-R43-002-1/2	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-002-1/2	
												CTC	SA		34SV-R43-005-1/2	
												CTO	SA		34SV-R43-005-1/2	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
												CTC	SA		34SV-R43-012-2	
												CTO	SA		34SV-R43-012-2	
1R43-F009C	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(A-10)	C	O/C	NA	CTC	SA		34SV-R43-002-1/2	Notes 16, 22, 37
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-002-1/2	
												CTC	SA		34SV-R43-005-1/2	
												CTO	SA		34SV-R43-005-1/2	
												CTC	SA		34SV-R43-012-2	
												CTO	SA		34SV-R43-012-2	

HATCH UNIT 1
R43

Valve ID / Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1R43-F009D	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(A-9)	C	O/C	NA	CTC	SA		34SV-R43-002-1/2	Notes 16, 22, 37
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-002-1/2	
												CTC	SA		34SV-R43-005-1/2	
												CTO	SA		34SV-R43-005-1/2	
												CTC	SA		34SV-R43-012-2	
												CTO	SA		34SV-R43-012-2	
1R43-F010A	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(D-2)	C	O/C	NA	CTC	SA		34SV-R43-001-1	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-001-1	
												CTC	SA		34SV-R43-004-1	
												CTO	SA		34SV-R43-004-1	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
1R43-F010B	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(D-2)	C	O/C	NA	CTC	SA		34SV-R43-001-1	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-001-1	
												CTC	SA		34SV-R43-004-1	
												CTO	SA		34SV-R43-004-1	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
1R43-F010C	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(A-8)	C	O/C	NA	CTC	SA		34SV-R43-001-1	Notes 16, 22, 37
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-001-1	
												CTC	SA		34SV-R43-004-1	
												CTO	SA		34SV-R43-004-1	

HATCH UNIT 1
R43

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1R43-F010D	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(A-8)	C	O/C	NA	CTC	SA		34SV-R43-001-1	Notes 16, 22, 37
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-001-1	
												CTC	SA		34SV-R43-004-1	
												CTO	SA		34SV-R43-004-1	
1R43-F011A	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(B-2)	C	O/C	NA	CTC	SA		34SV-R43-003-1	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-003-1	
												CTC	SA		34SV-R43-006-1	
												CTO	SA		34SV-R43-006-1	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
1R43-F011B	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(B-2)	C	O	NA	CTC	SA		34SV-R43-003-1	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-006-1	
												CTO	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-003-1	
												CTC	SA		34SV-R43-006-1	
												CTC	SA		34SV-R43-010-0	
1R43-F011C	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(A-11)	C	O/C	NA	CTC	SA		34SV-R43-003-1	Notes 16, 22, 37
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-003-1	
												CTC	SA		34SV-R43-006-1	
												CTO	SA		34SV-R43-006-1	
1R43-F011D	NA	Y	C	ACTIVE	2"	CV	NA	H-11037(A-11)	C	O/C	NA	CTC	SA		34SV-R43-003-1	Notes 16, 22, 37
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-003-1	
												CTC	SA		34SV-R43-006-1	
												CTO	SA		34SV-R43-006-1	

HATCH UNIT 1
R43

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1R43-F015A	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-11631(H-10)	C	O/C	NA	STC	SA		34SV-R43-001-1	Notes 16, 24
DG Air Start Vlv												STO	SA		34SV-R43-001-1	
												STC	SA		34SV-R43-004-1	
												STO	SA		34SV-R43-004-1	
1R43-F015B	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-11638(H-11)	C	O/C	NA	STC	SA		34SV-R43-002-1	Notes 16, 24
DG Air Start Vlv												STO	SA		34SV-R43-002-1	
												STC	SA		34SV-R43-002-2	
												STO	SA		34SV-R43-002-2	
												STC	SA		34SV-R43-005-1/2	
												STO	SA		34SV-R43-005-1/2	
												STC	SA		34SV-R43-012-2	
												STO	SA		34SV-R43-012-2	
1R43-F015C	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-11631(H-11)	C	O/C	NA	STC	SA		34SV-R43-003-1	Notes 16, 24
DG Air Start Vlv												STO	SA		34SV-R43-003-1	
												STC	SA		34SV-R43-006-1	
												STO	SA		34SV-R43-006-1	
1R43-F016A	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-11631(H-11)	C	O/C	NA	STC	SA		34SV-R 43-001-1	Notes 16, 24
DG Air Start Vlv												STC	SA		34SV-R43-001-1	
												STO	SA		34SV-R43-001-1	
												STO	SA		34SV-R43-004-1	

HATCH UNIT 1
R43

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1R43-F016B DG Air Start Vlv	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-11638(J-11)	C	O/C	NA	STC	SA		34SV-R43-002-1	Notes 16, 24
												STO	SA		34SV-R43-002-1	
												STC	SA		34SV-R43-002-2	
												STO	SA		34SV-R43-002-2	
												STC	SA		34SV-R43-005-1/2	
												STO	SA		34SV-R43-005-1/2	
												STC	SA		34SV-R43-012-2	
												STO	SA		34SV-R43-012-2	
1R43-F016C DG Air Start Vlv	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-11631(H-11)	C	O/C	NA	STC	SA		34SV-R43-003-1	Notes 16, 24
												STO	SA		34SV-R43-003-1	
												STC	SA		34SV-R43-006-1	
												STO	SA		34SV-R43-006-1	
1R43-F3034A Air Receiver Inlet CV	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11631(E-11)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	
1R43-F3034B Air Receiver Inlet CV	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11638(E-11)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	
1R43-F3034C Air Receiver Inlet CV	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11631(E-11)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	

HATCH UNIT 1
R43

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1R43-F3035A Air Receiver Inlet CV	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11631(E-10)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	
1R43-F3035B Air Receiver Inlet CV	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11638(E-10)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	
1R43-F3035C Air Receiver Inlet CV	NA	Y	C	ACTIVE	3/4"	CV	NA	H-11631(E-10)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	
1R43-F3036A Air Receiver RV	NA	Y	C	ACTIVE	1/2"	RV	NA	H-11631(E-12)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
1R43-F3036B Air Receiver RV	NA	Y	C	ACTIVE	1/2"	RV	NA	H-11638(F-12)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
1R43-F3036C Air Receiver RV	NA	Y	C	ACTIVE	1/2"	RV	NA	H-11631(E-12)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
1R43-F3037A Air Receiver RV	NA	Y	C	ACTIVE	1/2"	RV	NA	H-11631(E-8)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
1R43-F3037B Air Receiver RV	NA	Y	C	ACTIVE	1/2"	RV	NA	H-11638(F-9)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
1R43-F3037C Air Receiver RV	NA	Y	C	ACTIVE	1/2"	RV	NA	H-11631(E-8)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16

HATCH UNIT 1
T23

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T23-F004 Passive CIV	2	N	A	PASSIVE	3/4"	Man GLV	NA	H-16060(D-3)	LC	C	NA	LT	CIV		42SV-TET-001-1	NA
1T23-F005 Passive CIV	2	N	A	PASSIVE	3/4"	Man GLV	NA	H-16060(D-3)	LC	C	NA	LT	CIV		42SV-TET-001-1	NA

HATCH UNIT 1
T46

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T46-F001A	3	N	B	ACTIVE	18"	BFV	AO	H-16020(C-1)	C	O	O	PIT	2Y		34SV-T46-002-1	
Filter Bed Inlet from Rx Bldg												STO	Qtr		34SV-T46-002-1	
1T46-F001B	3	N	B	ACTIVE	18"	BFV	AO	H-16020(G-1)	C	O	O	PIT	2Y		34SV-T46-002-1	
Filter Bed Inlet from Rx Bldg												STO	Qtr		34SV-T46-002-1	
1T46-F002A	3	N	B	ACTIVE	18"	BFV	AO	H-16174(C-6)	C	O	O	PIT	2Y		34SV-T46-002-1	
SGTS Filter Outlet from Rx Bldg												STO	Qtr		34SV-T46-002-1	
1T46-F002B	3	N	B	ACTIVE	18"	BFV	AO	H-16174(F-6)	C	O	O	PIT	2Y		34SV-T46-002-1	
SGTS Filter Outlet from Rx Bldg												STO	Qtr		34SV-T46-002-1	

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F103 DW & Torus CIV	2	N	A	ACTIVE	6"	BFV	AO	H-16000(F-2)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F104 DW & Torus CIV	2	N	A	ACTIVE	1"	GLV	AO	H-16000(G-4)	C	C	C	LT	CIV		42SV-TET-001-1	NA
												PIT	2Y		34SV-SUV-008-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F113 DW Inerting Outbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-16000(F-7)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F114 DW Inerting Inbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-16000(F-8)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F115 DW Inerting Outbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-16000(G-7)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F116 DW Inerting Inbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-16000(G-8)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F118A DW Makeup Inbrd CIV	2	N	A	ACTIVE	1"	N/A	SO	H-16000(G-5)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F118B	2	N	A	ACTIVE	1"	N/A	SO	H-16000(G-5)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Makeup Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F307	2	N	A	ACTIVE	18"	BFV	AO	H-16024(C-9)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Purge Inlet Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F308	2	N	A	ACTIVE	18"	BFV	AO	H-16024(C-10)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Purge Inlet Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F309	2	N	A	ACTIVE	18"	BFV	AO	H-16024(E-10)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Purge Inlet Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F310	2	N	A	ACTIVE	20"	BFV	AO	H-16024(F-10)	C	O/C	O	PIT	2Y		34SV-T48-001-1	NA
Torus Purge Vac Brker CIV												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-T48-001-1	
												STC	Qtr		34SV-T48-001-1	
1T48-F311	2	N	A	ACTIVE	20"	BFV	AO	H-16024(F-9)	C	O/C	O	PIT	2Y		34SV-T48-001-1	NA
Torus Purge Vac Brker CIV												LT	CIV		42SV-TET-001-1	
												STO	Qtr		34SV-T48-001-1	
												STC	Qtr		34SV-T48-001-1	

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F318	2	N	A	ACTIVE	18"	BFV	AO	H-16024(G-4)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F319	2	N	A	ACTIVE	18"	BFV	AO	H-16024(D-4)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F320	2	N	A	ACTIVE	18"	BFV	AO	H-16024(D-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F321	2	N	A	ACTIVE	2"	GLV	AO	H-16000(J-7)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Inerting Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F322	2	N	A	ACTIVE	2"	GLV	AO	H-16000(J-8)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Inerting Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F323A	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	

HATCH UNIT 1

T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F323B	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F323C	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F323D	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F323E	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F323F	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F323G	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F323H	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F323I	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F323J	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F323K	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F323L	2	N	C	ACTIVE	20"	Test CV	AO	H-16024(H-8)	C	O/C	NA	PIT	2Y		52SV-T48-001-0	Notes 26, 33
DW to Torus VB												PIT	2Y		34SV-T48-002-1	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-1	
												CTO	Qtr/RO		34SV-T48-002-1	
1T48-F324	2	N	A	ACTIVE	18"	BFV	AO	H-16024(D-10)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Purge Inlet Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F325	2	N	A	ACTIVE	2"	GLV	AO	H-16000(H-7)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Inerting Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F326	2	N	A	ACTIVE	18"	BFV	AO	H-16024(G-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F327	2	N	A	ACTIVE	2"	GLV	AO	H-16000(H-8)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Inerting Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F328A	2	N	AC	ACTIVE	20"	Test CV	AO	H-16024(G-10)	C	O/C	NA	PIT	2Y		34SV-T48-001-1	Notes 26, 33
Rx Bldg to Supp Cham VB CIV												PIT	2Y		52SV-T48-003-0	
												LT	CIV		42SV-TET-001-1	
												CTC	Qtr/RO		34SV-T48-001-1	
												CTO	Qtr/RO		34SV-T48-001-1	
												CTC	Qtr/RO		52SV-T48-003-0	
												CTO	Qtr/RO		52SV-T48-003-0	
1T48-F328B	2	N	AC	ACTIVE	20"	Test CV	AO	H-16024(G-9)	C	O/C	NA	PIT	2Y		34SV-T48-001-1	Notes 26, 33
Rx Bldg to Supp Cham VB CIV												PIT	2Y		52SV-T48-003-0	
												LT	CIV		42SV-TET-001-1	
												CTC	Qtr/RO		34SV-T48-001-1	
												CTO	Qtr/RO		34SV-T48-001-1	
												CTC	Qtr/RO		52SV-T48-003-0	
												CTO	Qtr/RO		52SV-T48-003-0	
1T48-F332A	2	N	A	ACTIVE	2"	GLV	AO	H-16024(E-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F332B	2	N	A	ACTIVE	2"	GLV	AO	H-16024(F-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F333A	2	N	A	ACTIVE	2"	GLV	AO	H-16024(E-4)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F333B	2	N	A	ACTIVE	2"	GLV	AO	H-16024(F-4)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
Torus Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F334A	2	N	A	ACTIVE	2"	GLV	AO	H-16024(B-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F334B	2	N	A	ACTIVE	2"	GLV	AO	H-16024(C-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F335A	2	N	A	ACTIVE	2"	GLV	AO	H-16024(B-4)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F335B	2	N	A	ACTIVE	2"	GLV	AO	H-16024(C-4)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
DW Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	

Version 1.0

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F338 Bypass-Outbrd CIV	2	N	A	ACTIVE	2"	N/A	SO	H-16024(H-2)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F339 Bypass-Inbrd CIV	2	N	A	ACTIVE	2"	N/A	SO	H-16024(H-3)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F340 Bypass-Outbrd CIV	2	N	A	ACTIVE	2"	N/A	SO	H-16024(D-4)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F341 Bypass-Inbrd CIV	2	N	A	ACTIVE	2"	N/A	SO	H-16024(D-4)	C	C	C	PIT	2Y		34SV-SUV-008-1	NA
												LT	CIV		42SV-TET-001-1	
												STC	Qtr		34SV-SUV-008-1	
1T48-F342A Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342B Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342C Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342D Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342E Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27

HATCH UNIT 1
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
1T48-F342F Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342G Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342H Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342I Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342J Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342K Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27
1T48-F342L Torus to DW VB Test CIV	2	N	A	PASSIVE	1/2"	N/A	SO	H-16024(H-8)	C	C	C	LT	CIV		42SV-TET-001-1	Note 27

Version 1.0

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F010A	1	N	AC	ACTIVE	18"	CV	NA	H-26000(E-3)	O	O/C	NA	CTO	DNO		42EN-PPM-001-2N	Note 36
FW Inbrd CIV												CTC	RO	ROJ - V-1	42SV-TET-001-2	
												LT	RO		42SV-TET-001-2	
2B21-F010B	1	N	AC	ACTIVE	18"	CV	NA	H-26000(F-3)	O	O/C	NA	CTO	DNO		42EN-PPM-001-2N	Note 36
FW Inbrd CIV												CTC	RO	ROJ - V-1	42SV-TET-001-2	
												LT	RO		42SV-TET-001-2	
2B21-F013A	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013B	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam Safety/Relief												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013C	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013D	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam Safety/Relief												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013E	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F013F	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam Safety/Relief												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013G	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam Safety/Relief												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013H	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013K	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013L	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F013M	1	N	C	ACTIVE	6"	RV	NA	H-26000(D-6)	C	O/C	NA	PIT	2Y		52GM-B21-005-0	NA
Main Steam ADS												RV	5Y		42SV-TET-001-2	
												RV	5Y		52GM-B21-005-0	
2B21-F016	1	N	A	ACTIVE	3"	GV	MO	H-26000(E-8)	C	O/C	AI	PIT	2Y		34SV-SUV-008-2	NA
Main Steam Line DRN Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F019	1	N	A	ACTIVE	3"	GV	MO	H-26000(E-9)	C	O/C	AI	PIT	2Y		34SV-SUV-008-2	NA
Main Steam Line DRN Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2B21-F021	2	N	B	ACTIVE	3"	GLV	MO	H-26000(E-10)	C	O	AI	PIT	2Y		34IT-B21-001-2	NA
MS Line Drain Vlv												STO	Qtr		34IT-B21-001-2	
2B21-F022A	1	N	A	ACTIVE	24"	GLV	AO	H-26000(D-8)	O	C	C	PIT	2Y		34SV-B21-001-2	NA
MSIV												PIT	2Y		34SV-B21-002-2	
												LT	CIV		42SV-TET-001-2	
												STC	CS	CSJ - V-1	34SV-B21-001-2	
												STC	CS	CSJ - V-1	34SV-B21-002-2	
2B21-F022B	1	N	A	ACTIVE	24"	GLV	AO	H-26000(D-8)	O	C	C	PIT	2Y		34SV-B21-001-2	NA
MSIV												PIT	2Y		34SV-B21-002-2	
												LT	CIV		42SV-TET-001-2	
												STC	CS	CSJ - V-1	34SV-B21-001-2	
												STC	CS	CSJ - V-1	34SV-B21-002-2	
2B21-F022C	1	N	A	ACTIVE	24"	GLV	AO	H-26000(D-8)	O	C	C	PIT	2Y		34SV-B21-001-2	NA
MSIV												PIT	2Y		34SV-B21-002-2	
												LT	CIV		42SV-TET-001-2	
												STC	CS	CSJ - V-1	34SV-B21-001-2	
												STC	CS	CSJ - V-1	34SV-B21-002-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F022D	1	N	A	ACTIVE	24"	GLV	AO	H-26000(D-8)	O	C	C	PIT	2Y		34SV-B21-001-2	NA
MSIV												PIT	2Y		34SV-B21-002-2	
												LT	CIV		42SV-TET-001-2	
												STC	CS	CSJ - V-1	34SV-B21-001-2	
												STC	CS	CSJ - V-1	34SV-B21-002-2	
2B21-F024A	3	N	C	ACTIVE	1"	CV	NA	H-26000(B-7)	O/C	O/C	NA	CTO	CS		34SV-B21-001-2	
MSIV Accum CV												CTO	CS		34SV-B21-002-2	
												CTC	RO	ROJ - V-31	42SV-TET-001-2	
2B21-F024B	3	N	C	ACTIVE	1"	CV	NA	H-26000(B-7)	O/C	O/C	NA	CTO	CS		34SV-B21-001-2	
MSIV Accum CV												CTO	CS		34SV-B21-002-2	
												CTC	RO	ROJ - V-31	42SV-TET-001-2	
2B21-F024C	3	N	C	ACTIVE	1"	CV	NA	H-26000(B-7)	O/C	O/C	NA	CTO	CS		34SV-B21-001-2	
MSIV Accum CV												CTO	CS		34SV-B21-002-2	
												CTC	RO	ROJ - V-31	42SV-TET-001-2	
2B21-F024D	3	N	C	ACTIVE	1"	CV	NA	H-26000(B-7)	O/C	O/C	NA	CTO	CS		34SV-B21-001-2	
MSIV Accum CV												CTO	CS		34SV-B21-002-2	
												CTC	RO	ROJ - V-31	42SV-TET-001-2	
2B21-F028A	1	N	A	ACTIVE	24"	GLV	AO	H-26000(D-9)	O	C	C	PIT	2Y		34SV-B21-001-2	NA
MSIV												PIT	2Y		34SV-B21-002-2	
												LT	CIV		42SV-TET-001-2	
												STC	CS	CSJ - V-1	34SV-B21-001-2	
												STC	CS	CSJ - V-1	34SV-B21-002-2	

Version 1.0

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F028B MSIV	1	N	A	ACTIVE	24"	GLV	AO	H-26000(D-9)	O	C	C	PIT	2Y		34SV-B21-001-2	NA
												PIT	2Y		34SV-B21-002-2	
												LT	CIV		42SV-TET-001-2	
												STC	CS	CSJ - V-1	34SV-B21-001-2	
												STC	CS	CSJ - V-1	34SV-B21-002-2	
2B21-F028C MSIV	1	N	A	ACTIVE	24"	GLV	AO	H-26000(D-9)	O	C	C	PIT	2Y		34SV-B21-001-2	NA
												PIT	2Y		34SV-B21-002-2	
												LT	CIV		42SV-TET-001-2	
												STC	CS	CSJ - V-1	34SV-B21-001-2	
												STC	CS	CSJ - V-1	34SV-B21-002-2	
2B21-F028D MSIV	1	N	A	ACTIVE	24"	GLV	AO	H-26000(D-9)	O	C	C	PIT	2Y		34SV-B21-001-2	NA
												PIT	2Y		34SV-B21-002-2	
												LT	CIV		42SV-TET-001-2	
												STC	CS	CSJ - V-1	34SV-B21-001-2	
												STC	CS	CSJ - V-1	34SV-B21-002-2	
2B21-F029A MSIV Accum CV	3	N	C	ACTIVE	1"	CV	NA	H-26000(B-9)	O/C	O/C	NA	CTO	CS		34SV-B21-001-2	
												CTO	CS		34SV-B21-002-2	
												CTC	RO	ROJ - V-31	42SV-TET-001-2	
2B21-F029B MSIV Accum CV	3	N	C	ACTIVE	1"	CV	NA	H-26000(B-9)	O/C	O/C	NA	CTO	CS		34SV-B21-001-2	
												CTO	CS		34SV-B21-002-2	
												CTC	RO	ROJ - V-31	42SV-TET-001-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F029C	3	N	C	ACTIVE	1"	CV	NA	H-26000(B-9)	O/C	O/C	NA	CTO	CS		34SV-B21-001-2	
MSIV Accum CV												CTO	CS		34SV-B21-002-2	
												CTC	RO	ROJ - V-31	42SV-TET-001-2	
2B21-F029D	3	N	C	ACTIVE	1"	CV	NA	H-26000(B-9)	O/C	O/C	NA	CTO	CS		34SV-B21-001-2	
MSIV Accum CV												CTO	CS		34SV-B21-002-2	
												CTC	RO	ROJ - V-31	42SV-TET-001-2	
2B21-F036A	2	N	C	ACTIVE	1"	CV	NA	H-28023(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036B	2	N	C	ACTIVE	1"	CV	NA	H-28023(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036C	2	N	C	ACTIVE	1"	CV	NA	H-28023(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036D	2	N	C	ACTIVE	1"	CV	NA	H-28023(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036E	2	N	C	ACTIVE	1"	CV	NA	H-28023(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036F	2	N	C	ACTIVE	1"	CV	NA	H-28023(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036G	2	N	C	ACTIVE	1"	CV	NA	H-28023(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F036H	2	N	C	ACTIVE	1"	CV	NA	H-28023(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036K	2	N	C	ACTIVE	1"	CV	NA	H-28023(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036L	2	N	C	ACTIVE	1"	CV	NA	H-28023(D-3)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F036M	2	N	C	ACTIVE	1"	CV	NA	H-28023(E-4)	O/C	C	NA	CTC	RO	ROJ - V-4	42SV-TET-001-2	Note 39
MSRV Accum Air Supply CV												CTO	DNO		NA	
2B21-F037A	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F037B	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F037C	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F037D	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F037E	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F037F	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F037G	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F037H VB MSRV Disch	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
2B21-F037K VB MSRV Disch	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
2B21-F037L VB MSRV Disch	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
2B21-F037M VB MSRV Disch	3	N	C	ACTIVE	6"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
2B21-F041 Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(B-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F043A Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(C-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F043B Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(C-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F045A Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(C-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F045B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(C-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F047A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(F-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F047B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F049A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(F-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F049B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F051A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F051B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

Version 1.0

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F051C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F051D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F053A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F053B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F053C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F053D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F055	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(J-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F057	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(J-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059E	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059F	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F059G	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059H	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059L	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059M	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059N	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059P	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059R	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

Version 1.0

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F059S	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059T	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F059U	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F061	1	N	AC	ACTIVE	1"	EFCV	NA	H-26001(J-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F070A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F070B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F070C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F070D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F071A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F071B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F071C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F071D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F072A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F072B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F072C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F072D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F073A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F073B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F073C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F073D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26000(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B21-F076A	2	N	C	ACTIVE	18"	CV	AO	H-26000(E-2)	O	C	NA	PIT	2Y		34SV-B21-006-2	
FW CV												CTC	CS	CSJ - V-11	34SV-B21-006-2	
												CTO	DNO		NA	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F076B	2	N	C	ACTIVE	18"	CV	AO	H-26000(E-2)	O	C	NA	PIT	2Y		34SV-B21-006-2	
FW CV												CTC	CS	CSJ - V-11	34SV-B21-006-2	
												CTO	DNO		NA	
2B21-F077A	1	N	AC	ACTIVE	18"	CV	AO	H-26000(E-3)	O	O/C	NA	LT	CIV		42SV-TET-001-2	
FW Outbrd CIV												CTO	DNO		42EN-PPM-001-2N	
												CTC	RO	ROJ - V-35	42SV-TET-001-2	
												PIT	2Y		34SV-B21-006-2	
2B21-F077B	1	N	AC	ACTIVE	18"	CV	AO	H-26000(E-3)	O	O/C	NA	LT	CIV		42SV-TET-001-2	
FW Outbrd CIV												CTO	DNO		42EN-PPM-001-2N	
												CTC	RO	ROJ - V-35	42SV-TET-001-2	
												PIT	2Y		34SV-B21-006-2	
2B21-F110B	3	N	C	ACTIVE	10"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F110D	3	N	C	ACTIVE	10"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F110F	3	N	C	ACTIVE	10"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F110G	3	N	C	ACTIVE	10"	VB	NA	H-26000(H-7)	C	O/C	NA	VB	2Y		52PM-B21-001-2	NA
VB MSRV Disch																
2B21-F111	2	N	A	ACTIVE	1"	GV	AO	H-26384(E-10)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Pass Sample Vlv												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
B21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B21-F112	2	N	A	ACTIVE	1"	GV	AO	H-26384(E-10)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Pass Sample Vlv												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B31-F003A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(G-2)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F003B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(G-2)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F004A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(G-2)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F004B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(G-2)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F009A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F009B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(E-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F009C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(E-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B31-F009D Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F010A Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F010B Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F010C Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(E-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F010D Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F011A Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(D-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F011B Inst EFCV	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B31-F011C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(E-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F011D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(G-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F012A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(E-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F012B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(F-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F012C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(E-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F012D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(G-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F013A	1	N	AC	ACTIVE	3/4"	CV	NA	H-26003(G-3)	O	C	NA	LT	CIV		42SV-TET-001-2	Note 36
Recir Pump Seal Wtr CIV												CTC	RO	ROJ - V-5	42SV-TET-001-2	
												CTO	DNO		NA	

HATCH UNIT 2
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B31-F013B	1	N	AC	ACTIVE	3/4"	CV	NA	H-26003(G-3)	O	C	NA	LT	CIV		42SV-TET-001-2	Note 36
Recir Pump Seal Wtr CIV												CTC	RO	ROJ - V-5	42SV-TET-001-2	
												CTO	DNO		NA	
2B31-F017A	1	N	AC	ACTIVE	3/4"	CV	NA	H-26003(G-2)	O	C	NA	LT	CIV		42SV-TET-001-2	Note 36
Recir Pump Seal Wtr CIV												CTC	RO	ROJ - V-5	42SV-TET-001-2	
												CTO	DNO		NA	
2B31-F017B	1	N	AC	ACTIVE	3/4"	CV	NA	H-26003(G-2)	O	C	NA	LT	CIV		42SV-TET-001-2	Note 36
Recir Pump Seal Wtr CIV												CTC	RO	ROJ - V-5	42SV-TET-001-2	
												CTO	DNO		NA	
2B31-F019	1	N	A	ACTIVE	1"	GLV	AO	H-26003(E-4)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
Rx Sample Sys Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2B31-F020	1	N	A	ACTIVE	1"	GLV	AO	H-26003(E-2)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
Rx Sample Sys Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2B31-F031A	1	N	B	ACTIVE	28"	GV	MO	H-26003(G-7)	O	C	AI	PIT	2Y		34SV-B31-001-2	NA
Recirc Pump Disch Iso												STC	RO	ROJ - V-33	34SV-B31-001-2	
2B31-F031B	1	N	B	ACTIVE	28"	GV	MO	H-26003(G-7)	O	C	AI	PIT	2Y		34SV-B31-001-2	NA
Recirc Pump Disch Iso												STC	RO	ROJ - V-33	34SV-B31-001-2	
2B31-F040A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(G-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
B31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2B31-F040B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F040C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(G-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2B31-F040D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26003(H-9)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2

C11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2C11-F010A	2	N	B	ACTIVE	1"	GLV	AO	H-26007(A-5)	O	C	C	PIT	2Y		34SV-C11-001-2	NA
SDV Vent Vlv												PIT	2Y		34SV-C11-002-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-001-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-002-2	
2C11-F010B	2	N	B	ACTIVE	1"	GLV	AO	H-26007(A-5)	O	C	C	PIT	2Y		34SV-C11-001-2	NA
SDV Vent Vlv												PIT	2Y		34SV-C11-002-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-001-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-002-2	
2C11-F011	2	N	B	ACTIVE	2"	GLV	AO	H-26007(D-3)	O	C	C	PIT	2Y		34SV-C11-001-2	NA
SDV Drain Vlv												PIT	2Y		34SV-C11-002-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-001-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-002-2	
2C11-F012	2	N	C	ACTIVE	3/4"	RV	NA	H-26007(C-4)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	
SDV Header relief valve																
2C11-F035A	2	N	B	ACTIVE	1"	GLV	AO	H-26007(A-5)	O	C	C	PIT	2Y		34SV-C11-001-2	NA
SDV Vent Vlv												PIT	2Y		34SV-C11-002-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-001-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-002-2	
2C11-F035B	2	N	B	ACTIVE	1"	GLV	AO	H-26007(A-5)	O	C	C	PIT	2Y		34SV-C11-001-2	NA
SDV Vent Vlv												PIT	2Y		34SV-C11-002-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-001-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-002-2	

HATCH UNIT 2
C11

Valve ID / Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2C11-F037 SDV Drain Vlv	2	N	B	ACTIVE	2"	GLV	AO	H-26007(D-3)	O	C	C	PIT	2Y		34SV-C11-001-2	NA
												PIT	2Y		34SV-C11-002-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-001-2	
												STC	Qtr/RO	ROJ - V-29	34SV-C11-002-2	
2C11-HCU-114 SDV HCU CV	2	N	C	ACTIVE	3/4"	CV	NA	H-26006(A-6)	C	O	NA	CTO	RO	ROJ - V-6	42SV-C11-003-0	Note 2
2C11-HCU-115 Charging Water HCU CV	2	N	C	ACTIVE	1/2"	CV	NA	H-26006(C-6)	C	C	NA	CTC	RO	ROJ - V-7	34SV-C11-005-2	Note 2
												CTO	DNO		NA	
2C11-HCU-126 Scram Insert HCU Cont Vlv	1	N	B	ACTIVE	1"	GLV	AO	H-26006(C-5)	C	O	O	PIT	2Y		42SV-C11-003-0	Note 2
												ETO	RO	ROJ - V-8	42SV-C11-003-0	
2C11-HCU-127 Scram Disch HCU Cont Vlv	1	N	B	ACTIVE	3/4"	GLV	AO	H-26006(B-5)	C	O	O	PIT	2Y		42SV-C11-003-0	Note 2
												ETO	RO	ROJ - V-8	42SV-C11-003-0	
2C11-HCU-138 Cooling Water Header HCU CV	1	N	C	ACTIVE	1/2"	CV	NA	H-26006(C-4)	C	C	NA	CTC	Monthly		34SV-C11-003-2	Notes 2, 3
												CTO	DNO		NA	

HATCH UNIT 2
C41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2C41-F004A	2	N	D	ACTIVE	1-1/2"	Expl Act	NA	H-26009(E-2)	C	O	NA	RD	2R		34SV-C41-003-2	NA
SLC Expl Act												RD	2R		52PM-C41-105-2	
2C41-F004B	2	N	D	ACTIVE	1-1/2"	Expl Act	NA	H-26009(F-2)	C	O	NA	RD	2R		34SV-C41-003-2	NA
SLC Expl Act												RD	2R		52PM-C41-105-2	
2C41-F006	1	N	AC	ACTIVE	1-1/2"	CV	NA	H-26009(E-2)	C	O/C	NA	CTO	RO	ROJ - V-9	34SV-C41-003-2	Note 22
SLC Outbrd CIV												CTC	RO	ROJ - V-9	42SV-TET-001-2	
												LT	RO		42SV-TET-001-2	
2C41-F007	1	N	AC	ACTIVE	1-1/2"	CV	NA	H-26009(F-2)	C	O/C	NA	CTO	RO	ROJ - V-9	34SV-C41-003-2	Note 22
SLC Inbrd CIV												CTC	RO	ROJ - V-9	42SV-TET-001-2	
												LT	RO		42SV-TET-001-2	
2C41-F029A	2	N	C	ACTIVE	1"	RV	NA	H-26009(E-5)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
SLC Pump Disch RV																
2C41-F029B	2	N	C	ACTIVE	1"	RV	NA	H-26009(H-5)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
SLC Pump Disch RV																
2C41-F033A	2	N	C	ACTIVE	1-1/2"	CV	NA	H-26009(F-4)	C	O	NA	CTO	CVCM		34SV-C41-002-2	Note 42
SLC Pump Disch												CTC	CVCM		42SV-SUV-040-2	
2C41-F033B	2	N	C	ACTIVE	1-1/2"	CV	NA	H-26009(G-4)	C	O	NA	CTO	CVCM		34SV-C41-002-2	Note 42
SLC Pump Disch												CTC	CVCM		42SV-SUV-040-2	

HATCH UNIT 2
C51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2C51-Ball A	2	N	A	ACTIVE	N/A	Ball	SO	H-26993(C-7)	O	C	NA	PIT	2Y		34SV-C51-005-0	NA
TIP Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-C51-005-0	
2C51-Ball B	2	N	A	ACTIVE	N/A	Ball	SO	H-26993(C-7)	O	C	NA	PIT	2Y		34SV-C51-005-0	NA
TIP Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-C51-005-0	
2C51-Ball C	2	N	A	ACTIVE	N/A	Ball	SO	H-26993(C-7)	O	C	NA	PIT	2Y		34SV-C51-005-0	NA
TIP Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-C51-005-0	
2C51-Ball D	2	N	A	ACTIVE	N/A	Ball	SO	H-26993(C-7)	O	C	NA	PIT	2Y		34SV-C51-005-0	NA
TIP Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-C51-005-0	
2C51-F3017	2	N	AC	ACTIVE	N/A	CV	NA	H-26993(B-13)	O	C	NA	LT	CIV		42SV-TET-001-2	Note 36
TIP N2 Purge CIV												CTC	RO	ROJ - V-10	42SV-TET-001-2	
												CTO	DNO		NA	
2C51-Shear A	2	N	AD	ACTIVE	N/A	Expl Shear	NA	H-26993(C-7)	O	C	NA	RD	Note 41		52PM-C51-001-2	NA
TIP Outbrd CIV																
2C51-Shear B	2	N	AD	ACTIVE	N/A	Expl Shear	NA	H-26993(C-3)	O	C	NA	RD	Note 41		52PM-C51-001-2	NA
TIP Outbrd CIV																
2C51-Shear C	2	N	AD	ACTIVE	N/A	Expl Shear	NA	H-26993(C-3)	O	C	NA	RD	Note 41		52PM-C51-001-2	NA
TIP Outbrd CIV																

HATCH UNIT 2
C51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2C51-Shear D TIP Outbrd CIV	2	N	AD	ACTIVE	N/A	Expl Shear	NA	H-26993(C-3)	O	C	NA	RD	Note 41		52PM-C51-001-2	NA

HATCH UNIT 2

D11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2D11-F050	2	N	A	ACTIVE	1"	Plug	AO	H-26016(D-5)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
Fission Prod Mon CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2D11-F051	2	N	A	ACTIVE	1"	Plug	AO	H-26016(F-5)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
Fission Prod Mon CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2D11-F052	2	N	A	ACTIVE	1"	Plug	AO	H-26016(D-6)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
Fission Prod Mon CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2D11-F053	2	N	A	ACTIVE	1"	Plug	AO	H-26016(F-6)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
Fission Prod Mon CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2D11-F058	2	N	A	PASSIVE	1"	Man GLV	NA	H-26016(G-4)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA
Passive CIV																
2D11-F065	2	N	A	PASSIVE	1"	Man GLV	NA	H-26016(G-3)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA
Passive CIV																

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F003A	2	N	B	ACTIVE	16"	GV	MO	H-26015(D-4)	O	O	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Hx Shell Side Outlet												STO	Qtr		34SV-E11-002-2	
2E11-F003B	2	N	B	ACTIVE	16"	GV	MO	H-26014(E-8)	O	O	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Hx Shell Side Outlet												STO	Qtr		34SV-E11-002-2	
2E11-F004A	2	N	B	ACTIVE	24"	GV	MO	H-26015(F-8)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	Note 4
RHR Pump Suct Torus Iso												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F004B	2	N	B	ACTIVE	24"	GV	MO	H-26014(F-3)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	Note 4
RHR Pump Suct Torus Iso												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F004C	2	N	B	ACTIVE	24"	GV	MO	H-26015(F-9)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	Note 4
RHR Pump Suct Torus Iso												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F004D	2	N	B	ACTIVE	24"	GV	MO	H-26014(F-2)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	Note 4
RHR Pump Suct Torus Iso												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F005A	3	N	C	ACTIVE	14"	CV	NA	H-21039(C-5)	C	O/C	NA	CTC	Qtr		34SV-E11-004-2	Notes 6, 7, 22
RHRSW Pump Disch CV												CTO	Qtr		34SV-E11-004-2	
2E11-F005B	3	N	C	ACTIVE	14"	CV	NA	H-21039(F-5)	C	O/C	NA	CTC	Qtr		34SV-E11-004-2	Notes 6, 7, 22
RHRSW Pump Disch CV												CTO	Qtr		34SV-E11-004-2	

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F005C RHRSW Pump Disch CV	3	N	C	ACTIVE	14"	CV	NA	H-21039(D-4)	C	O/C	NA	CTC	Qtr		34SV-E11-004-2	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-004-2	
2E11-F005D RHRSW Pump Disch CV	3	N	C	ACTIVE	14"	CV	NA	H-21039(G-4)	C	O/C	NA	CTC	Qtr		34SV-E11-004-2	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-004-2	
2E11-F006A RHR SDC Suct	2	N	B	ACTIVE	20"	GV	MO	H-26015(F-8)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F006B RHR SDC Suct	2	N	B	ACTIVE	20"	GV	MO	H-26014(F-3)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F006C RHR SDC Suct	2	N	B	ACTIVE	20"	GV	MO	H-26015(F-10)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F006D RHR SDC Suct	2	N	B	ACTIVE	20"	GV	MO	H-26014(F-2)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F007A RHR Pump Min Flow Torus Iso	2	N	B	ACTIVE	4"	GV	MO	H-26015(D-5)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	Note 4
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F007B RHR Pump Min Flow Torus Iso	2	N	B	ACTIVE	4"	GV	MO	H-26014(D-6)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	Note 4
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F008	1	N	A	ACTIVE	20"	GV	MO	H-26015(D-10)	C	O/C	AI	LT	PIV/CIV	RR - V-10	42SV-TET-001-2	NA
RHR SDC Inbrd CIV												PIT	2Y		34SV-SUV-016-2	
												STO	RO	ROJ - V-14	34SV-SUV-016-2	
												STC	RO	ROJ - V-14	34SV-SUV-016-2	
2E11-F009	1	N	A	ACTIVE	20"	GV	MO	H-26015(D-10)	C	O/C	AI	LT	PIV	RR - V-10	42SV-TET-001-2	NA
RHR SDC Inbrd PIV												PIT	2Y		34SV-SUV-016-2	
												STO	RO	ROJ - V-14	34SV-SUV-016-2	
												STC	RO	ROJ - V-14	34SV-SUV-016-2	
2E11-F011A	2	N	B	ACTIVE	4"	GV	MO	H-26015(D-3)	C	C	AI	PIT	2Y		34SV-E11-002-2	Note 4
RHR Cond Disch to Torus												STC	Qtr		34SV-E11-002-2	
2E11-F011B	2	N	B	ACTIVE	4"	GV	MO	H-26014(D-8)	C	C	AI	PIT	2Y		34SV-E11-002-2	Note 4
RHR Cond Disch to Torus												STC	Qtr		34SV-E11-002-2	
2E11-F015A	1	N	A	ACTIVE	24"	GV	MO	H-26015(D-7)	C	O/C	AI	LT	PIV/CIV	RR - V-10	42SV-TET-001-2	NA
LPCI Inbrd CIV												PIT	2Y		34SV-SUV-016-2	
												STO	RO	ROJ - V-14	34SV-SUV-016-2	
												STC	RO	ROJ - V-14	34SV-SUV-016-2	
2E11-F015B	1	N	A	ACTIVE	24"	GV	MO	H-26014(D-4)	C	O/C	AI	LT	PIV/CIV	RR - V-10	42SV-TET-001-2	NA
LPCI Inbrd CIV												PIT	2Y		34SV-SUV-016-2	
												STO	RO	ROJ - V-14	34SV-SUV-016-2	
												STC	RO	ROJ - V-14	34SV-SUV-016-2	

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F016A Cont Spray Inbrd CIV	2	N	A	ACTIVE	16"	GLV	MO	H-26015(B-7)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F016B Cont Spray Inbrd CIV	2	N	A	ACTIVE	16"	GLV	MO	H-26014(C-4)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F017A LPCI	2	N	B	ACTIVE	24"	GLV	MO	H-26015(D-7)	O	O	AI	PIT	2Y		34SV-SUV-016-2	NA
												STO	Qtr		34SV-E11-002-2	
2E11-F017B LPCI	2	N	B	ACTIVE	24"	GLV	MO	H-26014(D-4)	O	O	AI	STO	Qtr		34SV-E11-002-2	NA
												PIT	2Y		34SV-SUV-016-2	
2E11-F021A Cnmt Spray	2	N	B	ACTIVE	16"	GV	MO	H-26015(B-9)	C	O/C	AI	PIT	2Y		34SV-SUV-016-2	NA
												STO	RO	ROJ - V-28	34SV-SUV-016-2	
												STC	RO	ROJ - V-28	34SV-SUV-016-2	
2E11-F021B Cnmt Spray	2	N	B	ACTIVE	16"	GV	MO	H-26014(C-2)	C	O/C	AI	PIT	2Y		34SV-SUV-016-2	NA
												STO	RO	ROJ - V-28	34SV-SUV-016-2	
												STC	RO	ROJ - V-28	34SV-SUV-016-2	
2E11-F023 Passive CIV	2	N	A	PASSIVE	4"	GLV	MO	H-26014(B-3)	C	C	AI	LT	CIV		42SV-TET-001-2	NA

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F024A SPC	2	N	B	ACTIVE	16"	GLV	MO	H-26015(C-6)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	Note 4
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F024B SPC	2	N	B	ACTIVE	16"	GLV	MO	H-26014(D-6)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	Note 4
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F025A LPCI RV	2	N	C	ACTIVE	1"	RV	NA	H-26015(C-7)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
2E11-F025B LPCI RV	2	N	C	ACTIVE	1"	RV	NA	H-26014(C-4)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
2E11-F027A Supp Pool Spray	2	N	B	ACTIVE	6"	GLV	MO	H-26015(C-7)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F027B Supp Pool Spray	2	N	B	ACTIVE	6"	GLV	MO	H-26014(D-5)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F028A Supp Pool Spray Inbrd CIV	2	N	A	ACTIVE	16"	GV	MO	H-26015(C-6)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F028B Supp Pool Spray Inbrd CIV	2	N	A	ACTIVE	16"	GV	MO	H-26014(C-5)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F029 RHR Pump Suc RV	2	N	C	ACTIVE	1"	RV	NA	H-26015(E-9)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
2E11-F031A RHR Pump Disch	2	N	C	ACTIVE	20"	CV	NA	H-26015(H-6)	C	O/C	NA	CTC	Qtr		34SV-E11-001-2	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-001-2	
2E11-F031B RHR Pump Disch	2	N	C	ACTIVE	20"	CV	NA	H-26014(H-6)	C	O/C	NA	CTC	Qtr		34SV-E11-001-2	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-001-2	
2E11-F031C RHR Pump Disch	2	N	C	ACTIVE	20"	CV	NA	H-26015(H-9)	C	O/C	NA	CTC	Qtr		34SV-E11-001-2	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-001-2	
2E11-F031D RHR Pump Disch	2	N	C	ACTIVE	20"	CV	NA	H-26014(H-3)	C	O/C	NA	CTC	Qtr		34SV-E11-001-2	Notes 6, 7, 22
												CTO	Qtr		34SV-E11-001-2	
2E11-F040 RHR to RW Drain	2	N	B	ACTIVE	4"	GLV	MO	H-26014(B-6)	C	C	AI	PIT	2Y		34SV-E11-002-2	NA
												STC	Qtr		34SV-E11-002-2	
2E11-F041A RHR Inst CIV	2	N	A	PASSIVE	1"	Control	AO	H-26015(A-5)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												LT	CIV		42SV-TET-001-2	
2E11-F041B RHR Inst CIV	2	N	A	PASSIVE	1"	Control	AO	H-26014(A-7)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
												LT	CIV		42SV-TET-001-2	

Version 1.0

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F041C	2	N	A	PASSIVE	1"	Control	AO	H-26015(A-8)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Inst CIV												LT	CIV		42SV-TET-001-2	
2E11-F041D	2	N	A	PASSIVE	1"	Control	AO	H-26014(A-3)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Inst CIV												LT	CIV		42SV-TET-001-2	
2E11-F046A	2	N	C	ACTIVE	3"	CV	NA	H-26015(G-7)	C	O	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
RHR Min Flow Line												CTO	CVCM		42SV-SUV-040-2	
2E11-F046B	2	N	C	ACTIVE	3"	CV	NA	H-26014(H-5)	C	O	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
RHR Min Flow Line												CTO	CVCM		42SV-SUV-040-2	
2E11-F046C	2	N	C	ACTIVE	3"	CV	NA	H-26015(G-9)	C	O	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
RHR Min Flow Line												CTO	CVCM		42SV-SUV-040-2	
2E11-F046D	2	N	C	ACTIVE	3"	CV	NA	H-26014(G-2)	C	O	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
RHR Min Flow Line												CTO	CVCM		42SV-SUV-040-2	
2E11-F047A	2	N	B	ACTIVE	16"	GV	MO	H-26015(E-5)	O	O	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Hx Shell Side Inlet												STO	Qtr		34SV-E11-002-2	
2E11-F047B	2	N	B	ACTIVE	16"	GV	MO	H-26014(E-6)	O	O	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Hx Shell Side Inlet												STO	Qtr		34SV-E11-002-2	
2E11-F048A	2	N	B	ACTIVE	24"	GLV	MO	H-26015(D-5)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Hx Shell Side Bypass												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F048B	2	N	B	ACTIVE	24"	GLV	MO	H-26014(E-6)	O	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Hx Shell Side Bypass												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F049	2	N	B	ACTIVE	4"	GV	MO	H-26014(C-5)	C	C	AI	PIT	2Y		34SV-E11-002-2	NA
RHR to RW Drain												STC	Qtr		34SV-E11-002-2	
2E11-F050A	1	N	AC	ACTIVE	18"	CV	NA	H-26015(D-9)	C	O/C	NA	LT	PIV	RR - V-10	42SV-TET-001-2	Note 22
LPCI PIV												CTO	RO	ROJ - V-30	34SO-E11-006-2	
												CTC	RO	ROJ - V-30	42SV-TET-001-2	
2E11-F050B	1	N	AC	ACTIVE	18"	CV	NA	H-26014(D-3)	C	O/C	NA	LT	PIV	RR - V-10	42SV-TET-001-2	Note 22
LPCI PIV												CTO	RO	ROJ - V-30	34SO-E11-006-2	
												CTC	RO	ROJ - V-30	42SV-TET-001-2	
2E11-F055A	2	N	C	ACTIVE	4"	RV	NA	H-26015(F-4)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
RHR Hx Shell RV																
2E11-F055B	2	N	C	ACTIVE	4"	RV	NA	H-26014(F-7)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 4
RHR Hx Shell RV																
2E11-F065A	2	N	B	PASSIVE	24"	BFV	AO	H-26015(E-9)	O	O	O	PIT	2Y		34SV-E11-002-2	Note 8
RHR Pump Suct Maint																
2E11-F065B	2	N	B	PASSIVE	24"	BFV	AO	H-26014(F-3)	O	O	O	PIT	2Y		34SV-E11-002-2	Note 8
RHR Pump Suct Maint																
2E11-F065C	2	N	B	PASSIVE	24"	BFV	AO	H-26015(E-9)	O	O	O	PIT	2Y		34SV-E11-002-2	Note 8
RHR Pump Suct Maint																

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F065D	2	N	B	PASSIVE	24"	BFV	AO	H-26014(F-2)	O	O	O	PIT	2Y		34SV-E11-002-2	Note 8
RHR Pump Suct Maint																
2E11-F068A	3	N	B	ACTIVE	10"	Ball	MO	H-21039(C-10)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Hx Ser Wtr Disc												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F068B	3	N	B	ACTIVE	10"	Ball	MO	H-21039(G-10)	C	O/C	AI	PIT	2Y		34SV-E11-002-2	NA
RHR Hx Ser Wtr Disc												STO	Qtr		34SV-E11-002-2	
												STC	Qtr		34SV-E11-002-2	
2E11-F103A	2	N	B	ACTIVE	1"	GLV	MO	H-26015(E-4)	C	C	AI	PIT	2Y		34SV-E11-002-2	Note 4
RHR Hx Vent Iso												STC	Qtr		34SV-E11-002-2	
2E11-F103B	2	N	B	ACTIVE	1"	GLV	MO	H-26014(E-7)	C	C	AI	PIT	2Y		34SV-E11-002-2	Note 4
RHR Hx Vent Iso												STC	Qtr		34SV-E11-002-2	
2E11-F119A	3	N	B	ACTIVE	18"	GV	MO	H-21039(C-8)	C	O	AI	PIT	2Y		34SV-E11-002-2	NA
RHR SW Crosstie												STO	Qtr		34SV-E11-002-2	
2E11-F119B	3	N	B	ACTIVE	18"	GV	MO	H-21039(G-8)	C	O	AI	PIT	2Y		34SV-E11-002-2	NA
RHR SW Crosstie												STO	Qtr		34SV-E11-002-2	
2E11-F122A	1	N	A	PASSIVE	1"	Plug	AO	H-26015(D-9)	C	C	C	PIT	2Y		42SV-TET-001-2	Note 8
Passive PIV												LT	PIV	RR - V-10	42SV-TET-001-2	
2E11-F122B	1	N	A	PASSIVE	1"	Plug	AO	H-26014(D-3)	C	C	C	PIT	2Y		42SV-TET-001-2	Note 8
Passive PIV												LT	PIV	RR - V-10	42SV-TET-001-2	

HATCH UNIT 2
E11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E11-F123A	2	N	C	ACTIVE	2"	CV	NA	H-26019(E-4)	O/C	C	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
Jockey Pump to RHR CV												CTO	CVCM		42SV-SUV-040-2	
2E11-F123B	2	N	C	ACTIVE	2"	CV	NA	H-26019(E-6)	O/C	C	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
Jockey Pump to RHR CV												CTO	CVCM		42SV-SUV-040-2	
2E11-F3079A	3	N	C	ACTIVE	3/4"	RV	NA	H-26015(G-4)	C	NA	NA	RV	10Y		42SV-SUV-004-0	NA
RHR Ht. Exh. Thermal Relief																
2E11-F3079B	3	N	C	ACTIVE	3/4"	RV	NA	H-26014(H-7)	C	NA	NA	RV	10Y		42SV-SUV-004-0	NA
RHR Ht. Exh. Thermal Relief																
2E11-F3090	1	N	AC	ACTIVE	3/4"	CV	NA	H-26015(D-10)	C	O/C	NA	CTC	RO	ROJ - V-27	42SV-TET-001-2	Notes 22, 38
SDC Suct Line Thermal Relief / CV												CTO	RO	ROJ - V-27	42SV-TET-001-2	
												LT	RO		42SV-TET-001-2	

HATCH UNIT 2
E21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E21-F001A	2	N	B	ACTIVE	20"	GV	MO	H-26018(H-7)	O	O/C	AI	PIT	2Y		34SV-E21-002-2	Note 4
CS Pump Suct Iso												STO	Qtr		34SV-E21-002-2	
												STC	Qtr		34SV-E21-002-2	
2E21-F001B	2	N	B	ACTIVE	20"	GV	MO	H-26018(H-7)	O	O/C	AI	PIT	2Y		34SV-E21-002-2	Note 4
CS Pump Suct Iso												STO	Qtr		34SV-E21-002-2	
												STC	Qtr		34SV-E21-002-2	
2E21-F003A	2	N	C	ACTIVE	12"	CV	NA	H-26018(F-7)	C	O/C	NA	CTC	Note 12		34SV-E21-001-2	Notes 7, 22
CS Pump Disch												CTO	Qtr		34SV-E21-001-2	
2E21-F003B	2	N	C	ACTIVE	12"	CV	NA	H-26018(F-9)	C	O/C	NA	CTC	Note 12		34SV-E21-001-2	Notes 7, 22
CS Pump Disch												CTO	Qtr		34SV-E21-001-2	
2E21-F004A	1	N	B	ACTIVE	10"	GV	MO	H-26018(E-6)	O	O	AI	PIT	2Y		34SV-E21-002-2	NA
CS Outbrd Inject												STO	Qtr		34SV-E21-002-2	
2E21-F004B	1	N	B	ACTIVE	10"	GV	MO	H-26018(C-6)	O	O	AI	PIT	2Y		34SV-E21-002-2	NA
CS Outbrd Inject												STO	Qtr		34SV-E21-002-2	
2E21-F005A	1	N	A	ACTIVE	10"	GV	MO	H-26018(E-5)	C	O/C	AI	LT	PIV/CIV	RR - V-10	42SV-TET-001-2	NA
CS Inbrd Inject												PIT	2Y		34SV-SUV-016-2	
												STO	CS	CSJ - V-5	34SV-SUV-016-2	
												STC	CS	CSJ - V-5	34SV-SUV-016-2	
2E21-F005B	1	N	A	ACTIVE	10"	GV	MO	H-26018(C-5)	C	O/C	AI	LT	PIV/CIV	RR - V-10	42SV-TET-001-2	NA
CS Inbrd Inject												PIT	2Y		34SV-SUV-016-2	
												STO	CS	CSJ - V-5	34SV-SUV-016-2	
												STC	CS	CSJ - V-5	34SV-SUV-016-2	

HATCH UNIT 2
E21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E21-F006A	1	N	AC	ACTIVE	10"	CV	NA	H-26018(D-4)	C	O/C	NA	LT	PIV	RR - V-10	42SV-TET-001-2	Note 22
CS Inject												CTO	RO	ROJ - V-12	34SO-E21-001-2	
												CTC	RO	ROJ - V-12	42SV-TET-001-2	
2E21-F006B	1	N	AC	ACTIVE	10"	CV	NA	H-26018(D-4)	C	O/C	NA	LT	PIV	RR - V-10	42SV-TET-001-2	Note 22
CS Inject												CTO	RO	ROJ - V-12	34SO-E21-001-2	
												CTC	RO	ROJ - V-12	42SV-TET-001-2	
2E21-F012A	2	N	C	ACTIVE	2"	RV	NA	H-26018(E-7)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
CS Pump Disch RV																
2E21-F012B	2	N	C	ACTIVE	2"	RV	NA	H-26018(C-8)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
CS Pump Disch RV																
2E21-F015A	2	N	B	ACTIVE	10"	GLV	MO	H-26018(D-7)	C	C	AI	PIT	2Y		34SV-E21-002-2	Note 4
CS Test Bypass Iso												STC	Qtr		34SV-E21-002-2	
2E21-F015B	2	N	B	ACTIVE	10"	GLV	MO	H-26018(D-7)	C	C	AI	PIT	2Y		34SV-E21-002-2	Note 4
CS Test Bypass Iso												STC	Qtr		34SV-E21-002-2	
2E21-F018A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26018(B-3)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2E21-F018B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26018(B-3)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
E21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E21-F018C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26018(B-4)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2E21-F019A	2	N	B	PASSIVE	16"	BFV	AO	H-26018(H-5)	O	O	O	PIT	2Y		34SV-E21-002-2	Note 8
CS Suct																
2E21-F019B	2	N	B	PASSIVE	16"	BFV	AO	H-26018(H-5)	O	O	O	PIT	2Y		34SV-E21-002-2	Note 8
CS Suct																
2E21-F031A	2	N	B	ACTIVE	3"	GV	MO	H-26018(F-8)	O	O/C	AI	PIT	2Y		34SV-E21-002-2	NA
CS Pump Min Flow												STO	Qtr		34SV-E21-002-2	
												STC	Qtr		34SV-E21-002-2	
2E21-F031B	2	N	B	ACTIVE	3"	GV	MO	H-26018(F-9)	O	O/C	AI	PIT	2Y		34SV-E21-002-2	NA
CS Pump Min Flow												STO	Qtr		34SV-E21-002-2	
												STC	Qtr		34SV-E21-002-2	
2E21-F036A	2	N	C	ACTIVE	3"	CV	NA	H-26018(E-8)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4, 42
Min Flow Line Iso												CTO	CVCM		42SV-SUV-040-2	
2E21-F036B	2	N	C	ACTIVE	3"	CV	NA	H-26018(E-9)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4, 42
Min Flow Line Iso												CTO	CVCM		42SV-SUV-040-2	
2E21-F037A	1	N	A	PASSIVE	1"	Plug Vlv	AO	H-26018(D-4)	C	C	C	PIT	2Y		42SV-TET-001-2	Note 8
Passive Iso												LT	PIV	RR - V-10	42SV-TET-001-2	
2E21-F037B	1	N	A	PASSIVE	1"	Plug Vlv	AO	H-26018(C-4)	C	C	C	PIT	2Y		42SV-TET-001-2	Note 8
Passive Iso												LT	PIV	RR - V-10	42SV-TET-001-2	

HATCH UNIT 2
E21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E21-F039A Maintain CS Water Level	2	N	C	ACTIVE	1-1/2"	CV	NA	H-26019(D-5)	O/C	C	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
												CTO	CVCM		42SV-SUV-040-2	
2E21-F039B Maintain CS Water Level	2	N	C	ACTIVE	1-1/2"	CV	NA	H-26019(D-6)	O/C	C	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
												CTO	CVCM		42SV-SUV-040-2	
2E21-F044A Jockey Pump Bypass Iso	2	N	C	ACTIVE	1-1/2"	Stop CV	NA	H-26019(E-1)	O	C	NA	CTC	RO	ROJ - V-13	42SV-TET-001-2	Notes 4, 36
												CTO	DNO		NA	
2E21-F044B Jockey Pump Bypass Iso	2	N	C	ACTIVE	1-1/2"	Stop CV	NA	H-26019(E-9)	O	C	NA	CTC	RO	ROJ - V-13	42SV-TET-001-2	Notes 4, 36
												CTO	DNO		NA	

Version 1.0

HATCH UNIT 2
E41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position: Normal	Position: Safety	Position: Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E41-D003	2	N	D	ACTIVE	16"	RD	NA	H-26021(D-6)	C	O/C	NA	RD	Note 14	RR - V-5	52PM-E41-002-0	NA
Turbine Exhaust RD																
2E41-D004	2	N	D	ACTIVE	16"	RD	NA	H-26021(E-6)	C	O/C	NA	RD	Note 14	RR - V-5	52PM-E41-002-0	NA
Turbine Exhaust RD																
2E41-F001	2	N	B	ACTIVE	10"	GV	MO	H-26020(E-10)	C	O	AI	PIT	2Y		34SV-E41-001-2	NA
Steam Supply Shutoff												STO	Qtr		34SV-E41-001-2	
2E41-F002	1	N	A	ACTIVE	10"	GV	MO	H-26020(C-3)	O	O/C	AI	LT	CIV		42SV-TET-001-2	NA
Steam Supply Inbrd CIV												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-6	34SV-SUV-016-2	
2E41-F003	1	N	A	ACTIVE	10"	GV	MO	H-26020(C-3)	O	O/C	AI	LT	CIV		42SV-TET-001-2	NA
Steam Supply Outbrd CIV												PIT	2Y		34SV-SUV-016-2	
												STC	Qtr		34SV-E41-001-2	
2E41-F004	2	N	B	ACTIVE	16"	GV	MO	H-26020(D-7)	O	O/C	AI	PIT	2Y		34SV-E41-001-2	NA
Pump Suc from Cond Stor												STC	Qtr		34SV-E41-001-2	
2E41-F005	2	N	AC	ACTIVE	14"	CV	NA	H-26020(E-5)	C	O/C	NA	CTC	Note 12		42SV-TET-001-2	Notes 15, 22
Pump Disch												LT	PIV	RR - V-10	42SV-TET-001-2	
												CTO	Qtr		34SV-E41-002-2	
2E41-F006	2	N	A	ACTIVE	14"	GV	MO	H-26020(E-4)	C	O/C	AI	LT	PIV	RR - V-10	42SV-TET-001-2	NA
Pump Outbrd Disch Iso												PIT	2Y		34SV-E41-001-2	
												STO	Qtr		34SV-E41-001-2	
												STC	Qtr		34SV-E41-001-2	

HATCH UNIT 2
E41

Valve ID / Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position: Normal	Position: Safety	Position: Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E41-F007	2	N	B	ACTIVE	14"	GV	MO	H-26020(E-5)	O	O	AI	PIT	2Y		34SV-E41-001-2	NA
Pump Outbrd Disch												STO	Qtr		34SV-E41-001-2	
2E41-F008	2	N	B	ACTIVE	10"	GLV	MO	H-26020(D-6)	C	C	AI	PIT	2Y		34SV-E41-001-2	NA
Pump Test Bypass												STC	Qtr		34SV-E41-001-2	
2E41-F011	2	Y	B	ACTIVE	10"	GV	MO	H-26020(C-6)	C	C	AI	PIT	2Y		34SV-E41-001-2	Note 16
Pump Test Bypass												STC	Qtr		34SV-E41-001-2	
2E41-F012	2	N	B	ACTIVE	4"	GLV	MO	H-26020(F-6)	C	O/C	AI	PIT	2Y		34SV-E41-001-2	Notes 4
Pump Min Flow Inbrd Iso												STO	Qtr		34SV-E41-001-2	
												STC	Qtr		34SV-E41-001-2	
2E41-F019	2	N	C	ACTIVE	16"	CV	NA	H-26020(D-7)	C	O	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
Pump Suc Cond Stg												CTO	CVCM		34SV-E41-002-2	
2E41-F020	2	N	C	ACTIVE	1 1/2"	RV	NA	H-26021(B-7)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
Pump Suction RV																
2E41-F021	2	N	C	ACTIVE	12"	Stop CV	NA	H-26020(G-3)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4,7,22,42
Turb Exh Inbrd Iso												CTO	CVCM		42SV-SUV-040-2	
2E41-F024A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26020(C-4)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2E41-F024B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26020(D-4)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	

HATCH UNIT 2
E41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E41-F024C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26020(C-4)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2E41-F024D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26020(E-4)	O	C	NA	PIT	2Y		57SV-SUV-004-2	
Inst EFCV												LT	LTV		57SV-SUV-004-2	
												CTC	TS	RR - V-9	57SV-SUV-004-2	
2E41-F028	2	N	B	ACTIVE	1"	GLV	AO	H-26020(G-10)	O	O/C	C	PIT	2Y		34SV-E41-001-2	NA
Drain Pot Drain												STC	Qtr		34SV-E41-001-2	
2E41-F029	2	N	B	ACTIVE	1"	GLV	AO	H-26020(G-10)	O	O/C	C	PIT	2Y		34SV-E41-001-2	NA
Drain Pot Drain												STC	Qtr		34SV-E41-001-2	
2E41-F041	2	N	B	ACTIVE	16"	GV	MO	H-26020(D-7)	C	O/C	AI	PIT	2Y		34SV-E41-001-2	Notes 4, 42
Pump Suc Supply												STO	Qtr		34SV-E41-001-2	
2E41-F042	2	N	B	ACTIVE	16"	GV	MO	H-26020(H-4)	C	O/C	AI	PIT	2Y		34SV-E41-001-2	Note 4
Pump Suc Torus Outbrd Iso												STO	Qtr		34SV-E41-001-2	
												STC	Qtr		34SV-E41-001-2	
2E41-F045	2	N	C	ACTIVE	16"	CV	NA	H-26020(H-5)	C	O	NA	CTO	CVCM		42SV-SUV-040-2	Note 42
Pump Suc												CTC	CVCM		42SV-SUV-040-2	
2E41-F046	2	N	C	ACTIVE	4"	CV	NA	H-26020(F-6)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4, 42
Pump Min Flow Outbrd Iso												CTO	CVCM		42SV-SUV-040-2	
2E41-F048	2	N	C	ACTIVE	2"	CV	NA	H-26021(G-8)	C	O	NA	CTO	CVCM		42SV-SUV-040-2	Note 42
Cond Pump Rtr Line CV												CTC	CVCM		42SV-SUV-040-2	

HATCH UNIT 2
E41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E41-F049	2	N	C	ACTIVE	20"	CV	NA	H-26020(G-4)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4,7,22,42
Turb Exh Outbrd Iso												CTO	CVCM		42SV-SUV-040-2	
2E41-F050	2	N	C	ACTIVE	2"	RV	NA	H-26021(G-8)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	NA
Lube Oil Cooler RV																
2E41-F051	2	N	B	ACTIVE	16"	BFV	AO	H-26020(H-4)	O	O/C	O	PIT	2Y		34SV-E41-001-2	Note 4
Pump Suc Torus Inbrd Iso												STO	Qtr		34SV-E41-001-2	
												STC	Qtr		34SV-E41-001-2	
2E41-F052	2	N	C	ACTIVE	2"	CV	NA	H-26021(G-9)	C	C	NA	CTO	DNO		NA	Notes 18, 36
Barometric Cond Pump Disch												CTC	Qtr		34SV-E41-002-1	
2E41-F057	2	N	C	ACTIVE	2"	CV	NA	H-26021(G-9)	C	O	NA	CTO	CVCM		42SV-SUV-040-2	Note 42
Lube Oil Cooling Wtr Return CV												CTC	CVCM		42SV-SUV-040-2	
2E41-F059	2	N	B	ACTIVE	2"	GLV	MO	H-26021(F-7)	C	O	AI	PIT	2Y		34SV-E41-001-2	NA
Turb Lube Oil Cooling												STO	Qtr		34SV-E41-001-2	
2E41-F102	2	N	C	ACTIVE	1"	CV	NA	H-26020(F-2)	C	O/C	NA	CTC	RO	ROJ - V-24	42SV-TET-001-2	Note 22
Vacuum RV												CTO	RO	ROJ - V-24	42SV-TET-001-2	
2E41-F103	2	N	C	ACTIVE	1"	CV	NA	H-26020(F-2)	C	O/C	NA	CTC	RO	ROJ - V-24	42SV-TET-001-2	Note 22
Vacuum RV												CTO	RO	ROJ - V-24	42SV-TET-001-2	
2E41-F104	2	N	A	ACTIVE	2"	GV	MO	H-26020(F-2)	O	O/C	AI	LT	CIV		42SV-TET-001-2	NA
Vac Relief Inbrd Torus CIV												PIT	2Y		34SV-E41-001-2	
												STO	Qtr		34SV-E41-001-2	
												STC	Qtr		34SV-E41-001-2	

HATCH UNIT 2
E41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E41-F111	2	N	A	ACTIVE	2"	GV	MO	H-26020(G-1)	O	O/C	AI	LT	CIV		42SV-TET-001-2	NA
Vac Relief Inbrd Torus CIV												PIT	2Y		34SV-E41-001-2	
												STO	Qtr		34SV-E41-001-2	
												STC	Qtr		34SV-E41-001-2	
2E41-F121	2	N	A	ACTIVE	3/8"	N/A	SO	H-26384(H-9)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Pass Sample Return												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2E41-F122	2	N	A	ACTIVE	3/8"	N/A	SO	H-26384(H-9)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Pass Sample Return												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
E51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E51-F001 Turb Exh Inbrd Iso	2	N	C	ACTIVE	10"	Stop CV	NA	H-26023(G-5)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4,7,22,42
												CTO	CVCM		42SV-SUV-040-2	
2E51-F002 Turb Exh Drn Torus Iso	2	N	C	ACTIVE	2"	Stop CV	NA	H-26023(F-5)	C	C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4,11,42
												CTO	CVCM		42SV-SUV-040-2	
2E51-F003 Pump Suct Torus Inbrd Iso	2	N	B	ACTIVE	6"	BFV	AO	H-26023(H-7)	O	O/C	O	PIT	2Y		34SV-E51-001-2	Note 4
												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	
2E51-F007 Steam Supply Inbrd CIV	1	N	A	ACTIVE	4"	GV	MO	H-26023(C-5)	O	C	AI	LT	CIV		42SV-TET-001-2	NA
												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-6	34SV-SUV-016-2	
2E51-F008 Steam Supply Outbrd CIV	1	N	A	ACTIVE	4"	GV	MO	H-26023(C-6)	O	C	AI	LT	CIV		42SV-TET-001-2	NA
												STC	Qtr		34SV-E51-001-2	
												PIT	2Y		34SV-SUV-016-2	
2E51-F010 Pump Suc from Cond Stor	2	Y	B	ACTIVE	6"	GV	MO	H-26023(C-8)	O	O/C	AI	PIT	2Y		34SV-E51-001-2	Note 16
												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	
2E51-F011 Pump Suc Cond Stor	2	Y	C	ACTIVE	6"	CV	NA	H-26023(C-8)	C	O	NA	CTC	CVCM		42SV-SUV-040-2	Notes 16, 42
												CTO	CVCM		34SV-E51-002-2	
2E51-F012 Pump Outbrd Disch	2	Y	B	ACTIVE	4"	GV	MO	H-26023(D-6)	O	O	AI	PIT	2Y		34SV-E51-001-2	Note 16
												STO	Qtr		34SV-E51-001-2	

HATCH UNIT 2
E51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E51-F013	2	N	A	ACTIVE	4"	GV	MO	H-26023(D-6)	C	O/C	AI	LT	PIV	RR - V-10	42SV-TET-001-2	NA
Pump Outbrd Disch PIV												PIT	2Y		34SV-E51-001-2	
												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	
2E51-F014	2	N	AC	ACTIVE	4"	CV	NA	H-26023(D-6)	C	O/C	NA	CTC	Note 12		42SV-TET-001-2	Notes 15, 22
Pump Disch												LT	PIV	RR - V-10	42SV-TET-001-2	
												CTO	Qtr		34SV-E51-002-2	
2E51-F017	2	Y	C	ACTIVE	1"	RV	NA	H-26024(B-6)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	Note 16
Pump Suct RV																
2E51-F019	2	N	B	ACTIVE	2"	GLV	MO	H-26023(F-7)	C	O/C	AI	PIT	2Y		34SV-E51-001-2	Note 4
Pump Min Flow Inbrd Iso												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	
2E51-F021	2	N	C	ACTIVE	2"	CV	NA	H-26023(F-7)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4, 42
Pump Min Flow Outbrd Iso												CTO	CVCM		42SV-SUV-040-2	
2E51-F022	2	Y	B	ACTIVE	4"	GLV	MO	H-26023(C-6)	C	C	AI	PIT	2Y		34SV-E51-001-2	Notes 16
Pump Test Bypass												STC	Qtr		34SV-E51-001-2	
2E51-F028	2	N	C	ACTIVE	2"	CV	NA	H-26023(F-7)	C	C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4,11,42
Turb Exh Drn												CTO	CVCM		42SV-SUV-040-2	
2E51-F029	2	Y	B	ACTIVE	6"	GV	MO	H-26023(C-8)	C	O/C	AI	PIT	2Y		34SV-E51-001-2	Note 16
Pump Suc Shutoff												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	

HATCH UNIT 2
E51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E51-F030	2	Y	C	ACTIVE	6"	CV	NA	H-26023(H-8)	C	O	NA	CTO	CVCM		42SV-SUV-040-2	Notes 16, 19, 42
Pump Suct												CTC	CVCM		42SV-SUV-040-2	
2E51-F031	2	N	B	ACTIVE	6"	GV	MO	H-26023(H-7)	C	O/C	AI	PIT	2Y		34SV-E51-001-2	Note 4
Pump Suct Torus Outbrd Iso												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	
2E51-F040	2	N	C	ACTIVE	10"	CV	NA	H-26023(F-5)	C	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 4,7,22,42
Turb Exh Outbrd Iso												CTO	CVCM		42SV-SUV-040-2	
2E51-F044A	1	N	AC	ACTIVE	1"	EFCV	NA	H-26023(B-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2E51-F044B	1	N	AC	ACTIVE	1"	EFCV	NA	H-26023(B-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2E51-F044C	1	N	AC	ACTIVE	1"	EFCV	NA	H-26023(B-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2E51-F044D	1	N	AC	ACTIVE	1"	EFCV	NA	H-26023(B-5)	O	C	NA	LT	LTV		57SV-SUV-004-2	
Inst EFCV												CTC	TS	RR - V-9	57SV-SUV-004-2	
												PIT	TS		57SV-SUV-004-2	
2E51-F045	2	Y	B	ACTIVE	4"	GLV	MO	H-26024(C-10)	C	O/C	AI	PIT	2Y		34SV-E51-001-2	Note 16
Steam Supply Shutoff												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	

HATCH UNIT 2
E51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2E51-F046	2	Y	B	ACTIVE	2"	GLV	MO	H-26024(D-6)	C	O	AI	PIT	2Y		34SV-E51-001-2	Note 16
Turb Lube Oil Cooling												STO	Qtr		34SV-E51-001-2	
2E51-F047	2	Y	C	ACTIVE	2"	CV	NA	H-26024(G-7)	C	C	NA	CTC	CVCM		42SV-SUV-040-2	Notes 16, 19, 42
Cond Pump Rtrn Line CV												CTO	CVCM		42SV-SUV-040-2	
2E51-F102	2	Y	C	ACTIVE	1 1/2"	CV	NA	H-26023(F-5)	C	O/C	NA	CTC	RO		42SV-TET-001-2	Notes 16, 20, 22
Vacuum Relief												CTO	RO		42SV-TET-001-2	
2E51-F103	2	Y	C	ACTIVE	1 1/2"	CV	NA	H-26023(F-5)	C	O/C	NA	CTC	RO		42SV-TET-001-2	Notes 16, 20, 22
Vacuum Relief												CTO	RO		42SV-TET-001-2	
2E51-F104	2	N	A	ACTIVE	1 1/2"	GV	MO	H-26023(F-5)	O	O/C	AI	LT	CIV		42SV-TET-001-2	NA
Vac Relief Outbrd Torus CIV												PIT	2Y		34SV-E51-001-2	
												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	
2E51-F105	2	N	A	ACTIVE	1 1/2"	GV	MO	H-26023(F-4)	O	O/C	AI	LT	CIV		42SV-TET-001-2	NA
Vac Relief Inbrd Torus CIV												PIT	2Y		34SV-E51-001-2	
												STO	Qtr		34SV-E51-001-2	
												STC	Qtr		34SV-E51-001-2	

HATCH UNIT 2
G11

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2G11-F003 DW Flr Drns CIV	2	N	A	ACTIVE	4"	GV	AO	H-26026(B-3)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2G11-F004 DW Flr Drns CIV	2	N	A	ACTIVE	4"	GV	AO	H-26026(B-4)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2G11-F019 DW Equip Drns CIV	2	N	A	ACTIVE	4"	GV	AO	H-26026(E-4)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2G11-F020 DW Equip Drns CIV	2	N	A	ACTIVE	4"	GV	AO	H-26026(E-4)	O	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2G11-F2027 DW Floor Drn Disch Relief	3	N	C	ACTIVE	1"	RV	NA	H-26026(B-2)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	
2G11-F2028 DW Equip Drn Disch Relief	3	N	C	ACTIVE	1"	RV	NA	H-26026(D-3)	C	O/C	NA	RV	10Y		42SV-SUV-004-0	
2G11-F852 Passive CIV	2	N	A	PASSIVE	1-1/2"	Man GV	NA	H-26026(E-11)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA
2G11-F853 Passive CIV	2	N	A	PASSIVE	1-1/2"	Man GV	NA	H-26026(D-11)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA

HATCH UNIT 2
G31

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2G31-F001	1	N	A	ACTIVE	6"	GV	MO	H-26036(C-2)	O	C	AI	LT	CIV		42SV-TET-001-2	NA
RWCU Pump Suc Inbrd CIV												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-7	34SV-SUV-016-2	
2G31-F004	1	N	A	ACTIVE	6"	GV	MO	H-26036(C-3)	O	C	AI	LT	CIV		42SV-TET-001-2	NA
RWCU Pump Suc Outbrd CIV												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-7	34SV-SUV-016-2	
2G31-F039	2	Y	C	ACTIVE	4"	CV	NA	H-26036(B-3)	O	C	NA	CTC	CVCM		42SV-SUV-040-2	
RWCU Return												CTO	CVCM		NA	
2G31-F144	2	N	C	ACTIVE	4"	CV	NA	H-26036(B-4)	O	C	NA	CTC	CVCM		42SV-SUV-040-2	
RWCU Return												CTO	CVCM		NA	

HATCH UNIT 2
G51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2G51-F011 Passive Cont Bndy	2	N	B	PASSIVE	3"	Control	AO	H-26042(C-5)	C	C	C	PIT	2Y		34SV-SUV-008-2	Notes 4, 8
2G51-F012 Passive Cont Bndy	2	N	B	PASSIVE	3"	Control	AO	H-26042(C-5)	C	C	C	PIT	2Y		34SV-SUV-008-2	Notes 4, 8
2G51-F013 Cond Transfer	2	N	B	PASSIVE	3"	Control	AO	H-26042(C-2)	C	C	C	PIT	2Y		34SV-SUV-008-2	Note 8
2G51-F017 Cond Transfer	2	N	B	PASSIVE	3"	Control	AO	H-26042(C-2)	C	C	C	PIT	2Y		34SV-SUV-008-2	Note 8

HATCH UNIT 2
P21

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P21-F032 Passive CIV	2	N	A	PASSIVE	2"	Man GV	NA	H-26047(F-2)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA
2P21-F034 Passive CIV	2	N	A	PASSIVE	2"	Man GV	NA	H-26047(E-2)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA

HATCH UNIT 2
P33

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P33-F002	2	N	A	ACTIVE	1"	GLV	AO	H-26048(B-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F003	2	N	A	ACTIVE	1"	GLV	AO	H-26048(C-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F004	2	N	A	ACTIVE	1"	GLV	AO	H-26048(D-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F005	2	N	A	ACTIVE	1"	GLV	AO	H-26048(E-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F006	2	N	A	ACTIVE	1"	GLV	AO	H-26048(F-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
P33

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P33-F007	2	N	A	ACTIVE	1"	GLV	AO	H-26048(H-4)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F010	2	N	A	ACTIVE	1"	GLV	AO	H-26048(B-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F011	2	N	A	ACTIVE	1"	GLV	AO	H-26048(C-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F012	2	N	A	ACTIVE	1"	GLV	AO	H-26048(D-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F013	2	N	A	ACTIVE	1"	GLV	AO	H-26048(E-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
P33

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P33-F014	2	N	A	ACTIVE	1"	GLV	AO	H-26048(F-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	
2P33-F015	2	N	A	ACTIVE	1"	GLV	AO	H-26048(H-5)	O	O/C	O	PIT	2Y		34SV-SUV-008-2	NA
H2 & O2 Analy CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-SUV-008-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
P41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P41-F035A HPCI Pump Rm Cooler	3	N	B	ACTIVE	2"	GLV	AO	H-26051(C-4)	C	O	O	STO	Qtr		34SV-E41-001-2	NA
2P41-F035B HPCI Pump Rm Cooler	3	N	B	ACTIVE	2"	GLV	AO	H-26051(C-5)	C	O	O	STO	Qtr		34SV-E41-001-2	NA
2P41-F036A RHR & CS Pump Rm Cooler	3	N	B	ACTIVE	3"	GLV	AO	H-26051(C-5)	C	O	O	STO	Qtr		34SV-E21-001-2	NA
2P41-F036B RHR & CS Pump Rm Cooler	3	N	B	ACTIVE	3"	GLV	AO	H-26051(C-6)	C	O	O	STO	Qtr		34SV-E21-001-2	NA
2P41-F037A RHR Pump Cooler	3	N	B	ACTIVE	1-1/2"	GLV	AO	H-26050(D-7)	C	O	O	STO	Qtr		34SV-E11-001-2	NA
2P41-F037B RHR Pump Cooler	3	N	B	ACTIVE	1-1/2"	GLV	AO	H-26051(D-9)	C	O	O	STO	Qtr		34SV-E11-001-2	NA
2P41-F037C RHR Pump Cooler	3	N	B	ACTIVE	1-1/2"	GLV	AO	H-26050(D-8)	C	O	O	STO	Qtr		34SV-E11-001-2	NA
2P41-F037D RHR Pump Cooler	3	N	B	ACTIVE	1-1/2"	GLV	AO	H-26051(D-8)	C	O	O	STO	Qtr		34SV-E11-001-2	NA
2P41-F039A RHR Pump Rm Cooler	3	N	B	ACTIVE	3"	GLV	AO	H-26050(D-9)	C	O	O	STO	Qtr		34SV-E21-001-2	NA
2P41-F039B RHR Pump Rm Cooler	3	N	B	ACTIVE	3"	GLV	AO	H-26050(D-9)	C	O	O	STO	Qtr		34SV-E21-001-2	NA
2P41-F040A RCIC Pump Rm Cooler Control	3	Y	B	ACTIVE	2"	GLV	AO	H-26050(D-5)	C	O	O	STO	Qtr		34SV-E51-001-2	Notes 16, 21

HATCH UNIT 2
P41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P41-F040B RCIC Pump Rm Cooler Control	3	Y	B	ACTIVE	2"	GLV	AO	H-26050(D-5)	C	O	O	STO	Qtr		34SV-E51-001-2	Notes 16, 21
2P41-F064 Division 1 SW Supply	3	N	C	ACTIVE	10"	CV	NA	H-26050(E-10)	O	O	NA	CTO	CVCM		42SV-SUV-040-2	Note 42
												CTC	CVCM		42SV-SUV-040-2	
2P41-F065 Division 2 SW Supply	3	N	C	ACTIVE	10"	CV	NA	H-26051(B-10)	O	O	NA	CTO	CVCM		42SV-SUV-040-2	Note 42
												CTC	CVCM		42SV-SUV-040-2	
2P41-F066 SW to ESF Coolers Iso	3	N	B	PASSIVE	10"	BFV	AO	H-26050(E-10)	O	O	O	PIT	2Y		34SV-SUV-016-2	Note 8
2P41-F067 SW to ESF Coolers Iso	3	N	B	PASSIVE	10"	BFV	AO	H-26051(B-10)	O	O	O	PIT	2Y		34SV-SUV-016-2	Note 8
2P41-F098 Control Rm HVAC	3	N	C	ACTIVE	4"	CV	NA	H-26051(B-4)	O	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
												CTO	CVCM		42SV-SUV-040-2	
2P41-F105 Control Rm HVAC	3	N	C	ACTIVE	3"	CV	NA	H-26050(F-4)	O	O/C	NA	CTC	CVCM		42SV-SUV-040-2	Note 42
												CTO	CVCM		42SV-SUV-040-2	
2P41-F311A SW Pump Disch	3	N	C	ACTIVE	18"	CV	NA	H-21033(B-3)	O/C	O/C	NA	CTO	CVCM		34SV-P41-001-2	Notes 7, 22, 42
												CTC	CVCM		42SV-SUV-040-2	
2P41-F311B SW Pump Disch	3	N	C	ACTIVE	18"	CV	NA	H-21033(E-3)	O/C	O/C	NA	CTO	CVCM		34SV-P41-001-2	Notes 7, 22, 42
												CTC	CVCM		42SV-SUV-040-2	
2P41-F311C SW Pump Disch	3	N	C	ACTIVE	18"	CV	NA	H-21033(C-3)	O/C	O/C	NA	CTO	CVCM		34SV-P41-001-2	Notes 7, 22, 42
												CTC	CVCM		42SV-SUV-040-2	

HATCH UNIT 2
P41

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P41-F311D	3	N	C	ACTIVE	18"	CV	NA	H-21033(F-3)	O/C	O/C	NA	CTO	CVCM		34SV-P41-001-2	Notes 7, 22, 42
SW Pump Disch												CTC	CVCM		42SV-SUV-040-2	
2P41-F316A	3	N	B	ACTIVE	30"	BFV	MO	H-21033(A-9)	O	C	AI	PIT	2Y		34SV-SUV-016-2	NA
SW to Turbine Bldg Shutoff												STC	CS	CSJ - V-9	34SV-SUV-016-2	
2P41-F316B	3	N	B	ACTIVE	30"	BFV	MO	H-21033(F-9)	O	C	AI	PIT	2Y		34SV-SUV-016-2	NA
SW to Turbine Bldg Shutoff												STC	CS	CSJ - V-9	34SV-SUV-016-2	
2P41-F316C	3	N	B	ACTIVE	30"	BFV	MO	H-21033(A-10)	O	C	AI	PIT	2Y		34SV-SUV-016-2	NA
SW to Turbine Bldg Shutoff												STC	CS	CSJ - V-9	34SV-SUV-016-2	
2P41-F316D	3	N	B	ACTIVE	30"	BFV	MO	H-21033(F-10)	O	C	AI	PIT	2Y		34SV-SUV-016-2	NA
SW to Turbine Bldg Shutoff												STC	CS	CSJ - V-9	34SV-SUV-016-2	
2P41-F321	3	N	C	ACTIVE	6"	CV	NA	H-21033(J-2)	C	O/C	NA	CTC	Qtr		34SV-P41-003-2	Notes 7, 22, 35
Stby Diesel SW Pump Disch												CTO	Qtr		34SV-P41-003-2	
												CTC	Qtr		34SV-R43-012-2	
												CTO	Qtr		34SV-R43-012-2	
2P41-F339A	3	N	B	ACTIVE	6"	BFV	AO	H-21033(J-8)	C	O	O	STO	Qtr		34SV-R43-001-2	NA
Diesel Gen Cooling																
2P41-F339B	3	N	B	ACTIVE	6"	BFV	AO	H-21033(J-6)	C	O	O	STO	Qtr		34SV-R43-003-2	NA
Diesel Gen Cooling																
2P41-F340	3	N	B	ACTIVE	6"	BFV	AO	H-11600(B-5)	C	O	O	STO	Qtr		34SV-P41-003-2	NA
Diesel Gen Cooling																

HATCH UNIT 2
P42

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P42-F051	2	N	A	ACTIVE	6"	GV	MO	H-26055(B-5)	O	C	AI	LT	CIV		42SV-TET-001-2	NA
RBCCW to Recir CIV												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-10	34SV-SUV-016-2	
2P42-F052	2	N	A	ACTIVE	6"	GV	MO	H-26055(C-5)	O	C	AI	LT	CIV		42SV-TET-001-2	NA
RBCCW to Recir CIV												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-10	34SV-SUV-016-2	
2P42-F083	2	N	C	ACTIVE	1"	RV	NA	H-26055(C-4)	C	O	NA	RV	10Y		42SV-SUV-004-0	NA
Thermal RV																

HATCH UNIT 2
P51

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P51-F513 Passive CIV	2	N	A	PASSIVE	2"	Man GLV	NA	H-26058(F-3)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA
2P51-F651 Passive CIV	2	N	A	PASSIVE	2"	Man GLV	NA	H-26058(F-3)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA

HATCH UNIT 2
P52

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P52-F340	NA	Y	C	ACTIVE	1"	CV	NA	H-26070(H-7)	O/C	C	NA	LT	Note 32		42SV-TET-004-2	Note 30
Accum A001 Inlet CV												CTC	Note 32		NA	
												CTO	DNO		NA	
2P52-F343	NA	Y	C	ACTIVE	1"	CV	NA	H-26064(E-8)	O/C	C	NA	LT	Note 32		42SV-TET-004-2	Note 30
Accum A002 Inlet CV												CTC	Note 32		NA	
												CTO	DNO		NA	
2P52-F346	NA	Y	C	ACTIVE	1"	CV	NA	H-26064(F-9)	O/C	C	NA	LT	Note 31		42SV-TET-004-2	Note 30
Accum A003 Inlet CV												CTC	Note 31		NA	
												CTO	DNO		NA	
2P52-F349	NA	Y	C	ACTIVE	1"	CV	NA	H-26064(F-9)	O/C	C	NA	LT	Note 31		42SV-TET-004-2	Note 30
Accum A004 Inlet CV												CTC	Note 31		NA	
												CTO	DNO		NA	
2P52-F416	NA	Y	C	ACTIVE	1"	CV	NA	H-26070(H-7)	O/C	C	NA	LT	Note 32		42SV-TET-004-2	Note 30
Accum A015 Inlet CV												CTC	Note 32		NA	
												CTO	DNO		NA	
2P52-F419	NA	Y	C	ACTIVE	1"	CV	NA	H-26070(F-7)	O/C	C	NA	LT	Note 32		42SV-TET-004-2	Note 30
Accum A016 Inlet CV												CTC	Note 32		NA	
												CTO	DNO		NA	
2P52-F458	NA	Y	C	ACTIVE	1"	CV	NA	H-26070(H-5)	O/C	C	NA	LT	Note 32		42SV-TET-004-2	Note 30
Accum A013 Inlet CV												CTC	Note 32		NA	
												CTO	DNO		NA	

HATCH UNIT 2
P52

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P52-F461 Accum A014 Inlet CV	NA	Y	C	ACTIVE	1"	CV	NA	H-26070(H-5)	O/C	C	NA	LT	Note 32		42SV-TET-004-2	Note 30
												CTC	Note 32		NA	
												CTO	DNO		NA	
2P52-F681 Accum A017 Inlet CV	NA	Y	C	ACTIVE	1"	CV	NA	H-26064(E-3)	O/C	C	NA	LT	Note 32		42SV-TET-004-2	Note 30
												CTC	Note 32		NA	
												CTO	DNO		NA	
2P52-F971 Accum A018 Inlet CV	NA	Y	C	ACTIVE	1"	CV	NA	H-26070(I-7)	O/C	C	NA	LT	Note 32		42SV-TET-004-2	Note 30
												CTC	Note 32		NA	
												CTO	DNO		NA	

HATCH UNIT 2
P64

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P64-F045	2	N	A	ACTIVE	6"	GLV	MO	H-26081(H-2)	O	C	AI	LT	CIV		42SV-TET-001-2	NA
Chilled Water CIV												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-8	34SV-SUV-016-2	
2P64-F047	2	N	A	ACTIVE	6"	GLV	MO	H-26081(G-11)	O	C	AI	LT	CIV		42SV-TET-001-2	NA
Chilled Water CIV												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-8	34SV-SUV-016-2	

HATCH UNIT 2
P70

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2P70-F002 DW Pneumatic CIV	2	N	A	PASSIVE	1"	GLV	AO	H-26066(F-8)	C	C	C	PIT	2Y		34SV-SUV-008-2	Note 8
												LT	CIV		42SV-TET-001-2	
2P70-F003 DW Pneumatic CIV	2	N	A	PASSIVE	1"	GLV	AO	H-26066(F-8)	C	C	C	PIT	2Y		34SV-SUV-008-2	Note 8
												LT	CIV		42SV-TET-001-2	
2P70-F004 DW Pneumatic CIV	2	N	A	ACTIVE	2"	GLV	SO	H-26066(B-9)	O	O/C	O	LT	CIV		42SV-TET-001-2	NA
												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-12	34SV-SUV-016-2	
2P70-F005 DW Pneumatic CIV	2	N	A	ACTIVE	2"	GLV	SO	H-26066(B-9)	O	O/C	O	LT	CIV		42SV-TET-001-2	NA
												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-12	34SV-SUV-016-2	
2P70-F066 DW Pneumatic CIV	2	N	A	ACTIVE	2"	GLV	SO	H-26066(D-9)	O	O/C	O	LT	CIV		42SV-TET-001-2	NA
												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-12	34SV-SUV-016-2	
2P70-F067 DW Pneumatic CIV	2	N	A	ACTIVE	2"	GLV	SO	H-26066(D-9)	O	O/C	O	LT	CIV		42SV-TET-001-2	NA
												PIT	2Y		34SV-SUV-016-2	
												STC	CS	CSJ - V-12	34SV-SUV-016-2	

HATCH UNIT 2
R43

Valve ID / Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2R43-F012A	NA	Y	C	ACTIVE	2"	CV	NA	H-21074(H-10)	C	O/C	NA	CTC	SA		34SV-R43-003-2	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-003-2	
												CTC	SA		34SV-R43-006-2	
												CTO	SA		34SV-R43-006-2	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
												CTC	SA		34SV-R43-013-2	
												CTO	SA		34SV-R43-013-2	
2R43-F012B	NA	Y	C	ACTIVE	2"	CV	NA	H-21074(H-9)	C	O/C	NA	CTC	SA		34SV-R43-003-2	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-003-2	
												CTC	SA		34SV-R43-006-2	
												CTO	SA		34SV-R43-006-2	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
												CTC	SA		34SV-R43-013-2	
												CTO	SA		34SV-R43-013-2	
2R43-F012C	NA	Y	C	ACTIVE	2"	CV	NA	H-21074(H-8)	C	O/C	NA	CTC	SA		34SV-R43-003-2	Notes 16, 22, 37
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-003-2	
												CTC	SA		34SV-R43-006-2	
												CTO	SA		34SV-R43-006-2	
2R43-F012D	NA	Y	C	ACTIVE	2"	CV	NA	H-21074(H-7)	C	O/C	NA	CTC	SA		34SV-R43-003-2	Notes 16, 22, 37
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-003-2	
												CTC	SA		34SV-R43-006-2	
												CTO	SA		34SV-R43-006-2	

HATCH UNIT 2
R43

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2R43-F013A	NA	Y	C	ACTIVE	2"	CV	NA	H-21074(F-10)	C	O/C	NA	CTC	SA		34SV-R43-001-2	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-001-2	
												CTC	SA		34SV-R43-004-2	
												CTO	SA		34SV-R43-004-2	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
												CTC	SA		34SV-R43-011-2	
												CTO	SA		34SV-R43-011-2	
2R43-F013B	NA	Y	C	ACTIVE	2"	CV	NA	H-21074(F-10)	C	O/C	NA	CTC	SA		34SV-R43-001-2	Notes 16, 22, 23
DG Fuel Oil Pump Disch CV												CTO	SA		34SV-R43-001-2	
												CTC	SA		34SV-R43-004-2	
												CTO	SA		34SV-R43-004-2	
												CTC	SA		34SV-R43-010-0	
												CTO	SA		34SV-R43-010-0	
												CTC	SA		34SV-R43-011-2	
												CTO	SA		34SV-R43-011-2	
2R43-F013C	NA	Y	C	ACTIVE	2"	CV	NA	H-21074(F-8)	C	O/C	NA	CTC	SA		34SV-R43-001-2	Notes 16, 22, 23
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-001-2	
												CTC	SA		34SV-R43-004-2	
												CTO	SA		34SV-R43-004-2	
2R43-F013D	NA	Y	C	ACTIVE	2"	CV	NA	H-21074(F-8)	C	O/C	NA	CTC	SA		34SV-R43-001-2	Notes 16, 22, 23
DG Fuel Oil Day Tank Inlet CV												CTO	SA		34SV-R43-001-2	
												CTC	SA		34SV-R43-004-2	
												CTO	SA		34SV-R43-004-2	

HATCH UNIT 2
R43

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2R43-F029A	NA	Y	C	ACTIVE	3/4"	CV	NA	H-21074(C-10)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
Air Receiver Inlet CV												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	
2R43-F029C	NA	Y	C	ACTIVE	3/4"	CV	NA	H-21074(C-10)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
Air Receiver Inlet CV												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	
2R43-F032A	NA	Y	C	ACTIVE	1/2"	RV	NA	H-21074(B-9)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
Air Receiver RV																
2R43-F032C	NA	Y	C	ACTIVE	1/2"	RV	NA	H-21074(B-9)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
Air Receiver RV																
2R43-F033A	NA	Y	C	ACTIVE	1/2"	RV	NA	H-21074(B-11)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
Air Receiver RV																
2R43-F033C	NA	Y	C	ACTIVE	1/2"	RV	NA	H-21074(B-11)	C	O/C	NA	RV	Note 34		52IT-MME-006-0	Note 16
Air Receiver RV																
2R43-F042A	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-21074(B-7)	C	O/C	NA	STC	SA		34SV-R43-001-2	Notes 16, 24
DG Air Start Valve												STO	SA		34SV-R43-001-2	
												STC	SA		34SV-R43-004-2	
												STO	SA		34SV-R43-004-2	
												STC	SA		34SV-R43-011-2	
												STO	SA		34SV-R43-011-2	

Version 1.0

HATCH UNIT 2
R43

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2R43-F042C DG Air Start Valve	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-21074(B-7)	C	O/C	NA	STC	SA		34SV-R43-003-2	Notes 16, 24
												STO	SA		34SV-R43-003-2	
												STC	SA		34SV-R43-006-2	
												STO	SA		34SV-R43-006-2	
												STC	SA		34SV-R43-013-2	
												STO	SA		34SV-R43-013-2	
2R43-F044A DG Air Start Valve	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-21074(A-7)	C	O/C	NA	STC	SA		34SV-R43-001-2	Notes 16, 24
												STO	SA		34SV-R43-001-2	
												STC	SA		34SV-R43-004-2	
												STO	SA		34SV-R43-004-2	
												STC	SA		34SV-R43-011-2	
												STO	SA		34SV-R43-011-2	
2R43-F044C DG Air Start Valve	NA	Y	B	ACTIVE	1 1/2"	N/A	SO	H-21074(A-7)	C	O/C	NA	STC	SA		34SV-R43-003-2	Notes 16, 24
												STO	SA		34SV-R43-003-2	
												STC	SA		34SV-R43-006-2	
												STO	SA		34SV-R43-006-2	
												STC	SA		34SV-R43-013-2	
												STO	SA		34SV-R43-013-2	
2R43-F095A Air Receiver Inlet CV	NA	Y	C	ACTIVE	3/4"	CV	NA	H-21074(C-10)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	
2R43-F095C Air Receiver Inlet CV	NA	Y	C	ACTIVE	3/4"	CV	NA	H-21074(C-10)	C	C	NA	CTC	Note 25		34IT-R43-001-0	Note 16
												CTC	Note 25		34SV-R43-014-0	
												CTO	DNO		NA	

HATCH UNIT 2
T23

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T23-F004 Passive CIV	2	N	A	PASSIVE	1"	Man GLV	NA	H-26057(D-3)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA
2T23-F005 Passive CIV	2	N	A	PASSIVE	1"	Man GLV	NA	H-26057(D-3)	LC	C	NA	LT	CIV		42SV-TET-001-2	NA

HATCH UNIT 2
T46

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T46-F001A	3	N	B	ACTIVE	18"	BFV	AO	H-26078(C-2)	C	O	O	PIT	2Y		34SV-T46-002-2	
Filter Bed Inlet from Rx Bldg												STO	Qtr		34SV-T46-002-2	
2T46-F001B	3	N	B	ACTIVE	18"	BFV	AO	H-26078(G-2)	C	O	O	PIT	2Y		34SV-T46-002-2	
Filter Bed Inlet from Rx Bldg												STO	Qtr		34SV-T46-002-2	
2T46-F002A	3	N	B	ACTIVE	18"	BFV	AO	H-26078(C-5)	C	O	O	PIT	2Y		34SV-T46-002-2	
SGTS Filter Outlet from Rx Bldg												STO	Qtr		34SV-T46-002-2	
2T46-F002B	3	N	B	ACTIVE	18"	BFV	AO	H-26078(G-5)	C	O	O	PIT	2Y		34SV-T46-002-2	
SGTS Filter Outlet from Rx Bldg												STO	Qtr		34SV-T46-002-2	
2T46-F003A	3	N	B	ACTIVE	18"	BFV	AO	H-26078(C-2)	C	O	O	PIT	2Y		34SV-T46-002-2	
SGTS Fltr Bed Inlet from RF												STO	Qtr		34SV-T46-002-2	
2T46-F003B	3	N	B	ACTIVE	18"	BFV	AO	H-26078(G-2)	C	O	O	PIT	2Y		34SV-T46-002-2	
SGTS Fltr Bed Inlet from RF												STO	Qtr		34SV-T46-002-2	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F103	2	N	A	ACTIVE	6"	BFV	AO	H-26083(D-10)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW & Torus Supply CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F104	2	N	A	ACTIVE	2"	GLV	AO	H-26083(G-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW & Torus Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F113	2	N	A	ACTIVE	2"	GLV	AO	H-26083(G-9)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Inerting Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F114	2	N	A	ACTIVE	2"	GLV	AO	H-26083(H-9)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Inerting Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F115	2	N	A	ACTIVE	2"	GLV	AO	H-26083(G-10)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Inerting Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F116	2	N	A	ACTIVE	2"	GLV	AO	H-26083(H-10)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Inerting Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F118A	2	N	A	ACTIVE	1"	GLV	AO	H-26083(J-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Makeup Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F118B	2	N	A	ACTIVE	1"	GLV	AO	H-26083(J-5)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Torus Makeup Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F209	2	N	A	ACTIVE	4"	BV	AO	H-26079(C-9)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Inboard CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F210	2	N	A	ACTIVE	4"	BV	AO	H-26079(C-9)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Outboard CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F211	2	N	A	ACTIVE	4"	BV	AO	H-26079(E-8)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Inboard CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F212	2	N	A	ACTIVE	4"	BV	AO	H-26079(E-8)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Outboard CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F307	2	N	A	ACTIVE	18"	BFV	AO	H-26084(C-9)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Purge Inlet Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F308	2	N	A	ACTIVE	18"	BFV	AO	H-26084(C-10)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Purge Inlet Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F309	2	N	A	ACTIVE	18"	BFV	AO	H-26084(E-10)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Torus Purge Inlet Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F310	2	N	A	ACTIVE	20"	BFV	AO	H-26084(F-10)	C	O/C	O	PIT	2Y		34SV-T48-001-2	NA
Torus Purge Vac Brker CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-T48-001-2	
												STC	Qtr		34SV-T48-001-2	
2T48-F311	2	N	A	ACTIVE	20"	BFV	AO	H-26084(F-9)	C	O/C	O	PIT	2Y		34SV-T48-001-2	NA
Torus Purge Vac Brker CIV												LT	CIV		42SV-TET-001-2	
												STO	Qtr		34SV-T48-001-2	
												STC	Qtr		34SV-T48-001-2	
2T48-F318	2	N	A	ACTIVE	18"	BFV	AO	H-26084(G-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Torus Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F319	2	N	A	ACTIVE	18"	BFV	AO	H-26084(D-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F320	2	N	A	ACTIVE	18"	BFV	AO	H-26084(D-3)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F321	2	N	A	ACTIVE	2"	GLV	AO	H-26083(G-7)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Inerting Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F322	2	N	A	ACTIVE	2"	GLV	AO	H-26083(H-7)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Inerting Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F323A	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F323B	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F323C	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F323D	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F323E	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F323F	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F323G	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F323H	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F323I	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F323J	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F323K	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F323L	2	N	C	ACTIVE	18"	Test CV	AO	H-26084(G-8)	C	O/C	NA	PIT	2Y		34SV-T48-002-2	Notes 26, 33
DW to Torus VB												PIT	2Y		52SV-T48-001-0	
												CTC	Qtr/RO		34SV-T48-002-2	
												CTO	Qtr/RO		34SV-T48-002-2	
												CTC	Qtr/RO		52SV-T48-001-0	
												CTO	Qtr/RO		52SV-T48-001-0	
2T48-F324	2	N	A	ACTIVE	18"	BFV	AO	H-26084(D-10)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Torus Purge Inlet Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F325	2	N	A	ACTIVE	2"	GLV	AO	H-26083(G-8)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Torus Inerting Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F326	2	N	A	ACTIVE	18"	BFV	AO	H-26084(G-3)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Torus Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F327	2	N	A	ACTIVE	2"	GLV	AO	H-26083(H-8)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Torus Inerting Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
T48

Valve ID / Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F328A Rx Bldg to Supp Cham VB	2	N	AC	ACTIVE	20"	Test CV	AO	H-26084(G-10)	C	O/C	NA	PIT	2Y		52SV-T48-003-0	Notes 26, 33
												PIT	2Y		34SV-T48-001-2	
												LT	CIV		42SV-TET-001-2	
												CTC	Qtr/RO		52SV-T48-003-0	
												CTO	Qtr/RO		52SV-T48-003-0	
												CTC	Qtr/RO		34SV-T48-001-2	
												CTO	Qtr/RO		34SV-T48-001-2	
2T48-F328B Rx Bldg to Supp Cham VB	2	N	AC	ACTIVE	20"	Test CV	AO	H-26084(G-10)	C	O/C	NA	PIT	2Y		52SV-T48-003-0	Notes 26, 33
												PIT	2Y		34SV-T48-001-2	
												LT	CIV		42SV-TET-001-2	
												CTC	Qtr/RO		52SV-T48-003-0	
												CTO	Qtr/RO		52SV-T48-003-0	
												CTC	Qtr/RO		34SV-T48-001-2	
												CTO	Qtr/RO		34SV-T48-001-2	
2T48-F332A Torus Purge Outlet Outbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-26084(E-3)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F332B Torus Purge Outlet Outbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-26084(G-3)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F333A Torus Purge Outlet Inbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-26084(E-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F333B	2	N	A	ACTIVE	2"	GLV	AO	H-26084(G-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Torus Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F334A	2	N	A	ACTIVE	2"	GLV	AO	H-26084(B-3)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F334B	2	N	A	ACTIVE	2"	GLV	AO	H-26084(C-3)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Purge Outlet Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F335A	2	N	A	ACTIVE	2"	GLV	AO	H-26084(B-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F335B	2	N	A	ACTIVE	2"	GLV	AO	H-26084(C-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
DW Purge Outlet Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F338	2	N	A	ACTIVE	2"	GLV	AO	H-26084(H-2)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Bypass-Outbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F339	2	N	A	ACTIVE	2"	GLV	AO	H-26084(H-3)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
Bypass-Inbrd CIV												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F340 Bypass-Outbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-26084(D-2)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F341 Bypass-Inbrd CIV	2	N	A	ACTIVE	2"	GLV	AO	H-26084(E-4)	C	C	C	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
												STC	Qtr		34SV-SUV-008-2	
2T48-F342A Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342B Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342C Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342D Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342E Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342F Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342G Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342H Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27

Version 1.0

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F342I Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342J Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342K Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F342L Torus to DW VB Test CIV	2	N	AP	PASSIVE	1/2"	GLV	SO	H-26084(H-8)	C	C	C	LT	CIV		42SV-TET-001-2	Note 27
2T48-F361A Torus Water Level CIV	2	N	A	PASSIVE	1"	GLV	AO	H-26084(G-9)	O	O/C	AI	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
2T48-F361B Torus Water Level CIV	2	N	A	PASSIVE	1"	GLV	AO	H-26084(G-5)	O	O/C	AI	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
2T48-F362A Torus Water Level Iso	2	N	B	PASSIVE	1"	GLV	AO	H-26084(H-9)	O	O/C	AI	PIT	2Y		34SV-SUV-008-2	Note 4
2T48-F362B Torus Water Level Iso	2	N	B	PASSIVE	1"	GLV	AO	H-26084(H-5)	O	O/C	AI	PIT	2Y		34SV-SUV-008-2	Note 4
2T48-F363A Press Transmitter CIV	2	N	A	PASSIVE	1"	GLV	AO	H-26084(E-8)	O	O/C	AI	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	
2T48-F363B Press Transmitter CIV	2	N	A	PASSIVE	1"	GLV	AO	H-26084(D-6)	O	O/C	AI	PIT	2Y		34SV-SUV-008-2	NA
												LT	CIV		42SV-TET-001-2	

HATCH UNIT 2
T48

Valve ID Description	Clas	Aug.	Cat.	A/P	Size	Valve Type	Act. Type	Drawing & Coord	Position Normal	Position Safety	Position Fail-Safe	Required Test	Freq.	Code Dev.	Procedure	Plan Notes
2T48-F364A	2	N	A	PASSIVE	1"	GLV	AO	H-26084(G-5)	O	O/C	AI	PIT	2Y		34SV-SUV-008-2	NA
Press Transmitter CIV												LT	CIV		42SV-TET-001-2	
2T48-F364B	2	N	A	PASSIVE	1"	GLV	AO	H-26084(G-8)	O	O/C	AI	PIT	2Y		34SV-SUV-008-2	NA
Press Transmitter CIV												LT	CIV		42SV-TET-001-2	

12.0 VALVE RELIEF REQUEST LOG

Relief Request	Component	Status*
RR-V-1	1C11-F010A&B 1C11-F011 1C11-F035A&B 1C11-F037	Approved by SER dated December 30, 2015
RR-V-2	1/2C51-Shear A, B, C, & D	Withdrawn
RR-V-3	1/2P41-F035A&B 1/2P41-F036A&B 1/2P41-F037A thru D 1/2P41-F039A&B 2P41-F339A&B 2P41-F340	Withdrawn
RR-V-4	N/A	Deleted
RR-V-5	1/2E41-F003 1/2E41-D004	Approved by SER dated December 30, 2015
RR-V-6	N/A	Deleted
RR-V-7	N/A	Deleted
RR-V-8	All IST Valves & Pumps	Approved by SER dated December 30, 2015
RR-V-9	EFCVs (See List)	Approved by SER dated December 30, 2015
RR-V-10	Valves (See List)	Approved by SER dated December 30, 2015

* Status as a result of latest IST Program Revision.

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED RELIEF IN ACCORDANCE WITH 10 CFR 50.55a(f)(6)(i)
RR-V-1

PLANT/UNIT:	Edwin I Hatch Nuclear Plant/Unit 1.
INTERVAL:	5th Interval beginning January 1, 2016 and ending December 31, 2025.
COMPONENTS AFFECTED:	1C11-F010A&B, 1C11-F011, 1C11-F035A&B, 1C11-F037
CODE EDITION AND ADDENDA:	ASME OM Code-2004 Edition with Addenda through OMb-2006
REQUIREMENTS:	Establish limiting values of valve stroke time and measure individual valve stroke time per ISTC-5131.

REASON FOR REQUEST: This relief request is a re-submittal of NRC approved 4th Interval relief request RR-V-1 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-V-1, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-V-1).

A limiting value of stroke time cannot be specified for the air operated scram discharge volume vent and drain valves and they cannot be individually stroked and timed. In order to prevent water hammer induced damage to the system during a full CRD scram, plant Technical Specifications require that system valve operation is adjusted so that the outboard vent and drain valves (F035A&B, F037) fully close at least five seconds after each respective inboard vent and drain valve (F010A&B, F011). All valves must be fully closed in less than forty-five (45) seconds.

Additionally, the system is adjusted so that the inboard vent and drain valves (F010A&B, F011) start to open at least five seconds after each respective outboard vent and drain valve (F035A&B, F037) upon reset of a full core scram. The valves are not equipped with individual valve control switches and cannot be individually stroke timed. Because of the adjustable nature of the valve control system, individual valve stroke timing would not provide any meaningful information for monitoring valve degradation. System design prevents stroke timing these valves during normal operation without disabling the Reactor Protection System Scram Signal to the valves. Disabling this signal requires the installation of electrical jumpers and the opening of links in energized control circuits which increase the potential for a Reactor Scram.

PROPOSED RELIEF AND BASIS: The valves will be exercised quarterly but not timed. Additionally, the total valve sequence response time will be verified to be less than Technical Specifications requirements during each refueling outage when a complete stroke time test is performed. The above proposed relief provides a reasonable assurance of operational readiness since the valves will be exercised quarterly and total valve response time will be tested each refueling outage. Based on the impracticality of performing testing in accordance with the Code requirements, and in consideration of the burden on SNC if the Code requirements were imposed, this proposed relief should be granted pursuant to 10 CFR 50.55a(f)(6)(i).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-V-1 for the Fourth 10 Year IST Interval

REFERENCES: NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627

<u>RR-V-2</u>

Withdrawn

RR-V-3

Withdrawn

RR-V-4

Deleted

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-V-5

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: 1E41-D003, 1E41-D004, 2E41-D003, 2E41-D004

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ASME OM Code, 2004 Edition, Appendix I, paragraph 1-1360 requires Class 2 and 3 nonreclosing pressure relief devices (rupture discs) to be replaced every 5 years, unless historical data indicates a requirement for more frequent replacement.

REASON FOR REQUEST: This alternative is a re-submittal of NRC approved 4th Interval relief request RR-V-5 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, RR-V-5, is based on the ASME OM Code-2004 Edition with Addenda through OMb-2006. There have been no substantive changes to this alternative, to the OM Code requirements or to the basis for use, which would alter the previous NRC Safety Evaluation conclusions. (See References for SER date and TAC numbers associated with RR-V-5).

The subject rupture discs are supplied by Continental Disc Corporation. Southern Nuclear Operating Company requested the supplier to perform cyclic testing, to destruction, of a disc that had previously been installed in the HPCI system at Plant Hatch. The test disc was installed in an appropriate disc holder and flange assembly which simulated the installed configuration. The rupture disc assembly was cycled from full vacuum to 70% of the ambient burst pressure (219 psig). The cycle testing was conducted at ambient room temperature. Since a rupture disc is a differential pressure relief device, cycling conditions were achieved by placing a constant 15 psig pressure on the downstream side of the rupture disc and cycling the upstream pressure from zero to 70% of the ambient burst pressure plus 15 psig. The 15 psig added to the upstream cycling pressure compensates for the constant 15 psig pressure on the downstream side. An electronic counter recorded each cycle. The test disc completed 2,788 cycles before failure occurred. The rupture disc burst in the normal fashion as with disc of this design.

The HPCI system is typically tested every 3 months, but for conservatism a test frequency of each month will be assumed. Monthly testing would result in approximately 72 tests during 3 operating cycles (i.e., 72 months). To meet the Code 5-year replacement frequency, the disc must be replaced every 2nd refueling outage (48 months) or after approximately 48 HPCI system tests. Therefore, a change from replacement every 48 months to every 72 months is insignificant when compared to the expected life of the disc as proven by the number of cycles required for disc rupture by vendor testing.

Plant Hatch operates on a 24-month fuel cycle. Replacement every 6 years results in replacement every 3rd refueling outage whereas a 5-year replacement results in replacement every 2nd refueling outage. Extension of the replacement frequency by 1-year will coincide with the fuel cycle for Plant Hatch.

PROPOSED ALTERNATIVE AND BASIS: The subject rupture discs will be replaced at least once every 3rd refueling outage, corresponding to once every 6 years.

As proven by the vendor testing, the subject rupture discs have adequate margin for operation well beyond the requested 6-year replacement frequency. Therefore, the proposed alternative provides an acceptable level of quality and safety and should be granted pursuant to 10CFR50.55a(z)(1).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS: This Relief Request was approved as RR-V-5 for the Fourth 10 Year IST Interval

REFERENCES: NRC Safety Evaluation dated February 14, 2006 - TAC Nos. MC6837, MC6838, MC7626 and MC7627

RR-V-6

Deleted

<u>**RR-V-7**</u>

Deleted

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(2)
RR-V-8

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED: Pumps and Valves contained within the Inservice Testing Program scope

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: This request applies to the following exam frequency requirements of the ASME OM Code.
ISTA-3120(a)- "The frequency for the inservice testing shall be in accordance with the requirements of Section IST."

ISTB-3400-	Frequency of Inservice Tests
ISTC-3510-	Exercising Test Frequency
ISTC-3540-	Manual Valves
ISTC-3630(a)-	Frequency
ISTC-3700-	Position Verification Testing
ISTC-5221(c)(3)-	"At least one valve from each group shall be disassembled and examined at each refueling outage; all valves in a group shall be disassembled and examined at least once every 8 years."
Appendix I, 1-1320-	Test Frequencies, Class 1 Pressure Relief Valves
Appendix I, 1-1330-	Test Frequencies, Class 1 Nonreclosing Pressure Relief Devices
Appendix I, 1-1340-	Test Frequencies- Class 1 Pressure Relief Devices That Are Used for Thermal Relief Application
Appendix I, 1-1350-	Test Frequencies- Class 2 and 3 Pressure Relief Valves
Appendix I, 1-1360-	Test Frequencies- Class 2 and 3 Nonreclosing Pressure Relief Devices
Appendix I, 1-1370-	Test Frequencies- Class 2 and 3 Primary Containment Vacuum Relief Valves
Appendix I, 1-1380-	Test Frequencies- Class 2 and 3 Vacuum Relief Valves Except for Primary Containment Vacuum Relief Valves
Appendix I, 1-1390-	Test Frequencies- Class 1 Pressure Relief Devices That Are Used for Thermal Relief Application
Appendix II, II-4000(a)(1)-	Performance Improvement Activities Interval
Appendix II, II-4000(b)(1)(e)-	Optimization of Condition Monitoring Activities Interval

REASON FOR REQUEST: Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (z)(2), relief is requested from the frequency specifications of the ASME OM Code. The basis of the relief request is that the Code requirement presents an undue hardship without a compensating increase in the level of quality or safety.

ASME OM Code Section IST establishes the inservice test frequency for all components within the scope of the Code. The frequencies (e.g., quarterly) have always been interpreted as "nominal" frequencies (generally as defined in the Table 3.2 of NUREG 1482, Revision 2) and Owners routinely applied the surveillance extension time period (i.e., grace period) contained in the plant Technical Specifications (TS) Surveillance Requirements (SRs). The TS typically allow for a less than or equal to 25% extension of the surveillance test interval to accommodate plant conditions that may not be suitable for conducting the surveillance (SR 3.0.2). However, regulatory issues have been raised concerning the applicability of the TS "Grace Period" to ASME OM Code required inservice test frequencies irrespective of allowances provided under TS Administrative Controls (i.e., TS 5.5.6, "Inservice Testing Program," invokes SR 3.0.2 for various OM Code frequencies).

The lack of a tolerance band on the ASME OM Code inservice test frequency restricts operational flexibility. There may be a conflict where a surveillance test could be required but where it is not possible or not desired that it be performed until sometime after a certain restricted plant condition is cleared . Therefore, to avoid this conflict, the surveillance test should be performed as soon as it is practicable. The NRC recognized this potential issue in the TS by allowing a frequency tolerance as described in TS SR 3.0.2. The lack of a similar tolerance applied to OM Code testing places an unusual hardship on the plant to adequately schedule work tasks without operational flexibility.

Thus, just as with TS required surveillance testing, some tolerance is needed to allow extending OM Code testing intervals. Interval extension is to facilitate test scheduling and considers plant operating conditions that may not be suitable for performance of the required testing (e.g., performance of the test would cause an unacceptable increase in the plant risk profile due to transient conditions or other ongoing surveillance, test or maintenance activities). Such extensions are not intended to be used repeatedly merely as an operational convenience to extend test intervals beyond those specified.

PROPOSED ALTERNATIVE AND BASIS: ASME OM Code establishes component test frequencies that are based either on elapsed time periods (e.g., quarterly, 2 years, etc.) or on the occurrence of plant conditions or events (e.g., cold shutdown, refueling outage, upon detection of a sample failure, following maintenance, etc.).

a. Components whose test frequencies are based on elapsed time periods shall undergo Inservice Testing at frequencies as specified in the Hatch Technical Specifications (TS 5.5.6) and shown in the following table:

Frequency	Specified Time Period Between Tests
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly	At least once per 92 days
Semiannually	At least once per 184 days
Yearly or Annually	At least once per 366 days

b. The specified time period between tests may be extended as follows:

   i. For periods specified as less than 2 years, the period may be extended by up to 25% for any given test.

   ii. For periods specified as greater than or equal to 2 years, the period may be extended by up to 6 months for any given test.

c. Components whose test frequencies are based on the occurrence of plant conditions or events (e.g., cold shutdown, refueling outage, upon detection of a sample failure, following maintenance, etc.) may not have their period between tests extended except as allowed by the ASME OM Code.

d. Period extensions may not be applied to the test frequency requirements specified in Subsection ISTD, Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-water Reactor Nuclear Power Plants, as Subsection ISTD contains its own rules for period extensions.

e. Period extensions of 25% may also be applied to accelerated test frequencies (e.g., pumps in Alert Range) and other less than two year test frequencies not specified in the table above.

This relief is requested citing the guidance found in ASME approved Code Case OMN-20. Based on the determination that compliance with the Code requirement results in a hardship without a compensating increase in the level of quality and safety, this proposed alternative should be granted pursuant to 10 CFR50.55a(z)(2).

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS:

1. Quad Cities Relief Request RV-01, SER dated 2/14/2013 (ML 13042A348)
2. Callaway Relief Request PR-04, SER dated 7/15/2014 (ML14178A769)
3. Calvert Cliffs Relief Request IST-RR-01 - approved in NRC Safety Evaluation dated 9/29/2014 (ML14247A555)
4. TMI Relief Request VR-02 – SER dated 8/15/2013 (ML13227A024)
5. Dresden Relief Request RV-01 – SER dated 10/31/2013 (ML13297A515)

REFERENCES:

1. NRC Regulatory Issue Summary 2012-10- "NRC STAFF POSITION ON APPLYING SURVEILLANCE REQUIREMENTS 3.0.2 AND 3.0.3 TO ADMINISTRATIVE CONTROLS PROGRAM TESTS
2. ASME OM Code Case OMN-20- "Inservice Test Frequency"

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-V-9

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED:

Comp ID	Unit	Code Class	Cat
1B21-F015A	1	1	A/C
1B21-F015B	1	1	A/C
1B21-F015C	1	1	A/C
1B21-F015D	1	1	A/C
1B21-F015E	1	1	A/C
1B21-F015F	1	1	A/C
1B21-F015G	1	1	A/C
1B21-F015H	1	1	A/C
1B21-F015J	1	1	A/C
1B21-F015K	1	1	A/C
1B21-F015L	1	1	A/C
1B21-F015M	1	1	A/C
1B21-F015N	1	1	A/C
1B21-F015P	1	1	A/C
1B21-F015R	1	1	A/C
1B21-F015S	1	1	A/C
1B21-F041	1	1	A/C
1B21-F043A	1	1	A/C
1B21-F043B	1	1	A/C
1B21-F045A	1	1	A/C
1B21-F045B	1	1	A/C
1B21-F047A	1	1	A/C
1B21-F047B	1	1	A/C
1B21-F049A	1	1	A/C
1B21-F049B	1	1	A/C
1B21-F051A	1	1	A/C
1B21-F051B	1	1	A/C
1B21-F051C	1	1	A/C

Comp ID	Unit	Code Class	Cat
1B21-F051D	1	1	A/C
1B21-F053A	1	1	A/C
1B21-F053B	1	1	A/C
1B21-F053C	1	1	A/C
1B21-F053D	1	1	A/C
1B21-F055	1	1	A/C
1B21-F057	1	1	A/C
1B21-F059A	1	1	A/C
1B21-F059B	1	1	A/C
1B21-F059C	1	1	A/C
1B21-F059D	1	1	A/C
1B21-F059E	1	1	A/C
1B21-F059F	1	1	A/C
1B21-F059G	1	1	A/C
1B21-F059H	1	1	A/C
1B21-F059L	1	1	A/C
1B21-F059M	1	1	A/C
1B21-F059N	1	1	A/C
1B21-F059P	1	1	A/C
1B21-F059R	1	1	A/C
1B21-F059S	1	1	A/C
1B21-F059T	1	1	A/C
1B21-F059U	1	1	A/C
1B21-F061	1	1	A/C
1B31-F003A	1	1	A/C
1B31-F003B	1	1	A/C
1B31-F004A	1	1	A/C
1B31-F004B	1	1	A/C

RR-V-9 (Cont.)

COMPONENTS AFFECTED:

Comp ID	Unit	Code Class	Cat	Comp ID	Unit	Code Class	Cat
1B31-F009A	1	1	A/C	2B21-F047A	2	1	A/C
1B31-F009B	1	1	A/C	2B21-F047B	2	1	A/C
1B31-F009C	1	1	A/C	2B21-F049A	2	1	A/C
1B31-F009D	1	1	A/C	2B21-F049B	2	1	A/C
1B31-F010A	1	1	A/C	2B21-F051A	2	1	A/C
1B31-F010B	1	1	A/C	2B21-F051B	2	1	A/C
1B31-F010C	1	1	A/C	2B21-F051C	2	1	A/C
1B31-F010D	1	1	A/C	2B21-F051D	2	1	A/C
1B31-F011A	1	1	A/C	2B21-F053A	2	1	A/C
1B31-F011B	1	1	A/C	2B21-F053B	2	1	A/C
1B31-F011C	1	1	A/C	2B21-F053C	2	1	A/C
1B31-F011D	1	1	A/C	2B21-F053D	2	1	A/C
1B31-F012A	1	1	A/C	2B21-F055	2	1	A/C
1B31-F012B	1	1	A/C	2B21-F057	2	1	A/C
1B31-F012C	1	1	A/C	2B21-F059A	2	1	A/C
1B31-F012D	1	1	A/C	2B21-F059B	2	1	A/C
1B31-F040A	1	1	A/C	2B21-F059C	2	1	A/C
1B31-F040B	1	1	A/C	2B21-F059D	2	1	A/C
1B31-F040C	1	1	A/C	2B21-F059E	2	1	A/C
1B31-F040D	1	1	A/C	2B21-F059F	2	1	A/C
1E21-F018A	1	1	A/C	2B21-F059G	2	1	A/C
1E21-F018B	1	1	A/C	2B21-F059H	2	1	A/C
1E21-F018C	1	1	A/C	2B21-F059L	2	1	A/C
1E41-F024A	1	1	A/C	2B21-F059M	2	1	A/C
1E41-F024B	1	1	A/C	2B21-F059N	2	1	A/C
1E41-F024C	1	1	A/C	2B21-F059P	2	1	A/C
1E41-F024D	1	1	A/C	2B21-F059R	2	1	A/C
1E51-F044A	1	1	A/C	2B21-F059S	2	1	A/C
1E51-F044B	1	1	A/C	2B21-F059T	2	1	A/C
1E51-F044C	1	1	A/C	2B21-F059U	2	1	A/C
1E51-F044D	1	1	A/C	2B21-F061	2	1	A/C
2B21-F041	2	1	A/C	2B21-F070A	2	1	A/C
2B21-F043A	2	1	A/C	2B21-F070B	2	1	A/C
2B21-F043B	2	1	A/C	2B21-F070C	2	1	A/C
2B21-F045A	2	1	A/C	2B21-F070D	2	1	A/C
2B21-F045B	2	1	A/C	2B21-F071A	2	1	A/C

COMPONENTS AFFECTED:

Comp ID	Unit	Code Class	Cat	Comp ID	Unit	Code Class	Cat
2B21-F071B	2	1	A/C	2B31-F011A	2	1	A/C
2B21-F071C	2	1	A/C	2B31-F011B	2	1	A/C
2B21-F071D	2	1	A/C	2B31-F011C	2	1	A/C
2B21-F072A	2	1	A/C	2B31-F011D	2	1	A/C
2B21-F072B	2	1	A/C	2B31-F012A	2	1	A/C
2B21-F072C	2	1	A/C	2B31-F012B	2	1	A/C
2B21-F072D	2	1	A/C	2B31-F012C	2	1	A/C
2B21-F073A	2	1	A/C	2B31-F012D	2	1	A/C
2B21-F073B	2	1	A/C	2B31-F040A	2	1	A/C
2B21-F073C	2	1	A/C	2B31-F040B	2	1	A/C
2B21-F073D	2	1	A/C	2B31-F040C	2	1	A/C
2B31-F003A	2	1	A/C	2B31-F040D	2	1	A/C
2B31-F003B	2	1	A/C	2E21-F018A	2	1	A/C
2B31-F004A	2	1	A/C	2E21-F018B	2	1	A/C
2B31-F004B	2	1	A/C	2E21-F018C	2	1	A/C
2B31-F009A	2	1	A/C	2E41-F024A	2	1	A/C
2B31-F009B	2	1	A/C	2E41-F024B	2	1	A/C
2B31-F009C	2	1	A/C	2E41-F024C	2	1	A/C
2B31-F009D	2	1	A/C	2E41-F024D	2	1	A/C
2B31-F010A	2	1	A/C	2E51-F044A	2	1	A/C
2B31-F010B	2	1	A/C	2E51-F044B	2	1	A/C
2B31-F010C	2	1	A/C	2E51-F044C	2	1	A/C
2B31-F010D	2	1	A/C	2E51-F044D	2	1	A/C

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ISTC-3522, "Category C Check Valves"

(a) "During operation at power, each check valve shall be exercised or examined in a manner that verifies obturator travel by using the methods in ISTC-5221."

(c) "If exercising is not practicable during operation at power and cold shutdown, it shall be performed during refueling outages."

ISTC- 3700, "Position Verification Testing"

"Valves with remote position indicators shall be observed locally at least once every 2 years to verify that valve operation is accurately indicated."

REASON FOR REQUEST: Pursuant to 10 CFR 50.55a, "Codes and Standards", paragraph (z)(1), relief is requested from the requirements of ASME OM Code ISTC-3522(a), ISTC-3522(c), and ISTC-3700 for the subject valves. The basis of the Relief Request is that the proposed alternative would provide an acceptable level of quality and safety.

PROPOSED ALTERNATIVE AND BASIS: Excess flow check valves will be tested on a representative sample basis at the frequency specified in Technical Specifications Surveillance Requirement 3.6.1.3.8.

Functional testing with verification that flow is checked will be performed per Technical Specification 3.6.1.3.8 during refueling outages. Surveillance Requirement 3.6.1.3.8 allows a "representative sample" of EFCVs to be tested every refueling outage, such that each EFCV will be individually tested approximately every ten years. The sample groups are representative of the various plant configurations, models, sizes, and operating environments.

The EFCVs have position indication in the control room. Check valve remote position indication is excluded from Regulatory Guide 1.97 as a required parameter for evaluating containment isolation. The remote position indication will be verified accurate at the same frequency as the functional test prescribed in Technical Specification Surveillance Requirement 3.6.1.3.8. Although inadvertent actuation of an EFCV during operation is highly unlikely due to the spring poppet design, Plant Hatch monitors the EFCVs indications on a daily basis as part of the Operations routine. Corrective Action documents are initiated for any EFCVs with abnormal position indication displays and repairs are scheduled for the next refueling outage.

Excess flow check valves are provided in each instrument process line that is part of the reactor coolant pressure boundary. The excess flow check valve is designed so that it will not close accidentally during normal operation, will close if a rupture of the instrument line occurs downstream of the valve, and can be reopened, when appropriate, after a closure.

As detailed in Unit 1 FSAR Section 5.2.2.5.4 and Unit 2 FSAR Section 6.2.5.3.3, Plant Hatch has incorporated into the design of each instrument source line a 0.25-inch restricting orifice as close to the RPV as possible. This is a redundant design feature which, along with the EFCV, will limit leakage to a level where the integrity and functional performance of the secondary containment and its associated air treatment systems (e.g., filters and the standby gas treatment system) are maintained. The coolant loss is well within the capabilities of the reactor coolant makeup system, and the potential offsite exposure is substantially below the guidelines of 10CFR100.

Additionally, the design and installation of the excess flow check valves at Plant Hatch follow the guidance of Regulatory Guide 1.11

PROPOSED ALTERNATIVE AND BASIS (Cont.):

Testing the subject valves quarterly or during cold shutdown is not practicable, based on plant conditions. These valves have been successfully tested throughout the life of Plant Hatch and they have shown no degradation or other signs of aging.

The technology for testing these valves is simple and has been demonstrated effectively during the operating history of Plant Hatch. The basis for this alternative is that testing a sample of EFCVs each refueling outage provides a level of safety and quality equivalent to that of the Code-required testing.

Excess flow check valves are required to be tested in accordance with ISTC-3522, which requires exercising check valves nominally every three months to the positions required to perform their safety functions. ISTC-3522(c) permits deferral of this requirement to every reactor refueling outage. Excess flow check valves are also required to be tested in accordance with ISTC-3700, which requires remote position indication verification at least once every 2 years.

10CFR50 Appendix J testing is only applicable to EFCVs if they perform a containment isolation function. EFCVs are not required to close in response to a containment isolation signal and are not required to operate under post-LOCA conditions. As discussed in Reference 2, the functioning of EFCVs is not necessary to remain within 10CFR100 limits. Consequently, for purpose of 10CFR50, Appendix J, CIV testing, EFCVs do not provide a containment isolation function and are exempt from consideration under Appendix J.

The testing described above requires removal of the associated instrument or instruments from service. Since these instruments are in use during plant operation, removal of any of these instruments from service may cause a spurious signal, which could result in a plant trip or an unnecessary challenge to safety systems. Additionally, process liquid will be contaminated to some degree, requiring special measures to collect flow from the vented instrument side and also will contribute to an increase in personnel radiation exposure.

Testing on a cold shutdown frequency is impractical considering the large number of valves to be tested and the locations in which the test fixtures must be located. Considering the number of valves to be tested and the conditions required for testing, it is also a hardship to test all of these valves during refueling outages. Improvements in refueling outage schedules have minimized the time that is planned for refueling and testing activities during the outages.

The excess flow check valve is a simple and reliable device. The major components are a poppet and spring. The spring holds the poppet open under static conditions. The valve will close upon sufficient differential pressure across the poppet.

Functional testing of the valve is accomplished by venting the instrument side of the valve. The resultant increase in flow imposes a differential pressure across the poppet, which compresses the spring and decreases flow through the valve. Industry experience as documented in GE Nuclear Energy topical report NEDO-32977-A, "Excess Flow Check Valve Testing Relaxation," indicates the EFCVs have

PROPOSED ALTERNATIVE AND BASIS (Cont.): a very low failure rate. The report indicates similarly that many reported test failures at other plants were related to test methodologies and not actual EFCV failures. In addition, the SER for that report assumed a 5 fold increase in failure rate to account for any potential aging influence and the resultant failure potential over 10 years was still found to not be significant. Test history at Plant Hatch shows a very low failure rate and no evidence of common mode failure, which is consistent with the findings of the NEDO report. The EFCVs at Plant Hatch, consistent with the industry, have exhibited a high degree of reliability, availability, and provide an acceptable level of quality and safety.

The Plant Hatch Technical Specifications detail what frequency is required to maintain a high degree of reliability and availability and as an alternative will provide an acceptable level of quality and safety. Therefore, Southern Nuclear Co. requests relief pursuant to 10CFR50.55a (z)(1) to test excess flow check valves on a representative sample basis and at the frequency specified in Plant Hatch Technical Specifications Surveillance Requirements (SR) 3.6.1.3.8.

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

PRECEDENTS:

1. Fermi 2 Relief Request VRR-011 (SER Sept. 2010 ML102360570)
2. Susquehanna Steam Electric Station Unit 2 – SER dated 4/11/2001 (ML010960041)
3. Nine Mile Point Nuclear Station – SER dated 9/17/2001 (ML012340462).

REFERENCES:

1. NRC Regulatory Guide 1.11, "INSTRUMENT LINES PENETRATING THE PRIMARY REACTOR CONTAINMENT"

2. GE Nuclear Energy topical report NEDO-32977-A, "Excess Flow Check Valve Testing Relaxation" as evaluated in SER dated 3/14/2000 (ML003729011)

3. Unit 1 FSAR 5.2.2.5.4 / Unit 2 FSAR 6.2.5.3.3.

SOUTHERN NUCLEAR OPERATING COMPANY
IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(1)
RR-V-10

PLANT/UNIT: Edwin I Hatch Nuclear Plant/Unit 1 and 2.

INTERVAL: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

COMPONENTS AFFECTED:

Valve No.	Description	ASME Class
1E11-F008	RHR SDC Suction Outtboard Isol. Valve	1
1E11-F009	RHR SDC Suction Inboard Isol. Valve	1
1E11-F015A	LPCI Inboard Isol. Valve	1
1E11-F015B	LPCI Inboard Isol. Valve	1
1E11-F050A	LPCI Injection Check Valve	1
1E11-F050B	LPCI Injection Check Valve	1
1E11-F122A	RHR F050A Bypass Valve	1
1E11-F122B	RHR F050B Bypass Valve	1
1E21-F005A	CS Injection Inboard Valve	1
1E21-F005B	CS Injection Inboard Valve	1
1E21-F006A	CS Injection Check Valve	1
1E21-F006B	CS Injection Check Valve	1
1E21-F037A	CS F006A Bypass Valve	1
1E21-F037B	CS F006B Bypass Valve	1
1E41-F005	HPCI Injection Check Valve	2
1E41-F006	HPCI Injection Outboard Isol. Valve	2
1E51-F013	RCIC Injection Outboard Isol. Valve	2
1E51-F014	RCIC Injection Check Valve	2
2E11-F008	RHR SDC Suction Outboard Isol. Valve	1
2E11-F009	RHR SDC Suction Inboard Isol. Valve	1
2E11-F015A	LPCI Inboard Isol. Valve	1
2E11-F015B	LPCI Inboard Isol. Valve	1
2E11-F050A	LPCI Injection Check Valve	1
2E11-F050B	LPCI Injection Check Valve	1
2E11-F122A	RHR F050A Bypass Valve	1
2E11-F122B	RHR F050B Bypass Valve	1
2E21-F005A	CS Injection Inboard Valve	1
2E21-F005B	CS Injection Inboard Valve	1
2E21-F006A	CS Injection Check Valve	1
2E21-F006B	CS Injection Check Valve	1
2E21-F037A	CS F006A Bypass Valve	1
2E21-F037B	CS F006B Bypass Valve	1
2E41-F005	HPCI Injection Check Valve	2
2E41-F006	HPCI Injection Outboard Isol. Valve	2
2E51-F013	RCIC Injection Outboard Isol. Valve	2
2E51-F014	RCIC Injection Check Valve	2

CODE EDITION AND ADDENDA: ASME OM Code-2004 Edition with Addenda through OMb-2006

REQUIREMENTS: ISTC-3630(a) – "Leakage Rate for other than Containment Isolation Valves" – Frequency. Tests shall be conducted at least once every 2 years.

REASON FOR REQUEST: Pursuant to 10 CFR 50.55a, "Codes and Standards", paragraph (a)(3), relief is requested from the requirement of ASME OM Code ISTC-3630(a). The basis of the relief request is that the proposed alternative would provide an acceptable level of quality and safety.

ISTC-3630(a) requires that leakage rate testing for pressure isolation valves be performed at least once every 2 years. Pressure Isolation Valves (PIVs) are not specifically included in the scope for performance-based testing as provided for in 10CFR50 Appendix J Option B. The concept behind the Option B alternative for containment isolation valves is that licensees should be allowed to adopt cost effective methods for complying with regulatory requirements. Additionally, NEI 94-01 describes the risk-informed basis for the extended test intervals under Option B. That justification shows that for valves which have demonstrated good performance by passing their leak rate tests for two consecutive cycles, further failures appear to be governed by the random failure rate of the component. NEI 94-01 also presents the results of a comprehensive risk analysis, including the statement that "the risk impact associated with increasing [leakrate] test intervals is negligible (less than 0.1% of total risk)." The valves identified in this relief request are all in water applications, CIV valves are tested in accordance with Appendix J Requirements using air. PIV testing is typically performed at lower pressures, such as for Appendix J Requirements, are acceptable provided the results are extrapolated to system functional differential pressure. Plant Hatch applies the extrapolated values to both PIV and CIV values. This relief request is intended to provide for a performance-based scheduling of PIV tests at Hatch. The reason for requesting this relief is dose reduction / ALARA. Recent historical data was used to identify that PIV testing alone each refuel outage incurs a total dose of approximately 400 milliRem. Assuming all of the PIVs remain classified as good performers the extended test intervals would provide for a savings of 800 mR over a 6 year period per unit.

NUREG 0933 Issue 105 (Interfacing Systems LOCA at LWRs) discussed the need for PIV leak rate testing based primarily on 3 pre-1980 historical failures of applicable valves industry-wide. These failures all involved human errors in either operations or maintenance. None of these failures involved inservice equipment degradation. The performance of PIV leak rate testing provides assurance of acceptable seat leakage with the valve in a closed condition. Typical PIV testing does not identify functional problems which may inhibit the valves ability to re-position from open to close. For check valves, such functional testing is accomplished per ASME OM Code ISTC-3522. Power-operated valves are routinely full stroke tested per ASME OM Code to ensure their functional capabilities. At Hatch, these functional tests for PIVs are performed only at a Cold Shutdown or Refuel Outage frequency.

Such testing is not performed online in order to prevent any possibility of an inadvertent ISLOCA condition. The 24 month functional testing of the PIVs is adequate to identify any abnormal condition that might affect closure capability. Performance of the separate 24 month PIV leak rate testing does not contribute any additional assurance of functional capability - it only determines the seat tightness of the closed valves.

PROPOSED ALTERNATIVE AND BASIS: Hatch proposes to perform PIV testing at intervals ranging from every refuel to every third refuel. The specific interval for each valve would be a function of its performance and would be established in a manner consistent with the Containment Isolation valve (CIV) process under 10CFR50 Appendix J Option B. 12 of the 36 valves listed are also classified as CIVs and are currently leak rate tested with air according to 10CFR50 Appendix J methodology every 2 years to satisfy their PIV leakage test requirement (with acceptance criteria correlated to water at function maximum pressure differential). Whether the valve is a CIV/PIV or PIV only, the valve must have two consecutive leakage tests which meet its acceptance criteria to be considered a good performer. That is, the test interval may be extended to every third refuel outage upon completion of two consecutive periodic PIV tests with results within prescribed acceptance criteria. The test interval will be extended to a specific value in a range of frequencies from 30 months up to a maximum of 75 months (as described in NEI 94-01 Revision 3-A). The test interval shall not exceed 75 months with a 3 month grace period (i.e., a total of 78 months). Any test failure will require a return to the initial (every RFO) interval until good performance can again be established.

The primary basis for this relief request is the historically good performance of the PIVs and desire to reduce personnel dose (ALARA). With the testing being performed every refueling outage has resulted in approximately 180 tests with 2 failures which yields a failure rate of approximately 1 percent.

Additional basis for this relief request is provided below:

- Separate functional testing of power-operated PIVs and Condition Monitoring of Check Valve PIVs per ASME OM Code.
- Low likelihood of valve mispositioning during power operations (procedures, interlocks).
- Air test vs. water test - degrading seat conditions tend to be identified sooner with air testing.
- Relief valves in the low pressure (LP) piping - these relief valves may not provide Inner-System Loss of Coolant Accident (ISLOCA) mitigation for inadvertent PIV mispositioning but their relief capacity can accommodate conservative PIV seat leakage rates.
- Alarms that identify high pressure (HP) to LP leakage - Operators are highly trained to recognize symptoms of a present ISLOCA and to take appropriate actions.

RR-V-10 (Cont.)

DURATION: 5th Interval beginning January 1, 2016 and ending December 31, 2025.

RECEDENTS:

1. This Relief Request was approved as RR VR-013 for Fermi 2 as documented in SER dated 10/28/2010 (TAC ME2558, ME2557 and ME2556)
2. Approved Quad Cities Relief Request RV03- NRC SER dated February 14, 2013 (ML13042A348)

REFERENCES:

1. NUREG 0933, Issue 105 (Interfacing Systems LOCA at LWRs)
2. NEI 94-01, Revision 3-A

13.0 COLD SHUTDOWN JUSTIFICATION (CSJ) LOG

Number	Component(s)	Description
CSJ-V-01	1/2B21-F022A thru D, 1/2B21-F028A thru D	MSIV Exercise and Stroke Time Testing
CSJ-V-02	N/A	Not used
CSJ-V-03	N/A	Not Used
CSJ-V-04	N/A	Not Used
CSJ-V-05	1/2E21-F005A&B	Core Spray CIV Exercise and Stroke Time Testing
CSJ-V-06	1/2E41-F002, 1/2E51-F007	HPCI and RCIC CIV Exercise and Stroke Time Testing
CSJ-V-07	1/2G31-F001, 1/2G31-F004	RWCU Pump Suction CIV Exercise and Stroke Time Testing
CSJ-V-08	1P41-F049, 1P41-F050, 2P64-F045, 2P64-F047	PSW/CW CIV Exercise and Stroke Time Testing
CSJ-V-09	1P41-F310A thru D, 2P41-F316A thru D	PSW Turbine Bldg. Isolation Exercise and Stroke Time Testing
CSJ-V-10	1/2P42-F051, 1/2P42-F052	RBCCW CIV Exercise and Stroke Time Testing
CSJ-V-11	2B21-F076A&B	Feedwater Injection Isolation Exercise and Stroke Time Testing
CSJ-V-12	1/2P70-F004, 1/2P70-F005, 1/2P70-F066, 1/2P70-F067	DW Pneumatics CIV Exercise and Stroke Time Testing

COLD SHUTDOWN JUSTIFICATION

CSJ-V-1

SYSTEM: Main Steam

VALVE(S): 1B21-F022A thru D, 1B21-F028A thru D
2B21-F022A thru D, 2B21-F028A thru D

CATEGORY: A

CLASS: 1

FUNCTION: Main Steam Isolation Valves

QUARTERLY TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: Full stroke testing these valves during normal reactor operation requires isolating one of the four main steam lines. Isolation of these lines results in primary system pressure spikes, reactor power fluctuations, and increased flow in the unisolated steam lines. This unstable operation can lead to a reactor scram, as discussed in NUREG-0626. Pressure transients resulting from full stroke testing MSIVs increase the chances of actuating primary system safety/relief valves. Also, stroking these valves during power operation requires decreasing the unit to 75% power, therefore, resulting in a substantial capacity factor loss prior to, during, and after the test.

PARTIAL QUARTERLY STROKE TESTING: These valves are partially stroked each quarter to satisfy the requirements of Improved Technical Specification SR 3.3.1.1.9 on an alternate test basis.

COLD SHUTDOWN TESTING: Full stroke exercise and stroke time each cold shutdown, unless the valve has been tested within the past 3 months.

DELETED

COLD SHUTDOWN JUSTIFICATION

CSJ-V-3

DELETED

DELETED

COLD SHUTDOWN JUSTIFICATION

CSJ-V-5

SYSTEM: Core Spray (CS)

VALVE(S): 1E21-F005A&B
2E21-F005A&B

CATEGORY: A

CLASS: 1

FUNCTION: Core Spray Injection Outboard CIV/PIV

QUARTERLY TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: These valves are pressure isolation valves, forming the boundary between the high pressure in the reactor coolant system and the low design pressure CS system. Inadvertent opening of these valves is prevented by system interlocks that require the primary system pressure to be below the CS operating pressure prior to opening or the associated upstream isolation valve to be closed. Routinely stroking these valves open and closed during power operation would place the plant in an unsafe condition by potentially exposing low pressure piping to reactor coolant pressure, which could result in an interfacing system LOCA (ISLOCA). Reliance on the interlocks with the upstream valves to prevent an ISLOCA would not be a safety-conscious strategy.

An ISLOCA can produce consequences that are very difficult to mitigate. The best prevention is to minimize the probability of occurrence. An important contribution to such minimization is to test pressure boundary valves only at conditions of low reactor coolant system pressure.

QUARTERLY PARTIAL STROKE TESTING: None. The valve operating circuitry does not allow for partial stroke capability.

COLD SHUTDOWN TESTING: These valves will be full stroke exercised and stroke timed each cold shutdown, unless the valve has been tested within the past 3 months.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-6

SYSTEMS: High Pressure Coolant Injection (HPCI)
Reactor Core Isolation Cooling (RCIC)

VALVE(S): 1E41-F002, 2E41-F002
1E51-F007, 2E51-F007

CATEGORY: A

CLASS: 1

FUNCTION: HPCI/RCIC Steam Supply CIV

QUARTERLY TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: These are normally open, motor operated valves located inside the primary containment. If the valve is exercised closed during normal operation and fails to re-open, the entire system safety function would be rendered inoperable. If the testing were to result in a loss of subsequent closure capability these valves would be unable to perform their safety function to close for containment isolation. The primary containment is inerted during normal operation and a plant shutdown would be required to repair the valve and restore the system safety function.

QUARTERLY PARTIAL STROKE TESTING: None

COLD SHUTDOWN TESTING: These valves will be full stroke exercised and stroke timed each cold shutdown, unless the valve has been tested within the past 3 months.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-7

SYSTEM: Reactor Water Cleanup System (RWCU)

VALVE(S): 1G31-F001, 1G31-F004
2G31-F001, 2G31-F004

CATEGORY: A

CLASS: 1

FUNCTION: RWCU Pump Suction CIV

QUARTERLY TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: The RWCU System is in service during normal plant operation to maintain reactor coolant chemistry within Technical Specifications limits. These isolation valves must be open to allow for RWCU system operation. Exercising and stroke timing these valves closed quarterly requires the RWCU system to be taken out of service which could result in degraded chemical makeup of the reactor coolant and subjects the entire RWCU system to unnecessary transients. These unnecessary transients could lead to degradation and failure of other related system components (e.g., pumps, valves, demineralizers) and the potential loss of the system availability which would ultimately cause a plant shutdown. Shutting down and re-starting of the RWCU system in order to exercise and stroke time these valves also results in undesired exposure to personnel involved in the actual surveillance activity.

Additionally, returning the system to service with reactor at normal operating conditions poses the potential for a system auto isolation which results in additional work of having to backwash the demineralizers before returning them to service.

QUARTERLY PARTIAL STROKE TESTING: None. The system logic does not allow partial closure of these valves.

COLD SHUTDOWN TESTING: These valves will be full stroke exercised and stroke timed each cold shutdown, unless the valve has been tested within the past 3 months.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-8

SYSTEM: Plant Service Water (1(2)P41) and Chilled Water System (1(2)P64)

VALVE(S): 1P41-F049, 1P41-F050
2P64-F045, 2P64-F047

CATEGORY: A

CLASS: 2

FUNCTION: Drywell Air Cooler CIV

QUARTERLY TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: Closure of any one of these valves would interrupt cooling water flow to the drywell coolers (Unit 1) or the drywell cooler condensers (Unit 2). This interruption of cooling water flow could result in an increase in the drywell temperatures which ultimately could require shutting the plant down due to Technical Specification requirements.

QUARTERLY PARTIAL STROKE TESTING: None. The valve circuitry does not allow partial closure of these valves.

COLD SHUTDOWN TESTING: These valves will be full stroke exercised and stroke timed each cold shutdown, unless the valve has been tested within the past 3 months.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-9

SYSTEM: Plant Service Water (PSW)

VALVE(S): 1P41-F310A thru D
2P41-F316A thru D

CATEGORY: B

CLASS: 3

FUNCTION: Turbine Building PSW Supply Shutoff

QUARTERLY TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: The individual service water supply trains combine into a common header prior to entry into the turbine building. During normal operation at least three service water pumps are required to provide cooling water to the safety and non-safety related loads.

Closure of one of these normally open valves in any sequence during normal operation would significantly decrease cooling water flow to the turbine building equipment, including the operating turbine and turbine related loads. A decrease in cooling water flow of this magnitude could cause a rapid increase in temperatures for these components and potentially extensive damage. Quarterly stroke testing would require power reduction or forced shutdown.

There may be specific times in support of corrective maintenance that it will be necessary to perform testing on these valves on-line, but routinely causing perturbations to the plant is adequate justification for deferral.

If one of these valves was to fail in its safety related position (Closed) during exercising, increased temperatures and a resultant plant shutdown would most certainly occur.

QUARTERLY PARTIAL STROKE TESTING: None. The valve circuitry does not allow partial closure of these valves.

COLD SHUTDOWN TESTING: These valves will be full stroke exercised and stroke timed each cold shutdown, unless the valve has been tested within the past 3 months.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-10

SYSTEM: Reactor Building Closed Cooling Water (RBCCW)

VALVE(S): 1P42-F051, 1P42-F052
2P42-F051, 2P42-F052

CATEGORY: A

CLASS: 2

FUNCTION: RBCCW to Recirculation Pumps CIV

QUARTERLY TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: Closure of these normally open valves would result in a loss of the cooling water flow to the Reactor Recirculation pumps which could result in possible damage to the pumps. Both Reactor Recirc pumps must operate continuously while the plant is at full power. Reducing plant power and securing the Recirc pumps one at a time for the purpose of this valve testing would create significant nuclear safety concerns and lost generation.

QUARTERLY PARTIAL STROKE TESTING: None, valve operating circuitry does not provide for partial exercising.

COLD SHUTDOWN TESTING: These valves will be full stroke exercised and stroke timed each cold shutdown, unless the valve has been tested within the past 3 months.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-11

SYSTEM: Nuclear Boiler (Feedwater)

VALVE(S): 2B21-F076A&B

CATEGORY: C

CLASS: 2

FUNCTION: Feedwater Isolation

QUARTERLY TEST REQUIREMENT: Check valves shall be exercised nominally every 3 months per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: Feedwater injection is required during normal operation. Isolating one of the feedwater lines to perform a closure test would require reducing reactor power by approximately 50% and would introduce main feedwater flow transients into the reactor due to a non-symmetrical injection pattern and the potential for a reactor protection system actuation. Closure testing consists of using the installed air actuator to close the valve and verify proper light indications. This can only be done with no feedwater flow and with HPCI and RWCU secured (to prevent backpressure on the valve).

QUARTERLY PARTIAL STROKE TESTING: No means exists to partially stroke these valves while at power. The actuator cannot overcome the opening force created by feed flow through the valve.

COLD SHUTDOWN TESTING: These normally-open feedwater check valves have an air assist operator to ensure tight closure and are provided with remote position indicating lights. Closure will be confirmed each cold shutdown, but not more frequently than once per 3 months, by actuating the closure mechanism and observing the indicating lights.

COLD SHUTDOWN JUSTIFICATION

CSJ-V-12

SYSTEM: Drywell Pneumatic System

VALVE(S): 1/2P70-F004, F005, F066, F067

CATEGORY: B

CLASS: 2

FUNCTION: DW Pneumatic CIVs

QUARTERLY TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

COLD SHUTDOWN TEST JUSTIFICATION: These valves are open to provide N_2 to accumulators for safety related, pneumatically operated valves located inside the primary containment, primarily some of the safety relief valves (SRVs) and inboard main steam isolation valves (MSIVs). Pneumatic pressure is required for the Automatic Depressurization function of selected SRVs and the MSIVs rely on pneumatic pressure to hold them open as well as assist in closing. These valves are normally open and fail open on loss of power to ensure that the N_2 supply is maintained. These valves auto close on an indication of system pressure less than drywell pressure or high flow into the drywell pneumatics headers (line break). If any of these valves is closed during normal operation, and then failed to reopen, it could result in a loss of accumulator pressure and resultant loss of partial ADS and closure of one or more MSIVs. Therefore, quarterly exercising is not justified and valves will be exercised during each Cold Shutdown.

QUARTERLY PARTIAL STROKE TESTING: Not Applicable

COLD SHUTDOWN TESTING: These valves will be full stroke exercised and stroke timed each cold shutdown, unless the valve has been tested within the past 3 months.

14.0 VALVE REFUELING OUTAGE JUSTIFICATION LOG

ROJ	Component	Description
ROJ-V-01	1/2B21-F010A&B	Feedwater Injection Check Valve Exercise Testing
ROJ-V-02	N/A	Not Used
ROJ-V-03	1B21-F032A&B	Feedwater Outboard CIV Exercise Testing
ROJ-V-04	1B21-F036A thru H, J, K, & L 2B21-F036A thru H, K, L, & M	MSRV Accumulator Check Valves Exercise Testing
ROJ-V-05	1/2B31-F013A&B 1/2B31-F017A&B	Recirculation Pump Seal Water Check Valves Exercise Testing
ROJ-V-06	1/2C11-HCU-114	Scram Discharge Volume HCU Check Valve Exercise Testing
ROJ-V-07	1/2C11-HCU-115	CRD Charging Water Header Check Valves Exercise Testing
ROJ-V-08	1/2C11-HCU-126 1/2C11-HCU-127	CRD Scram Inlet and Outlet Valves Exercise Testing
ROJ-V-09	1/2C41-F006 1/2C41-F007	SBLC Injection Line Check Valves Exercise Testing
ROJ-V-10	1/2C51-F3017	TIP Nitrogen Purge CIV Exercise Testing
ROJ-V-11	N/A	Not Used
ROJ-V-12	1/2E21-F006A&B	Core Spray Injection Check Valves Exercise Testing
ROJ-V-13	1/2E21-F044A&B	Core Spray Jockey Pump Recirc Check Valves Closure Testing
ROJ-V-14	1E11-F008, 1E11-F009, 1E11-F015A&B, 2E11-F008, 2E11-F009, 2E11-F015A&B	RHR Isolation Valve Exercise and Stroke Time Testing
ROJ-V-15	N/A	Not Used
ROJ-V-16	N/A	Not Used
ROJ-V-17	N/A	Not Used

14.0 VALVE REFUELING OUTAGE JUSTIFICATION LOG (Cont.)

ROJ	Component	Description
ROJ-V-18	N/A	Not Used
ROJ-V-19	N/A	Not Used
ROJ-V-20	N/A	Not Used
ROJ-V-21	NA	Not Used
ROJ-V-22	N/A	Not Used
ROJ-V-23	N/A	Not Used
ROJ-V-24	1/2E41-F102 1/2E41-F103	HPCI Vacuum Breaker Line Check Valves Exercise Testing
ROJ-V-25	1G31-F039 1G31-F203	RWCU Return Line CIV Check Valves Exercise Testing
ROJ-V-26	N/A	Not Used
ROJ-V-27	1/2E11-F3090	RHR SDC Suction Check Valves Exercise Testing
ROJ-V-28	1/2E11-F021A&B	RHR Cont. Spray Injection Valves Exercise and Stroke Time Testing
ROJ-V-29	2C11-F010A&B, 2C11-F011, 2C11-F035A&B, 2C11-F037	Scram DVVD Valves Stroke Timing
ROJ-V-30	1/2E11-F050A&B	LPCI Injection Check Valves Open Exercise Testing
ROJ-V-31	1/2B21-F024A thru D 1/2B21-F029A thru D	MSIV Accum. Check Valve Closure Exercise Testing
ROJ-V-32	N/A	Not Used
ROJ-V-33	1/2B31-F031A&B	Reactor Recirc Loop Isolation Valve Exercise and Stroke Time Testing
ROJ-V-34	1E21-F030A&B	Core Spray Keep Fill Check Valve Exercise Testing
ROJ-V-35	2B21-F077A&B	Feedwater Isolation Check Valve Close Exercise Testing

REFUELING OUTAGE JUSTIFICATION

ROJ-V-1

SYSTEM: Feedwater (1B21 and 2B21)

VALVE(S): 1B21-F010A&B
2B21-F010A&B

CATEGORY: AC

CLASS: 1

FUNCTION: Feedwater Line Injection and CIV

TEST REQUIREMENT: Exercise quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

DEFERRAL JUSTIFICATION: Feedwater injection is required during normal operation. Isolating one of the feedwater lines to perform a closure test would require reducing reactor power by approximately 50% and could potentially introduce reactor flux imbalance due to a non-symmetrical feedwater injection pattern.

The closure testing is not practical during non-refueling Cold Shutdowns due to the complexity and location of the testing setup (reference NUREG-1482 Rev. 2 Section 4.1.6). The closure testing consists of a leakrate type test and also requires entry into the drywell, which would have to be de-inerted.

Normal feedwater flow is significantly greater than the flowrate required for the open safety function (HPCI or RCIC injection). Therefore, the valve is proven capable of opening to the required position with normal feedwater injection during power operation.

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. The bi-directional exercise requirement in the open position is satisfied by feedwater flow during normal power operation.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-2

DELETED

ROJ-V-3

SYSTEM: Main Feedwater (1B21)

VALVE(S): 1B21-F032A&B

CATEGORY: AC

CLASS: 1

FUNCTION: Feedwater Outboard CIV

TEST REQUIREMENT: Exercise quarterly or at cold shutdown per ISTC-3510 and ISTC-3522.

BASIS FOR JUSTIFICATION: Feedwater injection is required during normal operation. Isolating one of the feedwater lines to perform a closure test would require reducing reactor power by approximately 50% and could potentially introduce reactor flux imbalance due to a non-symmetrical feedwater injection pattern.

The closure testing is not practical during non-refueling Cold Shutdowns due to the complexity and location of the testing setup (reference NUREG-1482 Rev. 2 Section 4.1.6). The closure testing consists of a leakrate type test and also requires entry into the drywell, which would have to be de-inerted.

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. The bi-directional exercise requirement in the open position is satisfied by feedwater flow during normal power operation.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-4

SYSTEM: Main Steam (1B21 and 2B21)

VALVE(S): 1B21-F036A, B, C, D, E, F, G, H, J, K, L
2B21-F036A, B, C, D, E, F, G, H, K, L, M

CATEGORY: C

CLASS: 2

FUNCTION: MSRV Accumulator Check Valves

TEST REQUIREMENT: Verify reverse flow closure quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

BASIS FOR JUSTIFICATION: These valves cannot be tested during power operation because entry into the drywell is required. The drywell is inerted during normal operation. Closure testing is not practical during non-refueling Cold Shutdowns due to the complexity of the testing setup (reference NUREG-1482 Rev. 2 Section 4.1.6), which could potentially delay the startup of the unit.

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. The bi-directional exercise requirement to the open position is verified during normal operation by successful charging of accumulators to maintain nominal pressures.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-5

SYSTEM: Reactor Recirculation (1B31 AND 2B31)

VALVE(S): 1B31-F013A&B, 1B31-F017A&B
2B31-F013A&B, 2B31-F017A&B

CATEGORY: AC

CLASS: 1

FUNCTION: Recirculation Pump Seal Water

TEST REQUIREMENT: Verify reverse flow closure quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

BASIS FOR JUSTIFICATION: These valves are located in the Recirculation Pump Seal Water injection lines which require continuous flow during power operation in accordance with the pump manufacturer's recommendations. Quarterly testing could damage the seals.

Closure testing is not practical during non-refueling Cold Shutdowns due to the complexity of the testing setup (reference NUREG-1482 Rev. 2 Section 4.1.6), which could potentially delay the startup of the unit.

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. The bi-directional exercise test requirement to the open position is satisfied during normal power operation by continuous seal water flow providing normal operating temperatures on the Recirculation Pumps.

ROJ-V-6

SYSTEM: CRD (1C11 and 2C11)

VALVE(S): 1C11-HCU-114
2C11-HCU-114

CATEGORY: C

CLASS: 2

FUNCTION: Scram Discharge Volume HCU Check Valve

TEST REQUIREMENT: Verify forward flow operability quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

BASIS FOR JUSTIFICATION: These valves are located on the scram discharge line of each CRD. Flow through each check valve is experienced only during the scram of the associated CRD unit.

Per NUREG 1482, Rev. 2, Section 4.4.6, verifying that the associated control rod meets the scram insertion time limits defined in the plant's Technical Specifications can be an acceptable alternative method of detecting degradation of these valves.

ALTERNATE TESTING: The required flow is achieved through the valves during the Technical Specification Control Rod Scram Insertion tests.

(1) As a minimum, 10% of the CRDs are scram timed on a rotating basis every 200 cumulative days of operation in mode 1.

(2) After each refueling outage or reactor shutdown ≥ 120 days, all control rods are scram tested from the fully withdrawn position.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-7

SYSTEM: CRD (1C11 and 2C11)

VALVE(S): 1C11-HCU-115
2C11-HCU-115

CATEGORY: C

CLASS: 2

FUNCTION: Charging Water Header Check Valves

TEST REQUIREMENT: Verify reverse flow closure quarterly or at cold shutdown per ISTC 3510 and ISTC-3522

BASIS FOR JUSTIFICATION: Reverse flow closure verification of the charging water header check valves requires that the CRD pumps be stopped in order to depressurize the charging water header. This test cannot be performed during normal operation because stopping the pumps results in loss of cooling water to all CRD mechanisms and seal damage could result. Additionally, it is impractical to perform this testing during cold shutdown because the CRD pumps supply seal water to the Reactor Recirc and Reactor Water Clean-up pumps. At least one Recirc pump and RWCU pump is normally maintained in operation during non-refueling cold shutdowns to maintain reactor coolant chemistry in accordance with Technical Specification requirements. This justification and alternative testing is also described in NUREG 1482 Revision 2 Section 4.4.6.

ALTERNATE TESTING: Reverse flow closure will be confirmed at each refueling outage by performance of a HCU accumulator pressure decay test. Open verification is demonstrated by the water inventory in the accumulators being maintained by flow through this valve during normal operation.

ROJ-V-8

SYSTEM: CRD (1C11 AND 2C11)

VALVE(S): 1C11-HCU-126, 1C11-HCU-127
2C11-HCU-126, 2C11-HCU-127

CATEGORY: B

CLASS: 2

FUNCTION: Scram Inlet and Outlet Valves

TEST REQUIREMENT: Exercise quarterly or at cold shutdown per ITSC-3510 and ISTC-3521

BASIS FOR JUSTIFICATION: The Hydraulic Control Units (HCU) are integrally designed systems for controlling rod drive movements. Individual valve testing is not possible without causing a control rod scram with a resulting change in core reactivity. Quarterly testing of these valves increases the potential to violate plant Technical Specifications which govern the methods and frequency of reactivity changes. In addition, these are power operated valves that full-stroke in milliseconds. Therefore, measuring their full-stroke time is impractical. Verifying that the associated control rod meets the scram insertion time limits defined in the Technical Specifications provides an alternate method of detecting valve degradation. Trending the stroke times of these valves is impractical and unnecessary since they are indirectly stroke timed and no meaningful correlation between the scram time and valve stroke time can be obtained. This justification and alternative testing is also described in NUREG 1482 Revision 2 Section 4.4.6.

ALTERNATE TESTING: Technical Specification Control Rod Scram Insertion Time testing serves to verify proper operation of each of these valves.

(1) As a minimum, 10% of the CRDs are scram timed on a rotating basis every 200 cumulative days of operation in mode 1.

(2) After each refueling outage or reactor shutdown ≥ 120 days all control rods are scram tested from the fully withdrawn position.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-9

SYSTEM: Standby Liquid Control (1C41 and 2C41)

VALVE(S): 1C41-F006, 1C41-F007
2C41-F006, 2C41-F007

CATEGORY: AC

CLASS: 1

FUNCTION: SBLC Injection Line Isolation

TEST REQUIREMENT: Verify forward flow operability and closure quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

BASIS FOR JUSTIFICATION: Forward flow exercising can only be performed by injecting into the reactor vessel using the SBLC pumps. The pumps are normally aligned to a sodium pentaborate storage tank and they would have to be aligned to demineralized water for exercise testing of the check valves. The associated piping would have to be flushed prior to the test and refilled with sodium pentaborate after the open exercise test. Closure testing can only be performed by a leakrate type test. Testing of these normally closed valves quarterly or during cold shutdown would require:

(1) Actuation and replacement / restoration of the explosive squib valves, 1(2)C41-F004A(B), to allow injection into the RPV (open exercise)

(2) Personnel entry into the primary containment to operate the manual test boundary valve 1(2)C41-F008 (close exercise) and,

(3) Loss of operability of the SBLC system (close exercise).

Due to the time required for testing setup, the complexity of the test, and the time required for associated valve alignments, attempting to perform this testing at cold shutdown could potentially delay startup of the unit.

ALTERNATE TESTING: These valves are full flow exercised once each refueling outage during SBLC Initiation (Technical Specifications surveillance) testing. These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-10

SYSTEM: TIP System (1C51 and 2C51)

VALVE(S): 1C51-F3017
2C51-F3017

CATEGORY: AC

CLASS: 2

FUNCTION: TIP Nitrogen Purge CIV

TEST REQUIREMENT: Verify reverse closure quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

BASIS FOR JUSTIFICATION: The only way to verify reverse closure is by performing a leakrate type test. These normally open check valves are located inside the primary containment and therefore are inaccessible during power operation. The primary containment is inerted during normal operation and personnel entry is prohibited. Therefore, testing during normal operation is impracticable.

The closure testing is not practical during non-refueling Cold Shutdowns due to the complexity and location of the testing setup (reference NUREG-1482 Rev. 2 Section 4.1.6).

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. The bi-directional exercise requirement is satisfied during power operation by verification of satisfactory Nitrogen purge flow during Transversing Incore Probe (TIP) operations.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-11

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-12

SYSTEM: Core Spray (1E21 and 2E21)

VALVE(S): 1E21-F006A&B
2E21-F006A&B

CATEGORY: AC

CLASS: 1

FUNCTION: Core Spray Injection and PIV

TEST REQUIREMENT: Verify forward flow operability quarterly or at cold shutdown per ISTC-3510 and ISTC-3522.

BASIS FOR RELIEF: System configuration does not provide for full or partial flow exercise testing during normal operation. Core spray injection during normal operation is impossible because reactor pressure is significantly greater than core spray injection pressure.

Electrical power is removed from the equalization valve (1(2)E21-F037A(B)) during normal operation which disables the partial exercise test circuit. These valves are located inside the primary containment, are PIVs, and potential erroneous signal indications caused by restoring power to the test circuit and partial exercising could not be readily distinguished from actual valve problems without shutting down the plant, de-inerting the containment, and performing a containment entry. Therefore, partial exercising during normal operation is impracticable.

Since these valves are located inside the primary containment and are inaccessible during normal operation or at cold shutdown unless the containment is de-inerted, mechanical exercising quarterly or during cold shutdown is also impracticable. The containment is not de-inerted during an unplanned shutdown unless containment entry is absolutely necessary.

The only feasible ways to confirm full stroke operational readiness is by: 1) full flow exercising by injecting condensate storage tank (CST) water into the RPV during a refueling outage, 2) mechanical exercising in accordance with ISTC-5221(b), or 3) disassembly, inspection, and full stroke exercising in accordance with ISTC-5221(c).

ROJ-V-12 (cont)

ALTERNATE TESTING: Each check valve is full flow exercised open each refueling outage by injecting into the RPV. Core Spray is utilized to flood the reactor cavity in preparation for fuel movement each refueling outage and both core spray pumps inject at the accident required flow rate.

These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing.

Use of the above test methods provides sufficient confirmation of valve operational readiness and provides adequate information to monitor for valve degradation.

ROJ-V-13

SYSTEM: Core Spray (1E21 and 2E21)

VALVE(S): 1E21-F044A&B
2E21-F044A&B

CATEGORY: C

CLASS: 2

FUNCTION: Containment Isolation Barrier

TEST REQUIREMENT: Reverse flow closure quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

BASIS FOR JUSTIFICATION: These valves are located in the jockey pump recirculation line back to the suppression pool. The water seal provided by the Suppression Pool means that these valves function as containment boundary valves and not Category A leak rate tested valves. The only viable means of proving closure is by performing a reverse leakage pressure test. Performing such a pressure test quarterly would require removing the associated jockey pump(s) from service and would likely result in not maintaining the associated train of RHR and Core Spray piping full of water as required by Technical Specifications. This would result in unnecessary ECCS unavailability and potential entries into Technical Specification 3.0.3.

This type of testing requires a significant amount of time for test setup, valve alignment and actual performance of the test. Testing at cold shutdown could potentially delay startup of the unit which is further discussed in NUREG-1482, Rev. 2, Section 4.1.6. Also, the RHR and Core Spray Systems are normally required to be operable during brief periods of cold shutdown. This testing can be more safely and efficiently performed during refueling outages

These valves provide only a containment boundary function and are not exposed to severe operating conditions which would promote rapid degradation; closure exercise testing at a refueling outage frequency will provide sufficient assurance of continued component operability.

ALTERNATE TESTING: Valves will be reverse flow closure tested each refueling outage by performance of a reverse leakage pressure test similar to an Appendix J, type C test.

COLD SHUTDOWN JUSTIFICATION

ROJ-V-14

SYSTEM: Residual Heat Removal

VALVE(S): 1E11-F008, 1E11-F009, 1E11-F015A, 1E11-F015B
2E11-F008, 2E11-F009, 2E11-F015A, 2E11-F015B

CATEGORY: A

CLASS: 1

FUNCTION: RHR Shutdown Cooling Pressure Isolation Valves
RHR Injection Line Inboard Isolation Valves

CODE TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

DEFERRAL JUSTIFICATION: These valves are pressure isolation valves, forming the boundary between the high pressure in the reactor coolant system and the low design pressure RHR system. These valves are interlocked to prevent valve opening when reactor coolant pressure is > 145 psig. Defeating the interlock and stroke testing these valves during normal operation could result in over-pressurization and potentially catastrophic damage to the low design pressure RHR pump suction piping.

These valves are also in the flowpath for Shutdown Cooling. During refueling conditions the reactor head is removed and the vessel is flooded up. This greatly increases time to boil because of the large additional water volume as compared to a Cold Shutdown non-refueling situation. There are also more redundant decay heat removal options available during the refueling conditions than in cold shutdown condition. Testing of these valves involves interruption and/or reconfiguration of Shutdown Cooling. With reduced time to boil during typical Cold S/D conditions any interruptions of Shutdown Cooling incur additional risk. This risk overshadows any benefit derived from slightly more frequent testing of these valves.

ALTERNATE TESTING: Exercise and stroke time each refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-15

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-16

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-17

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-18

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-19

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-20

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-21

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-22

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-23

DELETED

SYSTEM: HPCI (1E41 and 2E41)

VALVE(S): 1E41-F102, 1E41-F103
2E41-F102, 2E41-F103

CATEGORY: C

CLASS: 2

FUNCTION: Steam Exhaust Line Vacuum Breakers

TEST REQUIREMENT: Verify forward flow exercise and reverse flow closure quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

DEFERRAL JUSTIFICATION: Open exercising of these in-series simple check valves cannot be confirmed quarterly during surveillance testing because there is no instrumentation provided that can be used to determine each valve's disk movement.

Closed exercising of these check valves cannot be confirmed quarterly during surveillance testing because there is no available indication that each valve is actually closed.

Individually exercising these in series check valves during normal operation would require the HPCI turbine exhaust vacuum relief line to be isolated thus rendering the HPCI system inoperable per Technical Specification definition.

ALTERNATE TESTING: During the local leakrate test for valves 1(2)E41-F104 and 1(2)E41-F111 the piping is pressurized between valves 1(2)E41-F111 and 1(2)E41-F104. Valve 1(2)E41-F103 is then vented as part of the test to exercise both check valves open thus ensuring their vacuum breaker function since this flow rate will be greater than that required for vacuum relief.

Closure verification of at least one of the in series valves is proven during quarterly HPCI pump surveillance testing. If at least one of the valves did not close, steam would bypass the suppression pool into the torus bay air space and cause a resultant temperature increase.

Reverse flow closure is also proven in conjunction with LLRT of valves 1(2)E41-F104 and 1(2)E41-F111. With the boundary between valves 1(2)E41-F104 and 1(2)E41-F111 pressurized, separate vents for the 1(2)E41-F102 and 1(2)E41-F103 are individually opened in a sequence that confirms each valve to be closed.

A type C LLRT or a similar pressure decay type test will be performed at the interval established by the Appendix J program to confirm individual open and close exercising of valves 1(2)E41-F102 and 1(2)E41-F103.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-25

SYSTEM: Reactor Water Cleanup (1G31)

VALVE(S): 1G31-F039 and 1G31-F203

CATEGORY: AC

CLASS: 1

FUNCTION: RWCU Return Line CIV

TEST REQUIREMENT: Verify reverse flow closure quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

BASIS FOR JUSTIFICATION: These normally open check valves are located in the RWCU return line to the reactor vessel thru each feedwater line. To establish the necessary test boundary for each of these valves will require closure of the manual feedwater valve, 1B21-F011A(B), which is located inside primary containment. Entry into primary containment is not possible during normal operation due to high radiation and the nitrogen inerted atmosphere.

Closure testing is also not practical during non-refueling Cold Shutdowns due to the location and complexity of the testing setup (reference NUREG-1482 Rev. 2 Section 4.1.6), which could potentially delay the startup of the unit.

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. The non-safety function open direction is proven during power operations by normal RWCU flowrates.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-26

DELETED

ROJ-V-27

SYSTEM: RHR (1E11 and 2E11)

VALVE(S): 1E11-F3090
2E11-F3090

CATEGORY: AC

CLASS: 1

FUNCTION: Thermal overpressure protection and CIV.

TEST REQUIREMENT: Verify forward and reverse flow operability quarterly or at cold shutdown per ISTC-3510 and ISTC-3522.

BASIS FOR JUSTIFICATION: These valves are located inside the primary containment and are therefore inaccessible during normal operation or at cold shutdown unless the containment is de-inerted. The containment is never de-inerted during an unplanned shutdown unless containment entry is absolutely necessary. Exercising these valves partially open for their thermal overpressure protection function or in the reverse direction as a CIV requires entry into containment and the use of temporary test equipment to perform a leak test in addition to passing air flow through the valves to demonstrate their partial opening capability. Due to the considerable effort associated with these test activities, exercise testing to the partially open or closed positions quarterly or during cold shutdown is considered impractical due to the necessity of utilizing temporary test equipment inside containment. This deferral of test frequency is acceptable per the discussion provided in NUREG-1482, Rev. 2, Section 4.1.6.

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. Since there is no accident flow rate associated with the valves' safety function in the open direction, demonstrating partial opening capability will be performed in conjunction with scheduled seat leakage testing of E11-F008 and E11-F009.

Use of the above test methods provides sufficient confirmation of valve operational readiness and provides adequate information to monitor for valve degradation.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-28

SYSTEM: RHR

VALVE(S): 1E11-F021A&B
2E11-F021A&B

CATEGORY: B

CLASS: 2

FUNCTION: Containment Spray Injection and Isolation

TEST REQUIREMENT: Exercise and stroke time active Category B valves quarterly or cold shutdown per ISTC-3510 and ISTC-3521

BASIS FOR JUSTIFICATION:

These valves are located in the RHR Containment Spray lines. The RHR system was designed as a closed system outside containment, therefore, only one isolation valve is required for each containment penetration. The 1/2E11-F016A(B) valve provides the inboard containment isolation boundary (PCIV) while the 1/2E11-F021A(B) function as barrier valves allowing for Appendix J leakrate testing of the associated closed system penetration and PCIV.

The RHR containment spray piping is maintained filled with water up to the 1/2E11-F016A(B) when the system is required to be operable to preclude the possibility of water hammer upon system initiation. However, the piping between the inboard barrier valve (1/2E11-F021A/B) and the PCIV could possibly contain water, due to seat leakage after extended periods of normal plant operation. Any accumulated water must be confirmed drained prior to opening the inboard barrier valve (1/2E21-F021A/B) for exercising and stroke timing. Draining this piping is required to prevent water from entering the primary containment (drywell) and potentially damaging safety related equipment.

Exercising and stroke timing 1/2E11-F021A(B) requires personnel to attach a temporary hose to a drain connection between valves 1/2E11-F021A/B and 1/2E11-F016A/B (respectfully) and drain the piping prior to exercising the 1/2E11-F021A(B). After 3-months of normal operation, typically 2 - 5 gallons of water are drained, but the volume may vary depending on the seating characteristics of the 1/2E11-F016A(B) valve.

Connecting the temporary hose and draining the piping requires personnel entry into elevated areas of the Reactor Building for Unit 1 and into the RWCU Hx. Room for Unit 2. The RWCU Hx. Room is a "HIGH Radiation" area during normal operation and thus requires special Health Physics consideration and coverage. For both Units, personnel must consider safety issues related to accessing elevated components, ALARA, and proper disposal of contaminated water. In addition, a Technical Specification Required Action Statement (RAS)

ROJ-V-28 (Cont)

must be entered when the manual drain valve is opened due to primary containment integrity and isolation implications.

These considerations make it unreasonable to perform exercise and stroke time testing on a quarterly or cold shutdown frequency. These valves are included in the plant's motor operated valve program (reference: NRC Generic Letters 89-10 and 96-05) which provides added assurance that the valves are properly maintained and tested to ensure they will function in accordance with the design requirements and perform their required safety function. Exercising and stroke timing quarterly or during unplanned cold shutdowns for IST does not provide any significant additional benefit or assurance for valve operational readiness.

PARTIAL EXERCISING: None practical as described above.

ALTERNATE TESTING: Valves will be exercised and stroke timed each refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-29

SYSTEM: CRD

VALVE(S): 2C11-F010A&B, 2C11-F011
2C11-F035A&B, 2C11-F037

CATEGORY: B

CLASS: 2

FUNCTION: SCRAM Discharge Volume Vent and Drain Valves

TEST REQUIREMENT: Measure individual valve stroke time quarterly per ISTC-3510

BASIS FOR JUSTIFICATION: Quarterly stroking is performed to satisfy Technical Specification requirements by using a test switch. This actuation method bypasses the time delay relays, and all six valves are actuated at the same time. Stroke timing the valves during these quarterly TS strokes is impractical due to the logistics requirements (i.e., six operators and six stop watches). The quarterly stroking of these valves is done specifically to satisfy the TS requirement and is not credited as an IST exercise test.

ALTERNATE TESTING: During each refueling outage, an exercise test will be performed which simulates a SCRAM signal from RPS and the time delay relays are then part of the test circuit. All six valves (6 people with 6 stop watches) will also be stroke timed in both directions and the specific time delay values will be verified during this test.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-30

SYSTEM: RHR

VALVE(S): 1E11-F050A&B
2E11-F050A&B

CATEGORY: AC

CLASS: 1

FUNCTION: LPCI and Pressure Isolation

TEST REQUIREMENT: Verify forward flow operability quarterly or at cold shutdown per ISTC-3510 and ISTC-3522.

BASIS FOR JUSTIFICATION:

The plant and system configuration does not provide for full flow exercising during normal operation. LPCI injection during normal operation is impossible because reactor pressure is significantly greater than LPCI injection pressure. Therefore full exercising with flow on a quarterly frequency is impracticable.

Achieving design flow through these valves during Cold Shutdowns is also impractical. It is normal plant practice to utilize only one loop of RHR in Shutdown Cooling mode for any short term unscheduled shutdown due to the efforts involved in system alignment, flushing, pipe warm-up and swapping of loops. At least one of the valves is exposed to partial flow when the RHR System is operating in the SDC Mode of operation. However, achieving design flow during a Cold Shutdown could have negative impact on the control of Reactor cooldown rates and also requires additional man-power to align two RHR pumps for injection. Requiring both loops of RHR shutdown cooling to be placed in operation during an unplanned shutdown for the sole purpose of full stroke exercising each check valve is impractical and imposes increased activities on operation's personnel involved with other shutdown activities and could extend shutdown duration.

These valves are located inside the primary containment and are therefore inaccessible during normal operation or at cold shutdown unless the containment is de-inerted. The containment is never de-inerted during an unplanned shutdown unless containment entry is absolutely necessary. Therefore mechanical exercising quarterly or at cold shutdown is impractical.

The only way to full flow exercise these valves is to align both RHR pump suctions in a loop to the shutdown cooling suction line or mechanically exercising in accordance with ISTC-5221(b) using a torque wrench each refueling outage.

ROJ-V-30 (cont.)

ALTERNATE TESTING: Both loops of RHR will be aligned with both pumps taking suction from the shutdown cooling line and design accident flow will be injected to the RPV confirming full flow exercise of the associated check valve each refueling outage or each valve will be mechanically exercised during its respective refueling outage. As an alternative, mechanical exercising with a torque wrench may be performed every refueling outage. Either test will provide an acceptable method of open exercise functionality per ISTC-3510 and ISTC-3522.

ROJ-V-31

SYSTEM: Main Steam (1B21 and 2B21)

VALVE(S): 1B21-F024A, B, C, D
2B21-F024A, B, C, D
1B21-F029A, B, C, D
2B21-F029A, B, C, D

CATEGORY: C

CLASS: 2

FUNCTION: MSIV Accumulator Check Valves

TEST REQUIREMENT: Verify reverse flow closure quarterly or at cold shutdown per ISTC-3510 and ISTC-3522

BASIS FOR JUSTIFICATION: These valves are located in either the drywell or the main steam chase. Entry into the drywell is not permitted during normal operation due to the drywell being inerted during normal operation. The steamchase is inaccessible during normal operation due to extreme temperatures and dose rates. Because of the setup time, valve alignments and complexity of the test, attempting to perform these tests during cold shutdowns would potentially delay the startup of the unit and is further discussed in NUREG-1482 Rev. 2 Section 4.1.6.

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. The bi-directional exercise requirement to the open position is satisfied during Code required exercise testing of the MSIVs each cold shutdown.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-32

DELETED

REFUELING OUTAGE JUSTIFICATION

ROJ-V-33

SYSTEM: Reactor Recirculation System

VALVE(S): 1B31-F031A&B
2B31-F031A&B

CATEGORY: B

CLASS: 1

FUNCTION: Valves close to provide Reactor Recirc loop isolation

TEST REQUIREMENT: Exercise and stroke time quarterly per ISTC-3510

BASIS FOR JUSTIFICATION: Closure during normal operation requires a reduction in power to trip the associated recirculation pump. If the associated pump is tripped, it also creates a potential for exceeding the permissible temperature differential between the recirculation loops for pump re-start. In addition, the valves are located inside the primary containment and are inaccessible during normal operation, which precludes an operator from manually re-opening the valve in case of actuator failure. Each valve's operating circuitry does not allow partial closure during normal operation. Also, requiring that the reactor recirculation pump be stopped and restarted during each cold shutdown solely to allow for the testing of these valves is not warranted because repetitive cycling would increase pump wear and stress, as well as the number of cycles of related plant equipment, and could extend the length of cold shutdowns. This deferral is described in NUREG 1482, Rev. 2, Section 3.1.1.4.

ALTERNATE TESTING: Exercise and stroke time each refueling outage.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-34

SYSTEM: Core Spray

VALVE(S): 1E21-F030A&B

CATEGORY: C

CLASS: 2

FUNCTION: Core Spray System Isolation

TEST REQUIREMENT: Verify forward flow and reverse flow quarterly or at cold shutdown per ISTC-3510, ISTC-3522 and ISTC-5221(a)(3).

BASIS FOR JUSTIFICATION:

These valves provide the boundary between high pressure (460 psig) and low pressure (125 psig) piping during normal operation. Therefore, they are included in the IST Program.

The valves do not perform a safety related function in the open position. Therefore, they only require exercise open testing to meet bi-directional IST requirements.

The plant and system configuration does not provide for forward flow exercising during normal operation. To forward flow exercise these valves during normal plant operation would require draining water from the Core Spray system to forcibly initiate flow from the CST through these valves. Removing water from the Core Spray system would require a train of Core Spray to be declared inoperable for the sole purpose of this non-safety direction check valve testing.

Open functionality is verified during normal operation and shutdowns as evidenced by overcoming total system leakage and maintaining normal header pressures in the idle Core Spray System. Closure functionality is also verified by ensuring upstream relief valves 1E21-F024A&B do not lift when the respective Core Spray train is pressurized during quarterly system testing.

ALTERNATE TESTING: As a supplement to the above online functional verifications, 1E21-F030A&B will be grouped, disassembled, inspected, and/or mechanically exercised to prove open and closed functionality.

REFUELING OUTAGE JUSTIFICATION

ROJ-V-35

SYSTEM: Nuclear Boiler (Feedwater)

VALVE(S): 2B21-F077A&B

CATEGORY: AC

CLASS: 1

FUNCTION: Feedwater Containment Isolation

TEST REQUIREMENT: Check valves shall be exercised nominally every 3 months per ISTC-3510

BASIS FOR JUSTIFICATION: Feedwater injection is required during normal operation. Isolating one of the feedwater lines to perform a closure test would require reducing reactor power by approximately 50% and could potentially introduce reactor flux imbalance due to a non-symmetrical feedwater injection pattern.

Closure testing is not feasible during a cold shutdown, because these valves are located in the flowpath of the Reactor Water Cleanup (RWCU) System. Taking RWCU out of service during Cold Shutdowns for this closure testing could have adverse effects on RCS chemistry which could result in a plant startup delays.

(Open Exercise) Normal feedwater flow is significantly greater than the flowrate required for the open safety function (HPCI or RCIC injection). Therefore, the valve is proven capable of opening to the required position with normal feedwater injection during power operation.

ALTERNATE TESTING: These check valves will be exercised and confirmed to close during scheduled Appendix J Program leak rate testing. Open functionality is proven during normal operation by satisfactory feedwater injection flow.

E.I. HATCH INSERVICE TESTING PROGRAM

TECHNICAL POSITION INDEX

Technical Position No.	Description
TP-01	Bi-directional Testing of Check Valves
TP-02	Preconditioning (*See Corporate position*)
TP-03	Passive Valves without Test Requirements
TP-04	Fail Safe Testing of Valves
TP-05	Classification of Skid Mounted Components
TP-06	Manual Valve Exercise Frequency
TP-07	Outside Design Basis
TP-08	Categorization of IST Pumps (Group A or B)
TP-09	CRD valve testing per Technical Specifications
TP-10	Valve leakage test criteria
TP-11	Service Water pumps Inlet Pressure Accuracy
TP-12	Use of Linear Regression for Pump Curves and Data Normalization of Test Results
TP-13	Categorization of ADS Main Steam Safety Relief Valves
TP-14	Reference value testing ranges

Refer to SNC Corporate procedure NMP-ES-013-GL01 "IST Positions" for standard fleet positions related to the IST Program.

Bi-directional Testing of Check Valves with Non-Safety Positions

Purpose

The purpose of this Technical Position is to establish the station position for the verification of the non-safety direction exercise testing of check valves by normal plant operations.

Applicability

This Technical Position is applicable to those valves which are included in the Inservice Testing Program that are required to be exercised tested in their non-safety related direction of flow. This position applies to those check valves required to be tested in accordance with Subsection ISTC (ASME OM Code 2004 Edition through 2006 Addenda) and Appendix II. This Technical Position does not apply to testing of the safety function (direction) of check valves included in the Inservice Testing Program.

Background

The ASME OM Code 2004 through 2006 Addenda section ISTC-3550, "Valves in Regular Use", states:

> "Valves that operate in the course of plant operation at a frequency that would satisfy the exercising requirements of this Subsection need not be additionally exercised, provided that the observations otherwise required for testing are made and analyzed during such operation and recorded in the plant record at intervals no greater than specified in ISTC-3510."

Section ISTC-3510 requires that check valves shall be exercised nominally every 3 months with exceptions for extended periods referenced.

Section ISTC-5221(a)(2) states:

> "Check valves that have a safety function in only the open direction shall be exercised by initiating flow and observing that the obturator has traveled to either the full open position or to the position required to perform its intended function(s) (see ISTC-1100), and verify closure."

Section ISTC-5221(a)(3) states:

> "Check valves that have a safety function in only the close direction shall be exercised by initiating flow and observing that the obturator has traveled [to] at least the partially

open position,[1] and verify that on cessation or reversal of flow, the obturator has traveled to the seat."

[1] "The partially open position should correspond to the normal or expected system flow."

Normal and/or expected system flow may vary with plant configuration and alignment. Plant Hatch Plant Operations staff is trained in recognizing normal plant and system conditions, For check valves that have a non-safety function in the open position, Operator judgment has been deemed acceptable in determining whether or not the normal or expected flow rates for plant operation has been obtained. For check valves that have a non-safety related function in the closed position, Operator judgment is also deemed acceptable in determining whether or not flow has stopped or a differential pressure has established relative to a normal or expected flow rate, in order to verify appropriate obturator travel.

Position

Where feasible, an additional test will be established which provides direct quantifiable measurement of the check valve operation in the non-safety direction. Testing need only be performed on an interval when it is practicable to perform both the open and close tests. Where plant design or system configuration does not support such a dedicated test, the following alternate verifications may be performed as follows:

1. An appropriate means shall be determined which establishes the method for determining the open/closed non-safety function of the check valve during normal operations. The position determination may be by direct indicator, or by other positive means such as changes in system pressure, flow rate, level, temperature, seat leakage, etc. This determination shall be documented in the respective Condition Monitoring Plan for the specific check valve group. For check valves included in the Inservice Testing Program and not included in the Condition Monitoring Plan, this determination shall be documented in the IST Bases Document for the specific check valve.

2. Observation and analysis of plant processes that a check valve is satisfying its non-safety direction function may used. For an example, consider a check valve that has a safety function only in the closed direction but is normally open to provide a flow path to maintain plant operations. If this check valve does not open to pass sufficient flow when required, an alarm or indication would identify a problem to the operator. The operator would respond by taking the appropriate actions. A CA document would then be generated for the abnormal plant condition which would identify the check valve failure.

3. Observation and analysis of plant logs and other records may be an acceptable method for verifying a check valves non-safety direction function verification during normal plant operations.

The open/closed non-safety function shall be recorded at a frequency required by ISTC-3510, nominally every 3 months, (with exceptions as allowed), in plant records such as Plant Hatch Nuclear Operating Logs, Electronic Rounds, chart recorders, automated data loggers, etc. The safety function direction testing requires a Quality Record in the form of a surveillance test. Records as indicated above in 1 through 3 are satisfactory for the non-safety direction testing. A CA document shall be generated for any issues regarding check valve operability.

Justification

This Technical Position establishes the acceptability of the methods used in determining the ability of a valve to satisfy its non-safety function. Through normal plant system operation and Operator actions, a valves non-safety function is verified through either observation or analysis of plant records and logs. Additionally, the recording of parameters which demonstrate valve position is satisfied at a frequency in accordance with ISTC-3510. These actions collectively demonstrate the non-safety position of Inservice Testing Program check valves in regular use as required by ISTC-3550.

Technical Position TP-02
(Page 1 of 1)

Preconditioning

See SNC Corporate procedure NMP-ES-013-GL01
"IST Positions"

Passive Valves without Test Requirements

Purpose

The purpose of this Technical Position is to establish the Plant Hatch IST Program position for valves which perform a passive safety function.

Applicability

This Technical Position is applicable to valves that perform a passive function in accordance with the definition in ISTA-2000 and do not have inservice testing requirements per Table ISTC-3500-1. Such valves maintain their obturator position and do not need to change obturator position to accomplish a specific function as described in ISTA-1100.

'An example is a manual valve which must remain in its normal position during an accident, to perform its intended function.'

For such passive valves which also have remote position indication, if the valves are administratively controlled by Plant Hatch procedures and locked in their safety position and/or have their power removed, they are also exempt from testing per ISTC-3700.

Position

The Plant Hatch Inservice Testing Program, Valve Tables will not list valves that meet all of the following criteria.

- The valve is categorized B (seat leakage in the closed position is inconsequential for fulfillment of the valves' required function(s)) in accordance with ISTC-1300.
- The valve is considered passive (valve maintains obturator position and is not required to change obturator position to accomplish the required function(s)) in accordance with ISTA-2000.
- The valve does not have a remote position indicating system which detects and indicates valve position OR
- The valve has remote position indication but is administratively controlled by Plant Hatch procedures and locked in their safety position and/or have their power removed.

Passive Valves without Test Requirements

Justification

Valves that meet this position will not be listed in the Plant Hatch Inservice Testing Program, Valve Tables; however, the basis for categorization and consideration of active/passive functions shall be documented in the IST Program Basis Document.

Southern Nuclear Co./Hatch considers that if a passive valve equipped with remote position indication is under administrative control at all times during plant operation and if Operations does not have to take any actions based on light indication, the valves will not be subject to Position Indication Testing per ISTC-3700.

Technical Position TP-04
(Page 1 of 1)

Fail Safe Testing of Valves

Purpose

The purpose of this Technical Position is to establish the Plant Hatch IST Program position for fail safe testing of valves in conjunction with stroke time exercising or position indication testing.

Applicability

This Technical Position is applicable to valves with fail-safe actuators required to be tested in accordance with ISTC-3560.

Background

The ASME OM Code 2004 through 2006 Addenda section ISTC-3560 requires;

> "Valves with fail-safe actuators shall be tested by observing the operation of the actuator upon loss of valve actuating power in accordance with the exercising frequency of ISTC-3510."

Position

In cases where the valve operator moves the valve to the open or closed position following de-energizing the operator electrically, by venting air, or both, the resultant valve exercise will satisfy the fail safe test requirements and an additional test specific for fail safe testing will not be performed.

Plant Hatch will also use remote position indication as applicable to verify proper fail-safe operation, provided that the indication system for the valve is periodically verified in accordance with ISTC-3700.

Justification

Fail Safe Testing tests the ability of the fail safe mechanism of the valves to go to its fail safe condition. Whether or not the actuation of this fail safe mechanism is due to Operator Action or failure of the valves air / electric power source, the resultant action of the valve will be the same. Therefore, credit for the verification of a valves fail safe ability can be based on performance of either a stroke time exercising or full stroke position indication test for applicable valves.

Technical Position TP-05

Classification of Skid Mounted Components

Purpose

The purpose of this technical position is to clarify requirements for classification of various skid mounted components, and to clarify the testing requirements of these components.

Background

The ASME Code allows classification of some components as skid mounted when their satisfactory operation is demonstrated by the satisfactory performance of the associated major components. Testing of the major component is sufficient to satisfy Inservice Testing requirements for skid mounted components. In section 3.4 of NUREG 1482 Rev 2, the NRC supports the designation of components as skid mounted:

> "The staff has determined that the testing of the major component is an acceptable means for verifying the operational readiness of the skid-mounted and component subassemblies if the licensee documents this approach in the IST Program. This is acceptable for both Code class components and non-Code class components tested and tracked by the IST Program."

In the 1996a addenda to the ASME OM Code (endorsed by 10CFR50.55(a) in October 2000), the term skid-mounted was clarified by the addition of ISTA paragraph 1.7:

> ISTA 1.7 Definitions
>
> *Skid mounted components and component sub assemblies* – components integral to or that support operation of major components, even though these components may not be located directly on the skid. In general, these components are supplied by the manufacturer of the major component. Examples include: diesel skid-mounted fuel oil pumps and valves, steam admission and trip throttle valves for high-pressure coolant injection or Auxiliary Feedwater turbine-driven pumps, and solenoid-operated valve provided to control the air-operated valve.

Classification of Skid Mounted Components

This definition was further clarified in the 1998 and 2001 Editions of the ASME Code:

ISTA-2000 DEFINITIONS

Skid mounted pumps and valves – pumps and valves integral to or that support operation of major components, even though these components may not be located directly on the skid. In general, these pumps and valves are supplied by the manufacturer of the major component. Examples include:

(a) diesel fuel oil pumps and valves;
(b) steam admission and trip throttle valves for high-pressure coolant injection pumps;
(c) steam admission and trip throttle valves for Auxiliary Feedwater turbine driven pumps;
(d) solenoid-operated valves provided to control an air-operated valve.

Additionally the Subsections pertaining to pumps (ISTB) and valves (ISTC) includes exclusions/exemptions for skid mounted components;

ISTB-1200(c) Exclusions

Skid-mounted pumps that are tested as part of the major component and are justified by the Owner to be adequately tested.

ISTC-1200 Exemptions

Skid-mounted valves are excluded from this Subsection provided they are tested as part of the major component and are justified by the Owner to be adequately tested.

Position

The 2004 ASME OM Code definition of skid mounted will be used for classification of components in the Plant Hatch Inservice Testing Program. In addition, for a component to be considered skid mounted:

- The major component associated with the skid mounted component must be surveillance tested at a frequency sufficient to meet ASME Code test frequency for the skid mounted component.

- Satisfactory operation of the skid mounted component must be demonstrated by satisfactory operation of the major component.

Technical Position TP-05
(Page 3 of 3)

Classification of Skid Mounted Components

- The IST Bases Document should describe the bases for classifying a component as skid mounted, and the IST Program Plan should reference this technical position for the component.

Recognition and classification of components as skid mounted eliminates the need for the redundant testing of the sub component(s) as the testing of major (parent) component satisfactorily demonstrates operation of the "skid mounted" component(s).

The components designated as skid-mounted are identified as such in the IST Bases. These include auxiliary pumps for the Emergency Diesel Generators and the HPCI system. Also several valves mounted on the EDG skids which are part of the lube oil, fuel oil and cooling water sub-systems.

Technical Position TP-06
(Page 1 of 1)

Manual Valve Exercise Frequency

Purpose

The purpose of this Technical Position is to establish the Plant Hatch IST Program position for the frequency of exercising those manual valves which are required to be exercised.

Applicability

This Technical Position is applicable to the manual valves included in the Inservice Testing Program.

Background

The ASME OM Code 2004 through 2006 Addenda section ISTC-3540 states;

> "Manual valves shall be full-stroke exercised at least once every 5 years, except where adverse conditions[1] may require the valve to be tested more frequently to ensure operational readiness."
>
> [1]Harsh service environment, lubricant hardening, corrosive or sediment laden process fluid, or degraded valve components are some examples of adverse conditions.

However, 10CFR50.55a(b)(3)(vi) states: " *Exercise interval for manual valves.* Manual valves must be exercised on a 2-year interval rather that the 5-year interval specified in paragraph ISTC-3540 of the 1999 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(3) of this section, provided that adverse conditions do not require more frequent testing."

Position

Plant Hatch will perform exercising of manual valves within the scope of the IST Program at a frequency not to exceed 2 years.

Justification

The NRC stipulates a frequency of exercising manual valves at least once every 2 years. This interval is more frequent than required by ASME OM Code 2004 through 2006 Addenda section ISTC-3540; therefore no other justification is required.

NOTE: At the present time there are no manual valves within the scope of the Plant Hatch IST Program.

Technical Position TP-07
(Page 1 of 2)

Outside Design Basis

Purpose

The purpose of this Technical Position is to establish the Plant Hatch IST Program position for scoping decisions on components which may be functionally credited within the Appendix R program but are not considered in the scope of the IST Program.

Applicability

This Technical Position is applicable to components outside the scope of UFSAR Chapter 15 accident mitigation or which have no *specific* functional requirement to achieve or maintain cold shutdown.

Background

The ASME OM Code 2004 through 2006 Addenda section ISTA-1100, "Scope", states that Inservice Testing requirements pertain to:

> "Pumps and Valves that are required to perform a specific function in shutting down a reactor to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident."

The Appendix R Program examines accident scenarios triggered predominantly by fires in various plant locations. An Appendix R scenario may verify the ability of operators to travel to a specific plant location and to manually manipulate a valve in a BOP system which would be operated as part of an orderly plant shutdown. The ASME IST scoping process looks at safety-related equipment - for example, the need to provide adequate makeup water to the reactor must be fulfilled by ECCS systems with an underlying assumption that all non-ASME systems are unavailable. Hatch would provide for testing of those ECCS systems to ensure they can meet their design basis capabilities. This is only one example of the differences between ASME IST pump and valve scoping and Appendix R scoping.

Those components are not credited with an active safety function as defined by the ASME IST scoping definitions, and will not be tested under the auspices of the Plant Hatch IST Program.

Position

Consistent with industry practice, components required solely to mitigate the consequences of 10CFR50 Appendix R fires and station blackout events are outside the scope of the IST Program since these events are beyond the facility design basis.
Beyond design basis events are initiated by multiple (and sometimes complete) failures of safety-related components and systems. The facility design is based on requirement that each safety

Outside Design Basis

system be capable of performing its safety-related functions given a failure of the most limiting active component. Although regulations have been imposed that require the capability to cope with, or to mitigate these events, they are outside the scope of the facility accident analyses. Components whose sole safety functions are to mitigate these "outside design basis" events are not required by regulations to be classified as safety-related, nor would they meet the ASME OM Code scoping definitions.

Justification

Components credited in Appendix R or other outside design basis evaluations may or may not be safety-related. Testing of these components may be accomplished through the plant PM Program or other test scheduling processes. The expertise of the ISI/IST qualified personnel may be utilized to develop and even perform such testing. The IST Program involves a significant administrative burden and the scope of components within the program needs to be limited and in line with standard industry norms.

Technical Position TP-08
(Page 1 of 3)

Categorization of IST Pumps (Group A or B)

Position

Plant Hatch has categorized the pumps required to be included in the Inservice Testing Program as either Group A or B in accordance with the requirements of ISTB-2004/2006a.

Group A pumps are pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operations. The following pumps are categorized as Group A:

Pump CIC	Class	Group	Type	Function
1E11-C002A	2	A	Centrifugal	U1 Residual Heat Removal Pump A
1E11-C002B	2	A	Centrifugal	U1 Residual Heat Removal Pump B
1E11-C002C	2	A	Centrifugal	U1 Residual Heat Removal Pump C
1E11-C002D	2	A	Centrifugal	U1 Residual Heat Removal Pump D
2E11-C002A	2	A	Vert. Line Shaft	U2 Residual Heat Removal Pump A
2E11-C002B	2	A	Vert. Line Shaft	U2 Residual Heat Removal Pump B
2E11-C002C	2	A	Vert. Line Shaft	U2 Residual Heat Removal Pump C
2E11-C002D	2	A	Vert. Line Shaft	U2 Residual Heat Removal Pump D
1E11-C001A	3	A	Vert. Line Shaft	U1 RHR Service Water Pump A
1E11-C001B	3	A	Vert. Line Shaft	U1 RHR Service Water Pump B
1E11-C001C	3	A	Vert. Line Shaft	U1 RHR Service Water Pump C
1E11-C001D	3	A	Vert. Line Shaft	U1 RHR Service Water Pump D
2E11-C001A	3	A	Vert. Line Shaft	U2 RHR Service Water Pump A
2E11-C001B	3	A	Vert. Line Shaft	U2 RHR Service Water Pump B
2E11-C001C	3	A	Vert. Line Shaft	U2 RHR Service Water Pump C
2E11-C001D	3	A	Vert. Line Shaft	U2 RHR Service Water Pump D
1P41-C001A	3	A	Vert. Line Shaft	U1 Plant Service Water Pump A
1P41-C001B	3	A	Vert. Line Shaft	U1 Plant Service Water Pump B
1P41-C001C	3	A	Vert. Line Shaft	U1 Plant Service Water Pump C
1P41-C001D	3	A	Vert. Line Shaft	U1 Plant Service Water Pump D
2P41-C001A	3	A	Vert. Line Shaft	U2 Plant Service Water Pump A
2P41-C001B	3	A	Vert. Line Shaft	U2 Plant Service Water Pump B
2P41-C001C	3	A	Vert. Line Shaft	U2 Plant Service Water Pump C
2P41-C001D	3	A	Vert. Line Shaft	U2 Plant Service Water Pump D

Group B pumps are those pumps in standby systems that are not operated routinely except for testing. The following pumps are categorized as Group B:

Pump Number	Class	Group	Type	Function
1C41-C001A	2	B	Pos. Displ.	U1 Standby Liquid Control Pump
1C41-C001B	2	B	Pos. Displ.	U1 Standby Liquid Control Pump

Pump Number	Class	Group	Type	Function
2C41-C001A	2	B	Pos. Displ.	U2 Standby Liquid Control Pump
2C41-C001B	2	B	Pos. Displ.	U2 Standby Liquid Control Pump
1E21-C001A	2	B	Centrifugal	U1 Core Spray Pump A
1E21-C001B	2	B	Centrifugal	U1 Core Spray Pump B
2E21-C001A	2	B	Centrifugal	U2 Core Spray Pump A
2E21-C001B	2	B	Centrifugal	U2 Core Spray Pump B
1E41-C001	2	B	Centrifugal	U1 HPCI Pump
2E41-C001	2	B	Centrifugal	U2 HPCI Pump
1E51-C001 *	2	B	Centrifugal	U1 RCIC Pump
2E51-C001 *	2	B	Centrifugal	U2 RCIC Pump
2P41-C002	3	B	Vert. Line Shaft	U2 Standby Diesel Service Water Pump
1Y52-C001A *	N/A	B	Vert. Line Shaft	U1EDG Fuel Oil Transfer Pump
1Y52-C001B *	N/A	B	Vert. Line Shaft	U1EDG Fuel Oil Transfer Pump
1Y52-C001C *	N/A	B	Vert. Line Shaft	U1EDG Fuel Oil Transfer Pump
1Y52-C101A *	N/A	B	Vert. Line Shaft	U1EDG Fuel Oil Transfer Pump
1Y52-C101B *	N/A	B	Vert. Line Shaft	U1EDG Fuel Oil Transfer Pump
1Y52-C101C *	N/A	B	Vert. Line Shaft	U1EDG Fuel Oil Transfer Pump
2Y52-C001A *	N/A	B	Vert. Line Shaft	U2EDG Fuel Oil Transfer Pump
2Y52-C001C *	N/A	B	Vert. Line Shaft	U2EDG Fuel Oil Transfer Pump
2Y52-C101A *	N/A	B	Vert. Line Shaft	U2EDG Fuel Oil Transfer Pump
2Y52-C101C *	N/A	B	Vert. Line Shaft	U2EDG Fuel Oil Transfer Pump

* This is an augmented scope component

The following summarizes the Group A, B, and Comprehensive Pump Test requirements as specified by the ASME OM Code Subsection ISTB.

Group A Pump Tests – Group A tests are performed quarterly for each pump categorized as A. The following inservice test parameters are measured for each Group A pump test:

- Speed (if pump is variable speed)
- Differential Pressure
- Discharge Pressure, (for positive displacement pumps)
- Flow Rate
- Vibration

Group B Pump Tests – Group B tests are performed quarterly for each pump categorized as B(1). The following inservice test parameters are measured for each Group B pump test.

- Speed (if pump is variable speed)
- Differential Pressure(2)
- Flow Rate(2)

(1) Pumps in augmented scope may be tested at intervals different than typical IST intervals. For example, the EDG Fuel Oil Transfer pumps are tested every 6 months. See the pump tables or basis sheets for specific augmented scope pump testing.

(2) For positive displacement pumps, flow rate shall be measured or determined, for all other pumps, differential pressure or flow rate shall be measured or determined.

Comprehensive Pump Tests – Comprehensive pump tests (CPT) are performed biennially for all pumps in the Inservice Testing Program, although CPT is not performed on some augmented scope pumps. The following inservice test parameters are measured for each Comprehensive pump test:

- Speed (if pump is variable speed)
- Differential Pressure
- Discharge Pressure, (for positive displacement pumps)
- Flow Rate
- Vibration

The following instrument accuracy requirements apply to each test type:

Parameter	**Group A**	**Group B**	**Comprehensive**
Pressure	+/- 2.0%	+/- 2.0%	+/- 0.5%
Flow Rate	+/- 2.0%	+/- 2.0%	+/- 2.0%
Speed	+/- 2.0%	+/- 2.0%	+/- 2.0%
Vibration	+/- 5.0%	+/- 5.0%	+/- 5.0%
Differential Pressure	+/- 2.0%	+/- 2.0%	+/- 0.5%

CRD Scram Valve Exercise Frequency

Purpose

The purpose of this Technical Position is to establish the station position for exercising the Control Rod Drive scram outlet valves.

Applicability

This Technical Position is applicable to CRD valves that if exercised could potentially scram the reactor. This position is applicable to the following valves, which are typical of each individual hydraulic control unit:

Component	Description	Code Class	Category
1C11-HCU-114	CRD Scram Discharge Header Check Valve	2	C
1C11-HCU-126	CRD Hydraulic System Inlet Scram Valve	1	B
1C11-HCU-127	CRD Hydraulic System Outlet Scram Valve	1	B
2C11-HCU-114	CRD Scram Discharge Header Check Valve	2	C
2C11-HCU-126	CRD Hydraulic System Inlet Scram Valve	1	B
2C11-HCU-127	CRD Hydraulic System Outlet Scram Valve	1	B

Position

Plant Hatch will exercise the subject valves at a frequency in accordance with Technical Specifications.

Justification

The proper operation of each of these valves is demonstrated during scram time testing. During scram time testing, each drive's scram insertion time is measured and a fail-safe actuator test is performed. Plant Hatch's Technical Specifications provide a specific time for individual CRD scram insertion. If a particular CRD's scram insertion time is less than the specified time, the above valves are functioning properly.

- Plant Hatch Technical Specification section 3.1.4.1 requires "Verify each control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure ≥ 800 psig". At a frequency "Prior to exceeding 40% RTP after each reactor shutdown > 120 days" OR "Prior to exceeding 40% RTP after fuel movement within the reactor pressure vessel"

- Plant Hatch Technical Specification section 3.1.4.2 requires "Verify, for a representative sample, each tested control rod scram time is within the limits of Table 3.1.4-1 with reactor

CRD Scram Valve Exercise Frequency

steam dome pressure ≥ 800 psig". At a frequency of "200 days cumulative operation in MODE 1". [NOTE: Changed from 120 days to 200 days per License Amendment 167 dated 10/25/2005.]

This justification is consistent with the NRC guidance provided in NUREG-1482 Revision 2, Section 4.4.6.

Technical Position TP-10

(Page 1 of 1)

Valve Leakage Criteria

Purpose

The purpose of this Technical Position is to establish the Hatch IST Program position for determination of seat leakage and gross reverse leakage criteria on select valves.

Applicability

This Technical Position is applicable to the following valves:

1. Category A valves which do NOT have a Technical Specification or UFSAR prescribed leakage limit.
2. Category C Check valves with close exercise testing that involves identification of reverse leakage

Position

Per RER SNC505599 (Inservice Testing Acceptance Criteria Review with Respect to Design Analysis), for Category A valves described above the owner will establish administrative leakage limits. Administrative Leakage Limits for all Category A valves not referenced in the Technical Specifications will be determined by the guidance in 42EN-INS-002-0.

Also, Administrative Leakage Limits for those Category A valves which reference 42EN-INS-002-0 may be greater than the guidance included in 42EN-INS-002-0 due to past history where valves just minimally exceeded the guidance of 42EN-INS-002-0. Appendix J allows Licensees to establish Administrative Leakage Limits as long as total leakage is maintained less than total plant allowed leakage (La).

The closure exercise verification testing of some check valves involves a measurement of reverse leakage through the valve. Although criteria may be used for such leakage this does not imply that the valve would be a category A valve. Such criteria will be determined by the plant with the intent to show that the valve has in fact closed in reverse flow conditions. That criterion is not related to an analysis or commitment involving a maximum leakage path limit, and is not a contributor to La.

Technical Position TP-11
(Page 1 of 1)

Service Water Pumps Inlet Pressure Accuracy

Purpose

The purpose of this Technical Position is to document the basis for the Inlet (suction) pressure measurement and accuracy used in Service Water Pump testing.

Applicability

This Technical Position is applicable to the Unit 1 and 2 RHR Service Water and Plant Service Water pumps, and the unit 2 Standby Diesel Service water pump.

Position

These vertical line shaft service water pumps take suction off the Intake basin connected to the Altamaha River. The inlet pressure is a function of the elevation of the water in the intake basin, where the water level is maintained well above the actual suction bell of the pump. The pump has to create lift pressure to overcome the column of water. Because of this, pump differential pressure is calculated by adding the inlet pressure to the discharge pressure.

Inlet pressure is a calculated value, derived from the level of the water in the Intake basin. The formula for converting intake level to inlet pressure is: Pi = (114.5 feet - intake level) x 0.433

Instrument 1P41-N575 is used to measure intake level for the testing of both the Unit 1 and 2 pumps. Calibration procedure 57CP-CAL-013-1 shows that the 1P41N575 instrument is calibrated at +/- 1% for a range of 60 - 80 ft. For an instrument range of 20 ft, the maximum instrument inaccuracy is therefore 20*(0.1) = 0.2 ft.

At an intake level depth of 80 ft (maximum reading) the Pi would be 14.938 psi. Considering the maximum instrument inaccuracy of 0.2 ft the offset could be 80.2 ft; yielding a Pi value of 14.8519 psi. This is a maximum delta of 0.087 psi for the Pi measurement. The U2 Standby Diesel Service Water pump represents the most conservative condition, with a reference DP of only 105.9 for the CPT. The 0.087 psi possible offset in Pi would represent only a 0.082% impact on the measured DP. This is well within the 0.5% CPT pressure accuracy requirement in the ASME OM Code.

Technical Position TP-12
(Page 1 of 2)

Requirements for use of Linear Regression and Data Normalization related to Pump Curves

Purpose

The purpose of this Technical Position is to establish the IST Program position on developing a linear regression for portions of pump curves and for normalizing pressure data within a specific flow band.

Applicability

This Technical Position is applicable as a trending technique for all IST program pumps.

Position

USE OF LINEAR REGRESSION:
There are situations where a portion of a pump curve needs to be quantified with a pressure to flow relationship such that a derivation of one parameter can be made given a single value of the other parameter. Most pump curves have a non-linear pressure (head) to flow relationship over the entire curve; however, for specific portions of the curve the pressure to flow relationship may be proportional enough to use linear regression as the derivation technique. The following are guidelines and requirements to be used in establishing a linear regression for a pump curve:

GUIDELINE 1: It is recommended that at least 6 points be measured for actual flow and pressure within the bounds of the linear regression region.
REQUIREMENT 1: It is required that at least 4 points be measured for actual flow and pressure within the bounds of the linear regression region.

GUIDELINE 2: It is recommended that the correlation coefficient (R) for the linear relationship be greater than 0.960 [abs]. This provides high confidence and accuracy for deriving values using the regression equation.
REQUIREMENT 2: It is required that the correlation coefficient (R) for the linear relationship be greater than 0.920 [abs]. This provides sufficient confidence and accuracy for deriving values using the regression equation.

GUIDELINE 3: It is recommended that the valid range of "x", typically flow, be no lower than the lowest measured flow data point and no higher than the highest measured flow data point.
REQUIREMENT 3: It is required that the valid range of "x", typically flow, be no lower than 90% of the lowest measured flow data point and no higher than 110% of the highest measured flow data point.

Technical Position TP-12
(Page 2 of 2)

DATA NORMALIZATION:

For pump testing where a reference band is allowed, there will be some scatter associated with the measured variable data. This guidance will allow the evaluator a method to normalize that variable data in order to properly assess trends. The example used will be for a centrifugal pump where flow is set to an established reference value but allowance is given within the procedure for test flow to be plus or minus a given range about the reference value. Discharge and suction pressures are then measured at some measured flow value within the allowed test flow range.

The evaluator shall need to establish a known linear pressure-flow relationship, either from baseline data or from an assessment of a large quantity of pressure to flow data accumulated over several years. Using MS Excel, this linear relationship will need to be expressed as a table with at least 4 rows of data relating pressure to flow. One set of values should be at or below the minimum end of the allowable test flow band, another set at or above the maximum end and the remaining data at or very close to the middle (reference flow). The evaluator shall then use the Excel Forecast function to input an actual measured test flow and derive what the DP should be. The numerical difference between the derived DP and the DP at the center of the flow range shall then be subtracted from or added to (as applicable) the actual measured DP for that test flow. This should be done for all measured data to be used in the trend analysis. Below is an example:

Pump X
Baseline data table

Test Point	Flow	DP
4	4768	75.2
5	5410	59.0
6	6040	41.5
7	5407	59.2
8	5400	58.9

Derived values for allowed test range of 5300 - 5500 gpm	
5300	61.54136
5400	58.89245
5500	56.24353

Assume actual test measurements of 5362gpm / 60.3psid and 5465gpm / 56.6psid are being evaluated. The forecast DP at 5362 gpm is 59.89903 and the forecast DP at 5465 gpm is 57.17065.
For the 5362 gpm reading: 60.3 - (59.89903 - 58.89245) = **59.29**
For the 5465 gpm reading: 56.6 + (58.89245 - 57.17065) = **58.32**
For the purposes of trending, the corrected values of 59.29 and 58.32 would be used for these two data points. Normalizing the DP in this manner eliminates the scatter that would be introduced by tests performed at flow values well above or below the reference flow.

Categorization of ADS Safety Relief Valves

Purpose

The purpose of this Technical Position is to establish the Hatch IST Program position for categorization of selected SRVs.

Applicability

This Technical Position is applicable to the following SRVs which are aligned to the Emergency Core Cooling System (ECCS) Automatic Depressurization System (ADS) function:

Valve PIS No.	Code Class	Category	P&ID Drawing Unit 1 / Unit 2
1B21-F013B	1	C	H16062
1B21-F013D	1	C	H16062
1B21-F013E	1	C	H16062
1B21-F013F	1	C	H16062
1B21-F013J	1	C	H16062
1B21-F013K	1	C	H16062
1B21-F013L	1	C	H16062
2B21-F013A	1	C	H26000
2B21-F013C	1	C	H26000
2B21-F013E	1	C	H26000
2B21-F013H	1	C	H26000
2B21-F013K	1	C	H26000
2B21-F013L	1	C	H26000
2B21-F013M	1	C	H26000

Justification

The functions of these 14 ADS Safety Relief Valves (SRVs) are: 1) to act as a primary system safety relief valve which automatically actuates on high pressure; 2) to open upon receipt of an ECCS auto depressurization signal to reduce reactor pressure and; 3) to act as a primary system relief valve which can be manually actuated from the control room.

Even though these valves can operate as a result of an electrical control signal, either automatic or manual, the actuation of the main valve is mechanically via a pilot valve. The function of these valves is to reduce pressure. It is impractical to measure the stroke times for an SRV since the actual stem movement times are on the order of 100 msec.

Technical Position TP-13
(Page 2 of 2)

Categorization of ADS Safety Relief Valves

It is also impractical to exercise test these valves due to the need for reactor pressure for actuation and the need to control the resultant pressure transient.

Given their primary function, these valves will be treated as Category C safety relief valves and their testing will be as prescribed by ASME OM Code Appendix I.

Reference value testing ranges

Purpose

The purpose of this Technical Position is to establish the IST Program position on the allowable ranges of reference values for pump testing.

Applicability

This Technical Position is applicable to the following pumps:

Pump Designation	Description	Category
1(2)C41-C001A&B	Standby Liquid Control Pumps – Positive Displacement Pumps	Group B
1(2)E11-C001A-D	RHR Service Water Pumps – Vertical Line Shaft Pumps	Group A
1E11-C002A-D	Residual Heat Removal Pumps – Centrifugal Pumps	Group A
2E11-C002A-D	Residual Heat Removal Pumps – Vertical Line Shaft Pumps	Group A
1E21-C001A&B	Core Spray Pumps – Centrifugal Pumps	Group B
2E21-C001A&B	Core Spray Pumps – Vertical Line Shaft Pumps	Group B
1(2)E41-C001	High Pressure Coolant Injection Pumps – Centrifugal Pumps	Group B
1(2)E51-C00	Reactor Core Isolation Cooling Pumps) – Centrifugal Pumps	Group B
1(2)P41-C001A-D	Plant Service Water Pumps – Vertical Line Shaft Pumps	Group A
2P41-C002	Standby Diesel Service Water Pump – Vertical Line Shaft Pump	Group B
1Y52-C001A-C, 1Y52-C101A&B, 2Y52-C001A&C, 2Y52-C101A&C	Diesel Fuel Oil Transfer Pumps – Vertical Line Shaft Pumps	Group B

Background

ASME OM Code Case OMN-21 , Alternate Requirements for Adjusting Hydraulic Parameters to Specified Reference Points, provides guidance for adjusting reference flow/pressure to within a specified tolerance during Inservice Testing. The Code Case states "It is the opinion of the Committee that when it is impractical to operate a pump at a specified reference point and adjust the resistance of the system to a specified reference

Reference value testing ranges

point for either flow rate, differential pressure or discharge pressure, the pump may be operated as close as practical to the specified reference point with the following requirements. The Owner shall adjust the system resistance to as close as practical to the specified reference point where the variance from the reference point does not exceed + 2% or - 1% of the reference point when the reference point is flow rate, or + 1% or – 2% of the reference point when the reference point is differential pressure or discharge pressure. The NRC also discusses this ASME Code change in NUREG-1482, Revision 2, Section 5.3. Hatch obtained relief (see RR-PR-13) to implement this Code Case.

Position

Hatch will perform pump Inservice Testing in a manner consistent with the requirements as stated in ASME OM Code Case OMN-21. Specifically, testing of all centrifugal pumps identified above will be performed such that flow rate is adjusted as close as practical to the reference value and within proceduralized limits of +2% / -1% of the reference value. For positive displacement pumps the discharge pressure will be adjusted as close as practical to the reference value and within proceduralized limits of +1% / -2% of the reference value.

Hatch plant operators will still strive to achieve the exact test reference values during testing. Typical test guidance will be to adjust flow/pressure to the specific reference value with additional guidance that if the reference value cannot be achieved with reasonable effort the test will be considered valid if the steady state flow rate is within the proceduralized limits of +2% / -1% of the reference value or discharge pressure within proceduralized limits of +1% / -2% of the reference value.

Justification

This testing methodology allows for the throttling capability of tested systems while maintaining the ability to collect and analyze data which can identify degrading trends. As discussed in NUREG 1482 Rev 2 Section 5.3

> "The basis for allowing a variance of + 2 / -1 percent from the flow rate reference value deals with instrument fluctuations and system stability issues. The Code allows symmetrical damping devices or averaging techniques to be used to reduce instrument fluctuations to within 2 percent of the observed reading for values specified in the implementing procedures. Greater variances must be justified and acceptance criteria adjustments made as necessary. The limitation of 1 percent in the negative direction reduces the non-conservative impact on the variable parameter. The total 3 percent allowable variance provides for a reasonable throttling control range while minimizing the impact on trendability of the variable parameter.

Reference value testing ranges

Licensees should ensure that performance trending of pumps is capable of detecting degradation as early as possible. Larger variances in the reference parameter will induce scatter in the variable parameter data. Techniques such as data normalization, where recorded test data is corrected by the known pressure to flow relationship, should be used when necessary to provide for accurate short term trending."

IST analysts should reconcile the impact of variance from the reference value when performing a trend analysis. Technical Position TP-12 provides guidance on the use of data normalization as a tool to eliminate data scatter due solely to reference value variance.