Brunswick Nuclear Plant
P.O. Box 10429
Southport, NC 28461

February 19, 2018

Serial: BSEP 18-0014

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

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Renewed Facility Operating License Nos. DPR-71 and DPR-62
Docket Nos. 50-325 and 50-324
Fifth 10-Year Inservice Testing Program Plan

Reference:

1. Letter from Bryan B. Wooten (Duke Energy) to the U.S. Nuclear Regulatory Commission Document Control Desk, *Fifth 10-Year Inservice Testing Interval*, dated November 2, 2017, ADAMS Accession Number ML17310A160

2. Letter from Bryan B. Wooten (Duke Energy) to the U.S. Nuclear Regulatory Commission Document Control Desk, *Snubber Program Plan for Fifth 10-Year Inservice Testing Interval*, dated January 10, 2018, ADAMS Accession Number ML18010A579

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*, Duke Energy Progress, LLC (Duke Energy), is enclosing for information a copy of CSD-EG-BNP-1720, Revision 0, *BNP IST Program Plan – 5th Interval*, for the fifth 10-year interval for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2.

As reported by Reference 1, the fifth 10-year inservice testing (IST) interval for BSEP begins December 22, 2017. The fifth 10-year interval IST Program will follow the requirements of the ASME OM Code, 2004 Edition with Addenda through OM-2006. The snubber program plan for the fifth 10-year IST interval has already been submitted by letter dated January 10, 2018 (i.e., Reference 2).

Please refer any questions regarding this submittal to Mr. Lee Grzeck, Manager – Regulatory Affairs, at (910) 832-2487.

Sincerely,

Bryan B. Wooten
Director – Organizational Effectiveness
Brunswick Steam Electric Plant

WRM/wrm

Enclosure: CSD-EG-BNP-1720, Revision 0, *BNP IST Program Plan – 5th Interval*

cc (with enclosure):

U.S. Nuclear Regulatory Commission, Region II
ATTN: Ms. Catherine Haney, Regional Administrator
245 Peachtree Center Ave, NE, Suite 1200
Atlanta, GA 30303-1257

U.S. Nuclear Regulatory Commission
ATTN: Mr. Gale Smith, NRC Senior Resident Inspector
8470 River Road
Southport, NC 28461-8869

U.S. Nuclear Regulatory Commission
ATTN: Mr. Andrew Hon (Mail Stop OWFN 8G9A)
11555 Rockville Pike
Rockville, MD 20852-2738
Andrew.Hon@nrc.gov

Chair - North Carolina Utilities Commission **(Electronic Copy Only)**
4325 Mail Service Center
Raleigh, NC 27699-4300
swatson@ncuc.net

Mr. Cliff Dautrich, Bureau Chief
North Carolina Department of Labor
Boiler Safety Bureau
1101 Mail Service Center
Raleigh, NC 27699-1101

CSD-EG-BNP-1720, Revision 0,
BNP IST Program Plan – 5th Interval

BRUNSWICK NUCLEAR PLANT

BNP IST Program Plan – 5th Interval

CSD-EG-BNP-1720

Revision 0

Prepared By: _____ Date: _____

IST Review: _____ Date: _____

Approved By: _____ Date: _____

PLANT INFORMATION

Plant:	Brunswick Nuclear Plant Southport, North Carolina
Owner:	Duke Energy, Inc. Charlotte, North Carolina
Commercial Service Date:	Unit 1 – March 18, 1977 Unit 2 – November 1, 1975

REVISION STATUS SHEET

Revision	Affected Pages	Description/Comments
0	All	New document – This document is revision 0 for the new 5th Interval IST Program Plan.

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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

This document represents the Brunswick Nuclear Plant (BNP) Inservice Testing (IST) Program (Test Plan as referred to in ISTA-1300) for the Fifth interval. It establishes testing and examination requirements to assess the operational readiness of certain Safety Class 1, 2, and 3 components important to nuclear safety. These requirements apply to:

- pumps and valves required to perform a specific function in shutting down the reactor to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident;

- pressure relief devices that protect systems or portions of systems that perform one or more of these three functions;

NOTE: BNP is licensed for safe shutdown at the hot standby condition. Pumps and valves required to achieve and maintain the cold shutdown condition are optionally included in the IST Program as augmented components. These augmented components will be tested in accordance with the IST Program to the extent practicable.

This IST Program provides compliance with the regulatory requirements identified in Section 2.0 (below) and FSAR Section 3.9.6.

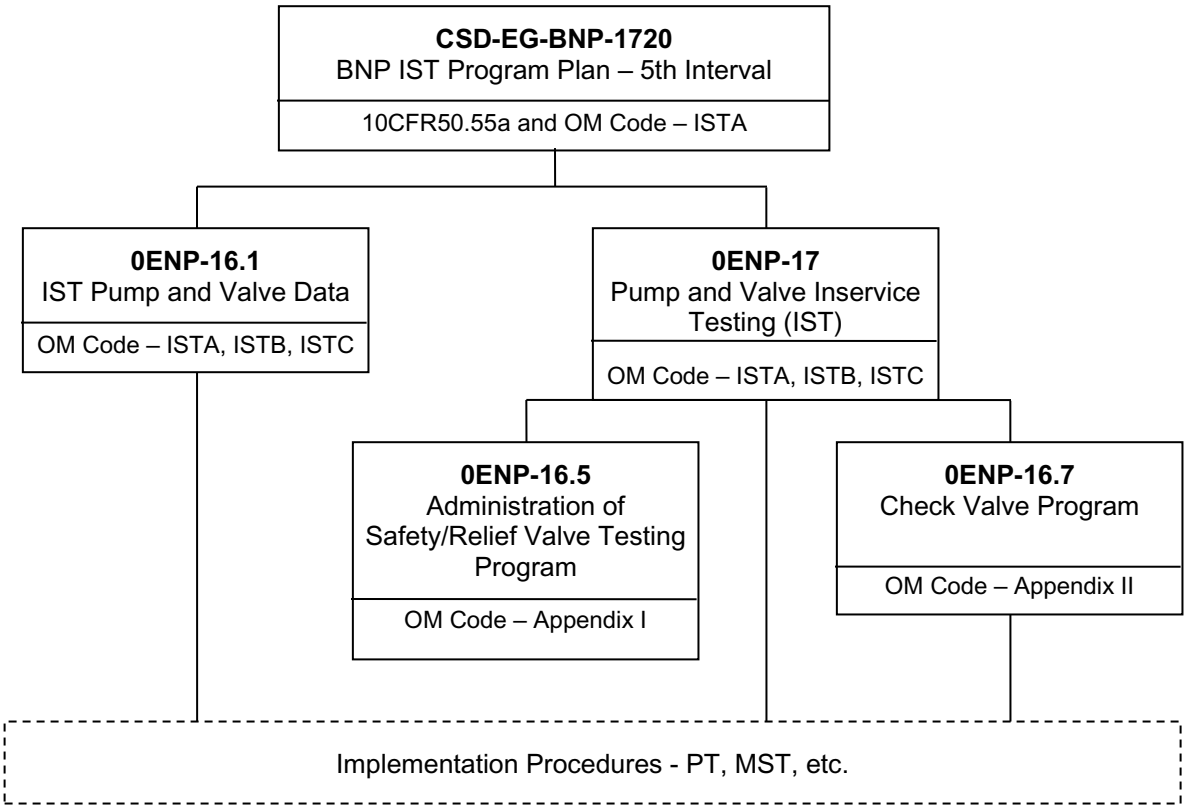
1.2 Jurisdiction

The jurisdiction of this IST Program covers individual components that have met all of the requirements of the construction code commencing at the time when the construction code requirements have been met, irrespective of the physical location. When portions of systems or plants are completed at different times, the jurisdiction of this IST Program covers only those components on which all construction related to the components have been completed.

Following the guidelines of NUREG-1482, specifically paragraph 2.2.3, provides guidance for the testing of certain non-Code components. BNP has chosen to follow this guidance for those sections of piping identified as non-Code that are part of the skid package of the Emergency Diesel Generator. For these components, tests are conducted to confirm Emergency Diesel Generator operability in order to satisfy Technical Specification 3.8.1 AC - Operating. These tests meet the requirements of 10CFR50 Appendix B and BNP Plant Technical Specifications.

1.3 Background

The BNP IST Program document structure/hierarchy used in the Fourth interval has been retained for the Fifth interval. This document (CSD-EG-BNP-1720) is the primary IST Program document. It defines BNP compliance with regulations, program interval, code of record, and specific program scope (listing of components and required tests). This document is supplemented by the ENP series procedures which define BNP compliance with each of the sub-program requirements (e.g. pump, valves) as shown below.



2.0 BASIS FOR INSERVICE TESTING PROGRAM

2.1 Code of Federal Regulations Requirements

The Code of Federal Regulations, Title 10, Part 50.55a (10CFR50.55a), paragraph (f)(5)(i) requires each licensee of boiling water-cooled nuclear reactors to revise their inservice testing program to meet the requirements of 10CFR50.55a(f)(4)(ii). As a result, the inservice testing program must be revised at 120-month intervals to comply with the requirements of the latest edition and addenda of the Code incorporated by reference in 10CFR50.55a(b) 12 months before the start of the 120-month interval subject to the conditions listed in 10CFR50.55a(b)(3).

2.1.1 10CFR50.55a Conditions

Conditions from 10CFR50.55a(b)(3) are incorporated into this IST Program as described below.

2.1.1.1 10CFR50.55a(b)(3)(i) – NQA-1, "Nuclear Quality Assurance Requirements for Nuclear Facilities"

This condition is incorporated into the IST Program by means of reference to BNP's quality assurance program. Specifically, paragraphs 4.6.2, 4.7.3, and DUKE-QAPD-001 implement these requirements.

2.1.1.2 10CFR50.55a(b)(3)(ii) – Motor-Operated Valve Testing

BNP will maintain and implement motor-operated valve testing program to ensure motor-operated valves will continue to be capable of performing the design basis safety function. The BNP motor-operated valve testing program is governed by EGR-NGGC-0101 and EGR-NGGC-0203.

2.1.1.3 10CFR50.55a(b)(3)(iii) – New Reactors

No action required.

2.1.1.4 10CFR50.55a(b)(3)(iv) – Check Valves (Appendix II)

BNP's Appendix II Check Valve Condition Monitoring Program is governed by 0ENP-16.7 which contains provisions for trending and evaluation, bidirectional testing, and limits initial test intervals to two fuel cycles or 3 years, whichever is longer. Additionally, Table II – Maximum Intervals For Use When Applying Interval Extensions is captured in 0ENP-16.7 as well.

TABLE II—MAXIMUM INTERVALS FOR USE WHEN APPLYING INTERVAL EXTENSIONS

Group size	Maximum interval between activities of member valves in the groups (years)	Maximum interval between activities of each valve in the group (years)
≥4	4.5	16
3	4.5	12
2	6	12
1	Not applicable	10

2.1.1.5 CFR50.55a(b)(3)(v) – Snubbers ISTD

This condition is addressed by a separate Program Plan submittal. Reference AD-EG-BNP-1618.

2.1.1.6 10CFR50.55a(b)(3)(vi) – Manual Valve Exercise Interval

This condition is not applicable. The Code of Record for this Interval encompasses the 2006 Edition of the OM Code which requires full stroke exercise at least once every two years.

2.2 Inspection Interval Information

2.2.1 Inspection Interval Dates

The third 120-month interval was applicable from May 11, 1998 through and including May 10, 2008.

The fourth 120-month interval was applicable from May 11, 2008 through and including May 10, 2018.

The fifth 120-month interval is applicable from December 22, 2017 through and including December 21, 2027.

2.2.2 Inservice Interval Requirements

Inservice intervals are 10 years except they may be extended or decreased by as much as 1 year. Adjustments shall not cause successive intervals to be altered by more than 1 year from the original pattern of intervals.

In addition, for units that are out of service continuously for 6 months or more, the inservice interval during which the outage occurred may be extended for a period equivalent to the outage and the original pattern of intervals extended accordingly for successive intervals.

BNP has elected to pull its 5th Interval forward. The end date for the 4th Interval was effective through May 10th, 2018. However, to align with other Duke Energy plants with the Duke Energy Fleet, the start date for the 5th Interval is now December 22, 2017. This decision meets the requirements of ISTA-3120(d).

2.3 Code of Record

In accordance with 10CFR50.55a, the code of record for the Fifth interval IST Program is ASME OM Code, 2004 Edition through 2006 Addenda subject to conditions in 10CFR50.55a(b)(3).

2.3.1 Code Cases

In accordance with 10CFR50.50a(b), Code Cases referenced in Regulatory Guide (RG) 1.192, “Operation and Maintenance Code Case Acceptability, ASME OM Code” may be used without obtaining further review. RG 1.192 provides a list of Code Cases that are acceptable provided they are used in their entirety, with any supplemental conditions specified in the regulatory guide.

2.3.1 Code Cases (cont.)

In addition, RG 1.192 provides a list of Code Cases which are “conditionally acceptable”, meaning that they are acceptable within the limitations described in RG 1.192.

2.3.1.1 Application of Code Cases

- Code Cases to be used during a preservice or inservice test or examination are listed in this IST Program. Currently, no Code Cases are included in the IST Program.
- Code Cases used in this IST Program are applicable to Code of Record identified in paragraph 2.3.
- Code Cases shall be in effect at the time this IST Program is filed, except as provided below.
- Code Cases issued subsequent to filing this IST Program may be proposed for use in amendments to this IST Program.

2.3.1.2 Application of Revised Code Cases

Superseded Code Cases approved for use in accordance with paragraph 2.3.1.1 may continue to be used.

2.3.1.3 Application of Annulled Code Cases

Code Cases approved for use in accordance with paragraph 2.3.1.1 or 2.3.1.2 may be used after annulment for the duration of that IST Program Interval Program Plan.

2.3.1.4 OMN-20

10CFR50.55a(b)(3)(x) has approved for use by Licensees ASME OM Code Case OMN-20 “Inservice Test Frequency” which was incorporated by reference in paragraph (a)(1(iii)(G).

2.3.2 Deviations from Code of Record

Where conformance with the requirements of the Code of Record is determined to be impracticable or result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, alternative requirements are presented in this IST Program. These alternative requirements are documented as Relief Requests which are submitted to the NRC for evaluation and approval.

Relief Requests define the component(s) and test(s) involved, the basis for relief, the proposed alternate testing and the status of the NRC evaluation.

BNP's Pump or Valve Relief Requests are numbered in a "**XRR-zz**" format where:

X	=	P for pump, V for valve
RR	=	Relief Request
zz	=	Unique sequential number (e.g., VRR-02 would be the second relief request for valves)

2.3.3 Deferred Test Justifications

When testing, exercising, or examining of pumps and valves at power is not practicable, justification for impracticality shall be documented. The current justifications are included at the end of this document. Impractical conditions justifying test deferrals may include the following situations that could result in an unnecessary plant shutdown, cause unnecessary challenges to safety systems, place undue stress on components, cause unnecessary cycling of equipment, or unnecessarily reduce the life expectancy of the plant systems and components:

- inaccessibility
- testing would require major plant or hardware modifications
- testing has a high potential to cause a reactor trip
- testing could cause system or component damage
- testing could create excessive plant personnel hazards
- existing technology will not give meaningful results.

Deferred Test Justifications are numbered in a "**CSJ-XX**" or "**RFJ-XX**" format where:

CSJ/RFJ	=	Cold Shutdown/Refueling Outage Test Justification
XX	=	Unique sequential number (e.g., RFJ-02 would be the second RFJ justification traceable to a specific population of valves)

2.3.4 Program Remarks

Generic program remarks provide specific detail to better explain and justify the basis for IST program positions taken. Program Remarks are uniquely numbered and components within the IST program affected by specific Program Remarks reference the unique number within pump and valve tables.

Program Remarks are numbered in a "P-XX" or "V-XX" format where:

P	=	Pump and corresponding sequential number
V	=	Valve and corresponding sequential number

2.4 Additional Guidance

Recommendations and guidance provided in NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants" are incorporated into this IST Program as applicable.

3.0 REFERENCES

3.1 ASME OM Code, “Code for Operation and Maintenance of Nuclear Power Plants”, 2004 Edition through 2006 Addenda

3.2 Code of Federal Regulations, Title 10, Part 50, Section 55a, dated August 17, 2017

3.3 EGR-NGGC-0101, Revision 12, Electrical Calculation of Motor Output Torque for AC and DC Motor Operated Valves (MOVs)

3.4 EGR-NGGC-0203, Revision 17, Motor-operated Valve Performance Prediction, Actuator Settings, and Diagnostic Test Data Reconciliation

3.5 BNP Updated Final Safety Analysis Report, Section 3.9.6, Inservice Testing of Pumps and Valves

3.6 BNP Updated Final Safety Analysis Report, Section 3.2.2, System Quality Group Classifications

3.7 0ENP-16.1 Revision 35, IST Pump and Valve Data

3.8 0ENP-16.5 Revision 32, Administration of Safety/Relief Valve Testing Program

3.9 0ENP-16.7 Revision 22, Check Valve Program

3.10 0ENP-17 Revision 39, Pump and Valve Inservice Testing (IST)

3.11 AD-SS-ALL-0001 Revision 2, Measuring & Test Equipment Calibration Program

3.12 DUKE-QAPD-001 Revision 43, Quality Assurance Program Manual

3.13 ASME OM Code Case OMN-20, Inservice Test Frequency

3.14 NUREG/CR-6396, "Examples, Clarification, and Guidance on Preparing Requests for Relief from Pump and Valve Inservice Testing Require

3.15 NUREG-1482, Revision 2, “Guidelines for Inservice Testing at Nuclear Power Plants”

3.16 Technical Requirements Manual, Brunswick Steam Electric Plant No. 1 Renewed Facility Operating License DPR-71

3.17 Technical Requirements Manual, Brunswick Steam Electric Plant No. 2 Renewed Facility Operating License DPR-62

3.18 Regulatory Guide 1.192, “Operation and Maintenance Code Case Acceptability, ASME OM Code”

3.19 Regulatory Guide 1.193, “ASME Code Cases Not Approved For Use”

3.0 References (cont.)

3.20 NRC ML17129A507 dated June 16, 2017, Brunswick Steam Electric Plant, Units 1 and 2 – Relief from the Requirements of the American Society of Mechanical Engineer Code for Operation and Maintenance for Inservice Testing Program, Fifth 10-Year Interval (Relief Requests VRR-01 and VRR-03) CAC Nos. MF8938 and MF8939

3.21 NRC Generic Letter 87-06 Periodic Verification of Leak Tight Integrity of Pressure Isolation Valves

3.22 BNP Response to Generic Letter 87-06 Periodic Verification of Leak Tight Integrity of Pressure Isolation Valves dated July 11 1987

4.0 GENERAL REQUIREMENTS

4.1 Classification of Components and Systems

Safety classification of pumps, valves, and pressure relief devices at BNP is described in UFSAR Section 3.2.2 and is shown in UFSAR Table 3-8.

In accordance with 10CFR50.55a(f)(4) and NUREG-1482, paragraphs 2.2 and 2.2.1, the scope of IST includes ASME Code Class 1, 2, 3 and MC components. Additionally, for pumps and valves that are within the scope of the ASME OM Code but are not classified as ASME Code Class 1, Class 2, or Class 3 will be classified and tested as an augmented component within the BNP IST Program. This use of an augmented IST program is acceptable. All deviations from the ASME OM Code will be documented and will provide an acceptable level of quality and safety, or will explain that implementing the Code provisions will result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The HPCI, RCIC, and EDG Systems are categorized as non-Code, augmented components and are tested to the same OM Code requirements as Code class components to the extent practicable. Any deviations are captured and evaluated within individual Program Remarks. Refer to paragraph 2.3.4.

BNP Technical Specifications and the UFSAR do not provide a listing of pressure isolation valves (PIVs). There is little to no discussion related to pressure isolation valves. Consequently, the BNP IST Program applies ISTC-3630 to establish its PIV acceptance criteria. A combination of system reviews and BNP's response to NRC Generic Letter 87-06 has resulted in the development of Table 4-1.

4.2 Systems and Flow Diagrams

Table 4-2 identifies the systems/boundaries contained in the IST Program. This list provides the P&IDs used in determining the safety classification.

Table 4-1, BNP Pressure Isolation Valve Listing

Valve ID	Valve ID Description
E11-F008	SHUTDOWN COOLING OUTBOARD SUCTION VLV
E11-F009	SHUTDOWN COOL INBRD SUCTION THROTTLE VLV
E11-F015A	LPCI INBOARD INJECTION VALVE
E11-F015B	LPCI INBOARD INJECTION VALVE
E11-F050A	RHR LOOP A INJECTION CHECK VALVE
E11-F050B	RHR LOOP B INJECTION CHECK VALVE
E11-V032	CHECK VALVE BYPASS VLV
E11-V033	CHECK VALVE BYPASS VLV
E21-F005A	CORE SPRAY PMP INBOARD INJECTION VLV
E21-F005B	CORE SPRAY PMP INBOARD INJECTION VLV
E21-F006A	CORE SPRAY INJECTION CHECK VALVE
E21-F006B	CORE SPRAY INJECTION CHECK VALVE

Table 4-2, System and Flow Diagram Cross Reference

System	System Name	Valve ID Acronym	Piping Diagrams
1005	NSSS: Nuclear Steam Supply System (Nuclear Boiler)	B21	D-02520, D-02521, D- 02522, D-07007, D-07206, D-25020, D-25021, D-25022, D-70007, D-72006
1050	TIP: Traversing Incore Probe	C51	F-70081, F-07081
1070	Control Rod Drive Hydraulic System	C11	D-02517, D-25017
2010	Reactor Water Cleanup	G31	D-02527, D-25027
2020	Reactor Coolant Recirculation	B32	D-02518, D-02548, D-25018, D-25048,
2035	Core Spray System	E21	D-02524, D-25024
2040	Standby Liquid Control	C41	D-02547, D-25047
2045	Residual Heat Removal	E11	D-02525, D-02526, D-02537, D-02549, D-25025, D-25026, D-25037, D-25049
2070	Containment Atmosphere Control	CAC	D-02515, D-07218, D-07326, D-25015, D-72018, D-73026
2095	High Pressure Coolant Injection	E41	D-02523, D-25023
2100	Reactor Core Isolation Cooling	E51	D-02529, D-25029
2117	Post-Accident Sampling	RXS	D-07327, D-73027
2190	Torus Drain	TD	D-02698, D-26098
3020	Miscellaneous Vents and Drains	MS	D-02521, D-25021
3060	High Pressure Drains	MVD	D-02028, D-02521, D-20028
4060	Service Water System	SW	D-02041, D-02537, D-02274, D-20041, D-25037
4070	Reactor Building Closed Cooling Water System	RCC	D-02538, D-25038
5100	Diesel Fuel Oil System, System	FOD	D-02268, D-02269
5105	Emergency Diesel Generator Lube Oil System	LO	D-02270, D-02271
5110	Emergency Diesel Generator Jacket Water System	MUD	D-02272, D-02273
5112	Emergency Diesel Generator Starting Air System	DG	D-02265, D-02266
6135	Instrument Air Supply System	RNS	D-07007, D-07029, D-07077, D0-7207, D-07368, D-70007, D-70029, D-70077, D-72007, D-73068
6235	Drywell Drains System	G16	D-02545, D-25045
6240	Drywell Drains System	G16	D-02545, D-02538, D-25045, D-25038
7071	Standby Gas Treatment System	SGT, VA	F-04073, F-40073
7110	Fuel Pool Cooling System	G41	D-02549, D-25049
8220	HVAC Control Building	VA	D-04080
8240	Reactor Building System	VA	F-04073, F-40073

4.3 BNP Responsibilities

Responsibilities of BNP include the following:

- determine appropriate Safety Class for each component, identification of system boundaries for each class of components subject to test or examination, and the components exempt from testing or examination requirements;
- design and arrange system components to include allowance for adequate access and clearances, valves, instrumentation, test connections, test loops, required fluid inventory, etc. for conduct of the tests and examinations;
- identify components (pumps and valves) in scope of the IST Program;
- categorize components (pumps and valves) as required to ensure appropriate testing and examinations requirements;
- establish component reference values and acceptance criteria;
- prepare plans and schedules;
- prepare written test and examination instructions and procedures;
- qualify personnel who perform and evaluate examinations and tests in accordance with the BNP's quality assurance program;
- qualify the application, method and capability of each nonintrusive technique;
- perform required tests and examinations;
- record required test and examination results that provide a basis for evaluation and facilitate comparison with the results of subsequent tests or examinations;
- evaluate tests and examination results;
- maintain adequate test and examination records such as test and examination data and description of procedures used;
- retain all test and examination records for the service lifetime of the component or system.

4.4 Acceptance Criteria

The acceptance criteria established for IST are based on OM Code provisions or limits specified in Technical Specifications, UFSAR, or other licensing basis, whichever are more conservative. Acceptance criteria derived from ranges or multiples of reference values in the OM Code shall be truncated, if necessary, to ensure limits specified in the licensing basis are not exceeded.

4.5 Corrective Actions

Corrective actions requiring repair/replacement activities shall be performed in accordance with reference 3.1818. Other corrective actions shall follow the BNP Corrective Action Program requirements.

4.6 Instrumentation and Test Equipment

4.6.1 Range and Accuracy

Instrumentation and test equipment used in performing the examination and testing program shall have the range and accuracy necessary to demonstrate conformance to specific examination or test requirements.

4.6.2 Calibration

All instruments and test equipment used in performing the examination and test program shall be calibrated and controlled in accordance with reference 3.11.

4.7 Records and Reports

The requirements for retention of records apply to those records generated in the course of performing preservice and inservice tests and examinations required by this IST Program and 10CFR50 Appendix B. Calibration records shall be controlled and maintained in accordance with reference 3.11 as allowed by ISTA-4200.

4.7.1 Inservice Test and Examination Results

The results of tests and examinations shall be documented and shall include the following as a minimum:

- equipment identification;
- date of test or examination;
- reason for test or examination (for example, post-maintenance, routine inservice test or examination, establishing reference values, etc.);
- test examination procedure used;
- identification of test equipment used;
- calibration records;
- values of measured parameters;
- comparison with allowable ranges of test and examination values, and analysis of deviations;
- requirement for corrective action;
- printed or typed name and signature of the person(s) responsible for conducting and analyzing the test and examination.

4.7.2 Corrective Action

BNP shall maintain records of corrective action that shall include a summary of the corrective actions made, the subsequent inservice test or examination, confirmation of operational adequacy, and the printed or typed name and signature of the person(s) responsible for the corrective action and verification of results.

4.7.3 Maintenance of Records

BNP shall retain records identified in paragraph 4.7.5 as a minimum. The records shall be filed and maintained. BNP shall provide suitable protection from deterioration and damage for all records, in accordance with the BNP's quality assurance program (reference 3.12) for the service lifetime of the component or system. Storage shall be either at the plant site or at another location that will meet the access and quality assurance program requirements.

4.7.4 Reproduction

Records shall be either the original or a legible copy.

4.7.5 Test and Examination Records

BNP shall be responsible for designating the records to be maintained. Such records shall include the following as a minimum:

- an index to record file;
- test plans;
- test and examination results;
- records of corrective actions.

5.0 PUMP TEST REQUIREMENTS

5.1 Pump Scope

Pumps included in the IST Program are those Safety Class 1, 2, and 3 centrifugal and positive displacement pumps provided with an emergency power source that are required to perform a specific function in:

- shutting down the reactor to the safe shutdown condition; or
- maintaining the reactor in the safe shutdown condition; or
- mitigating the consequences of an accident.

Excluded from the above are:

- drivers, except where the pump and driver form an integral unit and the pump bearings are in the driver;
- pumps supplied with emergency power solely for operating convenience;
- skid-mounted pumps and component subassemblies that are tested as part of the major component.

A complete list of pumps in scope of the IST Program and their associated required tests are listed (in a tabular format) in IST Pump Table, located at the end of this document.

The IST Pump Program is implemented by BNP administrative procedures 0ENP-16.1 and 0ENP-17.

Design Engineering shall develop a calculation to determine the minimum allowable pump performance as applicable. The minimum performance point shall include maximum instrument error (not uncertainty) associated with the flow rate instrument, pressure (differential pressure) instruments and speed instruments, if the pump is a variable speed pump. The performance shall be additionally compensated to account for the minimum allowable Emergency Diesel Generator frequency specified in the plant Technical Specifications as evaluated as applicable. The resultant criteria shall be included in the appropriate pump performance tests used to confirm Design Basis requirements.

IST Pump Table of Abbreviations

A complete list of pumps in the scope of the IST Program is provided at the end of this document in a tabular format. The IST Pump Table is sorted alpha-numerically by EDB tag number. A description of the standardized abbreviations is shown below.

Pump Group	Database Standardization
Group A	A
Group B	B
Augmented	AUG
Exempt	Exempt
Skid Mounted	SKID
Pump Code Class	
ASME Class 1	1
ASME Class 2	2
ASME Class 3	3
Not Applicable	NA
Non Code	NC
Pump Type	
Centrifugal Horizontal	C-H
Centrifugal Vertical	C-V
Positive Displacement	PD
Vertical Line Shaft	VLS
Pump Driver	
Motor Driven	MTR
Turbine Driven	TURB
Gear	GEAR
Pump Test Type	
Discharge Pressure	Pd
Differential Pressure	dP
Flow Rate	Q
Speed	S
Skid	SKID
Vibration	V
Pump Test Freq	
Cold Shutdown	CS
Quarterly	Q
Refueling	RO
Eighteen Months	18M
Two Year	2Y

6.0 VALVE TEST REQUIREMENTS

6.1 Valve Scope

Valves included in the IST Program are those active or passive Safety Class 1, 2, and 3 valves that are required to perform a specific function in:

- shutting down the reactor to the safe shutdown condition; or
- maintaining the reactor in the safe shutdown condition; or
- mitigating the consequences of an accident.

Pressure relief devices included in the IST Program are those Safety Class 1, 2, and 3 pressure relief devices that protect systems or portion of systems that perform a specific function in:

- shutting down the reactor to the safe shutdown condition; or
- maintaining the reactor in the safe shutdown condition; or
- mitigating the consequences of an accident.

The following are excluded from above, provided that they are not required to perform a specific function as specified above:

- valves used only for operating convenience such as vent, drain, instrument, and test valves;
- valves used only for system control, such as pressure regulating valves;
- valves used only for system or component maintenance;
- external control and protection systems responsible for sensing plant conditions and providing signals for valve operation;
- skid-mounted valves and component subassemblies that are tested as part of the major component.

A complete list of valves in scope of the IST Program and their associated required tests are listed in the IST Valve Table, located at the end of this document.

The IST Valve Testing Program is implemented by BNP administrative procedures 0ENP-16.1 IST Pump and Valve Data, 0ENP-17 Pump and Valve Inservice Testing (IST), 0ENP-16.5 Administration of Safety/Relief Valve Testing Program, and 0ENP-16.7 Check Valve Program.

IST Valve Table of Abbreviations

A complete list of valves in the scope of the IST Program is provided at the end of this document in a tabular format. The IST Valve Table is sorted alpha-numerically by EDB tag number. A description of the standardized abbreviations is shown below.

Valve Code Class	Database Standardization
ASME Class 1	1
ASME Class 2	2
ASME Class 3	3
Non Code	NC
Augmented Safety	SC
Valve Category	
A - Seat Leakage Limited	A
A/C Both Categories A and C	A/C
B - Seat Leakage Not Required	B
B/C - Both Categories B and C	B/C
C - Self Actuating Valves	C
D - Single Use Valves	D
Augmented	AUG
Exempt	Exempt
Skid Mounted	SKID
Valve Type	
Ball	BL
Butterfly	BF
Check	CK
Diaphragm	DA
Explosive	EX
Flow Control	FC
Gate	GA
Globe	GL
Not Applicable	N/A
Needle	ND
Plug	PL
Power Operated Relief	PORV
Relief or Safety	RV
Rupture Disk	RD
Solenoid	SV
Three-way	3W
Vacuum Breaker	VB
Excess Flow Check	XCK

Valve Normal Position	Database Standardization
Closed	C
Locked Closed	LC
Locked Open	LO
Locked Throttled	LT
No Safety Related Position	N/A
Open	O
Open or Closed	O/C
System Condition Dependent	System Dependent
Throttled	T
Valve Safety Position	
Closed	C
Locked Closed	LC
Locked Open	LO
Locked Throttled	LT
No Safety Related Position	N/A
Open	O
Open and Closed	O/C
Valve Fail Position	
Closed	C
Fail As-is	FAI
Open	O
No Safety Related Position	N/A
Valve Actuator Type	
Air	AO
Electro-Hydraulic Operator	EH
Explosive charge	EXP
Hand (manual)	MA
Hydraulic	HO
Motor	MO
Motor/Self Actuated	MO/SA
Not Applicable	N/A
Self (system) actuated	SA
Self/Air Actuated	SA/SO
Solenoid	SO

Valve Test Type	Database Standardization
Check Valve Bi-directional Closed	BDC (see Note 1)
Check Valve Bi-directional Open	BDO (see Note 1)
Check Valve Close	CVC (see Note 1)
Check Valve Open	CVO (see Note 1)
Check Valve Partial Stroke Test	CVP
Condition Monitoring	CM
Diagnostic Test	DIAG
Disassembly & Inspect	DA
Exercise Test Closed	ETC
Exercise Test Open	ETO
Explosive Test	EXP
Fail Safe Closed (P/F)	FC
Fail Safe Closed	FC
Fail Safe Open (P/F)	FO
Fail Safe Open	FO
Full Stroke Exercise Closed	FSC
Full Stroke Exercise Open	FSO
Full Stroke Exercise Open/Closed	FSO/C
Partial Stroke Exercise	FSP
Functional Verification	FV
Leak Rate Test App J	LTJ
Leak Rate Test	LT
Leak Rate Test PIV	LTP
Leak Rate Test CIV	LTC
Manual Stroke Exercise	MS
No Test Required	NTR
Partial Stroke Close	PSC
Partial Stroke Open	PSO
Partial Stroke Exercise	PSE
Remote Position Indication	RPI
Relief Valve Test	RV
Rupture Disk	RD
Seat Leakage Test (PORV)	STT
Skid Mounted	SKID
Stroke Time Closed	ST-C
Stroke Time Open	ST-O
Vacuum Breaker Setpoint	VB-SP

Frequency	Database Standardization
Appendix J	J
Appendix I	I
Appendix II	II
As Required (Procedure Trigger)	AR
Cold Shutdown	CS
Condition Monitoring	CM
Every 10 years	10Y
Every 2 years	2Y
Every 5 years	5Y
Every 6 years	6Y
Every 18 Months	18M
Every 6 Months	6M
Normal Operation	N-OP
Not Required	NR
Per the MOV Program	MOV
Once Per Cycle	OC
Quarterly	Q
Refueling Outage	RO
Every 2nd Refuel	2R
Skid Mounted	SK

Note 1: BDO and BDC are used to identify non-safety check valve position tests. CVO and CVC are assigned to identify safety-related check valve position tests. For example, valve 1G41-X has an open safety function and a non-safety close function. Consequently, following bi-directional test requirements, it would be assigned a CVO and a BDC test abbreviation.

Pump Summary Listing Standard Code ISTB Pumps - Unit 1

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1-C41-C001A	STANDBY LIQUID CONTROL PUMP 1A	D-25047 / C-5	B	2	Positive Displacement	Fixed	LT600	dP	2Y	1-0PT-06.1	
								Q	2Y	1-0PT-06.1	
								V	2Y	1-0PT-06.1	
								dP	Q	1-0PT-06.1	
								Q	Q	1-0PT-06.1	
1-C41-C001B	STANDBY LIQUID CONTROL PUMP 1A	D-25047 / B-5	B	2	Positive Displacement	Fixed	LT600	dP	2Y	1-0PT-06.1	
								Q	2Y	1-0PT-06.1	
								V	2Y	1-0PT-06.1	
								dP	Q	1-0PT-06.1	
								Q	Q	1-0PT-06.1	
1-E11-C001A	RHR Service Water Pump 1A	D-25037 SH0001 / E-5	A	3	Centrifugal Horizontal	Fixed	GE600	dP	2Y	1-0PT-08.1.4A	
								Q	2Y	1-0PT-08.1.4A	
								V	2Y	1-0PT-08.1.4A	
								dP	Q	1-0PT-08.1.4A	
								Q	Q	1-0PT-08.1.4A	
								V	Q	1-0PT-08.1.4A	
1-E11-C001B	RHR Service Water Pump 1B	D-25037 SH0002 / E-2	A	3	Centrifugal Horizontal	Fixed	GE600	dP	2Y	1-0PT-08.1.4B	
								Q	2Y	1-0PT-08.1.4B	
								V	2Y	1-0PT-08.1.4B	
								dP	Q	1-0PT-08.1.4B	
								Q	Q	1-0PT-08.1.4B	
								V	Q	1-0PT-08.1.4B	

Pump Summary Listing Standard Code ISTB Pumps - Unit 1

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1-E11-C001C	RHR Service Water Pump 1C	D-25037 SH0001 / E-7	A	3	Centrifugal Horizontal	Fixed	GE600	dP	2Y	1-0PT-08.1.4A	
								Q	2Y	1-0PT-08.1.4A	
								V	2Y	1-0PT-08.1.4A	
								dP	Q	1-0PT-08.1.4A	
								Q	Q	1-0PT-08.1.4A	
								V	Q	1-0PT-08.1.4A	
1-E11-C001D	RHR Service Water Pump 1D	D-25037 SH0002 / E-4	A	3	Centrifugal Horizontal	Fixed	GE600	dP	2Y	1-0PT-08.1.4B	
								Q	2Y	1-0PT-08.1.4B	
								V	2Y	1-0PT-08.1.4B	
								dP	Q	1-0PT-08.1.4B	
								Q	Q	1-0PT-08.1.4B	
								V	Q	1-0PT-08.1.4B	
1-E11-C002A	RHR Pump 1A	D-25025 SH0001B / B-6	A	2	Centrifugal Vertical	Fixed	GE600	V	2Y	1-0PT-08.2.2C	P-03
								dP	2Y	1-0PT-08.2.2C	
								Q	2Y	1-0PT-08.2.2C	
								V	Q	1-0PT-08.2.2C	P-03
								dP	Q	1-0PT-08.2.2C	
								Q	Q	1-0PT-08.2.2C	

Pump Summary Listing Standard Code ISTB Pumps - Unit 1

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1-E11-C002B	RHR Pump 1B	D-25026 SH0002B / A-5	A	2	Centrifugal Vertical	Fixed	GE600	V	2Y	1-0PT-08.2.2B	P-03
								dP	2Y	1-0PT-08.2.2B	
								Q	2Y	1-0PT-08.2.2B	
								V	Q	1-0PT-08.2.2B	P-03
								dP	Q	1-0PT-08.2.2B	
								Q	Q	1-0PT-08.2.2B	
1-E11-C002C	RHR Pump 1C	D-25025 SH0001B / B-3	A	2	Centrifugal Vertical	Fixed	GE600	V	2Y	1-0PT-08.2.2C	P-03
								dP	2Y	1-0PT-08.2.2C	
								Q	2Y	1-0PT-08.2.2C	
								V	Q	1-0PT-08.2.2C	P-03
								dP	Q	1-0PT-08.2.2C	
								Q	Q	1-0PT-08.2.2C	
1-E11-C002D	RHR Pump 1D	D-25026 SH0002B / A-8	A	2	Centrifugal Vertical	Fixed	GE600	V	2Y	1-0PT-08.2.2B	P-03
								dP	2Y	1-0PT-08.2.2B	
								Q	2Y	1-0PT-08.2.2B	
								V	Q	1-0PT-08.2.2B	P-03
								dP	Q	1-0PT-08.2.2B	
								Q	Q	1-0PT-08.2.2B	
1-E21-C001A	CORE SPRAY PUMP	D-25024 SH0002 / C-1	B	2	Centrifugal Vertical	Fixed	GE600	V	2Y	1-0PT-07.2.4A	P-03
								dP	2Y	1-0PT-07.2.4A	
								Q	2Y	1-0PT-07.2.4A	
								dP	Q	1-0PT-07.2.4A	
								Q	Q	1-0PT-07.2.4A	

Pump Summary Listing Standard Code ISTB Pumps - Unit 1

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1-E21-C001B	CORE SPRAY PUMP	D-25024 SH0001 / C-2	B	2	Centrifugal Vertical	Fixed	GE600	V	2Y	1-0PT-07.2.4B	P-03
								dP	2Y	1-0PT-07.2.4B	
								Q	2Y	1-0PT-07.2.4B	
								dP	Q	1-0PT-07.2.4B	
								Q	Q	1-0PT-07.2.4B	
1-SW-1A-CONV-PMP	1A CONVENTIONAL HEADER SERVICE WATER PUMP	D-20041 SH0001 / B-2	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	1PT-24.1-1	
								Q	2Y	1PT-24.1-1	
								V	2Y	1PT-24.1-1	
								dP	Q	1PT-24.1-1	
								Q	Q	1PT-24.1-1	
								V	Q	1PT-24.1-1	
1-SW-1A-NUC-PMP	1A NUCLEAR HEADER SERVICE WATER PUMP	D-20041 SH0002 / B-4	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	1PT-24.1-1	
								Q	2Y	1PT-24.1-1	
								V	2Y	1PT-24.1-1	
								dP	Q	1PT-24.1-1	
								Q	Q	1PT-24.1-1	
								V	Q	1PT-24.1-1	

Pump Summary Listing Standard Code ISTB Pumps - Unit 1

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1-SW-1B-CONV-PMP	1B CONVENTIONAL HEADER SERVICE WATER PUMP	D-20041 SH0001 / B-4	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	1PT-24.1-1	
								Q	2Y	1PT-24.1-1	
								V	2Y	1PT-24.1-1	
								dP	Q	1PT-24.1-1	
								Q	Q	1PT-24.1-1	
								V	Q	1PT-24.1-1	
1-SW-1B-NUC-PMP	1B NUCLEAR HEADER SERVICE WATER PUMP	D-20041 SH0002 / B-7	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	1PT-24.1-1	
								Q	2Y	1PT-24.1-1	
								V	2Y	1PT-24.1-1	
								dP	Q	1PT-24.1-1	
								Q	Q	1PT-24.1-1	
								V	Q	1PT-24.1-1	
1-SW-1C-CONV-PMP	1C CONVENTIONAL HEADER SERVICE WATER PUMP	D-20041 SH0001 / B-7	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	1PT-24.1-1	
								Q	2Y	1PT-24.1-1	
								V	2Y	1PT-24.1-1	
								dP	Q	1PT-24.1-1	
								Q	Q	1PT-24.1-1	
								V	Q	1PT-24.1-1	

Pump Summary Listing Standard Code ISTB Augmented Pumps - Unit 1

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1-E41-C001	HPCI MAIN AND BOOSTER PUMPS	D-25023 SH0001 / C-3	Aug-B	SC	Centrifugal Horizontal	Var	GE600	dP	2Y	1-0PT-09.2	P-02, P-04
								Q	2Y	1-0PT-09.2	P-04
								S	2Y	1-0PT-09.2	
								V	2Y	1-0PT-09.2	
								dP	Q	1-0PT-09.2	P-02, P-04
								Q	Q	1-0PT-09.2	P-04
1-E51-C001	REACTOR CORE ISOL COOLING (RCIC) PUMP	D-25029 SH0001 / B-4	Aug-B	SC	Centrifugal Horizontal	Var	GE600	dP	2Y	1-0PT-10.1.1	
								Q	2Y	1-0PT-10.1.1	
								S	2Y	1-0PT-10.1.1	
								V	2Y	1-0PT-10.1.1	
								dP	Q	1-0PT-10.1.1	
								Q	Q	1-0PT-10.1.1	

Component ID	Description	BPV Class	OM Class	Exempt
1-E41-C001-BOOST-PMP	HPCI BOOSTER PUMP		SC	Yes

Pump Summary Listing Standard Code ISTB- Unit 2

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2-C41-C001A	STANDBY LIQUID CONTROL PUMP 1A	D-02547 / C-5	B	2	Positive Displacement	Fixed	LT600	dP	2Y	2-0PT-06.1	
								Q	2Y	2-0PT-06.1	
								V	2Y	2-0PT-06.1	
								dP	Q	2-0PT-06.1	
								Q	Q	2-0PT-06.1	
2-C41-C001B	STANDBY LIQUID CONTROL PUMP 1B	D-02547 / B-5	B	2	Positive Displacement	Fixed	LT600	dP	2Y	2-0PT-06.1	
								Q	2Y	2-0PT-06.1	
								V	2Y	2-0PT-06.1	
								dP	Q	2-0PT-06.1	
								Q	Q	2-0PT-06.1	
2-E11-C001A	RHR Service Water Pump 2A	D-02537 SH0001 / E-5	A	3	Centrifugal Horizontal	Fixed	GE600	dP	2Y	2-0PT-08.1.4A	
								Q	2Y	2-0PT-08.1.4A	
								V	2Y	2-0PT-08.1.4A	
								dP	Q	2-0PT-08.1.4A	
								Q	Q	2-0PT-08.1.4A	
								V	Q	2-0PT-08.1.4A	
2-E11-C001B	RHR Service Water Pump 2B	D-02537 SH0002 / E-2	A	3	Centrifugal Horizontal	Fixed	GE600	dP	2Y	2-0PT-08.1.4B	
								Q	2Y	2-0PT-08.1.4B	
								V	2Y	2-0PT-08.1.4B	
								dP	Q	2-0PT-08.1.4B	
								Q	Q	2-0PT-08.1.4B	
								V	Q	2-0PT-08.1.4B	

Pump Summary Listing Standard Code ISTB- Unit 2

Page 2 of 5

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2-E11-C001C	RHR Service Water Pump 2C	D-02537 SH0001 / E-7	A	3	Centrifugal Horizontal	Fixed	GE600	dP	2Y	2-0PT-08.1.4A	
								Q	2Y	2-0PT-08.1.4A	
								V	2Y	2-0PT-08.1.4A	
								dP	Q	2-0PT-08.1.4A	
								Q	Q	2-0PT-08.1.4A	
								V	Q	2-0PT-08.1.4A	
2-E11-C001D	RHR Service Water Pump 2D	D-02537 SH0002 / E-4	A	3	Centrifugal Horizontal	Fixed	GE600	dP	2Y	2-0PT-08.1.4B	
								Q	2Y	2-0PT-08.1.4B	
								V	2Y	2-0PT-08.1.4B	
								dP	Q	2-0PT-08.1.4B	
								Q	Q	2-0PT-08.1.4B	
								V	Q	2-0PT-08.1.4B	
2-E11-C002A	RHR Pump 2A	D-02525 SH0001B / B-6	A	2	Centrifugal Vertical	Fixed	GE600	V	2Y	2-0PT-08.2.2C	P-03
								dP	2Y	2-0PT-08.2.2C	
								Q	2Y	2-0PT-08.2.2C	
								V	Q	2-0PT-08.2.2C	P-03
								dP	Q	2-0PT-08.2.2C	
								Q	Q	2-0PT-08.2.2C	

Pump Summary Listing Standard Code ISTB- Unit 2

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2-E11-C002B	RHR Pump 2B	D-02526 SH0002B / A-5	A	2	Centrifugal Vertical	Fixed	GE600	V	2Y	2-0PT-08.2.2B	P-03
								dP	2Y	2-0PT-08.2.2B	
								Q	2Y	2-0PT-08.2.2B	
								V	Q	2-0PT-08.2.2B	P-03
								dP	Q	2-0PT-08.2.2B	
								Q	Q	2-0PT-08.2.2B	
2-E11-C002C	RHR Pump 2C	D-02525 SH0001B / B-3	A	2	Centrifugal Vertical	Fixed	GE600	V	2Y	2-0PT-08.2.2C	P-03
								dP	2Y	2-0PT-08.2.2C	
								Q	2Y	2-0PT-08.2.2C	
								V	Q	2-0PT-08.2.2C	P-03
								dP	Q	2-0PT-08.2.2C	
								Q	Q	2-0PT-08.2.2C	
2-E11-C002D	RHR Pump 2D	D-02526 SH0002B / A-8	A	2	Centrifugal Vertical	Fixed	GE600	V	2Y	2-0PT-08.2.2B	P-03
								dP	2Y	2-0PT-08.2.2B	
								Q	2Y	2-0PT-08.2.2B	
								V	Q	2-0PT-08.2.2B	P-03
								dP	Q	2-0PT-08.2.2B	
								Q	Q	2-0PT-08.2.2B	
2-E21-C001A	CORE SPRAY PUMP	D-02524 SH0002 / C-1	B	2	Centrifugal Vertical	Fixed	GE600	V	2Y	2-0PT-07.2.4A	P-03
								dP	2Y	2-0PT-07.2.4A	
								Q	2Y	2-0PT-07.2.4A	
								dP	Q	2-0PT-07.2.4A	
								Q	Q	2-0PT-07.2.4A	

Pump Summary Listing Standard Code ISTB- Unit 2

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2-E21-C001B	CORE SPRAY PUMP	D-02524 SH0001 / C-2	B	2	Centrifugal Vertical	Fixed	GE600	V	2Y	2-0PT-07.2.4B	P-03
								dP	2Y	2-0PT-07.2.4B	
								Q	2Y	2-0PT-07.2.4B	
								dP	Q	2-0PT-07.2.4B	
								Q	Q	2-0PT-07.2.4B	
2-SW-2A-CONV-PMP	2A CONVENTIONAL HEADER SERVICE WATER PUMP	D-02041 SH0001 / B-2	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	2PT-24.1-2	
								Q	2Y	2PT-24.1-2	
								V	2Y	2PT-24.1-2	
								dP	Q	2PT-24.1-2	
								Q	Q	2PT-24.1-2	
								V	Q	2PT-24.1-2	
2-SW-2A-NUC-PMP	2A NUCLEAR HEADER SERVICE WATER PUMP	D-02041 SH0002 / B-4	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	2PT-24.1-2	
								Q	2Y	2PT-24.1-2	
								V	2Y	2PT-24.1-2	
								dP	Q	2PT-24.1-2	
								Q	Q	2PT-24.1-2	
								V	Q	2PT-24.1-2	

Pump Summary Listing Standard Code ISTB- Unit 2

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2-SW-2B-CONV-PMP	2B CONVENTIONAL HEADER SERVICE WATER PUMP	D-02041 SH0001 / B-4	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	2PT-24.1-2	
								Q	2Y	2PT-24.1-2	
								V	2Y	2PT-24.1-2	
								dP	Q	2PT-24.1-2	
								Q	Q	2PT-24.1-2	
								V	Q	2PT-24.1-2	
2-SW-2B-NUC-PMP	2B NUCLEAR HEADER SERVICE WATER PUMP	D-02041 SH0002 / B-7	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	2PT-24.1-2	
								Q	2Y	2PT-24.1-2	
								V	2Y	2PT-24.1-2	
								dP	Q	2PT-24.1-2	
								Q	Q	2PT-24.1-2	
								V	Q	2PT-24.1-2	
2-SW-2C-CONV-PMP	2C CONVENTIONAL HEADER SERVICE WATER PUMP	D-02041 SH0001 / B-7	A	3	Centrifugal Vertical	Fixed	GE600	dP	2Y	2PT-24.1-2	
								Q	2Y	2PT-24.1-2	
								V	2Y	2PT-24.1-2	
								dP	Q	2PT-24.1-2	
								Q	Q	2PT-24.1-2	
								V	Q	2PT-24.1-2	

Pump Summary Listing Standard Code ISTB Augmented Pumps - Unit 2

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2-E41-C001	HPCI MAIN AND BOOSTER PUMPS	D-02523 SH0001 / C-3	Aug-B	SC	Centrifugal Horizontal	Var	GE600	dP	2Y	2-0PT-09.2	P-02, P-04
								Q	2Y	2-0PT-09.2	P-04
								S	2Y	2-0PT-09.2	
								V	2Y	2-0PT-09.2	
								dP	Q	2-0PT-09.2	P-02, P-04
								Q	Q	2-0PT-09.2	P-04
2-E51-C001	REACTOR CORE ISOL COOLING (RCIC) PUMP	D-02529 SH0001 / B-4	Aug-B	SC	Centrifugal Horizontal	Var	GE600	dP	2Y	2-0PT-10.1.1	
								Q	2Y	2-0PT-10.1.1	
								S	2Y	2-0PT-10.1.1	
								V	2Y	2-0PT-10.1.1	
								dP	Q	2-0PT-10.1.1	
								Q	Q	2-0PT-10.1.1	
2-FOD-1A-XFER-PMP	Fuel Oil Transfer Pump 1A	D-02268 SH0001A / B-3	Aug-B	SC	Positive Displacement	Fixed	GE600	Q	2Y	0PT-12.4A	P-05
								dP	2Y	0PT-12.4A	
								V	2Y	0PT-12.4A	
								Q	Q	0PT-12.4A	P-05
								dP	Q	0PT-12.4A	

Pump Summary Listing Standard Code ISTB Augmented Pumps - Unit 2

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2-FOD-1B-XFER-PMP	Fuel Oil Transfer Pump 1B	D-02268 SH0001A / B-2	Aug-B	SC	Positive Displacement	Fixed	GE600	Q	2Y	0PT-12.4A	P-05
								dP	2Y	0PT-12.4A	
								V	2Y	0PT-12.4A	
								Q	Q	0PT-12.4A	P-05
								dP	Q	0PT-12.4A	
2-FOD-2A-XFER-PMP	Fuel Oil Transfer Pump 2A	D-02268 SH0001B / B-3	Aug-B	SC	Positive Displacement	Fixed	GE600	Q	2Y	0PT-12.4B	P-05
								dP	2Y	0PT-12.4B	
								V	2Y	0PT-12.4B	
								Q	Q	0PT-12.4B	P-05
								dP	Q	0PT-12.4B	
2-FOD-2B-XFER-PMP	Fuel Oil Transfer Pump 2B	D-02268 SH0001B / B-2	Aug-B	SC	Positive Displacement	Fixed	GE600	Q	2Y	0PT-12.4B	P-05
								dP	2Y	0PT-12.4B	
								V	2Y	0PT-12.4B	
								Q	Q	0PT-12.4B	P-05
								dP	Q	0PT-12.4B	
2-FOD-3A-XFER-PMP	Fuel Oil Transfer Pump 3A	D-02269 SH0002A / B-3	Aug-B	SC	Positive Displacement	Fixed	GE600	Q	2Y	0PT-12.4C	P-05
								dP	2Y	0PT-12.4C	
								V	2Y	0PT-12.4C	
								Q	Q	0PT-12.4C	P-05
								dP	Q	0PT-12.4C	

Pump Summary Listing Standard Code ISTB Augmented Pumps - Unit 2

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PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2-FOD-3B-XFER-PMP	Fuel Oil Transfer Pump 3B	D-02269 SH0002A / B-2	Aug-B	SC	Positive Displacement	Fixed	GE600	Q	2Y	0PT-12.4C	P-05
								dP	2Y	0PT-12.4C	
								V	2Y	0PT-12.4C	
								Q	Q	0PT-12.4C	P-05
								dP	Q	0PT-12.4C	
2-FOD-4A-XFER-PMP	Fuel Oil Transfer Pump 4A	D-02269 SH0002B / B-3	Aug-B	SC	Positive Displacement	Fixed	GE600	Q	2Y	0PT-12.4D	P-05
								dP	2Y	0PT-12.4D	
								V	2Y	0PT-12.4D	
								Q	Q	0PT-12.4D	P-05
								dP	Q	0PT-12.4D	
2-FOD-4B-XFER-PMP	Fuel Oil Transfer Pump 4B	D-02269 SH0002B / B-2	Aug-B	SC	Positive Displacement	Fixed	GE600	Q	2Y	0PT-12.4D	P-05
								dP	2Y	0PT-12.4D	
								V	2Y	0PT-12.4D	
								Q	Q	0PT-12.4D	P-05
								dP	Q	0PT-12.4D	

Component ID	Description	BPV Class	OM Class	Exempt
2-E41-C001-BOOST-PMP	HPCI PUMP ASSEMBLY		SC	Yes
2-FOD-ENG-BSTR-PMP-1	Engine Driven Fuel Oil Booster Pump 1		NC	Yes
2-FOD-ENG-BSTR-PMP-2	Engine Driven Fuel Oil Booster Pump 2		NC	Yes
2-FOD-ENG-BSTR-PMP-3	Engine Driven Fuel Oil Booster Pump 3		NC	Yes
2-FOD-ENG-BSTR-PMP-4	Engine Driven Fuel Oil Booster Pump 4		NC	Yes
2-FOD-MOT-BSTR-PMP-1	Motor Driven Fuel Oil Booster Pump 1		NC	Yes
2-FOD-MOT-BSTR-PMP-2	Motor Driven Fuel Oil Booster Pump 2		NC	Yes
2-FOD-MOT-BSTR-PMP-3	Motor Driven Fuel Oil Booster Pump 3		NC	Yes
2-FOD-MOT-BSTR-PMP-4	Motor Driven Fuel Oil Booster Pump 4		NC	Yes
2-LO-AUX-PMP-1	Motor Driven Aux LO Pump 1		NC	Yes
2-LO-AUX-PMP-2	Motor Driven Aux LOl Pump 2		NC	Yes
2-LO-AUX-PMP-3	Motor Driven Aux LO Pump 3		NC	Yes
2-LO-AUX-PMP-4	Motor Driven Aux LO Pump 4		NC	Yes
2-LO-ENG-PMP-1	Engine Driven Lube Oil Pump 1		NC	Yes
2-LO-ENG-PMP-2	Engine Driven Lube Oil Pump 2		NC	Yes
2-LO-ENG-PMP-3	Engine Driven Lube Oil Pump 3		NC	Yes
2-LO-ENG-PMP-4	Engine Driven Lube Oil Pump 4		NC	Yes
2-LO-PRELUBE-PMP-1	Engine Prelube Oil Pump 1		NC	Yes
2-LO-PRELUBE-PMP-2	Engine Prelube Oil Pump 2		NC	Yes
2-LO-PRELUBE-PMP-3	Engine Prelube Oil Pump 3		NC	Yes
2-LO-PRELUBE-PMP-4	Engine Prelube Oil Pump 4		NC	Yes
2-MUD-AUX-JKT-WTR-PMP-1	Aux Jacket Water Pump 1		NC	Yes
2-MUD-AUX-JKT-WTR-PMP-2	Aux Jacket Water Pump 2		NC	Yes
2-MUD-AUX-JKT-WTR-PMP-3	Aux Jacket Water Pump 3		NC	Yes
2-MUD-AUX-JKT-WTR-PMP-4	Aux Jacket Water Pump 4		NC	Yes
2-MUD-HTR-CIRC-PMP-1	Jacket Water Heater Circ Pump 1		NC	Yes
2-MUD-HTR-CIRC-PMP-2	Jacket Water Heater Circ Pump 2		NC	Yes
2-MUD-HTR-CIRC-PMP-3	Jacket Water Heater Circ Pump 3		NC	Yes
2-MUD-HTR-CIRC-PMP-4	Jacket Water Heater Circ Pump 4		NC	Yes
2-MUD-JKT-WTR-PMP-1	Engine Driven Jacket Water Pump 1		NC	Yes
2-MUD-JKT-WTR-PMP-2	Engine Driven Jacket Water Pump 2		NC	Yes
2-MUD-JKT-WTR-PMP-3	Engine Driven Jacket Water Pump 3		NC	Yes
2-MUD-JKT-WTR-PMP-4	Engine Driven Jacket Water Pump 4		NC	Yes

Valve Summary Listing Standard Code ISTC Valves - Unit 1

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F003	INBRD RX HEAD VENT VALVE	D-25021 SH0001C / F-4	B	PASS	1	.5	GL	AO	C	C	C	RPI	2Y	1-0PT-25.6	
1-B21-F004	OUTBRD RX HEAD VENT VALVE	D-25021 SH0001C / F-5	B	PASS	1	.5	GL	AO	C	C	C	RPI	2Y	1-0PT-25.6	
1-B21-F008	RX PRESS RIP VALVE TO B21-PS-N002	D-25021 SH0001C / E-6	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-B21-F010A	FEEDWATER LINE 'A' RPV INLET CHECK VLV	D-25021 SH0001C / C-5	A/C	ACT	1	18	CK	SA	O/C	O/C	N/A	LTJ	J	1-0PT-20.3-B21	
												CVO	Q	AD-OP-ALL-1000	
												CVC	RO	1-0PT-20.3-B21	RFJ-01
1-B21-F010B	FEEDWATER LINE 'B' RPV INLET CHECK VLV	D-25021 SH0001C / B-5	A/C	ACT	1	18	CK	SA	O/C	O/C	N/A	LTJ	J	1-0PT-20.3-B21	
												CVO	Q	AD-OP-ALL-1000	
												CVC	RO	1-0PT-20.3-B21	RFJ-01
1-B21-F013A	PRI STM LINE 'A' SAFETY/RELIEF VLV (ADS) PM 80-085	D-25021 SH0001B / E-3	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01

Valve Summary Listing Standard Code ISTC Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F013B	PRI STM LINE 'B' SAFETY/RELIEF VLV (ADS) PM 80-085	D-25021 SH0001B / E-2	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01
1-B21-F013C	PRI STM LINE 'B' SAFETY/RELIEF VLV (ADS) PM 80-085	D-25021 SH0001B / C-3	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01
1-B21-F013D	PRI STM LINE 'B' SAFETY/RELIEF VLV (ADS) PM 80-085	D-25021 SH0001B / C-2	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01
1-B21-F013E	PRI STM LINE 'B' SAFETY/RELIEF VLV	D-25021 SH0001B / C-2	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01

Valve Summary Listing Standard Code ISTC Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F013F	PRI STM LINE 'C' SAFETY/RELIEF VLV	D-25021 SH0001A / E-3	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01
1-B21-F013G	PRI STM LINE 'C' SAFETY/RELIEF VLV	D-25021 SH0001A / E-2	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01
1-B21-F013H	PRI STM LINE 'D' SAFETY/RELIEF VLV (ADS)	D-25021 SH0001A / C-3	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01
1-B21-F013J	PRI STM LINE 'D' SAFETY/RELIEF VLV (ADS)	D-25021 SH0001A / C-2	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01
1-B21-F013K	PRI STM LINE 'C' SAFETY/RELIEF VLV (ADS)	D-25021 SH0001A / E-1	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01

Valve Summary Listing Standard Code ISTC Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F013L	PRI STM LINE 'B' SAFETY/RELIEF VLV (ADS)	D-25021 SH0001B / C-1	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	1-0PT-19.5	VRR-01
												FSC	RO	1-0PT-19.5	VRR-01
												FSO	RO	1-0PT-11.1.2	RFJ-02, VRR-01
1-B21-F014A	B21-PDT-N006A & B AND C32-PDT-N003A MAIN ST	D-25021 SH0001B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV13R	VRR-03
												CVO	10Y	1-0MST-EFCV13R	VRR-03
												RPI	10Y	1-0MST-EFCV13R	VRR-03
1-B21-F014B	B21-PDT-N006A & B AND C32-PDT-N003A MAIN ST	D-25021 SH0001B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV13R	VRR-03
												CVO	10Y	1-0MST-EFCV13R	VRR-03
												RPI	10Y	1-0MST-EFCV13R	VRR-03
1-B21-F014C	B21-PDT-N006C, D MAIN STEAM LINE DIFF PRESS RIP	D-25021 SH0001B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV16R	VRR-03
												CVO	10Y	1-0MST-EFCV16R	VRR-03
												RPI	10Y	1-0MST-EFCV16R	VRR-03
1-B21-F014D	B21-PDT-N006C & D MAIN STEAM LINE DIFF PRES	D-25021 SH0001B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV16R	VRR-03
												CVO	10Y	1-0MST-EFCV16R	VRR-03
												RPI	10Y	1-0MST-EFCV16R	VRR-03

Valve Summary Listing Standard Code ISTC Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F014E	B21-PDT-N007A & B AND C32-PDT-N003B MAIN ST	D-25021 SH0001B / B-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV13R	VRR-03
												CVO	10Y	1-0MST-EFCV13R	VRR-03
												RPI	10Y	1-0MST-EFCV13R	VRR-03
1-B21-F014F	B21-PDT-N007A & B &C32-PDT-N003B MAIN STEAM	D-25021 SH0001B / B-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV13R	VRR-03
												CVO	10Y	1-0MST-EFCV13R	VRR-03
												RPI	10Y	1-0MST-EFCV13R	VRR-03
1-B21-F014G	B21-PDT-N007C & D MAIN STEAM LN DIFF PRESS R	D-25021 SH0001B / B-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV16R	VRR-03
												CVO	10Y	1-0MST-EFCV16R	VRR-03
												RPI	10Y	1-0MST-EFCV16R	VRR-03
1-B21-F014H	B21-PDT-N007C & D MN STEAM LINE DIFF RIP VAL	D-25021 SH0001B / A-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV16R	VRR-03
												CVO	10Y	1-0MST-EFCV16R	VRR-03
												RPI	10Y	1-0MST-EFCV16R	VRR-03
1-B21-F014J	B21-PDT-N008A, B & C32-PDT-N003D MAIN STEAM L	D-25021 SH0001A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV13R	VRR-03
												CVO	10Y	1-0MST-EFCV13R	VRR-03
												RPI	10Y	1-0MST-EFCV13R	VRR-03

Valve Summary Listing Standard Code ISTC Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F014K	B21-PDT-N008A, D & C32-PDT-N003C MN STEAM LI	D-25021 SH0001A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV13R	VRR-03
												CVO	10Y	1-0MST-EFCV13R	VRR-03
												RPI	10Y	1-0MST-EFCV13R	VRR-03
1-B21-F014L	B21-PDT-N008C/D EXCESS FLOW CHECK VALVE	D-25021 SH0001A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV16R	VRR-03
												CVO	10Y	1-0MST-EFCV16R	VRR-03
												RPI	10Y	1-0MST-EFCV16R	VRR-03
1-B21-F014M	B21-PDT-N008C & D MN STEAM LINE DIFF PRESS R	D-25021 SH0001A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV16R	VRR-03
												CVO	10Y	1-0MST-EFCV16R	VRR-03
												RPI	10Y	1-0MST-EFCV16R	VRR-03
1-B21-F014N	B21-PDT-N009A, B & C32-PDT-N003D MN STEAM LI	D-25021 SH0001A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV13R	VRR-03
												CVO	10Y	1-0MST-EFCV13R	VRR-03
												RPI	10Y	1-0MST-EFCV13R	VRR-03
1-B21-F014P	B21-PDT-N009A, B & C32-PDT-N003D MN STEAM LI	D-25021 SH0001A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV13R	VRR-03
												CVO	10Y	1-0MST-EFCV13R	VRR-03
												RPI	10Y	1-0MST-EFCV13R	VRR-03

Valve Summary Listing Standard Code ISTC Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F014R	B21-PDT-N009C & D MN STEAM LINE DIFF PRESS R	D-25021 SH0001A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV16R	VRR-03
												CVO	10Y	1-0MST-EFCV16R	VRR-03
												RPI	10Y	1-0MST-EFCV16R	VRR-03
1-B21-F014S	B21-PDT-N009C & D MN STEAM LINE DIFF PRESS R	D-25021 SH0001A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV16R	VRR-03
												CVO	10Y	1-0MST-EFCV16R	VRR-03
												RPI	10Y	1-0MST-EFCV16R	VRR-03
1-B21-F016	MAIN STEAM LINE DRAIN INBOARD ISOL VALVE	D-25021 SH0001B / D-4	A	ACT	1	3	GA	MO	O	C	FAI	RPI	2Y	1-0PT-25.4	
												LTJ	J	1-0PT-20.3-B21	
												FSC	Q	1-0PT-25.4	
												ST-C	Q	1-0PT-25.4	
1-B21-F019	MAIN STEAM LINE DRAIN OUTBOARD ISOL VLV	D-25021 SH0001B / D-5	A	ACT	1	3	GA	MO	O	C	FAI	RPI	2Y	1-0PT-25.4	
												LTJ	J	1-0PT-20.3-B21	
												FSC	Q	1-0PT-25.4	
												ST-C	Q	1-0PT-25.4	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F022A	INBOARD MSIV A	D-25021 SH0001B / E-4	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	1-0PT-25.1	
												FC	CS	1-0PT-25.1	CSJ-13
												FSC	CS	1-0PT-25.1	CSJ-01
												ST-C	CS	1-0PT-25.1	CSJ-01
												LTJ	J	1-0PT-20.3A.5	
												FSP	Q	1-0PT-40.2.8	CSJ-01
1-B21-F022B	INBOARD MSIV B	D-25021 SH0001B / B-4	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	1-0PT-25.1	
												FC	CS	1-0PT-25.1	CSJ-13
												FSC	CS	1-0PT-25.1	CSJ-01
												ST-C	CS	1-0PT-25.1	CSJ-01
												LTJ	J	1-0PT-20.3A.5	
												FSP	Q	1-0PT-40.2.8	CSJ-01
1-B21-F022C	INBOARD MSIV C	D-25021 SH0001A / E-4	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	1-0PT-25.1	
												FC	CS	1-0PT-25.1	CSJ-13
												FSC	CS	1-0PT-25.1	CSJ-01
												ST-C	CS	1-0PT-25.1	CSJ-01
												LTJ	J	1-0PT-20.3A.5	
												FSP	Q	1-0PT-40.2.8	CSJ-01

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F022D	INBOARD MSIV D	D-25021 SH0001A / C-4	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	1-0PT-25.1	
												FC	CS	1-0PT-25.1	CSJ-13
												FSC	CS	1-0PT-25.1	CSJ-01
												ST-C	CS	1-0PT-25.1	CSJ-01
												LTJ	J	1-0PT-20.3A.5	
												FSP	Q	1-0PT-40.2.8	CSJ-01
1-B21-F028A	OUTBOARD MSIV A	D-25021 SH0001B / E-5	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	1-0PT-25.1	
												FC	CS	1-0PT-25.1	CSJ-13
												FSC	CS	1-0PT-25.1	CSJ-01
												ST-C	CS	1-0PT-25.1	CSJ-01
												LTJ	J	1-0PT-20.3A.5	
												FSP	Q	1-0PT-40.2.8	CSJ-01
1-B21-F028B	OUTBOARD MSIV B	D-25021 SH0001B / B-5	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	1-0PT-25.1	
												FC	CS	1-0PT-25.1	CSJ-13
												FSC	CS	1-0PT-25.1	CSJ-01
												ST-C	CS	1-0PT-25.1	CSJ-01
												LTJ	J	1-0PT-20.3A.5	
												FSP	Q	1-0PT-40.2.8	CSJ-01

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F028C	OUTBOARD MSIV C	D-25021 SH0001A / E-6	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	1-0PT-25.1	
												FC	CS	1-0PT-25.1	CSJ-13
												FSC	CS	1-0PT-25.1	CSJ-01
												ST-C	CS	1-0PT-25.1	CSJ-01
												LTJ	J	1-0PT-20.3A.5	
												FSP	Q	1-0PT-40.2.8	CSJ-01
1-B21-F028D	OUTBOARD MSIV D	D-25021 SH0001A / C-6	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	1-0PT-25.1	
												FC	CS	1-0PT-25.1	CSJ-13
												FSC	CS	1-0PT-25.1	CSJ-01
												ST-C	CS	1-0PT-25.1	CSJ-01
												LTJ	J	1-0PT-20.3A.5	
												FSP	Q	1-0PT-40.2.8	CSJ-01
1-B21-F032A	FEEDWATER SUPPLY LINE A ISOLATION VALVE	D-25021 SH0001C / C-7	A/C	ACT	1	18	SCK	MO/SA	O	C	FAI	RPI	2Y	1-0PT-25.2	V-16
												FSC	CS	1-0PT-25.2	CSJ-03
												ST-C	CS	1-0PT-25.2	CSJ-03
												LTJ	J	1-0PT-20.3-B21	
												BDO	Q	AD-OP-ALL-1000	

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									NORM	SAFE	FAIL				
1-B21-F032B	FEEDWATER SUPPLY LINE B ISOLATION VLV	D-25021 SH0001C / B-7	A/C	ACT	1	18	SCK	MO/S A	O	C	FAI	RPI	2Y	1-0PT-25.2	V-16
												FSC	CS	1-0PT-25.2	CSJ-03
												ST-C	CS	1-0PT-25.2	CSJ-03
												LTJ	J	1-0PT-20.3-B21	
												BDO	Q	AD-OP-ALL-1000	
1-B21-F037A	VACUUM BREAKER VALVE FOR SRV LINE A	D-25021 SH0001A / B-6	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037B	VACUUM BREAKER VALVE FOR SRV LINE B	D-25021 SH0001A / B-6	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037C	VACUUM BREAKER VALVE FOR SRV LINE C	D-25021 SH0001A / B-6	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037D	VACUUM BREAKER VALVE FOR SRV LINE D	D-25021 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037E	VACUUM BREAKER VALVE FOR SRV LINE E	D-25021 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F037F	VACUUM BREAKER VALVE FOR SRV LINE F	D-25021 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037G	VACUUM BREAKER VALVE FOR SRV LINE G	D-25021 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037H	VACUUM BREAKER VALVE FOR SRV LINE H	D-25021 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037J	VACUUM BREAKER VALVE FOR SRV LINE J	D-25021 SH0001A / B-8	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037K	VACUUM BREAKER VALVE FOR SRV LINE K	D-25021 SH0001A / B-8	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F037L	VACUUM BREAKER VALVE FOR SRV LINE L	D-25021 SH0001A / B-8	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	1-0PT-11.1.3	RFJ-05
												CVO	RO	1-0PT-11.1.3	RFJ-05
1-B21-F040	RX LVL RIP VLV TO B21-LT-3331 AND N027	D-25022 SH0002A / F-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV10R	VRR-03
												CVO	10Y	1-0MST-EFCV10R	VRR-03
												RPI	10Y	1-0MST-EFCV10R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F042A	RX LVL RIP VLV TO B21-LT-N024A-1 & 2 LT-N024B-1 & 2, LT-N026	D-25022 SH0002A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-B21-F042B	RX LVL INSTR EXCESS FLO CHK VLV (X-69A) PM 82-287M	D-25020 SH0003A / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV19R	VRR-03
												CVO	10Y	1-0MST-EFCV19R	VRR-03
												RPI	10Y	1-0MST-EFCV19R	VRR-03
1-B21-F044A	RX LVL RIP VLV TO B21-LT-N024A-1 & 2 -LT-N024B-1 & 2,-LT-N026A	D-25022 SH0002A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-B21-F044B	RX LVL INSTR EXCESS FLO CHK VLV (X-69B) PM 82-287M	D-25020 SH0003A / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV19R	VRR-03
												CVO	10Y	1-0MST-EFCV19R	VRR-03
												RPI	10Y	1-0MST-EFCV19R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F046A	RX LVL RIP VLV TO B21-LT-N017-1 & 2 B21-LT-N027, -N042A, -N03	D-25022 SH0002A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-B21-F046B	RX LVL INSTR EXCESS FLO CHK VLV (X-69C) PM 82-287M	D-25020 SH0003A / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV19R	VRR-03
												CVO	10Y	1-0MST-EFCV19R	VRR-03
												RPI	10Y	1-0MST-EFCV19R	VRR-03
1-B21-F047C	PENET X53-B EXCESS FLOW CHECK VLV	D-25022 SH0002A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-B21-F047D	RX INSTR EXCESS FLO CHK VLV (X-83A)	D-25020 SH0003A / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV19R	VRR-03
												CVO	10Y	1-0MST-EFCV19R	VRR-03
												RPI	10Y	1-0MST-EFCV19R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F048A	RX LVL EXCESS FLO CHK VLV TO B21-LT-N036,B21-PT-N045A & B,C32	D-25022 SH0002A / C-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-B21-F048B	RX LVL INSTR EXCESS FLO CHK VLV (X-69D)	D-25020 SH0003A / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV19R	VRR-03
												CVO	10Y	1-0MST-EFCV19R	VRR-03
												RPI	10Y	1-0MST-EFCV19R	VRR-03
1-B21-F049C	PENET X53-A EXCESS FLOW CHECK VLV	D-25022 SH0002A / C-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-B21-F049D	RX LVL EXCESS FLOW CHV B21-LT-N017D-1&2	D-25020 SH0003A / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV19R	VRR-03
												CVO	10Y	1-0MST-EFCV19R	VRR-03
												RPI	10Y	1-0MST-EFCV19R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F050A	RX LVL RIP VLV TO B21-FT-N033A, B21-PT-N021C AND B21-LT-N036	D-25022 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F050B	JP 15 FLO HI PRESS EXCESS FLO CHK VLV TO B21-FT-N033B & B21-FT-	D-25020 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03
1-B21-F050C	JP-10 FLOW HI PRESS EXCESS FLOW CHV TO B21-FT-N033C (X58-F)	D-25022 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F050D	JP 20 FLO HI PRESS EXCESS FLO CHK VLV TO B21-FT-N033D (X-74D)	D-25020 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F052A	JP-5 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034J (X-59F)	D-25022 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F052B	JP 15 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N033B, B21-LT-N	D-25020 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03
1-B21-F052C	JP-10 FLOW HI PRESS EXCESS LOW CHV TO B21-FT-N033C AND N034V	D-25022 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F052D	JP 20 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N033D & B21-FT-	D-25020 SH0003B / F-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F054	X-61B EXCESS FLO CHK VLV TO B21-PDT-N032 PM 82-287J	D-25022 SH0002B / C-4	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV14R	VRR-03
												CVO	10Y	1-0MST-EFCV14R	VRR-03
												RPI	10Y	1-0MST-EFCV14R	VRR-03
1-B21-F056	X-61A EXCESS FLOW CHECK VALVE HIGH PRESS B21-FT-N034A,C,E,G,	D-25022 SH0002B / C-4	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F058A	JP-1 FLO LO PRESS EXCESS FLOW CHK VLV TO B21-FT-N034A (X-59D)	D-25022 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F058B	JP-11 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034B (X-75E)	D-25020 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03

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									NORM	SAFE	FAIL				
1-B21-F058C	JP-2 FLO LO PRESS EXCESS FLO CHK VLVTO B21-FT-N034C (X-59B)	D-25022 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03
1-B21-F058D	JP-12 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034D (X-75C)	D-25020 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03
1-B21-F058E	JP-3 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034E (X-59E)	D-25022 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F058F	JP-13 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034F (X-75F)	D-25020 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F058G	JP-4 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034G (X-59C)	D-25022 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F058H	JP-14 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034H (X-75B)	D-25020 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03
1-B21-F058L	JP-6 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034L (X-58D)	D-25022 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F058M	JP-16 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034M (X-74E)	D-25020 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F058N	JP-7 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034N (X-58A)	D-25022 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F058P	JP-17 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034P (X-74A)	D-25020 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03
1-B21-F058R	JP-8 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034R (X-58C)	D-25022 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F058S	JP-18 FLO LO PRESS EXCESS FLO CHK VLV B21-FT-N034S (X-74B)	D-25020 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F058T	JP-9 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034T (X-58E)	D-25022 SH0002B / F-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV12R	VRR-03
												CVO	10Y	1-0MST-EFCV12R	VRR-03
												RPI	10Y	1-0MST-EFCV12R	VRR-03
1-B21-F058U	JP-19 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034U (X-74F)	D-25020 SH0003B / F-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03
1-B21-F060	JP 11-20 FLO HP EXCESS FLO CHK VLV TO B21-FT-N034B D,F,H,K,M,P	D-25020 SH0003B / C-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV11R	VRR-03
												CVO	10Y	1-0MST-EFCV11R	VRR-03
												RPI	10Y	1-0MST-EFCV11R	VRR-03
1-B21-IV-2149	EXCESS FLOW CHK VLV (X-69E) CAPPED PM 82-287M	D-25020 SH0003A / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV10R	VRR-03
												CVO	10Y	1-0MST-EFCV10R	VRR-03
												RPI	10Y	1-0MST-EFCV10R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-IV-2196	E21-PDS-N004B RX INSTR PENET VALVE	D-25022 SH0002B / C-4	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV17R	VRR-03
												CVO	10Y	1-0MST-EFCV17R	VRR-03
												RPI	10Y	1-0MST-EFCV17R	VRR-03
1-B21-IV-2455	EXCESS FLOW CHECK VLV TO B21-LT-N026A	D-25022 SH0002A / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-B21-IV-2456	EXCESS FLOW CHECK VLV TO B21-LT-N026B	D-25020 SH0003A / F-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV19R	VRR-03
												CVO	10Y	1-0MST-EFCV19R	VRR-03
												RPI	10Y	1-0MST-EFCV19R	VRR-03
1-B32-F005A	RCR PMP 1A UPPER SEAL PRESS RIP VALVE	D-25018 SH0001A / C-2	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F005B	RCR PMP 1B UPPER SEAL PRESS RIP VALVE	D-25048 SH0002B / C-7	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B32-F006A	RCR PMP 1A LOWER SEAL PRESS RIP VALVE	D-25018 SH0001A / C-2	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F006B	RCR PMP 1B LOWER SEAL PRESS RIP VALVE	D-25048 SH0002B / C-7	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F019	SAMPLE LINE INBOARD ISOLATION VALVE	D-25018 SH0001A / D-7	A	ACT	1	.75	GL	AO	O	C	C	RPI	2Y	1-0PT-03.1.22	
												LTJ	J	1-0PT-20.3-B32	
												FC	Q	1-0PT-03.1.22	
												FSC	Q	1-0PT-03.1.22	
												ST-C	Q	1-0PT-03.1.22	
1-B32-F020	SAMPLE LINE OUTBOARD ISOLATION VALVE	D-25018 SH0001A / D-3	A	ACT	1	.75	GL	AO	O	C	C	RPI	2Y	1-0PT-03.1.22	
												LTJ	J	1-0PT-20.3-B32	
												FC	Q	1-0PT-03.1.22	
												FSC	Q	1-0PT-03.1.22	
												ST-C	Q	1-0PT-03.1.22	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B32-F031A	REACTOR RECIRC PUMP 1A DISCHARGE VALVE	D-25018 SH0001A / B-5	B	ACT	1	28	GA	MO	O	C	FAI	RPI	2Y	1-0PT-03.1.21	
												FSC	CS	1-0PT-03.1.21	CSJ-04
												ST-C	CS	1-0PT-03.1.21	CSJ-04
1-B32-F031B	REACTOR RECIRC PUMP 1B DISCHARGE VALVE	D-25048 SH0002B / B-4	B	ACT	1	28	GA	MO	O	C	FAI	RPI	2Y	1-0PT-03.1.21	
												FSC	CS	1-0PT-03.1.21	CSJ-04
												ST-C	CS	1-0PT-03.1.21	CSJ-04
1-B32-F032A	REACTOR RECIRC PUMP 1A DISCH BYPASS VLV	D-25018 SH0001A / B-5	B	ACT	1	4	GA	MO	O	C	FAI	RPI	2Y	1-0PT-03.1.21	
												FSC	CS	1-0PT-03.1.21	CSJ-05
												ST-C	CS	1-0PT-03.1.21	CSJ-05
1-B32-F032B	REACTOR RECIRC PUMP 1B DISCH BYPASS VLV	D-25048 SH0002B / B-4	B	ACT	1	4	GA	MO	O	C	FAI	RPI	2Y	1-0PT-03.1.21	
												FSC	CS	1-0PT-03.1.21	CSJ-05
												ST-C	CS	1-0PT-03.1.21	CSJ-05
1-B32-F039A	HI PRESS RIP VLV TO B32 -PDT-N015A	D-25018 SH0001A / B-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B32-F039B	LO PRESS RIP VLV TO B32-PDT-N015B	D-25048 SH0002B / B-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F039C	LO PRESS RIP VLV TO B32-PDT-N015A	D-25018 SH0001A / B-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F039D	HI PRESS RIP VLV TO B32 -PDT-N015B	D-25048 SH0002B / C-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F041A	LO PRESS RIP VLV TO B32-FT-N014A & B	D-25048 SH0002B / C-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F041B	LO PRESS RIP VLV TO B32-FT-N024A & B	D-25048 SH0002B / C-8	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B32-F041C	LO PRESS RIP VLV TO B32-FT-N014C & D	D-25018 SH0001A / C-1	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F041D	LO PRESS RIP VLV TO B32-FT-N024C & D	D-25018 SH0001A / C-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F042A	HI PRESS RIP VLV TO B32 -FT-N014A & B	D-25048 SH0002B / C-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F042B	HI PRESS RIP VLV TO B32 -FT-N024A & B	D-25048 SH0002B / C-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F042C	HIGH PRESS RIP VLV TO B32-FT-N014C & D	D-25018 SH0001A / C-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B32-F042D	HIGH PRESS RIP VLV TO B32-FT-N024C & D	D-25018 SH0001A / C-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F058A	RIP VLV TO B32-PS-N018A & -N018A-1	D-25018 SH0001A / B-2	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-F058B	RIP VLV TO B32-PS-N018B	D-25048 SH0002B / B-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV15R	VRR-03
												CVO	10Y	1-0MST-EFCV15R	VRR-03
												RPI	10Y	1-0MST-EFCV15R	VRR-03
1-B32-V22	RCR PMP 1A SEAL INJECTION VLV	D-25018 SH0001A / E-3	A	ACT	2	.75	GL	MO	O	C	FAI	RPI	2Y	1-0PT-03.1.21	
												FSC	CS	1-0PT-03.1.21	CSJ-06
												ST-C	CS	1-0PT-03.1.21	CSJ-06
												LTJ	J	1-0PT-20.3-B32	
1-B32-V24	RCR PMP 1A SEAL INJECTION CHECK VALVE	D-25018 SH0001A / E-3	A/C	ACT	2	.75	CK	SA	O	C	N/A	LTJ	J	1-0PT-20.3-B32	
												BDO	RO	1OP-02	RFJ-07
												CVC	RO	1-0PT-20.3-B32	RFJ-07

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B32-V30	RCR PMP 1B SEAL INJECTION VLV	D-25048 SH0002B / E-6	A	ACT	2	.75	GL	MO	O	C	FAI	RPI	2Y	1-0PT-03.1.21	
												FSC	CS	1-0PT-03.1.21	CSJ-06
												ST-C	CS	1-0PT-03.1.21	CSJ-06
												LTJ	J	1-0PT-20.3-B32	
1-B32-V32	RCR PMP 1B SEAL INJECTION CHECK VALVE	D-25048 SH0002B / E-6	A/C	ACT	2	.75	CK	SA	O	C	N/A	LTJ	J	1-0PT-20.3-B32	
												BDO	RO	1OP-02	RFJ-07
												CVC	RO	1-0PT-20.3-B32	RFJ-07
1-C11-115	HCU CHARGING WATER-RISER CHECK VLV	D-25017 SH0002A / D-3	C	ACT	2	.5	CK	SA	C	C	N/A	CVC	RO	1-0PT-14.1.2A	RFJ-15
												CVO	RO	1-0PT-14.2.1	RFJ-15
1-C41-F004A	STANDBY LIQ CTRL EXPLOSIVE SQUIB VALVE	D-25047 / C-7	D	ACT	2	1.5	EX	EXP	C	O/C	N/A	EXP	5Y	1-0PT-06.2.3	
1-C41-F004B	STANDBY LIQ CTRL EXPLOSIVE SQUIB VALVE	D-25047 / B-7	D	ACT	2	1.5	EX	EXP	C	O/C	N/A	EXP	5Y	1-0PT-06.2.3	
1-C41-F006	SLC OUTBOARD INJECTION CHECK VALVE	D-25047 / C-7	A/C	ACT	1	1.5	CK	SA	C	O/C	N/A	LT	2Y	1-0PT-20.14	
												CVC	RO	1-0PT-20.14	RFJ-09
												CVO	RO	1-0PT-20.14	RFJ-09
1-C41-F007	SLC INBOARD INJECTION CHECK VALVE	D-25047 / B-8	A/C	ACT	1	1.5	CK	SA	C	O/C	N/A	LT	2Y	1-0PT-20.14	
												CVC	RO	1-0PT-20.14	RFJ-09
												CVO	RO	1-0PT-20.14	RFJ-09
1-C41-F008	STANDBY LIQUID CTRL INBOARD INJECT VLV	D-25047 / B-8	B	PASS	1	1.5	GA	MA	LO	O	N/A	RPI	2Y	0PT-99.4	
1-C41-F029A	PMP C41-C001A DISCHRG SAFETY/RELIEF VLV	D-25047 / D-5	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	

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									NORM	SAFE	FAIL				
1-C41-F029B	PMP C41-C001B DISCHRG SAFETY/RELIEF VLV	D-25047 / A-5	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	
1-C41-F033A	SLC PUMP 1A DISCHARGE CHECK VALVE	D-25047 / C-6	C	ACT	2	1.5	CK	SA	C	O/C	N/A	CVC	Q	1-0PT-06.1	
												CVO	Q	1-0PT-06.1	
1-C41-F033B	SLC PUMP 1B DISCHARGE CHECK VALVE	D-25047 / B-6	C	ACT	2	1.5	CK	SA	C	O/C	N/A	CVC	Q	1-0PT-06.1	
												CVO	Q	1-0PT-06.1	
1-C51-J004A-BALL-VLV	TIP BALL VALVE	F-70081 / B-3	A	ACT	2	.37	BL	SO	C	C	C	RPI	2Y	1-0PT-20.3-179	
												LTJ	J	1-0PT-20.3-179	
												FC	Q	1-0PT-01.2.2A	
												FSC	Q	1-0PT-01.2.2A	
												ST-C	Q	1-0PT-01.2.2A	
1-C51-J004B-BALL-VLV	TIP BALL VALVE	F-70081 / B-3	A	ACT	2	.37	BL	SO	C	C	C	RPI	2Y	1-0PT-20.3-180	
												LTJ	J	1-0PT-20.3-180	
												FC	Q	1-0PT-01.2.2A	
												FSC	Q	1-0PT-01.2.2A	
												ST-C	Q	1-0PT-01.2.2A	
1-C51-J004C-BALL-VLV	TIP BALL VALVE	F-70081 / B-3	A	ACT	2	.37	BL	SO	C	C	C	RPI	2Y	1-0PT-20.3-181	
												LTJ	J	1-0PT-20.3-181	
												FC	Q	1-0PT-01.2.2A	
												FSC	Q	1-0PT-01.2.2A	
												ST-C	Q	1-0PT-01.2.2A	

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									NORM	SAFE	FAIL				
1-C51-J004D-BALL-VLV	TIP BALL VALVE	F-70081 / B-3	A	ACT	2	.37	BL	SO	C	C	C	RPI	2Y	1-0PT-20.3-182	
												LTJ	J	1-0PT-20.3-182	
												FC	Q	1-0PT-01.2.2A	
												FSC	Q	1-0PT-01.2.2A	
												ST-C	Q	1-0PT-01.2.2A	
1-C51-TIP-CHV	TIP NITROGEN PURGE LINE CHECK VALVE	F-70081 / C-3	A/C	ACT	2	.37	CK	SA	O	C	N/A	LTJ	J	1-0PT-20.3-183	
												BDO	RO	1-0PT-20.3-183	RFJ-06
												CVC	RO	1-0PT-20.3-183	RFJ-06
1-CAC-SV-1200B	CAC-AT-1261 INBD SMPL INLET VLV	D-72018 / D-4	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-073	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1205E	CAC-AT-4409 DRYWELL SMPL INLT RIP VLV (X60-E)	D-73026 SH0002 / B-3	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-SV-1209A	CAC-AT-4409 DRYWELL SMPL INLT RIP VLV (X57-A)	D-73026 SH0002 / B-3	B	ACT	2	3/4	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1209B	CAC-AT-4409 DRYWELL SMPL INLT RIP VLV (X57-B)	D-73026 SH0002 / B-3	B	ACT	2	3/4	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1209D	CAC-PT-4175 & PSH-2684 SOL VLV	D-25015 SH0001A / E-3	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-CAC-SV-1211E	CAC-AT-1262 INBD SMPL RET VLV	D-72018 / B-6	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-089	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1211F	CAC-AT-1262 INBD SMPL INLT VLV	D-72018 / C-5	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-083	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	

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									NORM	SAFE	FAIL				
1-CAC-SV-1213A	CAC-AT-4409 SUPP POOL SMPL INLT RIP VLV (X209B-A)	D-73026 SH0002 / B-3	B	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1215E	CAC-AT-4409 INBD SMPL RET RIP VLV (X245-E)	D-73026 SH0002 / B-4	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1218A	CAC-AT-4410 SUPP POOL SMPL INLT RIP VLV (X206A-A)	D-73026 SH0001 / A-6	B	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1218C	CAC-LT-3342,2601 & 4177 TORUS SV	D-25015 SH0001A / C-6	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-CAC-SV-1219B	CAC-PT-1257-2A TORUS PRESS SV	D-25015 SH0001A / C-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-CAC-SV-1219C	TORUS LEVEL SV TO CAC-LT-2602	D-25015 SH0001A / B-3	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-SV-1225B	COMMON INBD SMPL RET VLV	D-72018 / B-3	A	ACT	2	1.25	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-082	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1225C	CAC-PT-2685, 3341 & 4176 DW SV	D-25015 SH0001A / D-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-CAC-SV-1227A	CAC-AT-4410 DRYWELL SMPL INLT RIP VLV (X73-A)	D-73026 SH0001 / B-7	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1227B	CAC-AT-4410 DRYWELL SMPL INLT RIP VLV (X73-B)	D-73026 SH0001 / B-7	B	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	

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									NORM	SAFE	FAIL				
1-CAC-SV-1227C	CAC-AT-4410 INBD SMPL INLT RIP VLV (X-1-73C)	D-73026 SH0001 / B-6	B	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1227E	CAC-AT-1260 INBD SMPL INLT VLV	D-72018 / C-3	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-078A	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1231B	CAC-AT-4410 INBD SMPL RET RIP VLV (X244-B)	D-73026 SH0001 / A-6	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	1PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1260	CAC-AT-1260 OUTBD SMPL INLT VLV	D-72018 / C-3	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-079	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-SV-1261	CAC-AT-1261 OUTBD SMPL INLT VLV	D-72018 / D-3	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-074	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-1262	CAC-AT-1262 OUTBD SMPL INLT VLV	D-72018 / C-6	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-084	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-3439	CAC-AT-1262 OUTBOARD SMPL RET VLV	D-72018 / B-7	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-090	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-3440	COMMON OUTBOARD SMPL RET VLV	D-72018 / B-2	A	ACT	2	1.25	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-081	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-4344	CAC-LT-2602 SUPP POOL HP SV	D-25015 SH0001A / A-3	B	PASS	2	.5	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-CAC-SV-4345	CAC-LT-2602 SUPP POOL HP SV	D-25015 SH0001A / A-6	B	PASS	2	.5	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-SV-4409 -1	CAC-AT-4409 TORUS OUTBD SMPL INLT VLV	D-73026 SH0002 / B-4	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-4409 -2	CAC-AT-4409 PRI CONT OUTBD SMPL INLT VLV	D-73026 SH0002 / B-4	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-4409 -3	CAC-AT-4409 PRI CONT OUTBD SMPL INLT VLV	D-73026 SH0002 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-4409 -4	CAC-AT-4409 PRI CONT OUTBD SMPL INLT VLV	D-73026 SH0002 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-SV-4410 -1	CAC-AT-4410 TORUS OUTBD SMPL INLT VLV	D-73026 SH0001 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-4410 -2	CAC-AT-4410 PRI CONT OUTBD SMPL INLET VLV	D-73026 SH0001 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-4410 -3	CAC-AT-4410 PRI CONT OUTBD SMPL INLET VLV	D-73026 SH0001 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-4410 -4	CAC-AT-4410 PRI CONT OUTBD SMPL INLT VLV	D-73026 SH0001 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	

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									NORM	SAFE	FAIL				
1-CAC-SV-4540	CAC-AT-4409 OUTBD SMPL RET VLV	D-73026 SH0002 / B-4	B	ACT	2	.5	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-SV-4541	CAC-AT-4410 OUTBD SMPL RET VLV	D-73026 SH0001 / A-6	B	ACT	2	.5	GL	SO	O	C	C	RPI	2Y	1-0PT-20.4	
												FC	Q	1PT-16.0-1	
												FSC	Q	1PT-16.0-1	
												ST-C	Q	1PT-16.0-1	
1-CAC-V10	OUTBOARD DRYWELL PURGE EXHAUST VALVE	D-25015 SH0001A / D-6	A	ACT	2	18	BF	AO	C	C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-69E	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
1-CAC-V15	PRIMARY CONTAINMENT PURGE AIR INLET VALVE	D-25015 SH0001B / D-7	A	ACT	2	24	BF	AO	C	C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-67C	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-V16	REACTOR BUILDING TO SUPP POOL VAC BKR VLV	D-25015 SH0001B / A-6	A	ACT	2	20	BF	AO	C	O/C	C	RPI	2Y	1-0PT-02.3.2	
												LTJ	J	1-0PT-20.3-67D	
												FC	Q	1-0PT-02.3.2	
												FSC	Q	1-0PT-02.3.2	
												FSO	Q	1-0PT-02.3.2	
												ST-C	Q	1-0PT-02.3.2	
												ST-O	Q	1-0PT-02.3.2	
1-CAC-V160	SUPP POOL CAD N2 INJECTION INLT VLV	D-25015 SH0001B / C-8	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.3-67D	
												LTJ	J	1-0PT-20.3-67D	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	

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									NORM	SAFE	FAIL				
1-CAC-V161	DRYWELL CAD N2 INJECTION SOL VLV	D-25015 SH0001B / F-7	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.3-67E	
												LTJ	J	1-0PT-20.3-67E	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	
1-CAC-V162	SUPP POOL CAD N2 INJECTION INLT VLV	D-25015 SH0001B / C-7	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.3-67D	
												LTJ	J	1-0PT-20.3-67D	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	
1-CAC-V163	DRYWELL CAD N2 INJECTION INLET VLV	D-25015 SH0001B / E-7	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.3-67E	
												LTJ	J	1-0PT-20.3-67E	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	

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									NORM	SAFE	FAIL				
1-CAC-V17	REACTOR BUILDING TO SUPP POOL VAC BKR VLV	D-25015 SH0001B / A-7	A	ACT	2	20	BF	AO	C	O/C	C	RPI	2Y	1-0PT-02.3.2	
												LTJ	J	1-0PT-20.3-67D	
												FC	Q	1-0PT-02.3.2	
												FSC	Q	1-0PT-02.3.2	
												FSO	Q	1-0PT-02.3.2	
												ST-C	Q	1-0PT-02.3.2	
												ST-O	Q	1-0PT-02.3.2	
1-CAC-V172	SUPP POOL PURGE EXHAUST SOL VLV	D-25015 SH0001A / C-7	A	ACT	2	2	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-68C	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-V216	HARDENEND WETWELL VENT OUTBOARD ISOL VLV	D-25015 SH0001D / E-2	A	ACT	2	8	BF	AO	C	O/C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-68D	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	
1-CAC-V22	TORUS PURGE EXHAUST LINE ISOLATION VALVE	D-25015 SH0001A / C-8	A	ACT	2	2	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-68D	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-V23	PRI CONT DISCH VLV TO SBGT	D-25015 SH0001A / E-7	A	ACT	2	2	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-69E	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	
1-CAC-V4	INBRD PRIMARY CONT N2 INERTING INLET VLV	D-25015 SH0001B / B-5	A	ACT	2	8	BF	AO	C	C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-67C	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
1-CAC-V49	DRYWELL HEAD INBD PURGE EXH VALVE	D-25015 SH0001A / F-5	A	ACT	2	3	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-72A	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-V5	SUPPRESSION POOL N2 INLET VALVE	D-25015 SH0001B / B-6	A	ACT	2	20	BF	AO	C	C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-67D	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
1-CAC-V50	DRYWELL HEAD OUTBD PURGE EXH VALVE	D-25015 SH0001A / F-6	A	ACT	2	3	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-72B	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	
1-CAC-V55	DRYWELL CAD N2 INJECTION SOL VLV	D-25015 SH0001B / D-5	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-67B1	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-V56	DRYWELL CAD N2 INJECTION SOL VLV	D-25015 SH0001B / C-6	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-67B2	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	
1-CAC-V6	DRYWELL N2 INLET VALVE	D-25015 SH0001A / D-3	A	ACT	2	18	BF	AO	C	C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-67E	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
1-CAC-V7	INBD SUPPRESSION POOL PURGE EXHAUST VLV	D-25015 SH0001A / B-8	A	ACT	2	20	BF	AO	C	O/C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-68C	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-V8	OUTBD SUPPRESSION POOL PURGE EXHAUST VLV	D-25015 SH0001A / B-8	A	ACT	2	20	BF	AO	C	C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-68D	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
1-CAC-V9	INBOARD DRYWELL PURGE EXHAUST VALVE	D-25015 SH0001A / D-6	A	ACT	2	18	BF	AO	C	O/C	C	RPI	2Y	1-0PT-16.1.1	
												LTJ	J	1-0PT-20.3-69D	
												FC	Q	1-0PT-16.1.1	
												FSC	Q	1-0PT-16.1.1	
												FSO	Q	1-0PT-16.1.1	
												ST-C	Q	1-0PT-16.1.1	
												ST-O	Q	1-0PT-16.1.1	
1-CAC-X20A	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001B / A-6	A/C	ACT	2	20	VB	SA	C	O/C	N/A	LTJ	J	1-0PT-20.3-67C	
												CVC	Q	1-0PT-02.3.2	
												CVO	Q	1-0PT-02.3.2	
1-CAC-X20B	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001B / A-8	A/C	ACT	2	20	VB	SA	C	O/C	N/A	LTJ	J	1-0PT-20.3-67C	
												CVC	Q	1-0PT-02.3.2	
												CVO	Q	1-0PT-02.3.2	
1-E11-F002A	RHR HX 1A SW DISCHARGE VALVE	D-25037 SH0001 / C-6	B	PASS	3	16	BF	MO	O	O	FAI	RPI	2Y	1-0PT-08.1.4A	V-16
1-E11-F002B	RHR HX 1B SW DISCHARGE VALVE	D-25037 SH0002 / C-5	B	PASS	3	16	BF	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2B	V-16

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F003A	RHR HEAT EXCHANGER 1A OUTLET VALVE	D-25025 SH0001A / E-4	B	PASS	2	16	GL	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2C	
1-E11-F003B	RHR HEAT EXCHANGER 1B OUTLET VALVE	D-25026 SH0002A / B-8	B	PASS	2	16	GL	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2B	
1-E11-F004A	RHR PMP 1A SUPPRESSION POOL SUCTION VLV	D-25025 SH0001B / C-5	B	PASS	2	20	GA	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2C	V-16
1-E11-F004B	RHR PMP 1B SUPPRESSION POOL SUCTION VLV	D-25026 SH0002B / B-7	B	PASS	2	20	GA	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2B	V-16
1-E11-F004C	RHR PMP 1C SUPPRESSION POOL SUCTION VLV	D-25025 SH0001B / C-5	B	PASS	2	20	GA	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2C	V-16
1-E11-F004D	RHR PMP 1D SUPPRESSION POOL SUCTION VLV	D-25026 SH0002B / B-7	B	PASS	2	20	GA	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2B	V-16
1-E11-F005A	RHR SERVICE WATER PUMP A DISCHARGE CHV	D-25037 SH0001 / E-6	C	ACT	3	12	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-08.1.4A 1-0PT-08.1.4A	
1-E11-F005B	RHR SERVICE WATER PUMP B DISCHARGE CHV	D-25037 SH0002 / E-3	C	ACT	3	12	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-08.1.4B 1-0PT-08.1.4B	
1-E11-F005C	RHR SERVICE WATER PUMP C DISCHARGE CHV	D-25037 SH0001 / E-8	C	ACT	3	12	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-08.1.4A 1-0PT-08.1.4A	
1-E11-F005D	RHR SERVICE WATER PUMP D DISCHARGE CHV	D-25037 SH0002 / E-5	C	ACT	3	12	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-08.1.4B 1-0PT-08.1.4B	
1-E11-F006A	RHR PMP 1A SHUTDOWN COOLING SUCTION VLV	D-25025 SH0001B / C-7	B	PASS	2	20	GA	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2C	
1-E11-F006B	RHR PMP 1B SHUTDOWN COOLING SUCTION VLV	D-25026 SH0002B / C-5	B	PASS	2	20	GA	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2B	

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									NORM	SAFE	FAIL				
1-E11-F006C	RHR PMP 1C SHUTDOWN COOLING SUCTION VLV	D-25025 SH0001B / C-3	B	PASS	2	20	GA	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2C	
1-E11-F006D	RHR PMP 1D SHUTDOWN COOLING SUCTION VLV	D-25026 SH0002B / C-8	B	PASS	2	20	GA	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2B	
1-E11-F007A	MINIMUM FLOW BYPASS VALVE TO SUPP POOL	D-25025 SH0001B / D-7	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2C	
												FSC	Q	1-0PT-08.2.2C	
												FSO	Q	1-0PT-08.2.2C	
												ST-C	Q	1-0PT-08.2.2C	
												ST-O	Q	1-0PT-08.2.2C	
1-E11-F007B	MINIMUM FLOW BYPASS VALVE TO SUPP POOL	D-25026 SH0002B / B-4	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												FSC	Q	1-0PT-08.2.2B	
												FSO	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
												ST-O	Q	1-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F008	SHUTDOWN COOLING OUTBOARD SUCTION VLV	D-25025 SH0001B / D-2	A	ACT	1	20	GA	MO	C	C	FAI	LT	2Y	1-0PT-20.7B	
												RPI	2Y	1-0PT-08.0	
												FSC	CS	1-0PT-08.0	CSJ-07
												ST-C	CS	1-0PT-08.0	CSJ-07
												LTJ	J	1-0PT-20.3-E11	
1-E11-F009	SHUTDOWN COOL INBRD SUCTION THROTTLE VLV	D-25025 SH0001B / E-2	A	ACT	1	20	GA	MO	C	C	FAI	LT	2Y	1-0PT-20.7B	
												RPI	2Y	1-0PT-08.0	
												FSC	CS	1-0PT-08.0	CSJ-07
												ST-C	CS	1-0PT-08.0	CSJ-07
												LTJ	J	1-0PT-20.3-E11	
1-E11-F011A	RHR HX 1A DRAIN TO SUPPRESSION POOL	D-25025 SH0001A / E-5	B	PASS	2	4	GA	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2C	
1-E11-F011B	RHR HX 1B DRAIN TO SUPPRESSION POOL	D-25026 SH0002A / C-7	B	PASS	2	4	GA	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F015A	LPCI INBOARD INJECTION VALVE	D-25025 SH0001B / E-6	A	ACT	1	24	GA	MO	C	O/C	FAI	LT	2Y	1-0PT-20.7B	
												RPI	2Y	1-0PT-08.2.2C	
												FSC	CS	1-0PT-08.2.2C	CSJ-16
												FSO	CS	1-0PT-08.2.2C	CSJ-16
												ST-C	CS	1-0PT-08.2.2C	CSJ-16
												ST-O	CS	1-0PT-08.2.2C	CSJ-16
												LTJ	J	1-0PT-20.3-111A	
1-E11-F015B	LPCI INBOARD INJECTION VALVE	D-25026 SH0002B / D-5	A	ACT	1	24	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												LT	2Y	1-0PT-20.7B	
												FSC	CS	1-0PT-08.2.2B	CSJ-16
												FSO	CS	1-0PT-08.2.2B	CSJ-16
												ST-C	CS	1-0PT-08.2.2B	CSJ-16
												ST-O	CS	1-0PT-08.2.2B	CSJ-16
												LTJ	J	1-0PT-20.3-111B	
1-E11-F016A	DRYWELL SPRAY OUTBOARD ISOLATION VALVE	/ F-6	A	ACT	2	14	GL	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2C	
												LTJ	J	1-0PT-20.3-113A	
												FSC	Q	1-0PT-08.2.2C	
												FSO	Q	1-0PT-08.2.2C	
												ST-C	Q	1-0PT-08.2.2C	
												ST-O	Q	1-0PT-08.2.2C	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F016B	DRYWELL SPRAY OUTBOARD ISOLATION VALVE	/ E-5	A	ACT	2	14	GL	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												LTJ	J	1-0PT-20.3-114A	
												FSC	Q	1-0PT-08.2.2B	
												FSO	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
												ST-O	Q	1-0PT-08.2.2B	
1-E11-F017A	LPCI OUTBOARD INJECTION VALVE	D-25025 SH0001B / E-7	A	ACT	2	24	ANG	MO	O	O/C	FAI	RPI	2Y	1-0PT-08.2.2C	
												LTJ	J	1-0PT-20.3-112A	
												FSC	Q	1-0PT-08.2.2C	
												FSO	Q	1-0PT-08.2.2C	
												ST-C	Q	1-0PT-08.2.2C	
												ST-O	Q	1-0PT-08.2.2C	
1-E11-F017B	LPCI OUTBOARD INJECTION VALVE	D-25026 SH0002B / D-4	A	ACT	2	24	ANG	MO	O	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												LTJ	J	1-0PT-20.3-112B	
												FSC	Q	1-0PT-08.2.2B	
												FSO	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
												ST-O	Q	1-0PT-08.2.2B	

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									NORM	SAFE	FAIL				
1-E11-F020A	RHR PMP 1A & 1C SUPP POOL SUCT VLV	D-25025 SH0001B / D-4	B	ACT	2	24	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-08.2.2C	
												FSC	Q	1-0PT-08.2.2C	
												FSO	Q	1-0PT-08.2.2C	
												ST-C	Q	1-0PT-08.2.2C	
												ST-O	Q	1-0PT-08.2.2C	
1-E11-F020B	RHR PMP 1B & 1D SUPP POOL SUCT VLV	D-25026 SH0002B / C-7	B	ACT	2	24	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												FSC	Q	1-0PT-08.2.2B	
												FSO	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
												ST-O	Q	1-0PT-08.2.2B	
1-E11-F021A	DRYWELL SPRAY INBOARD ISOLATION VALVE	/ F-3	A	ACT	2	14	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2C	
												LTJ	J	1-0PT-20.3-E11	
												FSC	Q	1-0PT-08.2.2C	
												FSO	Q	1-0PT-08.2.2C	
												ST-C	Q	1-0PT-08.2.2C	
												ST-O	Q	1-0PT-08.2.2C	

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									NORM	SAFE	FAIL				
1-E11-F021B	DRYWELL SPRAY INBOARD ISOLATION VALVE	/ E-7	A	ACT	2	14	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												LTJ	J	1-0PT-20.3-E11	
												FSC	Q	1-0PT-08.2.2B	
												FSO	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
												ST-O	Q	1-0PT-08.2.2B	
1-E11-F024A	SUPPRESSION POOL COOLING ISOLATION VLV	D-25025 SH0001B / E-8	B	ACT	2	16	GL	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2C	
												FSC	Q	1-0PT-08.2.2C	
												FSO	Q	1-0PT-08.2.2C	
												ST-C	Q	1-0PT-08.2.2C	
												ST-O	Q	1-0PT-08.2.2C	
1-E11-F024B	SUPPRESSION POOL COOLING ISOLATION VLV	D-25026 SH0002B / D-3	B	ACT	2	16	GL	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												FSC	Q	1-0PT-08.2.2B	
												FSO	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
												ST-O	Q	1-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F025A	RHR HX 1A OUTLET SAFETY RELIEF VALVE	D-25025 SH0001A / F-3	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	
1-E11-F025B	RHR HX 1B OUTLET SAFETY RELIEF VALVE	D-25026 SH0002A / E-7	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	
1-E11-F027A	SUPPRESSION POOL SPRAY ISOLATION VALVE	D-25025 SH0001B / E-7	A	PASS	2	6	GL	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2C	
												LTJ	J	1-0PT-20.3-118B	
1-E11-F027B	SUPPRESSION POOL SPRAY ISOLATION VALVE	D-25026 SH0002B / E-4	A	PASS	2	6	GL	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2B	
												LTJ	J	1-0PT-20.3-118B	
1-E11-F028A	RHR TORUS DISCHARGE ISOLATION VALVE	D-25025 SH0001B / F-7	A	ACT	2	16	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2C	
												LTJ	J	1-0PT-20.3-118A	
												FSC	Q	1-0PT-08.2.2C	
												FSO	Q	1-0PT-08.2.2C	
												ST-C	Q	1-0PT-08.2.2C	
												ST-O	Q	1-0PT-08.2.2C	
1-E11-F028B	RHR TORUS DISCHARGE ISOLATION VALVE	D-25026 SH0002B / E-4	A	ACT	2	16	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												LTJ	J	1-0PT-20.3-119A	
												FSC	Q	1-0PT-08.2.2B	
												FSO	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
												ST-O	Q	1-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F029	SHUTDOWN COOLING SUCTION HEADER RELIEF	D-25025 SH0001B / C-1	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	
1-E11-F031A	RHR PUMP 1A DISCHARGE CHECK VALVE	D-25025 SH0001B / B-7	C	ACT	2	16	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-08.2.2C 1-0PT-08.2.2C	V-14
1-E11-F031B	RHR PUMP 1B DISCHARGE CHECK VALVE	D-25026 SH0002B / A-2	C	ACT	2	16	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-08.2.2B 1-0PT-08.2.2B	V-14
1-E11-F031C	RHR PUMP 1C DISCHARGE CHECK VALVE	D-25025 SH0001B / B-5	C	ACT	2	16	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-08.2.2C 1-0PT-08.2.2C	V-14
1-E11-F031D	RHR PUMP 1D DISCHARGE CHECK VALVE	D-25026 SH0002B / A-6	C	ACT	2	16	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-08.2.2B 1-0PT-08.2.2B	V-14
1-E11-F046A	RHR PUMP 1A DISCHARGE TO MIN FLOW LINE	D-25025 SH0001B / B-6	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II	1-0PT-08.2.2C 1-0PT-08.2.2C	V-14
1-E11-F046B	RHR PUMP 1B DISCHARGE TO MIN FLOW LINE	D-25026 SH0002B / A-4	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II	1-0PT-08.2.2B 1-0PT-08.2.2B	V-14
1-E11-F046C	RHR PUMP 1C DISCHARGE TO MIN FLOW LINE	D-25025 SH0001B / B-4	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II	1-0PT-08.2.2C 1-0PT-08.2.2C	V-14

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F046D	RHR PUMP 1D DISCHARGE TO MIN FLOW LINE	D-25026 SH0002B / A-6	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC	II	1-0PT-08.2.2B	V-14
												CVO	II	1-0PT-08.2.2B	
1-E11-F047A	RHR HEAT EXCHANGER 1A INLET VALVE	D-25025 SH0001A / D-2	B	PASS	2	16	GA	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2C	
1-E11-F047B	RHR HEAT EXCHANGER 1B INLET VALVE	D-25026 SH0002B / B-1	B	PASS	2	16	GA	MO	O	O	FAI	RPI	2Y	1-0PT-08.2.2B	
1-E11-F048A	RHR HEAT EXCHANGER 1A BYPASS VALVE	D-25025 SH0001A / E-2	B	ACT	2	20	GL	MO	O	O/C	FAI	RPI	2Y	1-0PT-08.2.2C	
												FSC	Q	1-0PT-08.2.2C	
												FSO	Q	1-0PT-08.2.2C	
												ST-C	Q	1-0PT-08.2.2C	
												ST-O	Q	1-0PT-08.2.2C	
1-E11-F048B	RHR HEAT EXCHANGER 1B BYPASS VALVE	D-25026 SH0002B / B-2	B	ACT	2	20	GL	MO	O	O/C	FAI	RPI	2Y	1-0PT-08.2.2B	
												FSC	Q	1-0PT-08.2.2B	
												FSO	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
												ST-O	Q	1-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F049	RHR TO RADWASTE INBOARD ISOLATION VALVE	D-25026 SH0002B / C-4	B	ACT	2	4	GL	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2B	
												FSC	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
1-E11-F050A	RHR LOOP A INJECTION CHECK VALVE	D-25025 SH0001B / E-4	C	ACT	1	24	CK	SA	C	O/C	N/A	LT	2Y	1-0PT-20.7B	
												CVO	CS	1-0PT-08.0A	CSJ-08
												CVC	RO	1-0PT-20.7B	RFJ-10
1-E11-F050B	RHR LOOP B INJECTION CHECK VALVE	D-25026 SH0002B / D-7	C	ACT	1	24	CK	SA	C	O/C	N/A	LT	2Y	1-0PT-20.7B	
												CVO	CS	1-0PT-08.0B	CSJ-08
												CVC	RO	1-0PT-20.7B	RFJ-10
1-E11-F060A	LPCI MANUAL INJECTION VALVE	D-25025 SH0001B / E-3	B	PASS	1	24	GA	MA	O	O	N/A	RPI	2Y	1-0PT-99.0	
1-E11-F060B	LPCI MANUAL INJECTION VALVE	D-25026 SH0002B / D-7	B	PASS	1	24	GA	MA	O	O	N/A	RPI	2Y	1-0PT-99.1	
1-E11-F079A	RHR HX 1A OUTLET INBOARD ISOLATION VALVE	D-25025 SH0001A / B-6	B	PASS	2	.75	GL	SO	C	C	C	RPI	2Y	1-0PT-08.2.2C	
1-E11-F079B	RHR HX 1B OUTLET INBOARD ISOLATION VALVE	D-25026 SH0002A / B-2	B	PASS	2	.75	GL	SO	C	C	C	RPI	2Y	1-0PT-08.2.2B	
1-E11-F089	INBOARD RHR KEEPFILL STATION CHECK VALVE	D-25026 SH0002B / F-3	C	ACT	2	4	CK	SA	C	C	N/A	BDO	Q	1-0PT-08.2.2B	
												CVC	Q	1-0PT-08.2.2B	
1-E11-F103A	RHR HEAT EXCHANGER 1A OUTBOARD VENT VLV	D-25025 SH0001A / C-2	B	PASS	2	1	GL	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2C	V-16
1-E11-F103B	RHR HEAT EXCHANGER 1B OUTBOARD VENT VLV	D-25026 SH0002A / C-4	B	PASS	2	1	GL	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2B	V-16

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F104A	RHR HEAT EXCHANGER 1A INBOARD VENT VLV	D-25025 SH0001A / C-2	B	PASS	2	1	GL	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2C	V-16
1-E11-F104B	RHR HEAT EXCHANGER 1B INBOARD VENT VLV	D-25026 SH0002A / C-4	B	PASS	2	1	GL	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2B	V-16
1-E11-PDV-F068A	RHR HX 1A SERV WTR DISCH VLV	D-25037 SH0001 / D-1	B	ACT	3	16	ANG	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q	1-0PT-08.1.4A 1-0PT-08.1.4A 1-0PT-08.1.4A	
1-E11-PDV-F068B	RHR HX 1B SERV WTR DISCH VLV	D-25037 SH0002 / D-8	B	ACT	3	16	ANG	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q	1-0PT-08.1.4B 1-0PT-08.1.4B 1-0PT-08.1.4B	
1-E11-SV-F037A	ISV TO E11-PT-N019A, C71-PT-N002A, C71-PS-N004	D-25025 SH0001B / F-4	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E11-SV-F037B	ISV TO E11-PT-N019B, C71-PT-N002C, C71-PS-N004	D-25026 SH0002B / E-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E11-SV-F037C	ISV TO E11-PT-N019C, C71-PT-N002B, C71-PS-N004	D-25025 SH0001B / E-4	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E11-SV-F037D	ISV TO E11-PT-N019D, C71-PT-N002D, C71-PS-N004	D-25026 SH0002B / E-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E11-SV-F043A	ISV TO E11-PT-N011A	D-25025 SH0001B / E-4	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E11-SV-F043B	ISV TO E11-PT-N011B	D-25026 SH0002B / E-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E11-SV-F043C	ISV TO E11-PT-N011C & CAC-PDS-4222	D-25025 SH0001B / E-4	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E11-SV-F043D	ISV TO E11-PT-N011D & CAC-PDS-4223	D-25026 SH0002B / E-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-V193	DEMIN WTR INBOARD FILL CHECK VALVE	D-25025 SH0001B / F-7	C	ACT	2	4	CK	SA	O/C	C	N/A	BDO CVC	Q Q	1-0PT-08.2.2C 1-0PT-08.2.2C	
1-E11-V20	RHR HEAT EXCHANGER 1A SHELL RELIEF VALVE	D-25025 SH0001A / C-3	C	ACT	2	.75	RV	SA	C	O/C	N/A	RV	I	PMID 8465-03	
1-E11-V21	RHR HEAT EXCHANGER 1B SHELL RELIEF VALVE	D-25026 SH0002A / C-3	C	ACT	2	.75	RV	SA	C	O/C	N/A	RV	I	PMID 8472-03	
1-E11-V32	Check Valve Bypass Vlv	D-25025 SH0001A / F-2	A	PASS	1	1	GL	MO	C	C	FAI	RPI LT	2Y 2Y	1-0PT-20.7B 1-0PT-20.7B	
1-E11-V33	Check Valve Bypass Vlv	D-25026 SH0002A / E-6	A	PASS	1	1	GL	MO	C	C	FAI	RPI LT	2Y 2Y	1-0PT-20.7B 1-0PT-20.7B	
1-E11-V39	RHR TO FUEL POOL COOL UPSTREAM MANUAL ISV	D-25049 SH0001B / F-5	B	ACT	2	8	GA	MA	C	O/C	N/A	FSC FSO	2Y 2Y	1-0PT-08.0C 1-0PT-08.0C	
1-E11-V51	RHR HX 1A DIRTY RADWASTE LINE RELIEF VALVE	D-25037 SH0001 / C-6	C	ACT	3	.75	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	
1-E11-V54	RHR HX 1B DIRTY RADWASTE LINE RELIEF VALVE	D-25037 SH0002 / C-5	C	ACT	3	.75	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	
1-E21-F001A	SUPPRESSION POOL SUCTION VALVE	D-25024 SH0002 / A-7	B	ACT	2	14	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q	1-0PT-07.2.4A 1-0PT-07.2.4A 1-0PT-07.2.4A 1-0PT-07.2.4A 1-0PT-07.2.4A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E21-F001B	CORE SPRAY PMP 1B SUPP POOL SUCT VLV	D-25024 SH0001 / B-8	B	ACT	2	14	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-07.2.4B	
												FSC	Q	1-0PT-07.2.4B	
												FSO	Q	1-0PT-07.2.4B	
												ST-C	Q	1-0PT-07.2.4B	
												ST-O	Q	1-0PT-07.2.4B	
1-E21-F003A	CORE SPRAY PUMP DISCHARGE CHECK VALVE	D-25024 SH0002 / D-1	C	ACT	2	12	CK	SA	C	O/C	N/A	CVC	Q	1-0PT-07.2.4A	
												CVO	Q	1-0PT-07.2.4A	
1-E21-F003B	CORE SPRAY PUMP DISCHARGE CHECK VALVE	D-25024 SH0001 / C-2	C	ACT	2	12	CK	SA	C	O/C	N/A	CVC	Q	1-0PT-07.2.4B	
												CVO	Q	1-0PT-07.2.4B	
1-E21-F004A	CORE SPRAY PMP OUTBOARD INJECTION VLV	D-25024 SH0002 / D-6	A	ACT	2	10	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-07.2.4A	
												LTJ	J	1-0PT-20.3-E21	
												FSC	Q	1-0PT-07.2.4A	
												FSO	Q	1-0PT-07.2.4A	
												ST-C	Q	1-0PT-07.2.4A	
												ST-O	Q	1-0PT-07.2.4A	
1-E21-F004B	CORE SPRAY PMP OUTBOARD INJECTION VLV	D-25024 SH0001 / E-6	A	ACT	2	10	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-07.2.4B	
												LTJ	J	1-0PT-20.3-E21	
												FSC	Q	1-0PT-07.2.4B	
												FSO	Q	1-0PT-07.2.4B	
												ST-C	Q	1-0PT-07.2.4B	
												ST-O	Q	1-0PT-07.2.4B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E21-F005A	CORE SPRAY PMP INBOARD INJECTION VLV	D-25024 SH0002 / D-6	A	ACT	1	10	GA	MO	C	O/C	FAI	LT	2Y	1-0PT-20.7B	
												RPI	2Y	1-0PT-07.2.4A	
												FSC	CS	1-0PT-07.2.4A	CSJ-16
												FSO	CS	1-0PT-07.2.4A	CSJ-16
												ST-C	CS	1-0PT-07.2.4A	CSJ-16
												ST-O	CS	1-0PT-07.2.4A	CSJ-16
												LTJ	J	1-0PT-20.3-E21	
1-E21-F005B	CORE SPRAY PMP INBOARD INJECTION VLV	D-25024 SH0001 / E-6	A	ACT	1	10	GA	MO	C	O/C	FAI	LT	2Y	1-0PT-20.7B	
												RPI	2Y	1-0PT-07.2.4B	
												FSC	CS	1-0PT-07.2.4B	CSJ-16
												FSO	CS	1-0PT-07.2.4B	CSJ-16
												ST-C	CS	1-0PT-07.2.4B	CSJ-16
												ST-O	CS	1-0PT-07.2.4B	CSJ-16
												LTJ	J	1-0PT-20.3-E21	
1-E21-F006A	CORE SPRAY INJECTION CHECK VALVE	D-25024 SH0002 / D-7	A/C	ACT	1	10	CK	SA	C	O/C	N/A	LT	2Y	1-0PT-20.7B	
												CVC	RO	1-0PT-20.7B	RFJ-08
												CVO	RO	1-0PT-07.1.1A	RFJ-08
1-E21-F006B	CORE SPRAY INJECTION CHECK VALVE	D-25024 SH0001 / E-7	A/C	ACT	1	10	CK	SA	C	O/C	N/A	LT	2Y	1-0PT-20.7B	
												CVC	RO	1-0PT-20.7B	RFJ-08
												CVO	RO	1-0PT-07.1.1B	RFJ-08

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									NORM	SAFE	FAIL				
1-E21-F007A	CORE SPRAY PMP MANUAL INJECTION VALVE	D-25024 SH0002 / D-7	B	PASS	1	10	GA	MA	O	O	N/A	RPI	2Y	1-0PT-99.2	
1-E21-F007B	CORE SPRAY PMP MANUAL INJECTION VALVE	D-25024 SH0001 / E-7	B	PASS	1	10	GA	MA	O	O	N/A	RPI	2Y	1-0PT-99.3	
1-E21-F012A	CORE SPRAY INJECTION LINE RELIEF VALVE	D-25024 SH0002 / E-2	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	
1-E21-F012B	CORE SPRAY INJECTION LINE RELIEF VALVE	D-25024 SH0001 / E-3	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I	1-0PT-11.0	
1-E21-F015A	CORE SPRAY FULL FLOW TEST BYPASS VALVE	D-25024 SH0002 / E-4	B	ACT	2	10	GL	MO	C	C	FAI	RPI	2Y	1-0PT-07.2.4A	
												FSC	RO	1-0PT-07.2.4A	RFJ-14
												ST-C	RO	1-0PT-07.2.4A	RFJ-14
1-E21-F015B	CORE SPRAY FULL FLOW TEST BYPASS VALVE	D-25024 SH0001 / D-4	B	ACT	2	10	GL	MO	C	C	FAI	RPI	2Y	1-0PT-07.2.4B	
												FSC	RO	1-0PT-07.2.4B	RFJ-14
												ST-C	RO	1-0PT-07.2.4B	RFJ-14
1-E21-F017A	E21-PDS-N004A EXCESS FLOW CHECK VALVE	D-25024 SH0002 / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV18R	VRR-03
												CVO	10Y	1-0MST-EFCV18R	VRR-03
												RPI	10Y	1-0MST-EFCV18R	VRR-03
1-E21-F017B	E21-PDS-N004B RIP EXCESS FLOW CHECK VALVE	D-25024 SH0001 / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV17R	VRR-03
												CVO	10Y	1-0MST-EFCV17R	VRR-03
												RPI	10Y	1-0MST-EFCV17R	VRR-03

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									NORM	SAFE	FAIL				
1-E21-F030A	KEEPFILL STATION INBOARD CHECK VALVE	D-25024 SH0002 / C-5	C	ACT	2	2	CK	SA	C	C	N/A	BDO	Q	1-0PT-07.2.4A	
												CVC	Q	1-0PT-07.2.4A	
1-E21-F030B	KEEPFILL STATION INBOARD CHECK VALVE	D-25024 SH0001 / E-5	C	ACT	2	2	CK	SA	C	C	N/A	BDO	Q	1-0PT-07.2.4B	
												CVC	Q	1-0PT-07.2.4B	
1-E21-F031A	CORE SPRAY MINIMUM FLOW BYPASS VALVE	D-25024 SH0002 / C-2	B	ACT	2	3	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-07.2.4A	
												FSC	Q	1-0PT-07.2.4A	
												FSO	Q	1-0PT-07.2.4A	
												ST-C	Q	1-0PT-07.2.4A	
												ST-O	Q	1-0PT-07.2.4A	
1-E21-F031B	CORE SPRAY MINIMUM FLOW BYPASS VALVE	D-25024 SH0001 / C-4	B	ACT	2	3	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-07.2.4B	
												FSC	Q	1-0PT-07.2.4B	
												FSO	Q	1-0PT-07.2.4B	
												ST-C	Q	1-0PT-07.2.4B	
												ST-O	Q	1-0PT-07.2.4B	
1-E41-F002	HPCI TURBINE STEAM SUPPLY INBOARD ISOLATION VALVE	D-25023 SH0001 / E-7	A	ACT	1	10	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-09.2.1	
												LTJ	J	1-0PT-20.3-148A	
												FSC	Q	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-C	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E41-F003	HPCI TURBINE STEAM SUPPLY OUTBOARD ISOLATION VALVE	D-25023 SH0001 / E-6	A	ACT	1	10	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-09.7	
												LTJ	J	1-0PT-20.3-148B	
												FSC	Q	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-C	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	
1-E41-F006	HPCI INJECTION VALVE	D-25023 SH0001 / A-7	A	ACT	1	14	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-09.7	
												LTJ	J	1-0PT-20.3-56	
												FSC	Q	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-C	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	
1-E41-F012	HPCI MIN FLOW BYPASS VALVE TO SUPP POOL	D-25023 SH0001 / A-5	B	ACT	2	4	GL	MO	C	O/C	FAI	RPI	2Y	1-0PT-09.7	
												FSC	Q	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-C	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E41-F021	HPCI TURB EXH LINE ISOLATION STOP CHECK VLV	D-25023 SH0002 / C-7	C	ACT	2	20	SCK	SA	C	O/C	N/A	CVO	Q	1-0PT-09.2	
												DA	RO	1-0PT-11.1.2.3	
1-E41-F022	HPCI TURB EXH DRN POT DRN VLV TO TORUS	D-25023 SH0002 / C-6	C	ACT	2	2	SCK	SA	C	O/C	N/A	CVC	II	1-0PT-11.1.2.3	
												CVO	II	1-0PT-11.1.2.3	
1-E41-F023A	E41-PDT-N004 & -PS-N001A STM LN PRESS EXCESS FLO	D-25023 SH0001 / F-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV14R	VRR-03
												CVO	10Y	1-0MST-EFCV14R	VRR-03
												RPI	10Y	1-0MST-EFCV14R	VRR-03
1-E41-F023B	E41-PDT-N005 & -PS-N001B STM LN PRESS EXCESS FLO	D-25023 SH0001 / D-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV17R	VRR-03
												CVO	10Y	1-0MST-EFCV17R	VRR-03
												RPI	10Y	1-0MST-EFCV17R	VRR-03
1-E41-F023C	E41-PDT-N004 & -PS-N001C STM LN PRESS EXCESS FLO	D-25023 SH0001 / F-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV14R	VRR-03
												CVO	10Y	1-0MST-EFCV14R	VRR-03
												RPI	10Y	1-0MST-EFCV14R	VRR-03
1-E41-F023D	E41-PDT-N005 & -PS-N001D STM LN PRESS EXCESS FLO	D-25023 SH0001 / D-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV17R	VRR-03
												CVO	10Y	1-0MST-EFCV17R	VRR-03
												RPI	10Y	1-0MST-EFCV17R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E41-F042	HPCI SUPPRESSION POOL SUCTION VALVE	D-25023 SH0002 / A-6	B	ACT	2	16	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-09.7	
												FSC	Q	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-C	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	
1-E41-F075	TURBINE EXHAUST VACUUM BREAKER VALVE	D-25023 SH0002 / B-8	A	ACT	2	2	GL	MO	O	O/C	FAI	RPI	2Y	1-0PT-09.7	
												LTJ	J	1-0PT-20.3-153B	
												FSC	Q	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-C	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	
1-E41-F076	VACCUM BREAKER LINE CHECK VALVE	D-25023 SH0002 / B-8	C	ACT	2	2	CK	SA	C	O/C	N/A	CVC	II	1-0PT-20.10	
												CVO	II	1-0PT-20.10	
1-E41-F077	VACCUM BREAKER LINE CHECK VALVE	D-25023 SH0002 / B-8	C	ACT	2	2	CK	SA	C	O/C	N/A	CVC	II	1-0PT-20.10	
												CVO	II	1-0PT-20.10	
1-E41-F079	TURBINE EXHAUST VACUUM BREAKER VALVE	D-25023 SH0002 / B-8	A	ACT	2	2	GL	MO	O	O/C	FAI	RPI	2Y	1-0PT-09.7	
												LTJ	J	1-0PT-20.3-153A	
												FSC	Q	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-C	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	
1-E41-SV-1218D	TORUS RIP VLV TO E41-LSH-N015A	D-25023 SH0002 / A-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E41-SV-1219D	TORUS RIP VLV TO E41-LSH-N015A	D-25023 SH0002 / B-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E41-SV-1220D	TORUS RIP VLV TO E41-LSH-N015A	D-25023 SH0002 / A-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E41-SV-1221D	TORUS RIP VLV TO E41-LSH-N015A	D-25023 SH0002 / A-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	1-0PT-20.4	
1-E41-V159	HPCI PMP DISCH LN CHECK VLV TO FW SYS SUP LINE	D-25023 SH0001 / A-7	C	ACT	1	14	CK	SA	C	O/C	N/A	CVC CVO	II II	1-0PT-20.12 1-0PT-11.1.2.3 1-0PT-20.12 1-0PT-11.1.2.3	
1-E41-V60	HPCI BAROMETRIC CNDSR VAC PMP DISCH CHV	D-25023 SH0002 / D-2	C	ACT	2	2	CK	SA	C	C	N/A	DA	II	1-0PT-11.1.2.3	
1-E51-F001	RCIC TURBINE STEAM EXHAUST TO TORUS	D-25029 SH0002 / B-6	C	ACT	2	8	SCK	SA	O	O/C	N/A	CVC CVO	II II	1-0PT-11.1.2.3 1-0PT-10.1.1	
1-E51-F007	RCIC STEAM SUPPLY INBOARD ISOLATION VLV	D-25029 SH0001 / E-7	A	ACT	1	3	GA	MO	O	O/C	FAI	RPI LTJ FSC FSO ST-C ST-O	2Y J Q Q Q Q	1-0PT-10.2.1 1-0PT-20.3-156A 1-0PT-10.1.8 1-0PT-10.1.8 1-0PT-10.1.8 1-0PT-10.1.8	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E51-F008	RCIC STEAM SUPPLY LINE OUTBOARD ISOL VLV	D-25029 SH0001 / E-6	A	ACT	1	3	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												LTJ	J	1-0PT-20.3-156B	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	
1-E51-F013	RCIC INJECTION VALVE	D-25029 SH0001 / B-6	A	ACT	1	4	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												LTJ	J	1-0PT-20.3-165	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	
1-E51-F019	RCIC MIN FLO BYPASS TO SUPP POOL VLV	D-25029 SH0002 / C-3	B	ACT	2	2	GL	MO	C	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E51-F031	RCIC SUPPRESSION POOL SUCTION VALVE	D-25029 SH0002 / A-6	B	ACT	2	6	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	
1-E51-F040	RCIC TURBINE STEAM TO SUPPRESSION POOL CHECK VAL	D-25029 SH0002 / B-6	C	ACT	2	8	CK	SA	C	O/C	N/A	CVO	Q	1-0PT-10.1.1	
												CVC	RO	1-0PT-20.2-160	RFJ-18
1-E51-F043A	X-61F EXC FLO CHK VLV TO E51-PDT-N017 & E51-PS-N	D-25029 SH0001 / D-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV14R	VRR-03
												CVO	10Y	1-0MST-EFCV14R	VRR-03
												RPI	10Y	1-0MST-EFCV14R	VRR-03
1-E51-F043B	X-61F EXC FLO CHK VLV TO E51-PDT-N017 & E51-PS-N	D-25029 SH0001 / F-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV17R	VRR-03
												CVO	10Y	1-0MST-EFCV17R	VRR-03
												RPI	10Y	1-0MST-EFCV17R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E51-F043C	X-61F EXC FLO CHK VLV TO E51-PDT-N017 & E51-PS-N	D-25029 SH0001 / D-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV14R	VRR-03
												CVO	10Y	1-0MST-EFCV14R	VRR-03
												RPI	10Y	1-0MST-EFCV14R	VRR-03
1-E51-F043D	X-61F EXC FLO CHK VLV TO E51-PDT-N017 & E51-PS-N	D-25029 SH0001 / F-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	1-0MST-EFCV17R	VRR-03
												CVO	10Y	1-0MST-EFCV17R	VRR-03
												RPI	10Y	1-0MST-EFCV17R	VRR-03
1-E51-F062	RCIC TURB EXH VACUUM BKR VLV DIV I	D-25029 SH0002 / B-7	A	ACT	2	2	GL	MO	O	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												LTJ	J	1-0PT-20.3-161B	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	
1-E51-F063	RCIC TURBINE EXHAUST VACUUM BREAKER CHECK VALVE	D-25029 SH0002 / B-8	C	ACT	2	2	CK	SA	C	O	N/A	BDC	II	1-0PT-20.10	
												CVO	II	1-0PT-20.10	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E51-F064	RCIC TURBINE EXHAUST VACUUM BREAKER CHECK VALVE	D-25029 SH0002 / B-8	C	ACT	2	2	CK	SA	C	O	N/A	BDC	II	1-0PT-20.10	
												CVO	II	1-0PT-20.10	
1-E51-F066	RCIC TURB EXH VACUUM BKR VLV DIV II	D-25029 SH0002 / B-8	A	ACT	2	2	GL	MO	O	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												LTJ	J	1-0PT-20.3-161A	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	
1-E51-V88	RCIC TIE TO FEEDWATER CHECK VALVE	D-25029 SH0001 / B-7	C	ACT	1	4	CK	SA	C	O/C	N/A	CVC	II	1-0PT-11.1.2.3	
												CVO	II	1-0PT-11.1.2.3	
1-G16-F003	DRYWELL FLOOR DRAIN INBRD ISOLATION VLV	D-25045 SH0003B / C-3	A	ACT	2	3	GA	AO	O	C	C	RPI	2Y	1-0PT-11.3	
												LTJ	J	1-0PT-20.3-162A	
												FC	Q	1-0PT-11.3	
												FSC	Q	1-0PT-11.3	
												ST-C	Q	1-0PT-11.3	

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									NORM	SAFE	FAIL				
1-G16-F004	DRYWELL FLOOR DRAIN INBRD ISOLATION VLV	D-25045 SH0003B / C-3	A	ACT	2	3	GA	AO	O	C	C	RPI	2Y	1-0PT-11.3	
												LTJ	J	1-0PT-20.3-162B	
												FC	Q	1-0PT-11.3	
												FSC	Q	1-0PT-11.3	
												ST-C	Q	1-0PT-11.3	
1-G16-F019	DRYWELL EQUIP DRN INBD ISOL VLV	D-25045 SH0003A / B-3	A	ACT	2	3	GA	AO	O	C	C	RPI	2Y	1-0PT-11.3	
												LTJ	J	1-0PT-20.3-163A	
												FC	Q	1-0PT-11.3	
												FSC	Q	1-0PT-11.3	
												ST-C	Q	1-0PT-11.3	
1-G16-F020	DRYWELL EQUIP DRN INBD ISOL VLV	D-25045 SH0003A / B-2	A	ACT	2	3	GA	AO	O	C	C	RPI	2Y	1-0PT-11.3	
												LTJ	J	1-0PT-20.3-163B	
												FC	Q	1-0PT-11.3	
												FSC	Q	1-0PT-11.3	
												ST-C	Q	1-0PT-11.3	
1-G31-F001	RWCU INLET LINE INBOARD ISOLATION VLV	D-25027 SH0001B / D-7	A	ACT	1	6	GA	MO	O	C	FAI	RPI	2Y	1-0PT-14.6	
												FSC	CS	1-0PT-14.6	CSJ-15
												ST-C	CS	1-0PT-14.6	CSJ-15
												LTJ	J	1-0PT-20.3-164A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-G31-F004	RWCU INLET LINE INBOARD ISOLATION VLV	D-25027 SH0001B / D-6	A	ACT	1	6	GA	MO	O	C	FAI	RPI	2Y	1-0PT-14.6	
												FSC	CS	1-0PT-14.6	CSJ-15
												ST-C	CS	1-0PT-14.6	CSJ-15
												LTJ	J	1-0PT-20.3-164B	
1-G31-F042	RWCU RETURN TO REACTOR MOTOR OP VLV	D-25027 SH0001B / E-5	A	ACT	1	4	GL	MO	O	C	FAI	RPI	2Y	1-0PT-14.6	
												FSC	CS	1-0PT-14.6	CSJ-15
												ST-C	CS	1-0PT-14.6	CSJ-15
												LTJ	J	1-0PT-20.3-165	
1-G41-V24	FUEL STO POOL CLEAN-UP RETURN DIF CHK VLV	D-25049 SH0001B / E-4	C	ACT	2	6	CK	SA	O	O/C	N/A	CVC	Q	1-0PT-24.6.2	
												CVO	Q	1-0PT-24.6.2	
1-G41-V8	FUEL STO POOL CLEAN-UP RETURN DIF CHK VLV	D-25049 SH0001B / E-4	C	ACT	2	6	CK	SA	O	O/C	N/A	CVC	Q	1-0PT-24.6.2	
												CVO	Q	1-0PT-24.6.2	
1-RCC-SV-1222B	RCR PMP 1A CLR OUTLET SMPL PRI CONT ISV	D-25038 SH0001 / F-2	A	ACT	2	.75	GL	SO	O	C	O	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-167	
												FO	Q	1-0PT-02.2.1A	
												FSC	Q	1-0PT-02.2.1A	
												ST-C	Q	1-0PT-02.2.1A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-RCC-SV-1222C	RCR PMP 1A CLR OUTLET SMPL PRI CONT ISV	D-25038 SH0001 / E-2	A	ACT	2	.75	GL	SO	O	C	O	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-167	
												FO	Q	1-0PT-02.2.1A	
												FSC	Q	1-0PT-02.2.1A	
												ST-C	Q	1-0PT-02.2.1A	
1-RCC-V28	RBCCW DRYWELL DISCHARGE HEADER ISOL VALVE	D-25038 SH0001 / D-8	A	ACT	2	8	GA	MO	O	C	FAI	RPI	2Y	1-0PT-22.2	
												FSC	CS	1-0PT-22.2	CSJ-11
												ST-C	CS	1-0PT-22.2	CSJ-11
												LTJ	J	1-0PT-31.6	
1-RCC-V52	RBCCW DRYWELL DISCHARGE HEADER ISOL VALVE	D-25038 SH0001 / E-7	A	ACT	2	8	GA	MO	O	C	FAI	RPI	2Y	1-0PT-22.2	
												FSC	CS	1-0PT-22.2	CSJ-11
												ST-C	CS	1-0PT-22.2	CSJ-11
												LTJ	J	1-0PT-31.6	
1-RNA-SV-5251	RNA DIV II N2 BACKUP SYS SV	D-73068 / E-2	A	ACT	2	.75	GL	SO	O	O/C	O	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-170	
												FO	Q	1-0PT-31.6	
												FSC	Q	1-0PT-31.6	
												FSO	Q	1-0PT-31.6	
												ST-C	Q	1-0PT-31.6	
												ST-O	Q	1-0PT-31.6	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-RNA-SV-5253	RNA DIV I N2 BACKUP SYS SV	D-73068 / C-2	A	ACT	2	.75	GL	SO	O	O/C	O	RPI	2Y	1PT-20.4	
												LTJ	J	1-0PT-20.3-171	
												FO	Q	1-0PT-31.6	
												FSC	Q	1-0PT-31.6	
												FSO	Q	1-0PT-31.6	
												ST-C	Q	1-0PT-31.6	
												ST-O	Q	1-0PT-31.6	
1-RNA-SV-5261	NON-INTERR AIR TO DRYWELL SOL VLV	D-70077 SH0003B / D-1	A	ACT	2	2	GL	SO	O	O/C	C	RPI	2Y	1-0PT-20.4	
												FC	CS	1-0PT-31.11	CSJ-12
												FSC	CS	1-0PT-31.11	CSJ-12
												ST-C	CS	1-0PT-31.11	CSJ-12
												FSO	CS	1-0PT-31.11	CSJ-12
												ST-O	CS	1-0PT-31.11	CSJ-12
												LTJ	J	1-0PT-20.3-169	
1-RNA-SV-5262	NON-INTERR AIR TO DRYWELL SOL VLV	D-70077 SH0003A / D-7	A	ACT	2	2	GL	SO	O	O/C	C	RPI	2Y	1-0PT-20.4	
												FC	CS	1-0PT-31.11	CSJ-12
												FSC	CS	1-0PT-31.11	CSJ-12
												ST-C	CS	1-0PT-31.11	CSJ-12
												FSO	CS	1-0PT-31.11	CSJ-12
												ST-O	CS	1-0PT-31.11	CSJ-12
												LTJ	J	1-0PT-20.3-168	
1-RNA-V313	DIV I ADS VALVES N2 BACKUP CHECK VALVE	D-70007 / E-3	C	ACT	2	.75	CK	SA	O/C	O/C	N/A	CVC	RO	1-0PT-20.9	RFJ-12
												CVO	RO	1-0PT-31.1	RFJ-12

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-RNA-V314	DIV I ADS VALVES N2 BACKUP CHECK VALVE	D-70007 / F-6	C	ACT	2	.75	CK	SA	O/C	O/C	N/A	CVC	RO	1-0PT-20.9	RFJ-12
												CVO	RO	1-0PT-31.1	RFJ-12
1-RNA-V350	DIV II NON INTERR IA SUP LN THRU X-71 INBOARD CHK VALVE	D-70007 / D-7	A/C	ACT	2	.75	CK	SA	O/C	O/C	N/A	LTJ	J	1-0PT-20.3-169A	
												CVC	RO	1-0PT-20.3-169A	RFJ-13
												CVO	RO	1-0PT-31.1	RFJ-13
1-RNA-V351	DIV 1 NON INTERR IA SUP LINE THRU X-55 INBOARD CHK VALVE	D-70007 / D-2	A/C	ACT	2	.75	CK	SA	O/C	O/C	N/A	LTJ	J	1-0PT-20.3-168A	
												CVC	RO	1-0PT-20.3-168A	RFJ-13
												CVO	RO	1-0PT-31.1	RFJ-13
1-RXS-SV-4186	LIQUID SAMPLE RETURN INBD ISV	D-73027 SH0001 / A-7	A	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	1PT-20.4	
												LTJ	J	1-0PT-20.3-172	
												FC	Q	1-0PT-15.8	
												FSC	Q	1-0PT-15.8	
												ST-C	Q	1-0PT-15.8	
1-RXS-SV-4187	LIQUID SAMPLE RETURN OUTBD ISV	D-73027 SH0001 / A-7	A	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	1PT-20.4	
												LTJ	J	1-0PT-20.3-173	
												FC	Q	1-0PT-15.8	
												FSC	Q	1-0PT-15.8	
												ST-C	Q	1-0PT-15.8	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-RXS-SV-4188	GAS SAMPLE RETURN INBOARD ISV	D-73027 SH0001 / B-7	A	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	1-0PT-20.4	
												LTJ	J	1-0PT-20.3-174	
												FC	Q	1-0PT-15.8	
												FSC	Q	1-0PT-15.8	
												ST-C	Q	1-0PT-15.8	
1-RXS-SV-4189	GAS SAMPLE RETURN OUTBOARD ISV	D-73027 SH0001 / B-7	A	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	1PT-20.4	
												LTJ	J	1-0PT-20.3-175	
												FC	Q	1-0PT-15.8	
												FSC	Q	1-0PT-15.8	
												ST-C	Q	1-0PT-15.8	
1-RXS-SV-4192	GAS SAMPLE RETURN OUTBOARD ISV	D-73027 SH0001 / F-8	B	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	1PT-20.4	
												FC	Q	1-0PT-15.7	
												FSC	Q	1-0PT-15.7	
												ST-C	Q	1-0PT-15.7	
1-SGT-V8	PRIMARY CONT POST LOCA VENT VALVE SGT-V8	F-40073 SH0003 / E-7	B	PASS	2	.5	ANG	MO	O	O	FAI	RPI	2Y	1-0PT-15.7	
1-SGT-V9	PRIMARY CONT POST LOCA VENT VALVE SGT-V9	F-40073 SH0003 / E-7	B	PASS	2	.5	ANG	MO	O	O	FAI	RPI	2Y	1-0PT-15.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-PV-116	CONV SW PMP 1A DISCHARGE STRAINER PCV	D-20041 SH0001 / C-3	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-PV-118	CONV SW PMP 1B DISCHARGE STRAINER PCV	D-20041 SH0001 / C-5	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-PV-120	CONV SW PMP 1C DISCHARGE STRAINER PCV	D-20041 SH0001 / C-7	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-PV-138	NUC SW PMP 1A DISCHARGE STRAINER PCV	D-20041 SH0002 / C-5	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-PV-140	NUC SW PMP 1B DISCHARGE STRAINER PCV	D-20041 SH0002 / C-7	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-V101	CONVENTIONAL SERVICE WATER SUPPLY VALVE	D-25037 SH0001 / D-4	B	ACT	3	24	BF	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.1.4A	
												FSC	Q	1-0PT-08.1.4A	
												FSO	Q	1-0PT-08.1.4A	
												ST-C	Q	1-0PT-08.1.4A	
												ST-O	Q	1-0PT-08.1.4A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V102	CONVENTIONAL-NUCLEAR HEADER CROSS-TIE VLV	D-25037 SH0002 / D-1	B	ACT	3	24	BF	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.1.4A	
												FSC	Q	1-0PT-08.1.4A	
												FSO	Q	1-0PT-08.1.4A	
												ST-C	Q	1-0PT-08.1.4A	
												ST-O	Q	1-0PT-08.1.4A	
1-SW-V103	NUCLEAR HDR TO RBCCW HX ISOL VLV	D-25037 SH0002 / E-8	B	ACT	3	20	BF	MO	O	C	FAI	RPI	2Y	1-0PT-08.1.4A	
												FSC	Q	1-0PT-08.1.4A	
												ST-C	Q	1-0PT-08.1.4A	
1-SW-V105	NUCLEAR SERVICE WATER SUPPLY VALVE	D-25037 SH0002 / E-7	B	ACT	3	24	BF	MO	C	O/C	FAI	RPI	2Y	1-0PT-08.1.4B	
												FSC	Q	1-0PT-08.1.4B	
												FSO	Q	1-0PT-08.1.4B	
												ST-C	Q	1-0PT-08.1.4B	
												ST-O	Q	1-0PT-08.1.4B	
1-SW-V106	RBCCW HX SERVICE WATER ISOL VALVE	D-25037 SH0001 / F-7	B	ACT	3	20	BF	MO	O	C	FAI	RPI	2Y	1-0PT-08.1.4A	
												FSC	Q	1-0PT-08.1.4A	
												ST-C	Q	1-0PT-08.1.4A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V111	CONVENTIONAL SW HDR TO VITAL HDR ISOL VLV	D-25037 SH0001 / C-2	B	ACT	3	6	BF	MO	C	O/C	FAI	RPI	2Y	1-0PT-24.1.2	
												FSC	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-C	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V117	NUCLEAR SW HDR TO VITAL HDR ISOL VLV	D-25037 SH0002 / C-7	B	ACT	3	6	BF	MO	C	O/C	FAI	RPI	2Y	1-0PT-24.1.2	
												FSC	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-C	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V118	VITAL HEADER CROSS-TIE VALVE	D-25037 SH0001 / B-6	B	ACT	3	6	BF	MO	O	O/C	FAI	RPI	2Y	1-0PT-24.1.2	
												FSC	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-C	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V123	(ATC) CS PUMP RM 1B COOLER SW DISCH VLV	D-25037 SH0002 / D-7	B	ACT	3	2	PL	AO	C	O	O	FO	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V124	(ATC) RHR PMP RM COOLER 1B SW DISCH VLV	D-25037 SH0002 / B-6	B	ACT	3	6	BF	AO	C	O	O	FO	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V125	RHR PMP 1D SEAL HX OUTLET VLV	D-25037 SH0002 / A-4	B	ACT	3	1	PL	AO	C	O	O	FO	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V126	RHR PMP 1B SEAL HX OUTLET VALVE	D-25037 SH0002 / A-5	B	ACT	3	1	PL	AO	C	O	O	FO	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V128	CORE SPRAY PMP RM 1A COOLER SW OUTLET VLV	D-25037 SH0001 / C-2	B	ACT	3	2	PL	AO	C	O	O	FO	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V129	RHR PMP RM A COOLER SW DISCHARGE VALVE	D-25037 SH0001 / B-3	B	ACT	3	6	BF	AO	C	O	O	FO	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V13	CONV SW PMP A DISCH VLV TO CONV HEADER	D-20041 SH0001 / E-2	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-V130	RHR PMP 1A SEAL COOLING HX SW OUTLET VALVE	D-25037 SH0001 / A-5	B	ACT	3	1	PL	AO	C	O	O	FO	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V131	RHR PMP 1C SEAL COOLING HX SW OUTLET VALVE	D-25037 SH0001 / A-4	B	ACT	3	1	PL	AO	C	O	O	FO	Q	1-0PT-24.1.2	
												FSO	Q	1-0PT-24.1.2	
												ST-O	Q	1-0PT-24.1.2	
1-SW-V136	RHR SW PUMP MOTOR 1A COOLER INLET VALVE	D-25037 SH0001 / E-5	B	ACT	3	1.5	PL	AO	C	O	O	RPI	2Y	1-0PT-08.1.4A	
												FO	Q	1-0PT-08.1.4A	
												FSO	Q	1-0PT-08.1.4A	
												ST-O	Q	1-0PT-08.1.4A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V137	RHR SW PUMP MOTOR 1C COOLER INLET VALVE	D-25037 SH0001 / E-7	B	ACT	3	1.5	PL	AO	C	O	O	RPI	2Y	1-0PT-08.1.4A	
												FO	Q	1-0PT-08.1.4A	
												FSO	Q	1-0PT-08.1.4A	
												ST-O	Q	1-0PT-08.1.4A	
1-SW-V138	RHR SW PUMP MOTOR 1B COOLER INLET VALVE	D-25037 SH0002 / E-2	B	ACT	3	1.5	PL	AO	C	O	O	RPI	2Y	1-0PT-08.1.4B	
												FO	Q	1-0PT-08.1.4B	
												FSO	Q	1-0PT-08.1.4B	
												ST-O	Q	1-0PT-08.1.4B	
1-SW-V139	RHR SW PUMP MOTOR 1D COOLER INLET VALVE	D-25037 SH0002 / E-4	B	ACT	3	1.5	PL	AO	C	O	O	RPI	2Y	1-0PT-08.1.4B	
												FO	Q	1-0PT-08.1.4B	
												FSO	Q	1-0PT-08.1.4B	
												ST-O	Q	1-0PT-08.1.4B	
1-SW-V14	CONV SW PMP A DISCH VLV TO NUCLEAR HEADER	D-20041 SH0001 / E-3	B	ACT	3	20	BF	MO	C	O/C	FAI	RPI	2Y	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-V144	RHR SERVICE WTR HDR WELL WATER CHECK VLV	D-25037 SH0002 / D-1	C	ACT	3	1.5	CK	SA	O	C	N/A	BDO	II	1-0PT-11.1.2.3	
												CVC	II	1-0PT-11.1.2.3	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V148	RHR SERVICE WTR HDR WELL WATER CHECK VLV	D-25037 SH0002 / D-2	C	ACT	3	1.5	CK	SA	O	C	N/A	BDO	II	1-0PT-11.1.2.3	
												CVC	II	1-0PT-11.1.2.3	
1-SW-V15	CONV SW PMP B DISCH VLV TO CONV HEADER	D-20041 SH0001 / E-4	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-V16	CONV SW PMP B DISCH VLV TO NUCLEAR HDR	D-20041 SH0001 / E-5	B	ACT	3	20	BF	MO	C	O/C	FAI	RPI	2Y	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-V17	CONV SW PMP C DISCH VLV TO CONV HEADER	D-20041 SH0001 / E-6	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V18	CONV SW PMP C DISCH VLV TO NUCLEAR HEADER	D-20041 SH0001 / E-7	B	ACT	3	20	BF	MO	C	O/C	FAI	RPI	2Y	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-V19	NUCLEAR HEADER WTR PMP A DISCHARGE VALVE	D-20041 SH0002 / E-5	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-V192	WELL WATER TO VITAL SERVICE HEADER CHV	D-25037 SH0001 / B-7	C	ACT	3	1.5	CK	SA	C	C	N/A	BDO	II	1-0PT-11.1.2.3	
												CVC	II	1-0PT-11.1.2.3	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V20	NUCLEAR HEADER WTR PMP B DISCHARGE VALVE	D-20041 SH0002 / E-8	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	1PT-24.1-1	
												FSC	Q	1PT-24.1-1	
												FSO	Q	1PT-24.1-1	
												ST-C	Q	1PT-24.1-1	
												ST-O	Q	1PT-24.1-1	
1-SW-V21	CONV SW PMP A DISCH VLV TO NUCLEAR HEADER PM 87-262	D-20041 SH0001 / D-3	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	1PT-24.1-1	
												CVO	II	1PT-24.1-1	
1-SW-V22	CONVENTIONAL SW PUMP B DISCH CHEACK VALVE PM 87-262	D-20041 SH0001 / D-5	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	1PT-24.1-1	
												CVO	II	1PT-24.1-1	
1-SW-V23	CONVENTIONAL SW PUMP C DISCH CHECK VALVE	D-20041 SH0001 / D-8	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	Q	1PT-24.1-1	
												CVO	Q	1PT-24.1-1	
1-SW-V24	NUCLEAR HEADER SW PUMP A CHECK VALVE PM 84-2	D-20041 SH0002 / D-5	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	1PT-24.1-1	
												CVO	II	1PT-24.1-1	
1-SW-V25	NUC HEADER SW PUMP B DISCH CHECK VALVE	D-20041 SH0002 / D-8	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	1PT-24.1-1	
												CVO	II	1PT-24.1-1	
1-SW-V294	SW SUPPLY OUTBRD ISV TO CHLORINATION SYS	D-20041 SH0001 / F-2	B	PASS	3	10	BF	MO	C	C	FAI	RPI	2Y	1-0PT-24.1.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V36	SW TO CW PUMPS BRGS INBOARD ISOL VALVE	D-20041 SH0002 / F-7	B	ACT	3	4	BF	MO	O	C	FAI	RPI	2Y	1-0PT-24.4	
												FSC	RO	1-0PT-24.4	RFJ-16
												ST-C	RO	1-0PT-24.4	RFJ-16
1-SW-V4	SW HDR INBOARD SUPPLY VALVE TO TURB BLDG	D-20041 SH0002 / E-2	B	ACT	3	30	BF	MO	O	C	FAI	RPI	2Y	1-0PT-24.4	
												FSC	CS	1-0PT-24.4	CSJ-10
												ST-C	CS	1-0PT-24.4	CSJ-10
1-SW-V679	DG1 ENG JKT WTR CLR SERVICE WTR INLET ISV	D-02274 SH0001 / C-3	B	ACT	3	6	BF	MO	C	O/C	FAI	FSC	Q	1-1MST-SW12Q	
												FSO	Q	1-1MST-SW12Q	
												ST-C	Q	1-1MST-SW12Q	
												ST-O	Q	1-1MST-SW12Q	
1-SW-V680	DG2 ENG JKT WTR CLR SERVICE WTR INLET ISV	D-02274 SH0001 / C-7	B	ACT	3	6	BF	MO	C	O/C	FAI	FSC	Q	1-1MST-SW12Q	
												FSO	Q	1-1MST-SW12Q	
												ST-C	Q	1-1MST-SW12Q	
												ST-O	Q	1-1MST-SW12Q	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V681	DG3 ENG JKT WTR CLR SERVICE WTR INLET ISV	D-02274 SH0002 / C-3	B	ACT	3	6	BF	MO	C	O/C	FAI	FSC	Q	1-2MST-SW12Q	
												FSO	Q	1-2MST-SW12Q	
												ST-C	Q	1-2MST-SW12Q	
												ST-O	Q	1-2MST-SW12Q	
1-SW-V682	DG4 ENG JKT WTR CLR SERVICE WTR INLET ISV	D-02274 SH0002 / C-7	B	ACT	3	6	BF	MO	C	O/C	FAI	FSC	Q	1-2MST-SW12Q	
												FSO	Q	1-2MST-SW12Q	
												ST-C	Q	1-2MST-SW12Q	
												ST-O	Q	1-2MST-SW12Q	
1-SW-V683	DG #1 JACKET WTR COOLER SUPPLY LINE CK VLV	D-02274 SH0001 / C-3	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC	II	1-0PT-11.1.2.3	
												CVO	II	1-1MST-SW12Q	
1-SW-V684	DG #2 JACKET WTR COOLER SUPPLY LINE CK VLV	D-02274 SH0001 / C-7	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC	II	1-0PT-11.1.2.3	
												CVO	II	1-1MST-SW12Q	
1-SW-V685	DG #3 JACKET WTR COOLER SUPPLY LINE CK VLV	D-02274 SH0002 / C-3	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC	II	1-0PT-11.1.2.3	
												CVO	II	1-2MST-SW12Q	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V686	DG #4 JACKET WTR COOLER SUPPLY LINE CK VLV	D-02274 SH0002 / C-6	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC CVO	II II	1-0PT-11.1.2.3 1-2MST-SW12Q	
1-VA-1A-BFCV-RB	SGT-1A-RB DISCHARGE LINE CHECK VLV	F-40073 SH0003 / D-1	C	ACT	2	18	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-15.7 1-0PT-15.7	
1-VA-1A-BFV-RB	PURGE SYSTEM EXH OUTLET VALVE	F-40073 SH0003 / F-2	B	ACT	2	24	BF	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q	1-0PT-15.7 1-0PT-15.7 1-0PT-15.7	
1-VA-1B-BFCV-RB	SGT-1B-RB DISCHARGE LINE CHECK VLV	F-40073 SH0003 / D-5	C	ACT	2	18	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-15.7 1-0PT-15.7	
1-VA-1B-BFV-RB	SGT FILTER TRAIN 'A' OUTLET VALVE	F-40073 SH0003 / D-1	B	PASS	2	18	BF	MO	O	O	FAI	RPI	2Y	1-0PT-15.7	
1-VA-1C-BFV-RB	SGT FILTER TRAIN 'A' INLET VALVE	F-40073 SH0003 / D-4	B	ACT	2	18	BF	MO	O	O	FAI	RPI FSO ST-O	2Y Q Q	1-0PT-15.7 1-0PT-15.7 1-0PT-15.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-VA-1D-BFV-RB	SGT RX BLDG SUCTION VALVE	F-40073 SH0003 / E-4	B	ACT	2	18	BF	MO	O	O/C	FAI	RPI	2Y	1-0PT-15.7	
												FSC	Q	1-0PT-15.7	
												FSO	Q	1-0PT-15.7	
												ST-C	Q	1-0PT-15.7	
												ST-O	Q	1-0PT-15.7	
1-VA-1E-BFV-RB	SGT FILTER TRAIN 'B' OUTLET VALVE	F-40073 SH0003 / D-5	B	PASS	2	18	BF	MO	O	O	FAI	RPI	2Y	1-0PT-15.7	
1-VA-1F-BFV-RB	SGT PRIMARY CONTAINMENT SUCT VALVE	F-40073 SH0003 / E-6	B	ACT	2	18	BF	MO	C	O/C	FAI	RPI	2Y	1-0PT-15.7	
												FSC	Q	1-0PT-15.7	
												FSO	Q	1-0PT-15.7	
												ST-C	Q	1-0PT-15.7	
												ST-O	Q	1-0PT-15.7	
1-VA-1G-BFV-RB	SGT FILTER TRAIN 'B' INLET VALVE	F-40073 SH0003 / D-8	B	ACT	2	18	BF	MO	O	O	FAI	RPI	2Y	1-0PT-15.7	
												FSO	Q	1-0PT-15.7	
												ST-O	Q	1-0PT-15.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-VA-1H-BFV-RB	SGT RX BLDG SUCTION VALVE	F-40073 SH0003 / E-8	B	ACT	2	18	BF	MO	O	O/C	FAI	RPI	2Y	1-0PT-15.7	
												FSC	Q	1-0PT-15.7	
												FSO	Q	1-0PT-15.7	
												ST-C	Q	1-0PT-15.7	
												ST-O	Q	1-0PT-15.7	
1-VA-1I-BFV-RB	PURGE EXHAUST SYSTEM INLET ISOLATION VALVE	F-40073 SH0003 / F-5	B	ACT	2	30	BF	MO	C	C	FAI	RPI	2Y	1-0PT-15.7	
												FSC	Q	1-0PT-15.7	
												ST-C	Q	1-0PT-15.7	

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 1

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F024A	INSTR AIR SUPPLY CHECK VLV TO B21-F022A	D-70007 / C-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-95A 1-0PT-31.1	RFJ-03 RFJ-03
1-B21-F024B	INSTR AIR SUPPLY CHECK VLV TO B21-F022B	D-70007 / C-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-95A 1-0PT-31.1	RFJ-03 RFJ-03
1-B21-F024C	INSTR AIR SUPPLY CHECK VLV TO B21-F022C PM 84-297	D-70007 / C-6	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-95A 1-0PT-31.1	RFJ-03 RFJ-03
1-B21-F024D	INSTR AIR SUPPLY CHECK VLV TO B21-F022D PM 84-297	D-70007 / C-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-95A 1-0PT-31.1	RFJ-03 RFJ-03
1-B21-F029A	INSTR AIR SUPPLY CHECK VLV TO B21-F028A PM 84-297	D-72006 / B-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	1-0PT-95 1-0PT-31.9	CSJ-02 CSJ-02
1-B21-F029B	INSTR AIR SUPPLY CHECK VLV TO B21-F028B PM 84-297	D-72006 / B-3	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	1-0PT-95 1-0PT-31.9	CSJ-02 CSJ-02
1-B21-F029C	INSTR AIR SUPPLY CHECK VLV TO B21-F028C PM 84-297	D-72006 / B-6	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	1-0PT-95 1-0PT-31.9	CSJ-02 CSJ-02

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F029D	INSTR AIR SUPPLY CHECK VLV TO B21-F028DPM 84-297	D-72006 / B-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	1-0PT-95 1-0PT-31.9	CSJ-02 CSJ-02
1-B21-F036A	INSTR AIR SUPPLY CHECK VLV TO B21-F013A PM 84-297	D-70007 / E-4	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036B	INSTR AIR SUPPLY CHECK VLV TO B21-F013B PM 84-297	D-70007 / E-4	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036C	INSTR AIR SUPPLY CHECK VLV TO B21-F013C PM 84-297	D-70007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036D	INSTR AIR SUPPLY CHECK VLV TO B21-F013D PM 84-297	D-70007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036E	INSTR AIR SUPPLY CHECK VLV TO B21-F013E PM 84-297	D-70007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036F	INSTR AIR SUPPLY CHECK VLV TO B21-F013F PM 84-297	D-70007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-F036G	INSTR AIR SUPPLY CHECK VLV TO B21-F013G PM 84-297	D-70007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036H	INSTR AIR SUPPLY CHECK VLV TO B21-F013H PM 84-297	D-70007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036J	INSTR AIR SUPPLY CHECK VLV TO B21-F013J PM 84-297	D-70007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036K	INSTR AIR SUPPLY CHECK VLV TO B21-F013K PM 84-297	D-70007 / E-7	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-F036L	INSTR AIR SUPPLY CHECK VLV TO B21-F013L PM 84-297	D-70007 / E-1	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27A	INSTR AIR SUPPLY CHECK VLV TO B21-F013A PM 84-297	D-70007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27B	INSTR AIR SUPPLY CHECK VLV TO B21-F013B PM 84-297	D-70007 / E-4	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-V27C	INSTR AIR SUPPLY CHECK VLV TO B21-F013C PM 84-297	D-70007 / E-4	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27D	INSTR AIR SUPPLY CHECK VLV TO B21-F013D PM 84-297	D-70007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27E	INSTR AIR SUPPLY CHECK VLV TO B21-F013E PM 84-297	D-70007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27F	INSTR AIR SUPPLY CHECK VLV TO B21-F013F PM 84-297	D-70007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27G	INSTR AIR SUPPLY CHECK VLV TO B21-F013G PM 84-297	D-70007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27H	INSTR AIR SUPPLY CHECK VLV TO B21-F013H PM 84-297	D-70007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-31.1 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27J	INSTR AIR SUPPLY CHECK VLV TO B21-F013J PM 84-297	D-70007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-V27K	INSTR AIR SUPPLY CHECK VLV TO B21-F013K PM 84-297	D-70007 / E-8	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V27L	INSTR AIR SUPPLY CHECK VLV TO B21-F013L PM 84-297	D-70007 / E-2	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-04 RFJ-04
1-B21-V28A	INSTR AIR SUPPLY CHECK VLV TO B21-F022A	D-70007 / C-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-95A 1-0PT-31.1	RFJ-03 RFJ-03
1-B21-V28B	INSTR AIR SUPPLY CHECK VLV TO B21-F022B	D-70007 / C-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-95A 1-0PT-31.1	RFJ-03 RFJ-03
1-B21-V28C	INSTR AIR SUPPLY CHECK VLV TO B21-F022C	D-70007 / C-6	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-95A 1-0PT-31.1	RFJ-03 RFJ-03
1-B21-V28D	INSTR AIR SUPPLY CHECK VLV TO B21-F022D	D-70007 / C-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-95A 1-0PT-31.1	RFJ-03 RFJ-03
1-B21-V29A	INSTR AIR SUPPLY CHECK VLV TO B21-F028A PM 84-297	D-72006 / B-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	1-0PT-95 1-0PT-31.9	CSJ-02 CSJ-02

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-B21-V29B	INSTR AIR SUPPLY CHECK VLV TO B21-F028B PM 84-297	D-72006 / B-3	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC	CS	1-0PT-95	CSJ-02
												CVO	CS	1-0PT-31.9	CSJ-02
1-B21-V29C	INSTR AIR SUPPLY CHECK VLV TO B21-F028C PM 84-297	D-72006 / B-6	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC	CS	1-0PT-95	CSJ-02
												CVO	CS	1-0PT-31.9	CSJ-02
1-B21-V29D	INSTR AIR SUPPLY CHECK VLV TO B21-F028D PM 84-297	D-72006 / B-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC	CS	1-0PT-95	CSJ-02
												CVO	CS	1-0PT-31.9	CSJ-02
1-C11-CV-F010	SCRAM DISCH VOLUME INBOARD VENT VALVE	D-25017 SH0002B / D-4	Aug-B	ACT	SC	1	GA	AO	O	C	C	RPI	2Y	1-0PT-14.0	
												FC	Q	1-0PT-14.0	
												FSC	Q	1-0PT-14.0	
												ST-C	Q	1-0PT-14.0	
1-C11-CV-F011	C11-CV-F011 SCRAM DISCH VOLUME OUTBOARD DRAIN	D-25017 SH0002B / B-4	Aug-B	ACT	SC	2	GA	AO	O	C	C	RPI	2Y	1-0PT-14.0	
												FC	Q	1-0PT-14.0	
												FSC	Q	1-0PT-14.0	
												ST-C	Q	1-0PT-14.0	
1-C11-V139	SCRAM DISCH VOLUME INBOARD VENT VALVE	D-25017 SH0002B / D-4	Aug-B	ACT	SC	1	GA	AO	O	C	C	RPI	2Y	1-0PT-14.0	
												FC	Q	1-0PT-14.0	
												FSC	Q	1-0PT-14.0	
												ST-C	Q	1-0PT-14.0	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-C11-V140	C11-CV-F011 SCRAM DISCH VOLUME OUTBOARD DRAIN	D-25017 SH0002B / B-4	Aug-B	ACT	SC	2	GA	AO	O	C	C	RPI	2Y	1-0PT-14.0	
												FC	Q	1-0PT-14.0	
												FSC	Q	1-0PT-14.0	
												ST-C	Q	1-0PT-14.0	
1-C51-J004A-SHEAR-VLV	TIP SHEAR VALVE	F-70081 / B-3	Aug-D	ACT	NC	.37	EX	EXP	O	C	N/A	EXP	5Y	1-0MST-TIP11R	
1-C51-J004B-SHEAR-VLV	TIP SHEAR VALVE	F-70081 / B-3	Aug-D	ACT	NC	.37	EX	EXP	O	C	N/A	EXP	5Y	1-0MST-TIP11R	
1-C51-J004C-SHEAR-VLV	TIP SHEAR VALVE	F-70081 / B-3	Aug-D	ACT	NC	.37	EX	EXP	O	C	N/A	EXP	5Y	1-0MST-TIP11R	
1-C51-J004D-SHEAR-VLV	TIP SHEAR VALVE	F-70081 / B-3	Aug-D	ACT	NC	.37	EX	EXP	O	C	N/A	EXP	5Y	1-0MST-TIP11R	
1-CAC-V59	CAD INJECTION LINE RELIEF VALVE	D-25015 SH0001B / D-5	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	
1-CAC-X18A	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-X18B	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	
1-CAC-X18C	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	
1-CAC-X18D	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-X18E	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	
1-CAC-X18F	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	
1-CAC-X18G	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-CAC-X18H	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	
1-CAC-X18I	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	
1-CAC-X18J	SUPPRESSION POOL VACUUM BREAKER CHV	D-25015 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	1-0PT-02.3.1	
												VB-SP	2Y	1-0MST-CAC500R	
												CVC	Q	1-0PT-02.3.1	
												CVO	Q	1-0PT-02.3.1	
												ST-C	Q	1-0PT-02.3.1	
												ST-O	Q	1-0PT-02.3.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E11-F040	RHR TO RADWASTE OUTBOARD ISOLATION VALVE	D-25026 SH0002B / C-3	Aug-B	ACT	SC	4	GA	MO	C	C	FAI	RPI	2Y	1-0PT-08.2.2B	
												FSC	Q	1-0PT-08.2.2B	
												ST-C	Q	1-0PT-08.2.2B	
1-E11-F075	RHR SW INBOARD INJECTION VALVE	D-25026 SH0002A / C-7	Aug-B	PASS	NC	16	GA	MO	C	C	FAI	NTR	NR		V-17
1-E11-F090	INBOARD RHR KEEPFILL STATION CHECK VALVE	D-25026 SH0002B / F-3	Aug-C	ACT	SC	4	CK	SA	O/C	C	N/A	BDO	Q	1-0PT-08.2.2B	
												CVC	Q	1-0PT-08.2.2B	
1-E11-V192	DEMIN WTR OUTBOARD FILL CHECK VALVE	D-25025 SH0001B / F-7	Aug-C	ACT	SC	4	CK	SA	O/C	C	N/A	BDO	Q	1-0PT-08.2.2C	
												CVC	Q	1-0PT-08.2.2C	
1-E21-F029A	KEEPFILL STATION OUTBOARD CHECK VALVE	D-25024 SH0002 / C-5	Aug-C	ACT	NC	2	CK	SA	C	C	N/A	BDO	Q	1-0PT-7.2.4A	
												CVC	Q	1-0PT-7.2.4A	
1-E21-F029B	KEEPFILL STATION OUTBOARD CHECK VALVE	D-25024 SH0001 / E-5	Aug-C	ACT	NC	2	CK	SA	C	C	N/A	BDO	Q	1-0PT-07.2.4B	
												CVC	Q	1-0PT-07.2.4B	
1-E41-F001	HPCI TURBINE STEAM SUPPLY VALVE	D-25023 SH0002 / F-2	Aug-B	ACT	SC	10	GA	MO	C	O	FAI	RPI	2Y	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	
1-E41-F004	CONDENSATE STORAGE TANK SUCTION VALVE	D-25023 SH0001 / E-2	Aug-B	ACT	SC	16	GA	MO	O	O/C	FAI	RPI	2Y	1-0PT-09.7	
												FSC	Q	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-C	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E41-F005	HPCI PUMP DISCHARGE LINE CHECK VALVE	D-25023 SH0001 / B-6	Aug-C	ACT	SC	14	CK	SA	C	O/C	N/A	CVC CVO	Q Q	1-0PT-09.2 1-0PT-09.2	
1-E41-F007	HPCI PUMP DISCHARGE VALVE	D-25023 SH0001 / B-6	Aug-B	PASS	SC	14	GA	MO	O	O	FAI	RPI	2Y	1-0PT-09.7	V-16
1-E41-F008	HPCI BYPASS TO COND STO TK VLV	D-25023 SH0001 / D-6	Aug-B	PASS	SC	10	GL	MO	C	C	FAI	RPI	2Y	1-0PT-09.7	
1-E41-F011	REDUNDANT ISOL VLV TO COND STO TK FROM HPCI SYST	D-25023 SH0001 / F-3	Aug-B	PASS	SC	10	GA	MO	C	C	FAI	RPI	2Y	1-0PT-09.7	V-16
1-E41-F019	CONDENSATE STORAGE TNK SUCTION CHECK VLV	D-25023 SH0001 / E-3	Aug-C	ACT	SC	16	CK	SA	C	O/C	N/A	CVC CVO	Q Q	1-0PT-09.2 1-0PT-09.2	
1-E41-F020	HPCI PUMP INLET LINE ANGLE RELIEF VALVE	D-25023 SH0001 / D-4	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	
1-E41-F026	HPCI COND PMP DISCH INBRD ISV TO CRW	D-25023 SH0002 / A-5	Aug-B	ACT	SC	1	GA	AO	O/C	C	C	RPI FC FSC ST-C	2Y Q Q Q	1-0PT-09.7 1-0PT-09.7 1-0PT-09.7 1-0PT-09.7	
1-E41-F040	EXH DRN POT DRN LN TO SUPP POOL CHK VLV	D-25023 SH0002 / C-6	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	CVC DA	RO RO	1-0PT-20.2-151 1-0PT-11.1.2.3	RFJ-17
1-E41-F041	HPCI PMP SUCTION VLV FROM SUPP POOL	D-25023 SH0001 / E-4	Aug-B	ACT	SC	16	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q	1-0PT-09.7 1-0PT-09.7 1-0PT-09.7 1-0PT-09.7 1-0PT-09.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E41-F045	SUPPRESSION POOL SUCTION CHECK VALVE	D-25023 SH0002 / A-5	Aug-C	ACT	SC	16	CK	SA	C	O/C	N/A	PSO	Q	1-0PT-09.2	V-06
												DA	V	1-0PT-11.1.2.3	V-06
1-E41-F046	MINIMUM FLOW BYPASS CHECK VALVE	D-25023 SH0001 / A-5	Aug-C	ACT	SC	4	CK	SA	C	O	N/A	DA	2R	1-0PT-11.1.2.3	V-07
												PSO	Q	1-0PT-09.2	V-07
1-E41-F048	CONDENSATE TO HPCI PUMP SUCTION LINE CHV	D-25023 SH0002 / B-4	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	PSO	Q	1-0PT-09.2	V-08
												DA	V	1-0PT-11.1.2.3	V-08
1-E41-F049	HPCI TURBINE EXHAUST LINE CHECK VALVE PM 86-039	D-25023 SH0002 / D-6	Aug-C	ACT	SC	20	CK	SA	C	O/C	N/A	CVO	Q	1-0PT-09.2	
												CVC	RO	1-0PT-20.2-152	RFJ-18
1-E41-F050	COOLING WATER SUPPLY LINE RELIEF VALVE	D-25023 SH0002 / B-5	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	
1-E41-F052	CONDENSATE PMP DISCHARGE LINE CHECK VLV	D-25023 SH0002 / A-2	Aug-C	ACT	SC	2	CK	SA	O/C	C	N/A	BDO	Q	1-0PT-09.2	
												CVC	Q	1-0PT-09.2	
1-E41-F057	LUBE OIL COOLER DISCHARGE CHECK VALVE	D-25023 SH0002 / B-3	Aug-C	ACT	SC	2	CK	SA	C	O	N/A	PSO	Q	1-0PT-09.2	V-08
												DA	V	1-0PT-11.1.2.3	V-08
1-E41-F059	HPCI LUBE OIL COOLING WATER SUPPLY VALVE	D-25023 SH0002 / C-5	Aug-B	ACT	SC	2	GL	MO	C	O	FAI	RPI	2Y	1-0PT-09.7	
												FSO	Q	1-0PT-09.7	
												ST-O	Q	1-0PT-09.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E41-PSE-D003	RUPTURE DISC FOR TURBINE EXH DRAIN	D-25023 SH0002 / D-6	Aug-D	ACT	SC	16	RD	SA	C	O/C	N/A	VI	5Y	PMID 39412-01	V-15
1-E41-PSE-D004	RUPTURE DISC FOR TURBINE EXH DRAIN	D-25023 SH0002 / E-6	Aug-D	ACT	NC	16	RD	SA	C	O/C	N/A	VI	5Y	PMID 39413-01	V-15
1-E41-V93	HPCI KEEPFILL STATION CHECK VALVE	D-25023 SH0001 / D-6	Aug-C	ACT	SC	2	CK	SA	C	C	N/A	BDO CVC	Q Q	1-0PT-09.2 1-0PT-09.2	
1-E41-V94	HPCI KEEPFILL STATION CHECK VALVE	D-25023 SH0001 / E-6	Aug-C	ACT	NC	2	CK	SA	C	C	N/A	BDO CVC	Q Q	1-0PT-09.2 1-0PT-09.2	
1-E51-F010	RCIC CONDENSATE STORAGE TANK SUCTION VLV	D-25029 SH0001 / E-4	Aug-B	ACT	SC	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q	1-0PT-10.1.8 1-0PT-10.1.8 1-0PT-10.1.8 1-0PT-10.1.8 1-0PT-10.1.8	
1-E51-F011	RCIC CONDENSATE TANK CHECK VALVE TO PUMP	D-25029 SH0001 / D-4	Aug-C	ACT	SC	6	CK	SA	C	O/C	N/A	CVC CVO	Q Q	1-0PT-10.1.1 1-0PT-10.1.1	
1-E51-F012	RCIC PUMP DISCHARGE VALVE	D-25029 SH0001 / B-6	Aug-B	PASS	SC	4	GA	MO	O	O	FAI	RPI	2Y	1-0PT-10.1.8	V-16
1-E51-F014	RCIC PUMP DISCHARGE CHECK VALVE	D-25029 SH0001 / B-5	Aug-C	ACT	SC	4	CK	SA	C	O/C	N/A	CVC CVO	Q Q	1-0PT-10.1.1 1-0PT-10.1.1	
1-E51-F017	RCIC SUCTION LINE PRESSURE RELIEF VALVE	D-25029 SH0001 / D-3	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E51-F018	RCIC COOL WTR SUPPLY LN PRESS RELIEF VLV	D-25029 SH0002 / E-5	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	
1-E51-F021	RCIC MIN FLOW BYPASS LINE CHECK VALVE	D-25029 SH0002 / C-2	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA	2R	1-0PT-11.1.2.3	V-07
												PSO	Q	1-0PT-10.1.1	V-07
1-E51-F022	RCIC BYPASS TO CONDENSATE STO TANK VLV	D-25029 SH0001 / D-5	Aug-B	ACT	SC	4	GL	MO	C	C	FAI	RPI	2Y	1-0PT-10.1.8	
												FSC	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
1-E51-F029	RCIC SUPP POOL SUCT VLV TO THE RCIC PMP	D-25029 SH0001 / D-4	Aug-B	ACT	SC	6	GA	MO	C	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	
1-E51-F030	RCIC SUPPRESSION POOL SUCTION CHECK VLV	D-25029 SH0002 / A-5	Aug-C	ACT	SC	6	CK	SA	C	O/C	N/A	PSO	Q	1-0PT-10.1.1	V-06
												DA	V	1-0PT-11.1.2.3	V-06

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E51-F045	RCIC TURBINE STEAM SUPPLY VALVE	D-25029 SH0001 / D-2	Aug-B	ACT	SC	3	GL	MO	C	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	
1-E51-F046	RCIC COOLING WATER SUPPLY VALVE	D-25029 SH0001 / B-4	Aug-B	ACT	SC	2	GL	MO	C	O/C	FAI	RPI	2Y	1-0PT-10.1.8	
												FSC	Q	1-0PT-10.1.8	
												FSO	Q	1-0PT-10.1.8	
												ST-C	Q	1-0PT-10.1.8	
												ST-O	Q	1-0PT-10.1.8	
1-E51-F047	RCIC COND PMP DISCH LINE TO RCIC PUMP CHECK VAL	D-25029 SH0002 / E-6	Aug-C	ACT	SC	2	CK	SA	C	C	N/A	BDO	Q	1-0PT-10.1.1	
												CVC	Q	1-0PT-10.1.1	
1-E51-PSE-D001	RUPTURE DIAPHRAGM FOR RCIC TURBINE EXHAUST DIAPH	D-25029 SH0002 / C-5	Aug-D	ACT	SC	8	RD	SA	C	O/C	N/A	VI	5Y	PMID 39414-01	V-15
1-E51-PSE-D002	RUPTURE DIAPHRAGM FOR RCIC TURBINE EXHAUST DIAPH	D-25029 SH0002 / C-5	Aug-D	ACT	SC	8	RD	SA	C	O/C	N/A	VI	5Y	PMID 39415-01	V-15

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-E51-V72	RCIC KEEPFILL STATION OUTLET CHECK VALVE	D-25029 SH0001 / A-5	Aug-C	ACT	NC	2	CK	SA	C	C	N/A	BDO	Q	1-0PT-10.1.1	
												CVC	Q	1-0PT-10.1.1	
1-E51-V73	RCIC KEEPFILL STATION OUTLET CHECK VALVE	D-25029 SH0001 / A-5	Aug-C	ACT	SC	2	CK	SA	C	C	N/A	BDO	Q	1-0PT-10.1.1	
												CVC	Q	1-0PT-10.1.1	
1-MS-F038A	MSL A Orifice Bypass VLV	D-25021 SH0001B / C-2	Aug-B	ACT	NC	2	GL	MO	C	O	FAI	RPI	2Y	1-0PT-25.4	
												FSO	CS	1-0PT-25.4	CSJ-14
												ST-O	CS	1-0PT-25.4	CSJ-14
1-MS-F038B	MSL A Orifice Bypass VLV	D-25021 SH0001B / D-3	Aug-B	ACT	NC	2	GL	MO	C	O	FAI	RPI	2Y	1-0PT-25.4	
												FSO	CS	1-0PT-25.4	CSJ-14
												ST-O	CS	1-0PT-25.4	CSJ-14
1-MS-F038C	MSL A Orifice Bypass VLV	D-25021 SH0001A / E-2	Aug-B	ACT	NC	2	GL	MO	C	O	FAI	RPI	2Y	1-0PT-25.4	
												FSO	CS	1-0PT-25.4	CSJ-14
												ST-O	CS	1-0PT-25.4	CSJ-14
1-MS-F038D	MSL A Orifice Bypass VLV	D-25021 SH0001A / C-2	Aug-B	ACT	NC	2	GL	MO	C	O	FAI	RPI	2Y	1-0PT-25.4	
												FSO	CS	1-0PT-25.4	CSJ-14
												ST-O	CS	1-0PT-25.4	CSJ-14
1-MVD-F021	MSL Drn VLV	D-25021 SH0001B / D-2	Aug-B	ACT	SC	2	GL	MO	C	O	FAI	RPI	2Y	1-0PT-25.4	
												FSO	CS	1-0PT-25.4	CSJ-14
												ST-O	CS	1-0PT-25.4	CSJ-14
1-MVD-V5008	DRN LN 1-MVD-163-1/2-A-1 check valve	D-20028 / D-6	Aug-C	ACT	SC	2	CK	SA	O/C	C	N/A	DA	2R	1-0PT-11.1.2.3	RFJ-19

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-MVD-V5009	DRN LN 1-MVD-163-1/2-A-1 check valve	D-20028 / D-6	Aug-C	ACT	SC	2	CK	SA	O/C	C	N/A	DA	2R	1-0PT-11.1.2.3	RFJ-19
1-RNA-IV-2307	CAC-V5 INSTR AIR SUPPLY CHECK VALVE	D-70029 SH0002A / D-6	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-16.1.1	
1-RNA-IV-2311	CAC-V6 INSTR AIR SUPPLY CHECK VALVE	D-70029 SH0002A / F-2	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-16.1.1	
1-RNA-IV-2315	CAC-V7 INSTR AIR SUPPLY CHECK VALVE	D-70029 SH0002B / A-6	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-20.9	
1-RNA-IV-2319	CAC-V8 INSTR AIR SUPPLY ISOLATION VLV	D-70029 SH0002B / A-6	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-16.1.1	
1-RNA-IV-2323	CAC-V10 INSTR AIR SUPPLY CHECK VALVE	D-72006 / F-6	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-16.1.1	
1-RNA-IV-2327	CAC-V9 INSTR AIR SUPPLY CHECK VALVE	D-72006 / F-6	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-16.1.1	
1-RNA-IV-2331	CAC-V15 INSTR AIR SUPPLY CHECK VALVE	D-70029 SH0002A / F-1	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-16.1.1	
1-RNA-IV-2620	CAC-V216 N2 BACK-UP LN CHK VLV	D-70029 SH0002B / B-5	Aug-C	ACT	SC	.75	CK	SA	C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-20.9	
1-RNA-IV-2621	CAC-V216 INSTR AIR LN CHK VLV	D-70029 SH0002B / B-5	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-20.9	

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-RNA-IV-2622	CAC-V7 N2 BACK-UP LN CHK VLV	D-70029 SH0002B / B-5	Aug-C	ACT	SC	.75	CK	SA	C	O/C	N/A	CVC	Q	1-0PT-20.9	
												CVO	Q	1-0PT-20.9	
1-RNA-PRV-5256	DIV II N2 BACKUP SUPPLY RELEIF VALVE	D-73068 / E-3	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	
1-RNA-PRV-5258	DIV I N2 BACKUP SUPPLY RELEIF VALVE	D-73068 / C-3	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	
1-RNA-PRV-5259	DIV II NITROGEN BACKUP SUPPLY PRV	D-73068 / E-7	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	
1-RNA-PRV-5260	DIV I NITROGEN BACKUP SUPPLY PRV	D-73068 / B-7	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	1-0PT-11.0	
1-RNA-PSE-101	Div II N2 Backup Supply HDR Rupture Diaphragm	D-73068 / E-7	Aug-D	ACT	SC	.75	RD	SA	C	O/C	N/A	RD	5Y	PMID 39410-01	
1-RNA-PSE-102	Div I Backup N2 HDR Rupture Diaphragm	D-73068 / C-7	Aug-D	ACT	SC	.75	RD	SA	C	O/C	N/A	RD	5Y	PMID 39411-01	
1-RNA-SV-5481	DIV II RNA N2 BACKUP SUP SV	D-73068 / E-5	Aug-B	ACT	SC	.75	GL	SO	C	O/C	O	FO	Q	1-0PT-31.6	
												FSC	Q	1-0PT-31.6	
												FSO	Q	1-0PT-31.6	
												RPI	Q	1-0PT-20.4	
												ST-C	Q	1-0PT-31.6	
												ST-O	Q	1-0PT-31.6	
1-RNA-SV-5482	DIV II RNA N2 BACKUP SUP SV	D-73068 / C-5	Aug-B	ACT	SC	.75	GL	SO	C	O/C	O	FO	Q	1-0PT-31.6	
												FSC	Q	1-0PT-31.6	
												FSO	Q	1-0PT-31.6	
												RPI	Q	1-0PT-20.4	
												ST-C	Q	1-0PT-31.6	
												ST-O	Q	1-0PT-31.6	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-RNA-V295	Div II Nitrogen Remote Supply Chk	D-73068 / F-5	Aug-C	ACT	SC	.75	CK	SA	C	C	N/A	CVC BDO	RO RO	1-0PT-31.1 1-0PT-31.1	RFJ-04 RFJ-04
1-RNA-V297	Div I Nitrogen Remote Supply Chk	D-73068 / C-5	Aug-C	ACT	SC	.75	CK	SA	C	C	N/A	CVC BDO	RO RO	1-0PT-31.1 1-0PT-31.1	RFJ-04 RFJ-04
1-RNA-V305	DIV II N2 BACKUP SUPPLY CHV TO CAC-V17	D-73068 / E-3	Aug-C	ACT	SC	.75	CK	SA	C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-02.3.2	
1-RNA-V306	VLV CAC-V17 NON-INTERRUP INSTR AIR CHV PM 84-19	D-70029 SH0002B / C-5	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	1-0PT-02.3.2 1-0PT-02.3.2	
1-RNA-V307	DIV I N2 BACKUP SUPPLY CHV TO CAC-V16	D-73068 / C-3	Aug-C	ACT	SC	.75	CK	SA	C	O/C	N/A	CVC CVO	Q Q	1-0PT-20.9 1-0PT-02.3.2	
1-RNA-V308	CAC-SV-4222 NON-INTERR INSTR AIR SUP CHV	D-70029 SH0002A / C-4	Aug-C	ACT	SC	.75	CK	SA	O	O/C	N/A	CVC CVO	Q Q	1-0PT-02.3.2 1-0PT-02.3.2	
1-RNA-V315	SRV ACCUMULATOR HEADER CHECK VALVE	D-70007 / E-2	Aug-C	ACT	SC	2	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-12 RFJ-12
1-RNA-V316	SRV ACCUMULATOR HEADER CHECK VALVE	D-70007 / F-7	Aug-C	ACT	SC	2	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	1-0PT-20.8 1-0PT-31.1	RFJ-12 RFJ-12
1-RNA-V317	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-RNA-V318	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V319	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V320	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V321	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V322	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V323	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V324	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V325	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V326	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V327	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V328	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-RNA-V329	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V330	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V331	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V332	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V333	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V334	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V335	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V336	DIV I NON INTERR IA BACKUP BOTTLED N2	D-73068 / C-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V5042	DIV I NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / C-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V5043	DIV I NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / C-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V5044	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-RNA-V5045	DIV II NON INTERR IA BACKUP BOTTLED N2 OUTLET LINE CHK VALVE	D-73068 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	1-0PT-31.8	V-03
1-SW-V295	SW SUPPLY INBRD ISV TO CHLORINATION SYS	D-20041 SH0001 / F-2	Aug-B	PASS	NC	10	BF	MO	C	C	FAI	RPI	2Y	1-0PT-24.1.2	

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-SW-V3	SW HEADER OUTBOARD SUPPLY VALVE TO TURBINE BUILDNG	D-20041 SH0002 / F-2	Aug-B	ACT	SC	30	BF	MO	O	C	FAI	RPI	2Y	1-0PT-24.4	
												FSC	CS	1-0PT-24.4	CSJ-10
												ST-C	CS	1-0PT-24.4	CSJ-10
1-SW-V37	SW TO CW PUMPS BRGS OUTBOARD ISOL VALVE	D-20041 SH0002 / E-7	Aug-B	ACT	NC	4	BF	MO	O	C	FAI	RPI	2Y	1-0PT-24.4	
												FSC	RO	1-0PT-24.4	RFJ-16
												ST-C	RO	1-0PT-24.4	RFJ-16
1-VA-1A-BFIV-RB	RX BLDG VNT INBD SUP ISOL DAMPER	F-40073 SH0002 / F-7	Aug-B	ACT	SC	54	BF	AO	O	C	FAI	FSC	2Y	1-0PT-15.4A	V-04
												ST-C	2Y	1-0PT-15.4A	V-04
												FSC	Q	1PT-04.1.1	
1-VA-1A-CV-CB	CB1 VENT INLET TORNADO CHECK VLV	F-04080 SH0001 / C-3	Aug-C	ACT	SC	54	CK	SA	O	O	N/A	BDC	Q	1-0PT-23.1.2	
												CVO	Q	1-0PT-23.1.2	
1-VA-1B-BFIV-RB	RX BLDG VNT OTBD SUP ISOL DAMPER	F-40073 SH0002 / F-7	Aug-B	ACT	SC	54	BF	AO	O	C	FAI	FSC	2Y	1-0PT-15.4A	V-04
												ST-C	2Y	1-0PT-15.4A	V-04
												FSC	Q	1PT-04.1.1	
1-VA-1B-CV-CB	CB1 VENT INLET TORNADO CHECK VLV	F-04080 SH0001 / C-1	Aug-C	ACT	SC	54	CK	SA	O	O	N/A	BDC	Q	1-0PT-23.1.2	
												CVO	Q	1-0PT-23.1.2	

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 1

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1-VA-1C-BFIV-RB	RX BLDG VNT INBD SUP ISOL DAMPER	F-40073 SH0002 / E-2	Aug-B	ACT	SC	54	BF	AO	O	C	FAI	FSC	2Y	1-0PT-15.4A	V-04
												ST-C	2Y	1-0PT-15.4A	V-04
												FSC	Q	1PT-04.1.1	
1-VA-1D-BFIV-RB	RX BLDG VNT OTBD SUP ISOL DAMPER	F-40073 SH0002 / E-2	Aug-B	ACT	SC	54	BF	AO	O	C	FAI	FSC	2Y	1-0PT-15.4A	V-04
												ST-C	2Y	1-0PT-15.4A	V-04
												FSC	Q	1PT-04.1.1	

Component ID	Description	BPV Class	OM Class	Exempt
1-C11-114	HCU SCRAM DISCH VOL-RISER CHECK VLV		SC	Yes
1-C11-138	HCU COOLING WATER-RISER CHECK VALVE		2	Yes
1-C11-CV-126	HCU SCRAM WATER INLET ISOL VLV		2	Yes
1-C11-CV-127	HCU SCRAM WATER INLET ISOL VLV		2	Yes
1-C11-SV-120	DIRECTIONAL CONTROL SOLENIOD VALVE		2	Yes
1-C11-SV-121	DIRECTIONAL CONTROL SOLENIOD VALVE		2	Yes
1-C11-SV-122	DIRECTIONAL CONTROL SOLENIOD VALVE		2	Yes
1-C11-SV-123	DIRECTIONAL CONTROL SOLENIOD VALVE		2	Yes
1-E41-V8	HPCI TURBINE STOP VALVE		NC	Yes
1-E41-V9	HPCI TURBINE CONTROL VALVE		NC	Yes
1-E51-V8	RCIC TURBINE TRIP & THROTTLE VALVE		SC	Yes
1-E51-V9	RCIC TURBINE GOVERNOR VALVE		SC	Yes

Valve Summary Listing Standard Code ISTC Valves - Unit 2

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F003	INBRD RX HEAD VENT VALVE	D-02521 SH0001C / F-4	B	PASS	1	.5	GL	AO	C	C	C	RPI	2Y	2-0PT-25.6	
2-B21-F004	OUTBOARD REACTOR HEAD VENT VALVE	D-02521 SH0001C / F-3	B	PASS	1	.5	GL	AO	C	C	C	RPI	2Y	2-0PT-25.6	
2-B21-F008	RX PRESS EXC FLO CHV TO B21-PS-N002 (X53-D)	D-02521 SH0001C / E-6	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03
2-B21-F010A	FEEDWATER LINE 'A' RPV INLET CHECK VLV	D-02521 SH0001C / C-5	A/C	ACT	1	18	CK	SA	O/C	O/C	N/A	LTJ	J	2-0PT-20.3-B21	
												CVO	Q	AD-OP-ALL-1000	
												CVC	RO	2-0PT-20.3-B21	RFJ-01
2-B21-F010B	FEEDWATER LINE 'B' INLET RPV CHECK VLV	D-02521 SH0001C / B-5	A/C	ACT	1	18	CK	SA	O/C	O/C	N/A	LTJ	J	2-0PT-20.3-B21	
												CVO	Q	AD-OP-ALL-1000	
												CVC	RO	2-0PT-20.3-B21	RFJ-01
2-B21-F013A	PRI STM LINE 'A' SAFETY/RELIEF VLV (ADS) PM 80-085	D-02521 SH0001B / E-3	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01
2-B21-F013B	PRI STM LINE 'A' SAFETY/RELIEF VLV	D-02521 SH0001B / E-2	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F013C	PRI STM LINE 'B' SAFETY/RELIEF VLV (ADS) PM 80-085	D-02521 SH0001B / C-3	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01
2-B21-F013D	PRI STM LINE 'B' SAFETY/RELIEF VLV (ADS) PM 80-085	D-02521 SH0001B / C-2	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01
2-B21-F013E	PRI STM LINE 'B' SAFETY/RELIEF VLV	D-02521 SH0001B / C-2	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01
2-B21-F013F	PRI STM LINE 'C' SAFETY/RELIEF VLV	D-02521 SH0001A / E-6	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01
2-B21-F013G	PRI STM LINE 'C' SAFETY/RELIEF VLV	D-02521 SH0001A / E-7	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F013H	PRI STM LINE 'D' SAFETY/RELIEF VLV (ADS)	D-02521 SH0001A / C-6	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01
2-B21-F013J	PRI STM LINE 'D' SAFETY/RELIEF VLV (ADS)	D-02521 SH0001A / C-7	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01
2-B21-F013K	PRI STM LINE 'C' SAFETY/RELIEF VLV (ADS)	D-02521 SH0001A / E-8	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01
2-B21-F013L	PRI STM LINE 'B' SAFETY/RELIEF VLV (ADS)	D-02521 SH0001B / C-1	B/C	ACT	1	6	RV	SA/AO	C	O/C	N/A	RV	5Y	2-0PT-19.5	VRR-01
												FSO	RO	2-0PT-19.5	VRR-01, RFJ-02
												FSC	RO	2-0PT-19.5	VRR-01

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F014A	B21-PDT-N006A & B AND C32-PDT-N003A MAIN STEAM LINE DIFF PRES	D-02521 SH0001B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV13R	VRR-03
												CVO	10Y	2-0MST-EFCV13R	VRR-03
												RPI	10Y	2-0MST-EFCV13R	VRR-03
2-B21-F014B	B21-PDT-N006A & B AND C32-PDT-N003A MAIN STEAM LINE DIFF PRES	D-02521 SH0001B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV13R	VRR-03
												CVO	10Y	2-0MST-EFCV13R	VRR-03
												RPI	10Y	2-0MST-EFCV13R	VRR-03
2-B21-F014C	1-PDT-N006C, D MAIN STEAM LINE DIFF PRESS EXC FLOW CHV (X77-A	D-02521 SH0001B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV16R	VRR-03
												CVO	10Y	2-0MST-EFCV16R	VRR-03
												RPI	10Y	2-0MST-EFCV16R	VRR-03
2-B21-F014D	B21-PDT-N006C & D MAIN STEAM LINE DIFF PRESS EXC FLOW CHV (	D-02521 SH0001B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV16R	VRR-03
												CVO	10Y	2-0MST-EFCV16R	VRR-03
												RPI	10Y	2-0MST-EFCV16R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F014E	B21-PDT-N007A & B AND C32-PDT-N003B MAIN STEAM LINE DIFF PRES	D-02521 SH0001B / B-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV13R	VRR-03
												CVO	10Y	2-0MST-EFCV13R	VRR-03
												RPI	10Y	2-0MST-EFCV13R	VRR-03
2-B21-F014F	B21-PDT-N007A & B &C32-PDT-N003B MAIN STEAM LINE DIFF PRESS R	D-02521 SH0001B / B-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV13R	VRR-03
												CVO	10Y	2-0MST-EFCV13R	VRR-03
												RPI	10Y	2-0MST-EFCV13R	VRR-03
2-B21-F014G	B21-PDT-N007C & D MAIN STEAM LINE DIFF PRESS EXC FLOW CHV (X-77)	D-02521 SH0001B / B-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV16R	VRR-03
												CVO	10Y	2-0MST-EFCV16R	VRR-03
												RPI	10Y	2-0MST-EFCV16R	VRR-03
2-B21-F014H	B21-PDT-N007C & D MN STEAM LINE DIFF PRESS EXC FLO CHV (X77-D)	D-02521 SH0001B / A-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV16R	VRR-03
												CVO	10Y	2-0MST-EFCV16R	VRR-03
												RPI	10Y	2-0MST-EFCV16R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F014J	B21-PDT-N008A, B AND C32-PDT-N003C MAIN STEAM LINE DIFF PRESS	D-02521 SH0001A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV13R	VRR-03
												CVO	10Y	2-0MST-EFCV13R	VRR-03
												RPI	10Y	2-0MST-EFCV13R	VRR-03
2-B21-F014K	B21-PDT-N008A & B AND C32-PDT-N003C MAIN STEAM LINE DIFF PRES	D-02521 SH0001A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV13R	VRR-03
												CVO	10Y	2-0MST-EFCV13R	VRR-03
												RPI	10Y	2-0MST-EFCV13R	VRR-03
2-B21-F014L	B21-PDT-N008C/D EXCESS FLOW CHECK VALVE	D-02521 SH0001A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV16R	VRR-03
												CVO	10Y	2-0MST-EFCV16R	VRR-03
												RPI	10Y	2-0MST-EFCV16R	VRR-03
2-B21-F014M	B21-PDT-N008C & D MN STEAM LINE DIFF PRESS EXC FLOW CHV (X76-F	D-02521 SH0001A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV16R	VRR-03
												CVO	10Y	2-0MST-EFCV16R	VRR-03
												RPI	10Y	2-0MST-EFCV16R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F014N	B21-PDT-N009A & B AND C32-PDT-N003D MAIN STEAM LINE DIFF PRES	D-02521 SH0001A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV13R	VRR-03
												CVO	10Y	2-0MST-EFCV13R	VRR-03
												RPI	10Y	2-0MST-EFCV13R	VRR-03
2-B21-F014P	B21-PDT-N009A & B AND C32-PDT-N003D MAIN STEAM LINE DIFF PRES	D-02521 SH0001A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV13R	VRR-03
												CVO	10Y	2-0MST-EFCV13R	VRR-03
												RPI	10Y	2-0MST-EFCV13R	VRR-03
2-B21-F014R	B21-PDT-N009C & D MN STEAM LINE DIFF PRESS EXC FLO CHV (X76-E)	D-02521 SH0001A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV16R	VRR-03
												CVO	10Y	2-0MST-EFCV16R	VRR-03
												RPI	10Y	2-0MST-EFCV16R	VRR-03
2-B21-F014S	B21-PDT-N009C & D MN STEAM LINE DIFF PRESS EXC FLOW CHV (X76-D)	D-02521 SH0001A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV16R	VRR-03
												CVO	10Y	2-0MST-EFCV16R	VRR-03
												RPI	10Y	2-0MST-EFCV16R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F016	MAIN STEAM LINE DRAIN INBD ISO VLV	D-02521 SH0001B / D-5	A	ACT	1	3	GA	MO	O	C	FAI	RPI	2Y	2-0PT-25.4	
												LTJ	J	2-0PT-20.3-B21	
												FSC	Q	2-0PT-25.4	
												ST-C	Q	2-0PT-25.4	
2-B21-F019	MAIN STEAM LINE DRAIN OUTBD ISOL VLV	D-02521 SH0001B / D-6	A	ACT	1	3	GA	MO	O	C	FAI	RPI	2Y	2-0PT-25.4	
												LTJ	J	2-0PT-20.3-B21	
												FSC	Q	2-0PT-25.4	
												ST-C	Q	2-0PT-25.4	
2-B21-F022A	INBOARD MSIV A	D-02521 SH0001B / E-5	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	2-0PT-25.1	
												FC	CS	2-0PT-25.1	CSJ-13
												FSC	CS	2-0PT-25.1	CSJ-01
												ST-C	CS	2-0PT-25.1	CSJ-01
												LTJ	J	2-0PT-20.3A.5	
												FSP	Q	2-0PT-40.2.8	CSJ-01
2-B21-F022B	INBOARD MSIV B	D-02521 SH0001B / B-5	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	2-0PT-25.1	
												FC	CS	2-0PT-25.1	CSJ-13
												FSC	CS	2-0PT-25.1	CSJ-01
												ST-C	CS	2-0PT-25.1	CSJ-01
												LTJ	J	2-0PT-20.3A.5	
												FSP	Q	2-0PT-40.2.8	CSJ-01

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F022C	INBOARD MSIV C	D-02521 SH0001A / E-5	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	2-0PT-25.1	
												FC	CS	2-0PT-25.1	CSJ-13
												FSC	CS	2-0PT-25.1	CSJ-01
												ST-C	CS	2-0PT-25.1	CSJ-01
												LTJ	J	2-0PT-20.3A.5	
												FSP	Q	2-0PT-40.2.8	CSJ-01
2-B21-F022D	INBOARD MSIV D	D-02521 SH0001A / C-5	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	2-0PT-25.1	
												FC	CS	2-0PT-25.1	CSJ-13
												FSC	CS	2-0PT-25.1	CSJ-01
												ST-C	CS	2-0PT-25.1	CSJ-01
												LTJ	J	2-0PT-20.3A.5	
												FSP	Q	2-0PT-40.2.8	CSJ-01
2-B21-F028A	OUTBOARD MSIV A	D-02521 SH0001B / E-6	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	2-0PT-25.1	
												FC	CS	2-0PT-25.1	CSJ-13
												FSC	CS	2-0PT-25.1	CSJ-01
												ST-C	CS	2-0PT-25.1	CSJ-01
												LTJ	J	2-0PT-20.3A.5	
												FSP	Q	2-0PT-40.2.8	CSJ-01
2-B21-F028B	OUTBOARD MSIV B	D-02521 SH0001B / B-6	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	2-0PT-25.1	
												FC	CS	2-0PT-25.1	CSJ-13
												FSC	CS	2-0PT-25.1	CSJ-01
												ST-C	CS	2-0PT-25.1	CSJ-01
												LTJ	J	2-0PT-20.3A.5	
												FSP	Q	2-0PT-40.2.8	CSJ-01

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F028C	OUTBOARD MSIV C	D-02521 SH0001A / E-3	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	2-0PT-25.1	
												FC	CS	2-0PT-25.1	CSJ-13
												FSC	CS	2-0PT-25.1	CSJ-01
												ST-C	CS	2-0PT-25.1	CSJ-01
												LTJ	J	2-0PT-20.3A.5	
												FSP	Q	2-0PT-40.2.8	CSJ-01
2-B21-F028D	OUTBOARD MSIV D	D-02521 SH0001A / C-3	A	ACT	1	24	GL	AO	O	C	C	RPI	2Y	2-0PT-25.1	
												FC	CS	2-0PT-25.1	CSJ-13
												FSC	CS	2-0PT-25.1	CSJ-01
												ST-C	CS	2-0PT-25.1	CSJ-01
												LTJ	J	2-0PT-20.3A.5	
												FSP	Q	2-0PT-40.2.8	CSJ-01
2-B21-F032A	FEEDWATER SUPPLY LINE A ISOLATION VALVE	D-02521 SH0001C / D-7	A/C	ACT	1	18	SCK	MO/S A	O	C	FAI	RPI	2Y	2-0PT-25.2	V-16
												FSC	CS	2-0PT-25.2	CSJ-03
												ST-C	CS	2-0PT-25.2	CSJ-03
												LTJ	J	2-0PT-20.3-B21	
												BDO	Q	AD-OP-ALL-1000	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F032B	FEEDWATER SUPPLY LINE B ISOLATION VALVE	D-02521 SH0001C / B-7	A/C	ACT	1	18	SCK	MO/S A	O	C	FAI	RPI	2Y	2-0PT-25.2	V-16
												FSC	CS	2-0PT-25.2	CSJ-03
												ST-C	CS	2-0PT-25.2	CSJ-03
												LTJ	J	2-0PT-20.3-B21	
												BDO	Q	AD-OP-ALL-1000	
2-B21-F037A	VACUUM BREAKER VALVE FOR SRV LINE A	D-02521 SH0001A / B-6	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037B	VACUUM BREAKER VALVE FOR SRV LINE B	D-02521 SH0001A / B-6	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037C	VACUUM BREAKER VALVE FOR SRV LINE C	D-02521 SH0001A / B-6	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037D	VACUUM BREAKER VALVE FOR SRV LINE D	D-02521 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037E	VACUUM BREAKER VALVE FOR SRV LINE E	D-02521 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F037F	VACUUM BREAKER VALVE FOR SRV LINE F	D-02521 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037G	VACUUM BREAKER VALVE FOR SRV LINE G	D-02521 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037H	VACUUM BREAKER VALVE FOR SRV LINE H	D-02521 SH0001A / B-7	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037J	VACUUM BREAKER VALVE FOR SRV LINE J	D-02521 SH0001A / B-8	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037K	VACUUM BREAKER VALVE FOR SRV LINE K	D-02521 SH0001A / B-8	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05
2-B21-F037L	VACUUM BREAKER VALVE FOR SRV LINE L	D-02521 SH0001A / B-8	C	ACT	2	10	VB	SA	O/C	O/C	N/A	CVC	RO	2-0PT-11.1.3	RFJ-05
												CVO	RO	2-0PT-11.1.3	RFJ-05

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F040	RX LVL EXC FLO CHV TO B21-LT-3331 AND B21-LT-N027A (X53-E)	D-02522 SH0002A / F-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV10R	VRR-03
												CVO	10Y	2-0MST-EFCV10R	VRR-03
												RPI	10Y	2-0MST-EFCV10R	VRR-03
2-B21-F042A	RX LVL EXC FLO CHV TO B21-LT-N024A-1 & 2 -LT-N024B-1 & 2,-LT-N026	D-02522 SH0002A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03
2-B21-F042B	RX LVL EXC FLO CHV TO B21-LT-N025A-1& 2,N025B-1&2, N031B&D, PI-	D-02520 SH0003A / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV19R	VRR-03
												CVO	10Y	2-0MST-EFCV19R	VRR-03
												RPI	10Y	2-0MST-EFCV19R	VRR-03
2-B21-F044A	RX LVL EXC FLO CHV TO B21-LT-N024A-1 & 2-LT-N024B-1 & 2,-LT-N0	D-02522 SH0002A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F044B	RX LVL EXC FLO CHV TO B21-LT-N024A-1 & 2-LT-N024B-1 & 2,-LT-N0	D-02520 SH0003A / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV19R	VRR-03
												CVO	10Y	2-0MST-EFCV19R	VRR-03
												RPI	10Y	2-0MST-EFCV19R	VRR-03
2-B21-F046A	RX LVL EXC FLO CHV TO B21-LT-N017-1 & 2, B21-LT-N027, -N042A, -N0	D-02522 SH0002A / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03
2-B21-F046B	RX LVL EXC FLO CHV TO B21-LT-N017D-3 N017C-1&2, N042B, N027B,	D-02520 SH0003A / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV19R	VRR-03
												CVO	10Y	2-0MST-EFCV19R	VRR-03
												RPI	10Y	2-0MST-EFCV19R	VRR-03
2-B21-F047C	RX LVL EXC FLO CHV TO B21-LT-N017A-1& 2 AND C32-LT-N004C (X53-B	D-02522 SH0002A / B-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F047D	RX LVL EXC FLO CHV TO B21-LT-N017D-1 &2 (X83-A)	D-02520 SH0003A / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV19R	VRR-03
												CVO	10Y	2-0MST-EFCV19R	VRR-03
												RPI	10Y	2-0MST-EFCV19R	VRR-03
2-B21-F048A	RX LVL EXC FLO CHV TO B21-LT-N036, N017B-1&2, N042A, PT-N045	D-02522 SH0002A / C-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03
2-B21-F048B	RX LVL EXC FLO CHV TO B21-LT-N037, N017D-3, N017C-1&2, N042B	D-02520 SH0003A / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV19R	VRR-03
												CVO	10Y	2-0MST-EFCV19R	VRR-03
												RPI	10Y	2-0MST-EFCV19R	VRR-03
2-B21-F049C	B21-LT-N017A-1&2 AND C32-LT-N044C RX LVL EXC FLO CHV	D-02522 SH0002A / C-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F049D	RX LVL EXCESS FLOW CHV B21-LT-N017D-1 &2 (X69-F)	D-02520 SH0003A / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV19R	VRR-03
												CVO	10Y	2-0MST-EFCV19R	VRR-03
												RPI	10Y	2-0MST-EFCV19R	VRR-03
2-B21-F050A	RX LVL EXC FLO CHV TO B21-FT-N033A, B21-PT-N021C AND B21-LT-N	D-02522 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03
2-B21-F050B	RX LVL EXC FLO CHV TO B21-FT-N033B PT-N021D, LT-N037 (X75-A)	D-02520 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F050C	JP-10 FLOW HI PRESS EXCESS FLOW CHV TO B21-FT-N033C (X58-F)	D-02522 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F050D	JP 20 FLO HI PRESS EXCESS FLO CHK VLV TO B21-FT-N033D (X-74D)	D-02520 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F052A	JP-5 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034J (X-59F) P	D-02522 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03
2-B21-F052B	JP 15 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N033B, B21-LT-N	D-02520 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F052C	JP-10 FLOW LOW PRESS EXCESS FLOW CHV TO B21-FT-N033C AND N034V	D-02522 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F052D	JP 20 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N033D & B21-FT-	D-02520 SH0003B / F-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F054	X-61B EXCESS FLO CHK VLV TO B21-PDT-N032 PM 82-287J	D-02522 SH0002B / C-4	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV14R	VRR-03
												CVO	10Y	2-0MST-EFCV14R	VRR-03
												RPI	10Y	2-0MST-EFCV14R	VRR-03
2-B21-F056	X-61A EXCESS FLOW CHECK VALVE HIGH PRESS B21-FT-N034A,C,E,G,	D-02522 SH0002B / C-4	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03
2-B21-F058A	JP-1 FLO LO PRESS EXCESS FLOW CHK VLV TO B21-FT-N034A (X-58D)	D-02522 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F058B	JP-11 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034B (X-75E)	D-02520 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F058C	JP-2 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034C (X-59B) P	D-02522 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03
2-B21-F058D	JP-12 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034D (X-75C)	D-02520 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F058E	JP-3 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034E (X-59E)	D-02522 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F058F	JP-13 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034F (X-75F)	D-02520 SH0003B / D-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F058G	JP-4 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034G (X-59C)	D-02522 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03
2-B21-F058H	JP-14 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034H (X-75B)	D-02520 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F058L	JP-6 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034L (X-59D)	D-02522 SH0002B / D-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F058M	JP-16 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034M (X-74E)	D-02520 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F058N	JP-7 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034N (X-58A)	D-02522 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03
2-B21-F058P	JP-17 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034P (X-74A)	D-02520 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F058R	JP-8 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034R (X-58C)	D-02522 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F058S	JP-18 FLO LO PRESS EXCESS FLO CHK VLV B21-FT-N034S (X-74B PM 8	D-02520 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F058T	JP-9 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034T (X-58E)	D-02522 SH0002B / E-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV12R	VRR-03
												CVO	10Y	2-0MST-EFCV12R	VRR-03
												RPI	10Y	2-0MST-EFCV12R	VRR-03
2-B21-F058U	JP-19 FLO LO PRESS EXCESS FLO CHK VLV TO B21-FT-N034U (X-74F)	D-02520 SH0003B / E-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03
2-B21-F060	JP 11-20 FLO HP EXCESS FLO CHK VLV TO B21-FT-N034B D,F,H,K,M,P	D-02520 SH0003B / C-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV11R	VRR-03
												CVO	10Y	2-0MST-EFCV11R	VRR-03
												RPI	10Y	2-0MST-EFCV11R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-IV-2149	RX LVL EXC FLO CHV TO B21-LT-N027B (X69-E)	D-02520 SH0003A / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV10R	VRR-03
												CVO	10Y	2-0MST-EFCV10R	VRR-03
												RPI	10Y	2-0MST-EFCV10R	VRR-03
2-B21-IV-2196	E21-PDS-N004B RX INSTR PENET VALVE	D-02522 SH0002B / C-4	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV17R	VRR-03
												CVO	10Y	2-0MST-EFCV17R	VRR-03
												RPI	10Y	2-0MST-EFCV17R	VRR-03
2-B21-IV-2455	RX LVL EXC FLO CHV TO B21-LT-N026A (X49B-A)	D-02522 SH0002A / F-5	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03
2-B21-IV-2456	RX INSTR PENE X-49A-A EXCESS FLOW CHV	D-02520 SH0003A / F-4	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV19R	VRR-03
												CVO	10Y	2-0MST-EFCV19R	VRR-03
												RPI	10Y	2-0MST-EFCV19R	VRR-03
2-B32-F005A	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02518 SH0001A / C-2	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B32-F005B	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02548 SH0002B / C-7	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F006A	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02518 SH0001A / C-2	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F006B	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02548 SH0002B / C-7	C	ACT	2	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F019	SAMPLE LINE INBOARD ISOLATION VALVE	D-02518 SH0001A / D-7	A	ACT	1	.75	GL	AO	O	C	C	RPI	2Y	2-0PT-03.1.22	
												LTJ	J	2-0PT-20.3-B32	
												FC	Q	2-0PT-03.1.22	
												FSC	Q	2-0PT-03.1.22	
												ST-C	Q	2-0PT-03.1.22	
2-B32-F020	SAMPLE LINE INBOARD ISOLATION VALVE	D-02518 SH0001A / D-3	A	ACT	1	.75	GL	AO	O	C	C	RPI	2Y	2-0PT-03.1.22	
												LTJ	J	2-0PT-20.3-B32	
												FC	Q	2-0PT-03.1.22	
												FSC	Q	2-0PT-03.1.22	
												ST-C	Q	2-0PT-03.1.22	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B32-F031A	REACTOR RECIRC PUMP 2A DISCHARGE VALVE	D-02518 SH0001A / B-5	B	ACT	1	28	GA	MO	O	C	FAI	RPI	2Y	2-0PT-03.1.21	
												FSC	CS	2-0PT-03.1.21	CSJ-04
												ST-C	CS	2-0PT-03.1.21	CSJ-04
2-B32-F031B	REACTOR RECIRC PUMP 2B DISCHARGE VALVE	D-02548 SH0002B / B-4	B	ACT	1	28	GA	MO	O	C	FAI	RPI	2Y	2-0PT-03.1.21	
												FSC	CS	2-0PT-03.1.21	CSJ-04
												ST-C	CS	2-0PT-03.1.21	CSJ-04
2-B32-F032A	REACTOR RECIRC PUMP 2A DISCH BYPASS VLV	D-02518 SH0001A / B-5	B	ACT	1	4	GA	MO	O	C	FAI	RPI	2Y	2-0PT-03.1.21	
												FSC	CS	2-0PT-03.1.21	CSJ-05
												ST-C	CS	2-0PT-03.1.21	CSJ-05
2-B32-F032B	REACTOR RECIRC PUMP 2B DISCH BYPASS VLV	D-02548 SH0002B / B-4	B	ACT	1	4	GA	MO	O	C	FAI	RPI	2Y	2-0PT-03.1.21	
												FSC	CS	2-0PT-03.1.21	CSJ-05
												ST-C	CS	2-0PT-03.1.21	CSJ-05
2-B32-F039A	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02518 SH0001A / B-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B32-F039B	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02548 SH0002B / B-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F039C	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02518 SH0001A / B-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F039D	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02548 SH0002B / C-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F041A	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02548 SH0002B / C-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F041B	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02548 SH0002B / C-8	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B32-F041C	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02518 SH0001A / C-1	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F041D	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02518 SH0001A / C-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F042A	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02548 SH0002B / C-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F042B	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02548 SH0002B / C-7	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F042C	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02518 SH0001A / C-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B32-F042D	RCR PMP 2A UPPER SEAL PRESS RIP VLV	D-02518 SH0001A / C-2	C	ACT	1	.75	XCK	SA	O	C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F058A	RIP VLV TO B32-PS-N018A & -N018A-1	D-02518 SH0001A / B-2	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-F058B	RIP VLV TO B32-PS-N018B	D-02548 SH0002B / B-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV15R	VRR-03
												CVO	10Y	2-0MST-EFCV15R	VRR-03
												RPI	10Y	2-0MST-EFCV15R	VRR-03
2-B32-V22	RCR PMP 1A SEAL INJECTION VLV	D-02518 SH0001A / F-4	A	ACT	2	.75	GL	MO	O	C	FAI	RPI	2Y	2-0PT-03.1.21	
												FSC	CS	2-0PT-03.1.21	CSJ-06
												ST-C	CS	2-0PT-03.1.21	CSJ-06
												LTJ	J	2-0PT-20.3-B32	
2-B32-V24	RCR PMP 1A SEAL INJECTION CHECK VALVE	D-02518 SH0001A / F-4	A/C	ACT	2	.75	CK	SA	O	C	N/A	LTJ	J	2-0PT-20.3-B32	
												BDO	RO	2OP-02	RFJ-07
												CVC	RO	2-0PT-20.3-B32	RFJ-07

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B32-V30	RCR PMP 1A SEAL INJECTION VLV	D-02548 SH0002B / E-6	A	ACT	2	.75	GL	MO	O	C	FAI	RPI	2Y	2-0PT-03.1.21	
												FSC	CS	2-0PT-03.1.21	CSJ-06
												ST-C	CS	2-0PT-03.1.21	CSJ-06
												LTJ	J	2-0PT-20.3-B32	
2-B32-V32	RCR PMP 1A SEAL INJECTION CHECK VALVE	D-02548 SH0002B / E-6	A/C	ACT	2	.75	CK	SA	O	C	N/A	LTJ	J	2-0PT-20.3-B32	
												BDO	RO	2OP-02	RFJ-07
												CVC	RO	2-0PT-20.3-B32	RFJ-07
2-C12-115	HCU CHARGING WATER-RISER CHECK VLV	D-02517 SH0002A / D-3	C	ACT	2	.5	CK	SA	C	C	N/A	CVC	RO	2-0PT-14.1.2A	RFJ-15
												CVO	RO	2-0PT-14.2.1	RFJ-15
2-C41-F004A	STANDBY LIQ CTRL EXPLOSIVE SQUIB VALVE	D-02547 / C-7	D	ACT	2	1.5	EX	EXP	C	O/C	N/A	EXP	5Y	2-0PT-06.2.3	
2-C41-F004B	STANDBY LIQ CTRL EXPLOSIVE SQUIB VALVE	D-02547 / B-7	D	ACT	2	1.5	EX	EXP	C	O/C	N/A	EXP	5Y	2-0PT-06.2.3	
2-C41-F006	SLC OUTBOARD INJECTION CHECK VALVE	D-02547 / C-7	A/C	ACT	1	1.5	CK	SA	C	O/C	N/A	LT	2Y	2-0PT-20.14	
												CVC	RO	2-0PT-20.14	RFJ-09
												CVO	RO	2-0PT-20.14	RFJ-09
2-C41-F007	SLC INBOARD INJECTION CHECK VALVE	D-02547 / B-8	A/C	ACT	1	1.5	CK	SA	C	O/C	N/A	LT	2Y	2-0PT-20.14	
												CVC	RO	2-0PT-20.14	RFJ-09
												CVO	RO	2-0PT-20.14	RFJ-09
2-C41-F008	STANDBY LIQUID CTRL INBOARD INJECT VLV	D-02547 / B-8	B	PASS	1	1.5	GA	MA	LO	O	N/A	RPI	2Y	0PT-99.4	
2-C41-F029A	PMP C41-C001A DISCHRG SAFETY/RELIEF VLV	D-02547 / D-5	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-C41-F029B	PMP C41-C001B DISCHRG SAFETY/RELIEF VLV	D-02547 / A-5	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	
2-C41-F033A	SLC PUMP 2A DISCHARGE CHECK VALVE	D-02547 / C-6	C	ACT	2	1.5	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-16.1.1	
												CVO	Q	2-0PT-16.1.1	
2-C41-F033B	SLC PUMP 2B DISCHARGE CHECK VALVE	D-02547 / B-6	C	ACT	2	1.5	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-16.1.1	
												CVO	Q	2-0PT-16.1.1	
2-C51-J004A-BALL-VLV	TIP BALL VALVE	F-07081 / B-3	A	ACT	2	.37	BL	SO	C	C	C	RPI	2Y	2-0PT-20.3-179	
												LTJ	J	2-0PT-20.3-179	
												FC	Q	2-0PT-01.2.2A	
												FSC	Q	2-0PT-01.2.2A	
												ST-C	Q	2-0PT-01.2.2A	
2-C51-J004B-BALL-VLV	TIP BALL VALVE	F-07081 / B-3	A	ACT	2	.37	BL	SO	C	C	C	RPI	2Y	2-0PT-20.3-180	
												LTJ	J	2-0PT-20.3-180	
												FC	Q	2-0PT-01.2.2A	
												FSC	Q	2-0PT-01.2.2A	
												ST-C	Q	2-0PT-01.2.2A	
2-C51-J004C-BALL-VLV	TIP BALL VALVE	F-07081 / B-3	A	ACT	2	.37	BL	SO	C	C	C	RPI	2Y	2-0PT-20.3-181	
												LTJ	J	2-0PT-20.3-181	
												FC	Q	2-0PT-01.2.2A	
												FSC	Q	2-0PT-01.2.2A	
												ST-C	Q	2-0PT-01.2.2A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-C51-J004D-BALL-VLV	TIP BALL VALVE	F-07081 / B-3	A	ACT	2	.37	BL	SO	C	C	C	RPI	2Y	2-0PT-20.3-182	
												LTJ	J	2-0PT-20.3-182	
												FC	Q	2-0PT-01.2.2A	
												FSC	Q	2-0PT-01.2.2A	
												ST-C	Q	2-0PT-01.2.2A	
2-C51-TIP-CHV	TIP NITROGEN PURGE LINE CHECK VALVE	F-07081 / C-3	A/C	ACT	2	.37	CK	SA	O	C	N/A	LT	2Y	2-0PT-20.3-183	
												BDO	RO	2-0PT-20.3-183	RFJ-06
												CVC	RO	2-0PT-20.3-183	RFJ-06
2-CAC-SV-1200B	CAC-AT-1261 INBD SMPL INLET VLV	D-07218 / D-4	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-073	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1205E	CAC-AT-4409 DRYWELL SMPL INLT RIP VLV (X60-E)	D-07326 SH0002 / B-3	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-SV-1209A	CAC-AT-4409 DRYWELL SMPL INLT RIP VLV (X57-A)	D-07326 SH0002 / B-3	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1209B	CAC-AT-4409 DRYWELL SMPL INLT RIP VLV (X57-B)	D-07326 SH0002 / B-3	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1209D	CAC-PT-4175 & PSH-2684 SOL VLV	D-02515 SH0001A / D-3	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-CAC-SV-1211E	CAC-AT-1262 INBD SMPL RET VLV	D-07218 / B-6	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-089	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1211F	CAC-AT-1262 INBD SMPL INLT VLV	D-07218 / C-5	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-083	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-SV-1213A	CAC-AT-4409 SUPP POOL SMPL INLT RIP VLV (X209B-A)	D-07326 SH0002 / B-3	B	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1215E	CAC-AT-4409 INBD SMPL RET RIP VLV (X245-E)	D-07326 SH0002 / B-4	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1218A	CAC-AT-4410 SUPP POOL SMPL INLT RIP VLV (X206A-A)	D-07326 SH0001 / A-6	B	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1218C	CAC-LT-3342,2601 & 4177 TORUS SV	D-02515 SH0001A / B-6	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-CAC-SV-1219B	CAC-PT-1257-2A TORUS PRESS SV	D-02515 SH0001A / C-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-CAC-SV-1219C	TORUS LEVEL SV TO CAC-LT-2602	D-02515 SH0001A / B-4	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-SV-1225B	COMMON INBD SMPL RET VLV	D-07218 / B-3	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-082	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1225C	CAC-PT-2685, 3341 & 4176 DW SV	D-02515 SH0001A / D-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-CAC-SV-1227A	CAC-AT-4410 DRYWELL SMPL INLT RIP VLV (X73-A)	D-07326 SH0001 / B-7	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1227B	CAC-AT-4410 DRYWELL SMPL INLT RIP VLV (X73-B)	D-07326 SH0001 / B-7	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-SV-1227C	CAC-AT-1260 INBD SMPL INLT VLV RIP VALVE (2-73C)	D-07218 / C-4	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-77B	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1227E	CAC-AT-4410 DRYWELL SMPL INLT RIP VLV (X-2-73E)	D-07326 SH0001 / B-6	B	ACT	2	.75	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1231B	CAC-AT-4410 INBD SMPL RET RIP VLV (X244-B)	D-07326 SH0001 / A-6	B	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-SV-1260	CAC-AT-1260 OUTBD SMPL INLT VLV	D-07218 / C-3	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-079	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1261	CAC-AT-1261 OUTBD SMPL INLT VLV	D-07218 / D-3	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-074	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-1262	CAC-AT-1262 OUTBD SMPL INLT VLV	D-07218 / C-6	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-084	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-3439	CAC-AT-1262 OUTBOARD SMPL RET VLV	D-07218 / B-7	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-090	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-SV-3440	COMMON OUTBOARD SMPL RET VLV	D-07218 / B-2	A	ACT	2	1	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-081	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-4344	CAC-LT-2602 SUPP POOL HP SV	D-02515 SH0001A / A-3	B	PASS	2	.5	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-CAC-SV-4345	CAC-LT-2602 SUPP POOL HP SV	D-02515 SH0001A / A-6	B	PASS	2	.5	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-CAC-SV-4409 -1	CAC-AT-4409 TORUS OUTBD SMPL INLT VLV	D-07326 SH0002 / B-4	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-4409 -2	CAC-AT-4409 PRI CONT OUTBD SMPL INLT VLV	D-07326 SH0002 / B-4	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-SV-4409 -3	CAC-AT-4409 PRI CONT OUTBD SMPL INLT VLV	D-07326 SH0002 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-4409 -4	CAC-AT-4409 PRI CONT OUTBD SMPL INLT VLV	D-07326 SH0002 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-4410 -1	CAC-AT-4410 TORUS OUTBD SMPL INLT VLV	D-07326 SH0001 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-4410 -2	CAC-AT-4410 PRI CONT OUTBD SMPL INLET VLV	D-07326 SH0001 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-SV-4410 -3	CAC-AT-4410 PRI CONT OUTBD SMPL INLET VLV	D-07326 SH0001 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-4410 -4	CAC-AT-4410 PRI CONT OUTBD SMPL INLT VLV	D-07326 SH0001 / B-5	B	ACT	2	.5	GL	SO	O/C	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-4540	CAC-AT-4409 OUTBD SMPL RET VLV	D-07326 SH0002 / B-4	B	ACT	2	.5	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	
2-CAC-SV-4541	CAC-AT-4410 OUTBD SMPL RET VLV	D-07326 SH0001 / A-6	B	ACT	2	.5	GL	SO	O	C	C	RPI	2Y	2-0PT-20.4	
												FC	Q	2PT-16.0-2	
												FSC	Q	2PT-16.0-2	
												ST-C	Q	2PT-16.0-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V10	OUTBOARD DRYWELL PURGE EXHAUST VALVE	D-02515 SH0001A / D-7	A	ACT	2	18	BF	AO	C	C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-69E	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
2-CAC-V15	PRIMARY CONTAINMENT PURGE AIR INLET VALVE	D-02515 SH0001B / D-7	A	ACT	2	24	BF	AO	C	C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-67C	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
2-CAC-V16	REACTOR BUILDING TO SUPP POOL VAC BKR VLV	D-02515 SH0001B / A-7	A	ACT	2	20	BF	AO	C	O/C	C	RPI	2Y	2-0PT-02.3.2	
												LTJ	J	2-0PT-20.3-69D	
												FC	Q	2-0PT-02.3.2	
												FSC	Q	2-0PT-02.3.2	
												FSO	Q	2-0PT-02.3.2	
												ST-C	Q	2-0PT-02.3.2	
												ST-O	Q	2-0PT-02.3.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V160	SUPP POOL CAD N2 INJECTION INLT VLV	D-02515 SH0001B / C-8	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	2-0PT-20.3-67D	
												LTJ	J	2-0PT-20.3-67D	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V161	DRYWELL CAD N2 INJECTION SOL VLV	D-02515 SH0001B / F-7	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	2-0PT-20.3-67E	
												LTJ	J	2-0PT-20.3-67E	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V162	SUPP POOL CAD N2 INJECTION INLT VLV	D-02515 SH0001B / C-7	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	2-0PT-20.3-67D	
												LTJ	J	2-0PT-20.3-67D	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V163	DRYWELL CAD N2 INJECTION INLET VLV	D-02515 SH0001B / E-7	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	2-0PT-20.3-67E	
												LTJ	J	2-0PT-20.3-67E	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V17	REACTOR BUILDING TO SUPP POOL VAC BKR VLV	D-02515 SH0001B / A-7	A	ACT	2	20	BF	AO	C	O/C	C	RPI	2Y	2-0PT-02.3.2	
												LTJ	J	2-0PT-20.3-67D	
												FC	Q	2-0PT-02.3.2	
												FSC	Q	2-0PT-02.3.2	
												FSO	Q	2-0PT-02.3.2	
												ST-C	Q	2-0PT-02.3.2	
												ST-O	Q	2-0PT-02.3.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V172	SUPP POOL PURGE EXHAUST SOL VLV	D-02515 SH0001A / C-8	A	ACT	2	2	GL	SO	C	O/C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-68C	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V216	HARDENEND WETWELL VENT OUTBOARD ISOL VLV	D-02515 SH0001D / F-2	A	ACT	2	8	BF	AO	C	O/C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-68D	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V22	TORUS PURGE EXHAUST LINE ISOLATION VALVE	D-02515 SH0001A / C-8	A	ACT	2	2	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-68D	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V23	PRI CONT DISCH VLV TO SBGT	D-02515 SH0001A / E-7	A	ACT	2	2	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-69E	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V4	INBRD PRIMARY CONT N2 INERTING INLET VLV	D-02515 SH0001B / B-5	A	ACT	2	8	BF	AO	C	C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-67C	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
2-CAC-V49	DRYWELL HEAD INBD PURGE EXH VALVE	D-02515 SH0001A / F-5	A	ACT	2	3	GL	SO	C	O/C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-72A	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V5	SUPPRESSION POOL N2 INLET VALVE	D-02515 SH0001B / B-6	A	ACT	2	20	BF	AO	C	C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-67D	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V50	DRYWELL HEAD OUTBD PURGE EXH VALVE	D-02515 SH0001A / F-6	A	ACT	2	3	GL	SO	C	O/C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-72B	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V55	DRYWELL CAD N2 INJECTION SOL VLV	D-02515 SH0001B / D-5	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-67B1	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V56	DRYWELL CAD N2 INJECTION SOL VLV	D-02515 SH0001B / C-6	A	ACT	2	1	GL	SO	C	O/C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-67C	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V6	DRYWELL N2 INLET VALVE	D-02515 SH0001A / D-3	A	ACT	2	18	BF	AO	C	C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-67E	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
2-CAC-V7	INBD SUPPRESSION POOL PURGE EXHAUST VLV	D-02515 SH0001A / B-8	A	ACT	2	20	BF	AO	C	O/C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-68C	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-V8	OUTBD SUPPRESSION POOL PURGE EXHAUST VLV	D-02515 SH0001A / B-8	A	ACT	2	20	BF	AO	C	C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-68D	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-V9	INBOARD DRYWELL PURGE EXHAUST VALVE	D-02515 SH0001A / D-6	A	ACT	2	18	BF	AO	C	O/C	C	RPI	2Y	2-0PT-16.1.1	
												LTJ	J	2-0PT-20.3-69D	
												FC	Q	2-0PT-16.1.1	
												FSC	Q	2-0PT-16.1.1	
												FSO	Q	2-0PT-16.1.1	
												ST-C	Q	2-0PT-16.1.1	
												ST-O	Q	2-0PT-16.1.1	
2-CAC-X20A	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001B / A-6	A/C	ACT	2	20	VB	SA	C	O/C	N/A	LTJ	J	2-0PT-20.3-67C	
												CVC	Q	2-0PT-02.3.2	
												CVO	Q	2-0PT-02.3.2	
2-CAC-X20B	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001B / A-8	A/C	ACT	2	20	VB	SA	C	O/C	N/A	LTJ	J	2-0PT-20.3-67C	
												CVC	Q	2-0PT-02.3.2	
												CVO	Q	2-0PT-02.3.2	
2-E11-F002A	RHR HX 2A SW DISCHARGE VALVE	D-02537 SH0001 / C-6	B	PASS	3	16	BF	MO	O	O	FAI	RPI	2Y	2-0PT-08.1.4A	V-16
2-E11-F002B	RHR HX 2B SW DISCHARGE VALVE	D-02537 SH0002 / C-5	B	PASS	3	16	BF	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2B	V-16
2-E11-F003A	RHR HEAT EXCHANGER 2A OUTLET VALVE	D-02525 SH0001A / E-4	B	PASS	2	16	GL	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2C	
2-E11-F003B	RHR HEAT EXCHANGER 2B OUTLET VALVE	D-02526 SH0002B / B-2	B	PASS	2	16	GL	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2B	
2-E11-F004A	RHR PMP 2A SUPPRESSION POOL SUCTION VLV	D-02525 SH0001B / C-5	B	PASS	2	20	GA	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2C	V-16
2-E11-F004B	RHR PMP 2B SUPPRESSION POOL SUCTION VLV	D-02526 SH0002B / B-7	B	PASS	2	20	GA	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2B	V-16
2-E11-F004C	RHR PMP 2C SUPPRESSION POOL SUCTION VLV	D-02525 SH0001B / C-5	B	PASS	2	20	GA	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2C	V-16

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F004D	RHR PMP 2D SUPPRESSION POOL SUCTION VLV	D-02526 SH0002B / B-7	B	PASS	2	20	GA	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2B	V-16
2-E11-F005A	RHR SERVICE WATER PUMP A DISCHARGE CHV	D-02537 SH0001 / E-6	C	ACT	3	12	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-08.1.4A 2-0PT-08.1.4A	
2-E11-F005B	RHR SERVICE WATER PUMP B DISCHARGE CHV	D-02537 SH0002 / E-3	C	ACT	3	12	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-08.1.4B 2-0PT-08.1.4B	
2-E11-F005C	RHR SERVICE WATER PUMP C DISCHARGE CHV	D-02537 SH0001 / E-8	C	ACT	3	12	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-08.1.4A 2-0PT-08.1.4A	
2-E11-F005D	RHR SERVICE WATER PUMP D DISCHARGE CHV	D-02537 SH0002 / E-5	C	ACT	3	12	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-08.1.4B 2-0PT-08.1.4B	
2-E11-F006A	RHR PMP 2A SHUTDOWN COOLING SUCTION VLV	D-02525 SH0001B / C-7	B	PASS	2	20	GA	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2C	
2-E11-F006B	RHR PMP 2B SHUTDOWN COOLING SUCTION VLV	D-02526 SH0002B / C-5	B	PASS	2	20	GA	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2B	
2-E11-F006C	RHR PMP 2C SHUTDOWN COOLING SUCTION VLV	D-02525 SH0001B / C-3	B	PASS	2	20	GA	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2C	
2-E11-F006D	RHR PMP 2D SHUTDOWN COOLING SUCTION VLV	D-02526 SH0002B / B-8	B	PASS	2	20	GA	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2B	
2-E11-F007A	MINIMUM FLOW BYPASS VALVE TO SUPP POOL	D-02525 SH0001B / D-7	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q	2-0PT-08.2.2C 2-0PT-08.2.2C 2-0PT-08.2.2C 2-0PT-08.2.2C 2-0PT-08.2.2C	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F007B	MINIMUM FLOW BYPASS VALVE TO SUPP POOL	D-02526 SH0002B / B-4	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2B	
												FSC	Q	2-0PT-08.2.2B	
												FSO	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
												ST-O	Q	2-0PT-08.2.2B	
2-E11-F008	SHUTDOWN COOLING OUTBOARD SUCTION VLV	D-02525 SH0001B / D-2	A	ACT	1	20	GA	MO	C	C	FAI	LT	2Y	2-0PT-20.7B	
												RPI	2Y	2-0PT-08.0	
												FSC	CS	2-0PT-08.0	CSJ-07
												ST-C	CS	2-0PT-08.0	CSJ-07
												LTJ	J	2-0PT-20.3-E11	
2-E11-F009	SHUTDOWN COOL INBRD SUCTION THROTTLE VLV	D-02525 SH0001B / E-2	A	ACT	1	20	GA	MO	C	C	FAI	LT	2Y	2-0PT-20.7B	
												RPI	2Y	2-0PT-08.0	
												FSC	CS	2-0PT-08.0	CSJ-07
												ST-C	CS	2-0PT-08.0	CSJ-07
												LTJ	J	2-0PT-20.3-E11	
2-E11-F011A	RHR HX 2A DRAIN TO SUPPRESSION POOL	D-02525 SH0001A / E-5	B	PASS	2	4	GA	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2C	
2-E11-F011B	RHR HX 2B DRAIN TO SUPPRESSION POOL	D-02526 SH0002A / C-7	B	PASS	2	4	GA	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F015A	LPCI INBOARD INJECTION VALVE	D-02525 SH0001B / E-6	A	ACT	1	24	GA	MO	C	O/C	FAI	LT	2Y	2-0PT-20.7B	
												RPI	2Y	2-0PT-08.2.2C	
												FSC	CS	2-0PT-08.2.2C	CSJ-16
												FSO	CS	2-0PT-08.2.2C	CSJ-16
												ST-C	CS	2-0PT-08.2.2C	CSJ-16
												ST-O	CS	2-0PT-08.2.2C	CSJ-16
												LTJ	J	2-0PT-20.3-111A	
2-E11-F015B	LPCI INBOARD INJECTION VALVE	D-02526 SH0002B / D-5	A	ACT	1	24	GA	MO	C	O/C	FAI	LT	2Y	2-0PT-20.7B	
												RPI	2Y	2-0PT-08.2.2B	
												FSC	CS	2-0PT-08.2.2B	CSJ-16
												FSO	CS	2-0PT-08.2.2B	CSJ-16
												ST-C	CS	2-0PT-08.2.2B	CSJ-16
												ST-O	CS	2-0PT-08.2.2B	CSJ-16
												LTJ	J	2-0PT-20.3-111B	
2-E11-F016A	DRYWELL SPRAY OUTBOARD ISOLATION VALVE	/ F-6	A	ACT	2	14	GL	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2C	
												LTJ	J	2-0PT-20.3-113A	
												FSC	Q	2-0PT-08.2.2C	
												FSO	Q	2-0PT-08.2.2C	
												ST-C	Q	2-0PT-08.2.2C	
												ST-O	Q	2-0PT-08.2.2C	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F016B	DRYWELL SPRAY OUTBOARD ISOLATION VALVE	/ E-5	A	ACT	2	14	GL	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2B	
												LTJ	J	2-0PT-20.3-114A	
												FSC	Q	2-0PT-08.2.2B	
												FSO	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
												ST-O	Q	2-0PT-08.2.2B	
2-E11-F017A	LPCI OUTBOARD INJECTION VALVE	D-02525 SH0001B / E-7	A	ACT	2	24	ANG	MO	O	O/C	FAI	RPI	2Y	2-0PT-08.2.2C	
												LTJ	J	2-0PT-20.3-112A	
												FSC	Q	2-0PT-08.2.2C	
												FSO	Q	2-0PT-08.2.2C	
												ST-C	Q	2-0PT-08.2.2C	
												ST-O	Q	2-0PT-08.2.2C	
2-E11-F017B	LPCI OUTBOARD INJECTION VALVE	D-02526 SH0002B / D-4	A	ACT	2	24	ANG	MO	O	O/C	FAI	RPI	2Y	2-0PT-08.2.2B	
												LTJ	J	2-0PT-20.3-112B	
												FSC	Q	2-0PT-08.2.2B	
												FSO	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
												ST-O	Q	2-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F020A	RHR PMP 2A & 2C SUPP POOL SUCT VLV	D-02525 SH0001B / D-4	B	ACT	2	24	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-08.2.2C	
												FSC	Q	2-0PT-08.2.2C	
												FSO	Q	2-0PT-08.2.2C	
												ST-C	Q	2-0PT-08.2.2C	
												ST-O	Q	2-0PT-08.2.2C	
2-E11-F020B	RHR PMP 2B & 2D SUPP POOL SUCT VLV	D-02526 SH0002B / C-7	B	ACT	2	24	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-08.2.2B	
												FSC	Q	2-0PT-08.2.2B	
												FSO	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
												ST-O	Q	2-0PT-08.2.2B	
2-E11-F021A	DRYWELL SPRAY INBOARD ISOLATION VALVE	/ F-3	A	ACT	2	14	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2C	
												LTJ	J	2-0PT-20.3-E11	
												FSC	Q	2-0PT-08.2.2C	
												FSO	Q	2-0PT-08.2.2C	
												ST-C	Q	2-0PT-08.2.2C	
												ST-O	Q	2-0PT-08.2.2C	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F021B	DRYWELL SPRAY INBOARD ISOLATION VALVE	/ E-7	A	ACT	2	14	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2B	
												LTJ	J	2-0PT-20.3-E11	
												FSC	Q	2-0PT-08.2.2B	
												FSO	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
												ST-O	Q	2-0PT-08.2.2B	
2-E11-F024A	SUPPRESSION POOL COOLING ISOLATION VLV	D-02525 SH0001B / E-8	B	ACT	2	16	GL	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2C	
												FSC	Q	2-0PT-08.2.2C	
												FSO	Q	2-0PT-08.2.2C	
												ST-C	Q	2-0PT-08.2.2C	
												ST-O	Q	2-0PT-08.2.2C	
2-E11-F024B	SUPPRESSION POOL COOLING ISOLATION VLV	D-02526 SH0002B / D-3	B	ACT	2	16	GL	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2B	
												FSC	Q	2-0PT-08.2.2B	
												FSO	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
												ST-O	Q	2-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F025A	RHR HX 2A OUTLET SAFETY RELIEF VALVE	D-02525 SH0001A / F-3	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	
2-E11-F025B	RHR HX 2B OUTLET SAFETY RELIEF VALVE	D-02526 SH0002B / E-2	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	
2-E11-F027A	SUPPRESSION POOL SPRAY ISOLATION VALVE	D-02525 SH0001B / E-7	A	PASS	2	6	GL	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2C	
												LTJ	J	2-0PT-20.3-118B	
2-E11-F027B	SUPPRESSION POOL SPRAY ISOLATION VALVE	D-02526 SH0002B / D-4	A	PASS	2	6	GL	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2B	
												LTJ	J	2-0PT-20.3-118B	
2-E11-F028A	RHR TORUS DISCHARGE ISOLATION VALVE	D-02525 SH0001B / F-7	A	ACT	2	16	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2C	
												LTJ	J	2-0PT-20.3-118A	
												FSC	Q	2-0PT-08.2.2C	
												FSO	Q	2-0PT-08.2.2C	
												ST-C	Q	2-0PT-08.2.2C	
												ST-O	Q	2-0PT-08.2.2C	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F028B	RHR TORUS DISCHARGE ISOLATION VALVE	D-02526 SH0002B / D-4	A	ACT	2	16	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.2.2B	
												LTJ	J	2-0PT-20.3-119A	
												FSC	Q	2-0PT-08.2.2B	
												FSO	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
												ST-O	Q	2-0PT-08.2.2B	
2-E11-F029	SHUTDOWN COOLING SUCTION HEADER RELIEF	D-02525 SH0001B / C-1	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	
2-E11-F031A	RHR PUMP 2A DISCHARGE CHECK VALVE	D-02525 SH0001B / B-7	C	ACT	2	16	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-08.2.2C	V-14
												CVO	Q	2-0PT-08.2.2C	
2-E11-F031B	RHR PUMP 2B DISCHARGE CHECK VALVE	D-02526 SH0002B / A-2	C	ACT	2	16	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-08.2.2B	V-14
												CVO	Q	2-0PT-08.2.2B	
2-E11-F031C	RHR PUMP 2C DISCHARGE CHECK VALVE	D-02525 SH0001B / B-5	C	ACT	2	16	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-08.2.2C	V-14
												CVO	Q	2-0PT-08.2.2C	
2-E11-F031D	RHR PUMP 2D DISCHARGE CHECK VALVE	D-02526 SH0002B / A-6	C	ACT	2	16	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-08.2.2B	V-14
												CVO	Q	2-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F046A	RHR PUMP 2A DISCHARGE TO MIN FLOW LINE	D-02525 SH0001B / B-6	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II	2-0PT-08.2.2C 2-0PT-08.2.2C	V-14
2-E11-F046B	RHR PUMP 2B DISCHARGE TO MIN FLOW LINE	D-02526 SH0002B / A-4	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II	2-0PT-08.2.2B 2-0PT-08.2.2B	V-14
2-E11-F046C	RHR PUMP 2C DISCHARGE TO MIN FLOW LIN	D-02525 SH0001B / B-4	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II	2-0PT-08.2.2C 2-0PT-08.2.2C	V-14
2-E11-F046D	RHR PUMP 2D DISCHARGE TO MIN FLOW LINE	D-02526 SH0002B / A-6	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II	2-0PT-08.2.2B 2-0PT-08.2.2B	V-14
2-E11-F047A	RHR HEAT EXCHANGER 2A INLET VALVE	D-02525 SH0001A / D-2	B	PASS	2	16	GA	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2C	
2-E11-F047B	RHR HEAT EXCHANGER 2B INLET VALVE	D-02526 SH0002B / A-1	B	PASS	2	16	GA	MO	O	O	FAI	RPI	2Y	2-0PT-08.2.2B	
2-E11-F048A	RHR HEAT EXCHANGER 2A BYPASS VALVE	D-02525 SH0001A / E-2	B	ACT	2	20	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q	2-0PT-08.2.2C 2-0PT-08.2.2C 2-0PT-08.2.2C 2-0PT-08.2.2C 2-0PT-08.2.2C	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F048B	RHR HEAT EXCHANGER 2B BYPASS VALVE	D-02526 SH0002B / B-2	B	ACT	2	20	GL	MO	O	O/C	FAI	RPI	2Y	2-0PT-08.2.2B	
												FSC	Q	2-0PT-08.2.2B	
												FSO	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
												ST-O	Q	2-0PT-08.2.2B	
2-E11-F049	RHR TO RADWASTE INBOARD ISOLATION VALVE	D-02526 SH0002B / C-4	B	ACT	2	4	GL	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2B	
												FSC	Q	2-0PT-08.2.2B	
												ST-C	Q	2-0PT-08.2.2B	
2-E11-F050A	RHR LOOP A INJECTION CHECK VALVE	D-02525 SH0001B / E-4	C	ACT	1	24	CK	SA	C	O/C	N/A	LT	2Y	2-0PT-20.7B	
												CVO	CS	2-0PT-08.0A	CSJ-08
												CVC	RO	2-0PT-20.7B	RFJ-10
2-E11-F050B	RHR LOOP B INJECTION CHECK VALVE	D-02526 SH0002B / D-7	C	ACT	1	24	CK	SA	C	O/C	N/A	LT	2Y	2-0PT-20.7B	
												CVO	CS	2-0PT-08.0B	CSJ-08
												CVC	RO	2-0PT-20.7B	RFJ-10
2-E11-F060A	LPCI MANUAL INJECTION VALVE	D-02525 SH0001B / E-3	B	PASS	1	24	GA	MA	O	O	N/A	RPI	2Y	2-0PT-99.0	
2-E11-F060B	LPCI MANUAL INJECTION VALVE	D-02526 SH0002B / D-7	B	PASS	1	24	GA	MA	O	O	N/A	RPI	2Y	2-0PT-99.1	
2-E11-F079A	RHR HX 2A OUTLET INBOARD ISOLATION VALVE	D-02525 SH0001A / B-6	B	PASS	2	0.75	GL	SO	C	C	C	RPI	2Y	2-0PT-08.2.2C	
2-E11-F079B	RHR HX 2B OUTLET INBOARD ISOLATION VALVE	D-02526 SH0002A / B-2	B	PASS	2	.75	GL	SO	C	C	C	RPI	2Y	2-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F090	INBOARD RHR KEEPFILL STATION CHECK VALVE	D-02526 SH0002B / F-3	C	ACT	2	4	CK	SA	O/C	C	N/A	BDO CVC	Q Q	2-0PT-08.2.2B 2-0PT-08.2.2B	
2-E11-F103A	RHR HEAT EXCHANGER 2A OUTBOARD VENT VLV	D-02525 SH0001A / C-2	B	PASS	2	1	GL	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2C	V-16
2-E11-F103B	RHR HEAT EXCHANGER 2B OUTBOARD VENT VLV	D-02526 SH0002A / C-4	B	PASS	2	1	GL	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2B	V-16
2-E11-F104A	RHR HEAT EXCHANGER 2A INBOARD VENT VLV	D-02525 SH0001A / C-2	B	PASS	2	1	GL	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2C	V-16
2-E11-F104B	RHR HEAT EXCHANGER 2B INBOARD VENT VLV	D-02526 SH0002A / C-2	B	PASS	2	1	GL	MO	C	C	FAI	RPI	2Y	2-0PT-08.2.2B	V-16
2-E11-PDV-F068A	RHR HX 2A SERV WTR DISCH VLV	D-02537 SH0001 / D-1	B	ACT	3	16	ANG	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q	2-0PT-08.1.4A 2-0PT-08.1.4A 2-0PT-08.1.4A	
2-E11-PDV-F068B	RHR HX 2B SERV WTR DISCH VLV	D-02537 SH0002 / D-8	B	ACT	3	16	ANG	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q	2-0PT-08.1.4B 2-0PT-08.1.4B 2-0PT-08.1.4B	
2-E11-SV-F037A	ISV TO E11-PT-N019A, C72-PT-N002A, C72-PS-N004	D-02525 SH0001B / F-4	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E11-SV-F037B	DW PRESS RIP VLV TO E11-PT-V019B, C72-PT-V002C & CAC-PDS-422	D-02526 SH0002B / E-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E11-SV-F037C	ISV TO E11-PT-N019C, C72-PT-N002B	D-02525 SH0001B / E-4	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	

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									NORM	SAFE	FAIL				
2-E11-SV-F037D	ISV TO E11-PT-N019D, C72-PT-N002D	D-02526 SH0002B / E-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E11-SV-F043A	ISV TO E11-PT-N011A	D-02525 SH0001B / E-4	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E11-SV-F043B	ISV TO E11-PT-N011B	D-02526 SH0002B / E-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E11-SV-F043C	ISV TO E11-PT-N011C	D-02525 SH0001B / E-4	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E11-SV-F043D	ISV TO E11-PT-N011D	D-02526 SH0002B / E-6	B	PASS	2	.75	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E11-V193	DEMIN WTR INBD FILL CHECK VALVE	D-02525 SH0001B / F-7	C	ACT	2	4	CK	SA	O/C	C	N/A	BDO CVC	Q Q	2-0PT-08.2.2C 2-0PT-08.2.2C	
2-E11-V32	Check Valve Bypass Vlv	D-02525 SH0001A / F-2	A	PASS	1	1	GL	MO	C	C	FAI	RPI LT	2Y 2Y	2-0PT-20.7B 2-0PT-20.7B	
2-E11-V33	Check Valve Bypass Vlv	D-02526 SH0002A / A-8	A	PASS	1	1	GL	MO	C	C	FAI	RPI LT	2Y 2Y	2-0PT-20.7B 2-0PT-20.7B	
2-E11-V39	RHR TO FUEL POOL COOL UPSTREAM MANUAL ISV	D-02549 SH0001B / F-5	B	ACT	2	8	GA	MA	C	O/C	N/A	FSC FSO	2Y 2Y	2-0PT-08.2.2C 2-0PT-08.2.2C	
2-E11-V51	RHR HX 2A DIRTY RADWASTE LINE RELIEF VALVE	D-02537 SH0001 / C-6	C	ACT	3	.75	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	
2-E11-V54	RHR HX 2B DIRTY RADWASTE LINE RELIEF VALVE	D-02537 SH0002 / C-5	C	ACT	3	.75	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	
2-E21-F001A	SUPPRESSION POOL SUCTION VALVE	D-02524 SH0002 / A-7	B	ACT	2	14	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q	2-0PT-07.2.4A 2-0PT-07.2.4A 2-0PT-07.2.4A 2-0PT-07.2.4A 2-0PT-07.2.4A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E21-F001B	RB2 CS PMP 2B TORUS SUCTION VLV	D-02524 SH0001 / B-8	B	ACT	2	14	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-07.2.4B	
												FSC	Q	2-0PT-07.2.4B	
												FSO	Q	2-0PT-07.2.4B	
												ST-C	Q	2-0PT-07.2.4B	
												ST-O	Q	2-0PT-07.2.4B	
2-E21-F003A	CORE SPRAY PUMP DISCHARGE CHECK VALVE	D-02524 SH0002 / D-1	C	ACT	2	12	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-07.2.4A	
												CVO	Q	2-0PT-07.2.4A	
2-E21-F003B	CORE SPRAY PUMP DISCHARGE CHECK VALVE	D-02524 SH0001 / C-2	C	ACT	2	12	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-07.2.4B	
												CVO	Q	2-0PT-07.2.4B	
2-E21-F004A	CORE SPRAY PMP OUTBOARD INJECTION VLV	D-02524 SH0002 / D-6	A	ACT	2	10	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-07.2.4A	
												LTJ	J	2-0PT-20.3-E21	
												FSC	Q	2-0PT-07.2.4A	
												FSO	Q	2-0PT-07.2.4A	
												ST-C	Q	2-0PT-07.2.4A	
												ST-O	Q	2-0PT-07.2.4A	
2-E21-F004B	CORE SPRAY PMP OUTBOARD INJECTION VLV	D-02524 SH0001 / E-6	A	ACT	2	10	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-07.2.4B	
												LTJ	J	2-0PT-20.3-E21	
												FSC	Q	2-0PT-07.2.4B	
												FSO	Q	2-0PT-07.2.4B	
												ST-C	Q	2-0PT-07.2.4B	
												ST-O	Q	2-0PT-07.2.4B	

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									NORM	SAFE	FAIL				
2-E21-F005A	CORE SPRAY PMP INBOARD INJECTION VLV	D-02524 SH0002 / D-6	A	ACT	1	10	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-07.2.4A	
												FSC	CS	2-0PT-07.2.4A	CSJ-16
												FSO	CS	2-0PT-07.2.4A	CSJ-16
												ST-C	CS	2-0PT-07.2.4A	CSJ-16
												ST-O	CS	2-0PT-07.2.4A	CSJ-16
												LTJ	J	2-0PT-20.3-E21	
2-E21-F005B	CORE SPRAY PMP INBOARD INJECTION VLV	D-02524 SH0001 / E-6	A	ACT	1	10	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-07.2.4B	
												FSC	CS	2-0PT-07.2.4B	CSJ-16
												FSO	CS	2-0PT-07.2.4B	CSJ-16
												ST-C	CS	2-0PT-07.2.4B	CSJ-16
												ST-O	CS	2-0PT-07.2.4B	CSJ-16
												LTJ	J	2-0PT-20.3-E21	
2-E21-F006A	CORE SPRAY INJECTION CHECK VALVE	D-02524 SH0002 / D-7	A/C	ACT	1	10	CK	SA	C	O/C	N/A	LT	2Y	2-0PT-20.7B	
												CVC	RO	2-0PT-20.7B	RFJ-08
												CVO	RO	2-0PT-07.1.1A	RFJ-08
2-E21-F006B	CORE SPRAY INJECTION CHECK VALVE	D-02524 SH0001 / E-7	A/C	ACT	1	10	CK	SA	C	O/C	N/A	LT	2Y	2-0PT-20.7B	
												CVC	RO	2-0PT-20.7B	RFJ-08
												CVO	RO	2-0PT-07.1.1B	RFJ-08
2-E21-F007A	CORE SPRAY PMP MANUAL INJECTION VALVE	D-02524 SH0002 / D-7	B	PASS	1	10	GA	MA	O	O	N/A	RPI	2Y	2-0PT-99.2	

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									NORM	SAFE	FAIL				
2-E21-F007B	CORE SPRAY PMP MANUAL INJECTION VALVE	D-02524 SH0001 / E-7	B	PASS	1	10	GA	MA	O	O	N/A	RPI	2Y	2-0PT-99.3	
2-E21-F012A	CORE SRRAY INJECTION LINE RELIEF VALVE	D-02524 SH0002 / E-2	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	
2-E21-F012B	CORE SRRAY INJECTION LINE RELIEF VALVE	D-02524 SH0001 / E-3	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I	2-0PT-11.0	
2-E21-F015A	CORE SPRAY FULL FLOW TEST BYPASS VALVE	D-02524 SH0002 / E-4	B	ACT	2	10	GL	MO	C	C	FAI	RPI	2Y	2-0PT-07.2.4A	
												FSC	RO	2-0PT-07.2.4A	RFJ-14
												ST-C	RO	2-0PT-07.2.4A	RFJ-14
2-E21-F015B	CORE SPRAY FULL FLOW TEST BYPASS VALVE	D-02524 SH0001 / D-4	B	ACT	2	10	GL	MO	C	C	FAI	RPI	2Y	2-0PT-07.2.4B	
												FSC	RO	2-0PT-07.2.4B	RFJ-14
												ST-C	RO	2-0PT-07.2.4B	RFJ-14
2-E21-F017A	E21-PDS-N004A EXCESS FLOW CHECK VALVE	D-02524 SH0002 / E-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV18R	VRR-03
												CVO	10Y	2-0MST-EFCV18R	VRR-03
												RPI	10Y	2-0MST-EFCV18R	VRR-03
2-E21-F017B	E21-PDS-N004B RIP EXCESS FLOW CHECK VLV	D-02524 SH0001 / D-6	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV17R	VRR-03
												CVO	10Y	2-0MST-EFCV17R	VRR-03
												RPI	10Y	2-0MST-EFCV17R	VRR-03
2-E21-F030A	KEEPFILL STATION INBOARD CHECK VALVE	D-02524 SH0002 / C-5	C	ACT	2	2	CK	SA	C	C	N/A	BDO	Q	2-0PT-07.2.4A	
												CVC	Q	2-0PT-07.2.4A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E21-F030B	KEEPFILL STATION INBOARD CHECK VALVE	D-02524 SH0001 / E-5	C	ACT	2	2	CK	SA	C	C	N/A	BDO	Q	2-0PT-07.2.4B	
												CVC	Q	2-0PT-07.2.4B	
2-E21-F031A	CORE SPRAY MINIMUM FLOW BYPASS VALVE	D-02524 SH0002 / C-2	B	ACT	2	3	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-07.2.4A	
												FSC	Q	2-0PT-07.2.4A	
												FSO	Q	2-0PT-07.2.4A	
												ST-C	Q	2-0PT-07.2.4A	
												ST-O	Q	2-0PT-07.2.4A	
2-E21-F031B	CORE SPRAY MINIMUM FLOW BYPASS VALVE	D-02524 SH0001 / C-4	B	ACT	2	3	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-07.2.4B	
												FSC	Q	2-0PT-07.2.4B	
												FSO	Q	2-0PT-07.2.4B	
												ST-C	Q	2-0PT-07.2.4B	
												ST-O	Q	2-0PT-07.2.4B	
2-E41-F002	HPCI TURBINE STEAM SUPPLY INBOARD ISOLATION VALVE	D-02523 SH0001 / E-7	A	ACT	1	10	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-09.2.1	
												LTJ	J	2-0PT-20.3-148A	
												FSC	Q	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E41-F003	HPCI TURBINE STEAM SUPPLY OUTBOARD ISOLATION VALVE	D-02523 SH0001 / E-6	A	ACT	1	10	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-09.7	
												LTJ	J	2-0PT-20.3-148B	
												FSC	Q	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	
2-E41-F006	HPCI INJECTION VALVE	D-02523 SH0001 / A-7	A	ACT	1	14	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-09.7	
												LTJ	J	2-0PT-20.3-56	
												FSC	Q	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	
2-E41-F012	HPCI MIN FLOW BYPASS VALVE TO SUPP POOL	D-02523 SH0001 / A-5	B	ACT	2	4	GL	MO	C	O/C	FAI	RPI	2Y	2-0PT-09.7	
												FSC	Q	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E41-F021	HPCI TURB EXH LINE ISOLATION STOP CHECK VLV	D-02523 SH0002 / C-7	C	ACT	2	20	SCK	SA	C	O/C	N/A	CVO	Q	2-0PT-09.2	
												DA	RO	2-0PT-11.1.2.3	
2-E41-F022	HPCI TURB EXH DRN POT DRN VLV TO TORUS	D-02523 SH0002 / C-6	C	ACT	2	2	SCK	SA	C	O/C	N/A	CVC	II	2-0PT-11.1.2.3	
												CVO	II	2-0PT-11.1.2.3	
2-E41-F023A	E41-PDT-N004 & -PS-N001A STM LN PRESS EXCESS FLO	D-02523 SH0001 / F-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV14R	VRR-03
												CVO	10Y	2-0MST-EFCV14R	VRR-03
												RPI	10Y	2-0MST-EFCV14R	VRR-03
2-E41-F023B	E41-PDT-N005 & -PS-N001B STM LN PRESS EXCESS FLO	D-02523 SH0001 / D-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV17R	VRR-03
												CVO	10Y	2-0MST-EFCV17R	VRR-03
												RPI	10Y	2-0MST-EFCV17R	VRR-03
2-E41-F023C	E41-PDT-N004 & -PS-N001C STM LN PRESS EXCESS FLO	D-02523 SH0001 / F-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV14R	VRR-03
												CVO	10Y	2-0MST-EFCV14R	VRR-03
												RPI	10Y	2-0MST-EFCV14R	VRR-03
2-E41-F023D	E41-PDT-N005 & -PS-N001D STM LN PRESS EXCESS FLO	D-02523 SH0001 / E-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV17R	VRR-03
												CVO	10Y	2-0MST-EFCV17R	VRR-03
												RPI	10Y	2-0MST-EFCV17R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E41-F042	HPCI SUPPRESSION POOL SUCTION VALVE	D-02523 SH0002 / A-6	B	ACT	2	16	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-09.7	
												FSC	Q	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	
2-E41-F075	TURBINE EXHAUST VACUUM BREAKER VALVE	D-02523 SH0002 / B-8	A	ACT	2	2	GL	MO	O	O/C	FAI	RPI	2Y	2-0PT-09.7	
												LTJ	J	2-0PT-20.3-153B	
												FSC	Q	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	
2-E41-F076	VACCUM BREAKER LINE CHECK VALVE	D-02523 SH0002 / B-8	C	ACT	2	2	CK	SA	C	O/C	N/A	CVC	II	2-0PT-20.10	
												CVO	II	2-0PT-20.10	
2-E41-F077	VACCUM BREAKER LINE CHECK VALVE	D-02523 SH0002 / B-8	C	ACT	2	2	CK	SA	C	O/C	N/A	CVC	II	2-0PT-20.10	
												CVO	II	2-0PT-20.10	
2-E41-F079	TURBINE EXHAUST VACUUM BREAKER VALVE	D-02523 SH0002 / B-8	A	ACT	2	2	GL	MO	O	O/C	FAI	RPI	2Y	2-0PT-09.7	
												LTJ	J	2-0PT-20.3-153A	
												FSC	Q	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	
2-E41-SV-1218D	TORUS RIP VLV TO E41-LSH-N015A	D-02523 SH0002 / A-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E41-SV-1219D	TORUS RIP VLV TO E41-LSH-N015A	D-02523 SH0002 / B-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E41-SV-1220D	TORUS RIP VLV TO E41-LSH-N015A	D-02523 SH0002 / A-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E41-SV-1221D	TORUS RIP VLV TO E41-LSH-N015A	D-02523 SH0002 / A-7	B	PASS	2	1	GL	SO	O	O	O	RPI	2Y	2-0PT-20.4	
2-E41-V159	HPCI PMP DISCH LN CHECK VLV TO FW SYS SUP LINE	D-02523 SH0001 / A-7	C	ACT	1	14	CK	SA	C	O/C	N/A	CVC CVO	II II	2-0PT-20.12 2-0PT-11.1.2.3 2-0PT-20.12 2-0PT-11.1.2.3	
2-E41-V60	HPCI BAROMETRIC CNDSR VAC PMP DISCH CHV	D-02523 SH0002 / D-2	C	ACT	2	2	CK	SA	C	C	N/A	DA	II	2-0PT-11.1.2.3	
2-E51-F001	RCIC TURBINE STEAM EXHAUST TO TORUS	D-02529 SH0002 / B-6	C	ACT	2	8	SCK	SA	C	O/C	N/A	CVC CVO	II II	2-0PT-11.1.2.3 2-0PT-10.1.1	
2-E51-F007	RCIC STEAM SUPPLY INBOARD ISOLATION VLV	D-02529 SH0001 / E-7	A	ACT	1	3	GA	MO	O	O/C	FAI	RPI LTJ FSC FSO ST-C ST-O	2Y J Q Q Q Q	2-0PT-10.2.1 2-0PT-20.3-156A 2-0PT-10.1.8 2-0PT-10.1.8 2-0PT-10.1.8 2-0PT-10.1.8	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E51-F008	RCIC STEAM SUPPLY LINE OUTBOARD ISOL VLV	D-02529 SH0001 / E-6	A	ACT	1	3	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												LTJ	J	2-0PT-20.3-156B	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	
2-E51-F013	RCIC INJECTION VALVE	D-02529 SH0001 / B-6	A	ACT	1	4	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												LTJ	J	2-0PT-20.3-165	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	
2-E51-F019	RCIC MIN FLO BYPASS TO SUPP POOL VLV	D-02529 SH0002 / C-3	B	ACT	2	2	GL	MO	C	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E51-F031	RCIC SUPPRESSION POOL SUCTION VALVE	D-02529 SH0002 / A-6	B	ACT	2	6	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	
2-E51-F040	RCIC TURBINE STEAM TO SUPPRESSION POOL CHECK VAL	D-02529 SH0002 / B-6	C	ACT	2	8	CK	SA	C	O/C	N/A	CVO	Q	2-0PT-10.1.1	
												CVC	RO	2-0PT-20.2-160	RFJ-18
2-E51-F043A	X-61F EXC FLO CHK VLV TO E51-PDT-N017 & E51-PS-N	D-02529 SH0001 / D-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV14R	VRR-03
												CVO	10Y	2-0MST-EFCV14R	VRR-03
												RPI	10Y	2-0MST-EFCV14R	VRR-03
2-E51-F043B	X-61F EXC FLO CHK VLV TO E51-PDT-N017 & E51-PS-N	D-02529 SH0001 / F-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV17R	VRR-03
												CVO	10Y	2-0MST-EFCV17R	VRR-03
												RPI	10Y	2-0MST-EFCV17R	VRR-03

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E51-F043C	X-61F EXC FLO CHK VLV TO E51-PDT-N017 & E51-PS-N	D-02529 SH0001 / D-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV14R	VRR-03
												CVO	10Y	2-0MST-EFCV14R	VRR-03
												RPI	10Y	2-0MST-EFCV14R	VRR-03
2-E51-F043D	X-61F EXC FLO CHK VLV TO E51-PDT-N017 & E51-PS-N	D-02529 SH0001 / F-7	C	ACT	1	.75	XCK	SA	O	O/C	N/A	CVC	10Y	2-0MST-EFCV17R	VRR-03
												CVO	10Y	2-0MST-EFCV17R	VRR-03
												RPI	10Y	2-0MST-EFCV17R	VRR-03
2-E51-F062	RCIC TURB EXH VACUUM BKR VLV DIV I	D-02529 SH0002 / B-7	A	ACT	2	2	GL	MO	O	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												LTJ	J	2-0PT-20.3-161B	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	
2-E51-F063	RCIC TURBINE EXHAUST VACUUM BREAKER CHECK VALVE	D-02529 SH0002 / B-8	C	ACT	2	2	CK	SA	C	O	N/A	BDC	II	2-0PT-20.10	
												CVO	II	2-0PT-20.10	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E51-F064	RCIC TURBINE EXHAUST VACUUM BREAKER CHECK VALVE	D-02529 SH0002 / B-8	C	ACT	2	2	CK	SA	C	O	N/A	BDC	II	2-0PT-20.10	
												CVO	II	2-0PT-20.10	
2-E51-F066	RCIC TURB EXH VACUUM BKR VLV DIV II	D-02529 SH0002 / B-8	A	ACT	2	2	GL	MO	O	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												LTJ	J	2-0PT-20.3-161A	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	
2-E51-V88	RCIC TIE TO FEEDWATER CHECK VALVE	D-02529 SH0001 / B-7	C	ACT	1	4	CK	SA	C	O/C	N/A	CVC	II	2-0PT-11.1.2.3	
												CVO	II	2-0PT-11.1.2.3	
2-G16-F003	DRYWELL FLOOR DRAIN INBRD ISOLATION VLV	D-02545 SH0003B / C-3	A	ACT	2	3	GA	AO	O	C	C	RPI	2Y	2-0PT-11.3	
												LTJ	J	2-0PT-20.3-162A	
												FC	Q	2-0PT-11.3	
												FSC	Q	2-0PT-11.3	
												ST-C	Q	2-0PT-11.3	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-G16-F004	DRYWELL FLOOR DRAIN INBRD ISOLATION VLV	D-02545 SH0003B / C-3	A	ACT	2	3	GA	AO	O	C	C	RPI	2Y	2-0PT-11.3	
												LTJ	J	2-0PT-20.3-162B	
												FC	Q	2-0PT-11.3	
												FSC	Q	2-0PT-11.3	
												ST-C	Q	2-0PT-11.3	
2-G16-F019	DRYWELL EQUIP DRN INBD ISOL VLV	D-02545 SH0003A / B-3	A	ACT	2	3	GA	AO	O	C	C	RPI	2Y	2-0PT-11.3	
												LTJ	J	2-0PT-20.3-163A	
												FC	Q	2-0PT-11.3	
												FSC	Q	2-0PT-11.3	
												ST-C	Q	2-0PT-11.3	
2-G16-F020	DRYWELL EQUIP DRN INBD ISOL VLV	D-02545 SH0003A / B-2	A	ACT	2	3	GA	AO	O	C	C	RPI	2Y	2-0PT-11.3	
												LTJ	J	2-0PT-20.3-163B	
												FC	Q	2-0PT-11.3	
												FSC	Q	2-0PT-11.3	
												ST-C	Q	2-0PT-11.3	
2-G31-F001	RWCU INLET LINE INBOARD ISOLATION VLV	D-02527 SH0001B / D-7	A	ACT	1	6	GA	MO	O	C	FAI	RPI	2Y	2-0PT-14.6	
												FSC	CS	2-0PT-14.6	CSJ-15
												ST-C	CS	2-0PT-14.6	CSJ-15
												LTJ	J	2-0PT-20.3-164A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-G31-F004	RWCU INLET LINE INBOARD ISOLATION VLV	D-02527 SH0001B / D-6	A	ACT	1	6	GA	MO	O	C	FAI	RPI	2Y	2-0PT-14.6	
												FSC	CS	2-0PT-14.6	CSJ-15
												ST-C	CS	2-0PT-14.6	CSJ-15
												LTJ	J	2-0PT-20.3-164B	
2-G31-F042	RWCU RETURN TO REACTOR MOTOR OP VLV	D-02527 SH0001B / E-5	A	ACT	1	4	GL	MO	O	C	FAI	RPI	2Y	2-0PT-14.6	
												FSC	CS	2-0PT-14.6	CSJ-15
												ST-C	CS	2-0PT-14.6	CSJ-15
												LTJ	J	2-0PT-20.3-165	
2-G41-V24	FUEL STO POOL CLEAN-UP RETURN DIF CHK VLV	D-02549 SH0001B / E-4	C	ACT	2	6	CK	SA	O	O/C	N/A	CVC	Q	2-0PT-24.6.2	
												CVO	Q	2-0PT-24.6.2	
2-G41-V8	FUEL STO POOL CLEAN-UP RETURN DIF CHK VLV	D-02549 SH0001B / E-4	C	ACT	2	6	CK	SA	O	O/C	N/A	CVC	Q	2-0PT-24.6.2	
												CVO	Q	2-0PT-24.6.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-RCC-SV-1222B	RCR PMP 1A CLR OUTLET SMPL PRI CONT ISV	D-02538 SH0001 / F-2	A	ACT	2	.75	GL	SO	O	C	O	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-167	
												FO	Q	2-0PT-02.2.1A	
												FSC	Q	2-0PT-02.2.1A	
												ST-C	Q	2-0PT-02.2.1A	
2-RCC-SV-1222C	RCR PMP 1A CLR OUTLET SMPL PRI CONT ISV	D-02538 SH0001 / E-2	A	ACT	2	.75	GL	SO	O	C	O	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-167	
												FO	Q	2-0PT-02.2.1A	
												FSC	Q	2-0PT-02.2.1A	
												ST-C	Q	2-0PT-02.2.1A	
2-RCC-V28	RBCCW DRYWELL DISCHARGE HEADER ISOL VALVE	D-02538 SH0001 / D-8	A	ACT	2	8	GA	MO	O	C	FAI	RPI	2Y	2-0PT-22.2	
												FSC	CS	2-0PT-22.2	CSJ-11
												ST-C	CS	2-0PT-22.2	CSJ-11
												LTJ	J	2-0PT-31.6	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-RCC-V52	RBCCW DRYWELL DISCHARGE HEADER ISOL VALVE	D-02538 SH0001 / E-7	A	ACT	2	8	GA	MO	O	C	FAI	RPI	2Y	2-0PT-22.2	
												FSC	CS	2-0PT-22.2	CSJ-11
												ST-C	CS	2-0PT-22.2	CSJ-11
												LTJ	J	2-0PT-31.6	
2-RNA-SV-5251	RNA DIV II N2 BACKUP SYS SV	D-07368 / E-2	A	ACT	2	.75	GL	SO	O	O/C	O	RPI	2Y	2-0PT-20.4	
												LTJ	J	2-0PT-20.3-170	
												FO	Q	2-0PT-31.6	
												FSC	Q	2-0PT-31.6	
												ST-C	Q	2-0PT-31.6	
												FSO	Q	2-0PT-31.6	
												ST-O	Q	2-0PT-31.6	
2-RNA-SV-5253	RNA DIV I N2 BACKUP SYS SV	D-07368 / C-2	A	ACT	2	.75	GL	SO	O	O/C	O	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-171	
												FO	Q	2-0PT-31.6	
												FSC	Q	2-0PT-31.6	
												ST-C	Q	2-0PT-31.6	
												FSO	Q	2-0PT-31.6	
												ST-O	Q	2-0PT-31.6	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-RNA-SV-5261	NON-INTERR AIR TO DRYWELL SOL VLV	D-07077 SH0003B / D-1	A	ACT	2	2	GL	SO	O	O/C	C	RPI	2Y	2-0PT-20.4	
												FC	CS	2-0PT-31.11	CSJ-12
												FSC	CS	2-0PT-31.11	CSJ-12
												ST-C	CS	2-0PT-31.11	CSJ-12
												FSO	CS	2-0PT-31.11	CSJ-12
												ST-O	CS	2-0PT-31.11	CSJ-12
												LTJ	J	2-0PT-20.3-169	
2-RNA-SV-5262	NON-INTERR AIR TO DRYWELL SOL VLV	D-07077 SH0003A / D-7	A	ACT	2	2	GL	SO	O	O/C	C	RPI	2Y	2-0PT-20.4	
												FC	CS	2-0PT-31.11	CSJ-12
												FSC	CS	2-0PT-31.11	CSJ-12
												ST-C	CS	2-0PT-31.11	CSJ-12
												FSO	CS	2-0PT-31.11	CSJ-12
												ST-O	CS	2-0PT-31.11	CSJ-12
												LTJ	J	2-0PT-20.3-168	
2-RNA-V313	DIV I ADS VALVES N2 BACKUP CHECK VALVE	D-07007 / E-3	C	ACT	2	.75	CK	SA	O/C	O/C	N/A	CVC	RO	2-0PT-20.9	RFJ-12
												CVO	RO	2-0PT-31.1	RFJ-12

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-RNA-V314	DIV I ADS VALVES N2 BACKUP CHECK VALVE	D-07007 / F-6	C	ACT	2	.75	CK	SA	O/C	O/C	N/A	CVC	RO	2-0PT-20.9	RFJ-12
												CVO	RO	2-0PT-31.1	RFJ-12
2-RNA-V350	DIV.II N2 BACKUP FOR INSTR AIR SUPPLY	D-07007 / D-7	A/C	ACT	2	.75	CK	SA	O/C	O/C	N/A	LTJ	J	2-0PT-20.3-169A	
												CVC	RO	2-0PT-20.3-169A	RFJ-13
												CVO	RO	2-0PT-31.1	RFJ-13
2-RNA-V351	DIV.I NON INTERR INSTR AIR N2 BACKUP	D-07007 / D-2	A/C	ACT	2	.75	CK	SA	O/C	O/C	N/A	LTJ	J	2-0PT-20.3-168A	
												CVC	RO	2-0PT-20.3-168A	RFJ-13
												CVO	RO	2-0PT-31.1	RFJ-13
2-RXS-SV-4186	LIQUID SAMPLE RETURN INBD ISV	D-07327 SH0001 / A-7	A	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-172	
												FC	Q	2-0PT-15.8	
												FSC	Q	2-0PT-15.8	
												ST-C	Q	2-0PT-15.8	
2-RXS-SV-4187	LIQUID SAMPLE RETURN OUTBD ISV	D-07327 SH0001 / A-7	A	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-173	
												FC	Q	2-0PT-15.8	
												FSC	Q	2-0PT-15.8	
												ST-C	Q	2-0PT-15.8	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-RXS-SV-4188	GAS SAMPLE RETURN INBOARD ISV	D-07327 SH0001 / B-7	A	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-174	
												FC	Q	2-0PT-15.8	
												FSC	Q	2-0PT-15.8	
												ST-C	Q	2-0PT-15.8	
2-RXS-SV-4189	GAS SAMPLE RETURN OUTBOARD ISV	D-07327 SH0001 / B-7	A	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	2PT-20.4	
												LTJ	J	2-0PT-20.3-175	
												FC	Q	2-0PT-15.8	
												FSC	Q	2-0PT-15.8	
												ST-C	Q	2-0PT-15.8	
2-RXS-SV-4192	GAS SAMPLE RETURN OUTBOARD ISV	D-07327 SH0001 / B-1	B	ACT	2	.5	GL	SO	C	C	C	RPI	2Y	2PT-20.4	
												FC	Q	2-0PT-15.7	
												FSC	Q	2-0PT-15.7	
												ST-C	Q	2-0PT-15.7	
2-SGT-V8	PRIMARY CONTAINMENT POST LOCA VENT VALVE	F-04073 SH0003 / E-7	B	PASS	2	.5	ANG	MO	O	O	FAI	RPI	2Y	2-0PT-15.7	
2-SGT-V9	PRIMARY CONTAINMENT POST LOCA VENT VALVE	F-04073 SH0003 / E-7	B	PASS	2	.5	ANG	MO	O	O	FAI	RPI	2Y	2-0PT-15.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-PV-116	CONV SW PMP 2A DISCHARGE STRAINER PCV	D-02041 SH0001 / C-1	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
2-SW-PV-118	CONV SW PMP 2B DISCHARGE STRAINER PCV	D-02041 SH0001 / C-4	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
2-SW-PV-120	CONV SW PMP 2C DISCHARGE STAINER PCV	D-02041 SH0001 / C-6	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
2-SW-PV-138	NUC SW PMP 2A DISCHARGE STRAINER PCV	D-02041 SH0002 / C-1	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-PV-140	NUC SW PMP 2B DISCHARGE STRAINER PCV	D-02041 SH0002 / C-4	B	ACT	3	2	BL	AO	C	O/C	O	FO	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
2-SW-V101	CONVENTIONAL SERVICE WATER SUPPLY VALVE	D-02537 SH0001 / D-4	B	ACT	3	24	BF	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.1.4A	
												FSC	Q	2-0PT-08.1.4A	
												FSO	Q	2-0PT-08.1.4A	
												ST-C	Q	2-0PT-08.1.4A	
												ST-O	Q	2-0PT-08.1.4A	
2-SW-V102	CONVENTIONAL-NUCLEAR HEADER CROSS-TIE VLV	D-02537 SH0002 / D-1	B	ACT	3	24	BF	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.1.4A	
												FSC	Q	2-0PT-08.1.4A	
												FSO	Q	2-0PT-08.1.4A	
												ST-C	Q	2-0PT-08.1.4A	
												ST-O	Q	2-0PT-08.1.4A	
2-SW-V103	NUCLEAR HDR TO RBCCW HX ISOL VLV	D-02537 SH0002 / E-8	B	ACT	3	20	BF	MO	O	C	FAI	RPI	2Y	2-0PT-08.1.4A	
												FSC	Q	2-0PT-08.1.4A	
												ST-C	Q	2-0PT-08.1.4A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V105	NUCLEAR SERVICE WATER SUPPLY VALVE	D-02537 SH0002 / E-7	B	ACT	3	24	BF	MO	C	O/C	FAI	RPI	2Y	2-0PT-08.1.4B	
												FSC	Q	2-0PT-08.1.4B	
												FSO	Q	2-0PT-08.1.4B	
												ST-C	Q	2-0PT-08.1.4B	
												ST-O	Q	2-0PT-08.1.4B	
2-SW-V106	RBCCW HX SERVICE WATER ISOL VALVE	D-02537 SH0001 / F-7	B	ACT	3	20	BF	MO	O	C	FAI	RPI	2Y	2-0PT-08.1.4A	
												FSC	Q	2-0PT-08.1.4A	
												ST-C	Q	2-0PT-08.1.4A	
2-SW-V111	CONVENTIONAL SW HDR TO VITAL HDR ISOL VLV	D-02537 SH0001 / C-2	B	ACT	3	6	BF	MO	C	O/C	FAI	RPI	2Y	2-0PT-24.1.2	
												FSC	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-C	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V117	NUCLEAR SW HDR TO VITAL HDR ISOL VLV	D-02537 SH0002 / C-7	B	ACT	3	6	BF	MO	C	O/C	FAI	RPI	2Y	2-0PT-24.1.2	
												FSC	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-C	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	
2-SW-V118	VITAL HEADER CROSS-TIE VALVE	D-02537 SH0001 / B-6	B	ACT	3	6	BF	MO	O	O/C	FAI	RPI	2Y	2-0PT-24.1.2	
												FSC	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-C	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	
2-SW-V123	VA-2D-FCU-RB SERV WTR DISCHARGE VALVE	D-02537 SH0002 / D-7	B	ACT	3	2	PL	AO	C	O	O	FO	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	
2-SW-V124	RHR PMP RM B COOLER SW DISCHARGE VALVE	D-02537 SH0002 / B-6	B	ACT	3	6	BF	AO	C	O	O	FO	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	
2-SW-V125	RHR PMP 2D SEAL HX OUTLET VLV	D-02537 SH0002 / A-4	B	ACT	3	1	PL	AO	C	O	O	FO	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V126	RHR PMP 2B SEAL COOLING HX OUTLET VALVE	D-02537 SH0002 / A-5	B	ACT	3	1	PL	AO	C	O	O	FO	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	
2-SW-V128	VA-2C-FCU-RB SERVICE WATER OUTLET VLV	D-02537 SH0001 / C-2	B	ACT	3	2	PL	AO	C	O	O	FO	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	
2-SW-V129	RHR PUMP ROOM A COOLER SERVICE WATER DISCHARGE VALVE	D-02537 SH0001 / B-3	B	ACT	3	6	BF	AO	C	O	O	FO	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	
2-SW-V13	CONV SW PMP A DISCH VLV TO CONV HEADER	D-02041 SH0001 / E-3	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
2-SW-V130	RHR PMP 2A SEAL COOLING HX SW OUTLET VLV	D-02537 SH0001 / A-5	B	ACT	3	1	PL	AO	C	O	O	FO	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V131	RHR PMP 2C SEAL COOLING HX SW OUTLET VLV	D-02537 SH0001 / A-4	B	ACT	3	1	PL	AO	C	O	O	FO	Q	2-0PT-24.1.2	
												FSO	Q	2-0PT-24.1.2	
												ST-O	Q	2-0PT-24.1.2	
2-SW-V136	RHR SW PUMP A COOLER INLET VALVE	D-02537 SH0001 / E-5	B	ACT	3	1.5	PL	AO	C	O	O	RPI	2Y	2-0PT-08.1.4A	
												FO	Q	2-0PT-08.1.4A	
												FSO	Q	2-0PT-08.1.4A	
												ST-O	Q	2-0PT-08.1.4A	
2-SW-V137	RHR SW PUMP C COOLER INLET VALVE	D-02537 SH0001 / E-7	B	ACT	3	1.5	PL	AO	C	O	O	RPI	2Y	2-0PT-08.1.4A	
												FO	Q	2-0PT-08.1.4A	
												FSO	Q	2-0PT-08.1.4A	
												ST-O	Q	2-0PT-08.1.4A	
2-SW-V138	RHR SW PUMP B COOLER INLET VALVE	D-02537 SH0002 / E-2	B	ACT	3	1.5	PL	AO	C	O	O	RPI	2Y	2-0PT-08.1.4B	
												FO	Q	2-0PT-08.1.4B	
												FSO	Q	2-0PT-08.1.4B	
												ST-O	Q	2-0PT-08.1.4B	
2-SW-V139	RHR SW PUMP D COOLER INLET VALVE	D-02537 SH0002 / E-4	B	ACT	3	1.5	PL	AO	C	O	O	RPI	2Y	2-0PT-08.1.4B	
												FO	Q	2-0PT-08.1.4B	
												FSO	Q	2-0PT-08.1.4B	
												ST-O	Q	2-0PT-08.1.4B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V14	CONV SW PMP A DISCH VLV TO NUCLEAR HEADER	D-02041 SH0001 / E-1	B	ACT	3	20	BF	MO	C	O/C	FAI	RPI	2Y	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
2-SW-V144	RHR SERVICE WTR HDR WELL WATER CHECK VLV	D-02537 SH0002 / D-1	C	ACT	3	1.5	CK	SA	O	C	N/A	BDO	II	2-0PT-11.1.2.3	
												CVC	II	2-0PT-11.1.2.3	
2-SW-V148	RHR SERVICE WTR HDR WELL WATER CHECK VLV	D-02537 SH0002 / D-2	C	ACT	3	1.5	CK	SA	O	C	N/A	BDO	II	2-0PT-11.1.2.3	
												CVC	II	2-0PT-11.1.2.3	
2-SW-V15	CONV SW PMP B DISCH VLV TO CONV HEADER	D-02041 SH0001 / E-5	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V16	CONV SW PMP B DISCH VLV TO NUCLEAR HEADER	D-02041 SH0001 / E-4	B	ACT	3	20	BF	MO	C	O/C	FAI	RPI	2Y	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
2-SW-V17	CONV SW PMP C DISCH VLV TO CONV HEADER	D-02041 SH0001 / E-7	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
2-SW-V18	CONV SW PMP C DISCH VLV TO NUCLEAR HEADER	D-02041 SH0001 / E-6	B	ACT	3	20	BF	MO	C	O/C	FAI	RPI	2Y	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V19	NUCLEAR HEADER WTR PMP A DISCHARGE VALVE	D-02041 SH0002 / E-1	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
2-SW-V192	WELL WATER TO VITAL SERVICE HEADER CHV	D-02537 SH0001 / B-7	C	ACT	3	1.5	CK	SA	C	C	N/A	BDO	II	2-0PT-11.1.2.3	
												CVC	II	2-0PT-11.1.2.3	
2-SW-V20	NUCLEAR HEADER SW PUMP B DISCHARGE VALVE PM 89-026	D-02041 SH0002 / E-4	B	ACT	3	20	BF	MO	O	O/C	FAI	RPI	2Y	2PT-24.1-2	
												FSC	Q	2PT-24.1-2	
												FSO	Q	2PT-24.1-2	
												ST-C	Q	2PT-24.1-2	
												ST-O	Q	2PT-24.1-2	
2-SW-V21	CONVENTIONAL SW PUMP A DISCH CHECK VALVE	D-02041 SH0001 / D-1	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	2PT-24.1-2	
												CVO	II	2PT-24.1-2	
2-SW-V22	CONVENTIONAL SW PUMP B DISCH CHECK VALVE	D-02041 SH0001 / D-4	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	2PT-24.1-2	
												CVO	II	2PT-24.1-2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V23	CONVENTIONAL SW PUMP C DISCH CHECK VALVE	D-02041 SH0001 / D-6	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	2PT-24.1-2	
												CVO	II	2PT-24.1-2	
2-SW-V24	NUCLEAR HEADER SW PUMP A CHECK VALVE PM 87-208	D-02041 SH0002 / D-1	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	2PT-24.1-2	
												CVO	II	2PT-24.1-2	
2-SW-V25	NUCLEAR HEADER SW PUMP B DISCHARGE VALVE PM 87-208	D-02041 SH0002 / D-4	C	ACT	3	20	CK	SA	O/C	O/C	N/A	CVC	II	2PT-24.1-2	
												CVO	II	2PT-24.1-2	
2-SW-V294	SW SUPPLY OUTBRD ISV TO CHLORINATION SYS	D-02041 SH0001 / F-7	B	PASS	3	10	BF	MO	C	C	FAI	RPI	2Y	2-0PT-24.1.2	
2-SW-V36	SW TO CW PUMPS BRGS INBOARD ISOL VALVE	D-02041 SH0001 / F-3	B	ACT	3	4	BF	MO	O	C	FAI	RPI	2Y	2-0PT-24.4	
												FSC	RO	2-0PT-24.4	RFJ-16
												ST-C	RO	2-0PT-24.4	RFJ-16
2-SW-V4	SW HDR INBOARD SUPPLY VALVE TO TURB BLDG	D-02041 SH0002 / F-7	B	ACT	3	30	BF	MO	O	C	FAI	RPI	2Y	2-0PT-24.4	
												FSC	CS	2-0PT-24.4	CSJ-10
												ST-C	CS	2-0PT-24.4	CSJ-10

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V679	DG1 ENG JKT WTR CLR SERVICE WTR INLET ISV	D-02274 SH0001 / C-3	B	ACT	3	6	BF	MO	C	O/C	FAI	RPI	2Y	2-1MST-SW12Q	
												FSC	Q	2-1MST-SW12Q	
												FSO	Q	2-1MST-SW12Q	
												ST-C	Q	2-1MST-SW12Q	
												ST-O	Q	2-1MST-SW12Q	
2-SW-V680	DG2 ENG JKT WTR CLR SERVICE WTR INLET ISV	D-02274 SH0001 / C-7	B	ACT	3	6	BF	MO	C	O/C	FAI	RPI	2Y	2-1MST-SW12Q	
												FSC	Q	2-1MST-SW12Q	
												FSO	Q	2-1MST-SW12Q	
												ST-C	Q	2-1MST-SW12Q	
												ST-O	Q	2-1MST-SW12Q	
2-SW-V681	DG3 ENG JKT WTR CLR SERVICE WTR INLET ISV	D-02274 SH0002 / C-3	B	ACT	3	6	BF	MO	C	O/C	FAI	RPI	2Y	2-2MST-SW12Q	
												FSC	Q	2-2MST-SW12Q	
												FSO	Q	2-2MST-SW12Q	
												ST-C	Q	2-2MST-SW12Q	
												ST-O	Q	2-2MST-SW12Q	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V682	DG4 ENG JKT WTR CLR SERVICE WTR INLET ISV	D-02274 SH0002 / C-7	B	ACT	3	6	BF	MO	C	O/C	FAI	RPI	2Y	2-2MST-SW12Q	
												FSC	Q	2-2MST-SW12Q	
												FSO	Q	2-2MST-SW12Q	
												ST-C	Q	2-2MST-SW12Q	
												ST-O	Q	2-2MST-SW12Q	
2-SW-V683	DG #1 JACKET WTR COOLER SUPPLY LINECK VLV	D-02274 SH0001 / C-3	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC	II	2-0PT-11.1.2.3	
												CVO	II	2-1MST-SW12Q	
2-SW-V684	DG #2 JACKET WTR COOLER SUPPLY LINE CK VLV	D-02274 SH0001 / C-7	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC	II	2-0PT-11.1.2.3	
												CVO	II	2-1MST-SW12Q	
2-SW-V685	DG #3 JACKET WTR COOLER SUPPLY LINE CK VLV	D-02274 SH0002 / C-3	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC	II	2-0PT-11.1.2.3	
												CVO	II	2-2MST-SW12Q	
2-SW-V686	DG #4 JACKET WTR COOLER SUPPLY LINE CK VLV	D-02274 SH0002 / C-6	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC	II	2-0PT-11.1.2.3	
												CVO	II	2-2MST-SW12Q	
2-VA-2A-BFCV-RB	SGT-2A-RB DISCHARGE LINE CHECK VLV	F-04073 SH0003 / D-1	C	ACT	2	18	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-15.7	
												CVO	Q	2-0PT-15.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-VA-2A-BFV-RB	PURGE SYSTEM EXH OUTLET VALVE	F-04073 SH0003 / F-2	B	ACT	2	24	BF	MO	C	C	FAI	RPI	2Y	2-0PT-15.7	
												FSC	Q	2-0PT-15.7	
												ST-C	Q	2-0PT-15.7	
2-VA-2B-BFCV-RB	SGT-2B-RB DISCHARGE LINE CHECK VLV	F-04073 SH0003 / D-5	C	ACT	2	18	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-15.7	
												CVO	Q	2-0PT-15.7	
2-VA-2B-BFV-RB	SGT FILTER TRAIN 'A' OUTLET VALVE	F-04073 SH0003 / D-1	B	PASS	2	18	BF	MO	O	O	FAI	RPI	2Y	2-0PT-15.7	
2-VA-2C-BFV-RB	SGT FILTER TRAIN 'A' INLET VALVE	F-04073 SH0003 / D-4	B	ACT	2	18	BF	MO	O	O	FAI	RPI	2Y	2-0PT-15.7	
												FSO	Q	2-0PT-15.7	
												ST-O	Q	2-0PT-15.7	
2-VA-2D-BFV-RB	SGT RX BLDG SUCTION VALVE	F-04073 SH0003 / E-4	B	ACT	2	18	BF	MO	O	O/C	FAI	RPI	2Y	2-0PT-15.7	
												FSC	Q	2-0PT-15.7	
												FSO	Q	2-0PT-15.7	
												ST-C	Q	2-0PT-15.7	
												ST-O	Q	2-0PT-15.7	
2-VA-2E-BFV-RB	SGT FILTER TRAIN 'B' OUTLET VALVE	F-04073 SH0003 / D-5	B	PASS	2	18	BF	MO	O	O	FAI	RPI	2Y	2-0PT-15.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-VA-2F-BFV-RB	SGT PRIMARY CONTAINMENT SUCT VALVE	F-04073 SH0003 / E-6	B	ACT	2	18	BF	MO	C	O/C	FAI	RPI	2Y	2-0PT-15.7	
												FSC	Q	2-0PT-15.7	
												FSO	Q	2-0PT-15.7	
												ST-C	Q	2-0PT-15.7	
												ST-O	Q	2-0PT-15.7	
2-VA-2G-BFV-RB	SGT FILTER TRAIN 'B' INLET VALVE	F-04073 SH0003 / D-8	B	ACT	2	18	BF	MO	O	O	FAI	RPI	2Y	2-0PT-15.7	
												FSO	Q	2-0PT-15.7	
												ST-O	Q	2-0PT-15.7	
2-VA-2H-BFV-RB	SGT RX BLDG SUCTION VALVE	F-04073 SH0003 / E-8	B	ACT	2	18	BF	MO	O	O/C	FAI	RPI	2Y	2-0PT-15.7	
												FSC	Q	2-0PT-15.7	
												FSO	Q	2-0PT-15.7	
												ST-C	Q	2-0PT-15.7	
												ST-O	Q	2-0PT-15.7	
2-VA-2I-BFV-RB	PURGE EXHAUST SYSTEM INLET ISOLATION VALVE	F-04073 SH0003 / F-6	B	ACT	2	30	BF	MO	C	C	FAI	RPI	2Y	2-0PT-15.7	
												FSC	Q	2-0PT-15.7	
												ST-C	Q	2-0PT-15.7	

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 2

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F024A	INSTR AIR SUPPLY CHECK VLV TO B21-F022A	D-07007 / C-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-95A 2-0PT-31.1	RFJ-03 RFJ-03
2-B21-F024B	INSTR AIR SUPPLY CHECK VLV TO B21-F022B	D-07007 / C-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-95A 2-0PT-31.1	RFJ-03 RFJ-03
2-B21-F024C	INSTR AIR SUPPLY CHECK VLV TO B21-F022C	D-07007 / C-6	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-95A 2-0PT-31.1	RFJ-03 RFJ-03
2-B21-F024D	INSTR AIR SUPPLY CHECK VLV TO B21-F022D	D-07007 / C-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-95A 2-0PT-31.1	RFJ-03 RFJ-03
2-B21-F029A	INSTR AIR SUPPLY CHECK VLV TO B21-F028A PM 84-	D-07206 / B-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	2-0PT-95 2-0PT-95	CSJ-02 CSJ-02
2-B21-F029B	INSTR AIR SUPPLY CHECK VLV TO B21-F028B PM 84-	D-07206 / B-3	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	2-0PT-95 2-0PT-95	CSJ-02 CSJ-02
2-B21-F029C	INSTR AIR SUPPLY CHECK VLV TO B21-F028C PM 84-	D-07206 / B-7	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	2-0PT-95 2-0PT-95	CSJ-02 CSJ-02

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F029D	INSTR AIR SUPPLY CHECK VLV TO B21-F028D PM 84-	D-07206 / B-6	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	2-0PT-95 2-0PT-95	CSJ-02 CSJ-02
2-B21-F036A	INSTR AIR SUPPLY CHECK VLV TO B21-F013A PM 84-297	D-07007 / E-4	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036B	INSTR AIR SUPPLY CHECK VLV TO B21-F013B PM 84-297	D-07007 / E-2	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036C	INSTR AIR SUPPLY CHECK VLV TO B21-F013C PM 84-297	D-07007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036D	INSTR AIR SUPPLY CHECK VLV TO B21-F013D PM 84-297	D-07007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036E	INSTR AIR SUPPLY CHECK VLV TO B21-F013E PM 84-297	D-07007 / E-2	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036F	INSTR AIR SUPPLY CHECK VLV TO B21-F013F PM 84-297	D-07007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-F036G	INSTR AIR SUPPLY CHECK VLV TO B21-F013G PM 84-297	D-07007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036H	INSTR AIR SUPPLY CHECK VLV TO B21-F013H PM 84-297	D-07007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036J	INSTR AIR SUPPLY CHECK VLV TO B21-F013J PM 84-297	D-07007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036K	INSTR AIR SUPPLY CHECK VLV TO B21-F013K PM 84-297	D-07007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-F036L	INSTR AIR SUPPLY CHECK VLV TO B21-F013L PM 84-297	D-07007 / E-4	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27A	INSTR AIR SUPPLY CHECK VLV TO B21-F013A PM 84-297	D-07007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27B	INSTR AIR SUPPLY CHECK VLV TO B21-F013B	D-07007 / E-2	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27C	INSTR AIR SUPPLY CHECK VLV TO B21-F013C PM 84-297	D-07007 / E-4	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-V27D	INSTR AIR SUPPLY CHECK VLV TO B21-F013D PM 84-297	D-07007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27E	INSTR AIR SUPPLY CHECK VLV TO B21-F013E	D-07007 / E-3	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27F	INSTR AIR SUPPLY CHECK VLV TO B21-F013F	D-07007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27G	INSTR AIR SUPPLY CHECK VLV TO B21-F013G	D-07007 / E-6	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27H	INSTR AIR SUPPLY CHECK VLV TO B21-F013H PM 84-297	D-07007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27J	INSTR AIR SUPPLY CHECK VLV TO B21-F013J PM 84-297	D-07007 / E-5	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27K	INSTR AIR SUPPLY CHECK VLV TO B21-F013K PM 84-297	D-07007 / E-8	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	
2-B21-V27L	INSTR AIR SUPPLY CHECK VLV TO B21-F013L PM 84-297	D-07007 / E-2	Aug-A/C	ACT	NC	.75	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	2-0PT-20.8 2-0PT-31.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-V28A	INSTR AIR SUPPLY CHECK VLV TO B21-F022A	D-07007 / C-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-95A 2-0PT-31.1	RFJ-03 RFJ-03
2-B21-V28B	INSTR AIR SUPPLY CHECK VLV TO B21-F022B	D-07007 / C-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-95A 2-0PT-31.1	RFJ-03 RFJ-03
2-B21-V28C	INSTR AIR SUPPLY CHECK VLV TO B21-F022C	D-07007 / C-6	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-95A 2-0PT-31.1	RFJ-03 RFJ-03
2-B21-V28D	INSTR AIR SUPPLY CHECK VLV TO B21-F022D	D-07007 / C-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-95A 2-0PT-31.1	RFJ-03 RFJ-03
2-B21-V29A	INSTR AIR SUPPLY CHECK VLV TO B21-F028A PM 84-297	D-07206 / B-4	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	2-0PT-95 2-0PT-95	CSJ-02 CSJ-02
2-B21-V29B	INSTR AIR SUPPLY CHECK VLV TO B21-F028B PM 84-297	D-07206 / B-3	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	2-0PT-95 2-0PT-95	CSJ-02 CSJ-02
2-B21-V29C	INSTR AIR SUPPLY CHECK VLV TO B21-F028C PM 84-297	D-07206 / B-6	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC CVO	CS CS	2-0PT-95 2-0PT-95	CSJ-02 CSJ-02

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-B21-V29D	INSTR AIR SUPPLY CHECK VLV TO B21-F028D PM 84-297	D-07206 / B-5	Aug-A/C	ACT	NC	1	CK	SA	O/C	O/C	N/A	CVC	CS	2-0PT-95	CSJ-02
												CVO	CS	2-0PT-31.9	CSJ-02
2-C12-CV-F010	SCRAM DISCH VOLUME OUTBOARD VENT VALVE	D-02517 SH0002B / D-4	Aug-B	ACT	SC	1	GA	AO	O	C	C	RPI	2Y	2-0PT-14.0	
												FC	Q	2-0PT-14.0	
												FSC	Q	2-0PT-14.0	
												ST-C	Q	2-0PT-14.0	
2-C12-CV-F011	C11-CV-F011 SCRAM DISCH VOLUME OUTBOARD DRAIN	D-02517 SH0002B / B-4	Aug-B	ACT	SC	2	GA	AO	O	C	C	RPI	2Y	2-0PT-14.0	
												FC	Q	2-0PT-14.0	
												FSC	Q	2-0PT-14.0	
												ST-C	Q	2-0PT-14.0	
2-C12-V139	SCRAM DISCH VOLUME OUTBOARD VENT VALVE	D-02517 SH0002B / D-4	Aug-B	ACT	SC	1	GA	AO	O	C	C	RPI	2Y	2-0PT-14.0	
												FC	Q	2-0PT-14.0	
												FSC	Q	2-0PT-14.0	
												ST-C	Q	2-0PT-14.0	
2-C12-V140	SCRAM DISCH VOLUME INBOARD DRAIN VALVE	D-02517 SH0002B / B-4	Aug-B	ACT	SC	2	GA	AO	O	C	C	RPI	2Y	2-0PT-14.0	
												FC	Q	2-0PT-14.0	
												FSC	Q	2-0PT-14.0	
												ST-C	Q	2-0PT-14.0	
2-C51-J004A-SHEAR-VLV	TIP SHEAR VALVE	F-07081 / B-3	Aug-D	ACT	NC	.37	EX	EXP	O	C	N/A	EXP	5Y	2-0MST-TIP11R	
2-C51-J004B-SHEAR-VLV	TIP SHEAR VALVE	F-07081 / B-3	Aug-D	ACT	NC	.37	EX	EXP	O	C	N/A	EXP	5Y	2-0MST-TIP11R	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-C51-J004C-SHEAR-VLV	TIP SHEAR VALVE	F-07081 / B-3	Aug-D	ACT	NC	.37	EX	EXP	O	C	N/A	EXP	5Y	2-0MST-TIP11R	
2-C51-J004D-SHEAR-VLV	TIP SHEAR VALVE	F-07081 / B-3	Aug-D	ACT	NC	.37	EX	EXP	O	C	N/A	EXP	5Y	2-0MST-TIP11R	
2-CAC-CV-2713	CAD VAPORIZER A INLET VALVE	D-02560 SH0002A / D-6	Aug-B	ACT	SC	.75	GA	AO	C	O/C	C	RPI	2Y	2PT-16.3	
												FC	Q	2PT-16.3	
												FSC	Q	2PT-16.3	
												FSO	Q	2PT-16.3	
												ST-C	Q	2PT-16.3	
												ST-O	Q	2PT-16.3	
2-CAC-CV-2714	CAD VAPORIZER B INLET VALVE	D-02560 SH0002A / D-5	Aug-B	ACT	SC	.75	GA	AO	C	O/C	C	RPI	2Y	2PT-16.3	
												FC	Q	2PT-16.3	
												FSC	Q	2PT-16.3	
												FSO	Q	2PT-16.3	
												ST-C	Q	2PT-16.3	
												ST-O	Q	2PT-16.3	
2-CAC-CV-2715	CAD LOOP A/LOOP B CROSS-TIE VALVE	D-02560 SH0002A / B-5	Aug-B	ACT	SC	.75	GA	AO	C	O/C	C	RPI	2Y	2PT-16.3	
												FC	Q	2PT-16.3	
												FSC	Q	2PT-16.3	
												FSO	Q	2PT-16.3	
												ST-C	Q	2PT-16.3	
												ST-O	Q	2PT-16.3	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-CV-2716	CAD LOOP A/LOOP B CROSS-TIE VALVE	D-02560 SH0002A / B-5	Aug-B	ACT	SC	.75	GA	AO	C	O/C	C	RPI	2Y	2PT-16.3	
												FC	Q	2PT-16.3	
												FSC	Q	2PT-16.3	
												FSO	Q	2PT-16.3	
												ST-C	Q	2PT-16.3	
												ST-O	Q	2PT-16.3	
2-CAC-CV-2889	INSTR AIR BACKUP FROM CAD SYS ISV	D-02560 SH0002A / E-3	Aug-B	ACT	SC	1	GA	AO	C	O/C	O	RPI	2Y	2PT-16.3	
												ST-C	Q	2PT-16.3	V-05
												ST-O	Q	2PT-16.3	V-05
												FSC	Q	2PT-16.3	
												FSO	Q	2PT-16.3	
2-CAC-CV-2890	INSTR AIR BACKUP FROM CAD SYS ISV	D-02560 SH0002A / E-3	Aug-B	ACT	SC	1	GA	AO	C	O/C	O	RPI	2Y	2PT-16.3	
												ST-C	Q	2PT-16.3	V-05
												ST-O	Q	2PT-16.3	V-05
												FSC	Q	2PT-16.3	
												FSO	Q	2PT-16.3	
2-CAC-PSV1	CAD LN2 STORAGE TANK DISCHARGE LINE RV	D-02560 SH0002A / D-5	Aug-C	ACT	SC	.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-CAC-PSV2	CAD LN2 STORAGE TANK DISCHARGE LINE RV	D-02560 SH0002A / D-6	Aug-C	ACT	SC	.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-CAC-PSV3	CAD LN2 STOR TANK PRESS BUILDUP LINE RV	D-02560 SH0002A / F-5	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-CAC-PSV4	CAD VAPORIZER A DISCHARGE RELIEF VALVE	D-02560 SH0002A / C-6	Aug-C	ACT	SC	.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-CAC-PSV5	CAD VAPORIZER B DISCHARGE RELIEF VALVE	D-02560 SH0002A / C-5	Aug-C	ACT	SC	.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-PSV7	Heat Coil Ambient Relief Valve	D-02560 SH0002A / D-3	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-CAC-V59	CAD INJECTION LINE RELIEF VALVE	D-02515 SH0001B / D-5	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-CAC-X18A	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	
2-CAC-X18B	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	
2-CAC-X18C	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-X18D	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	
2-CAC-X18E	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	
2-CAC-X18F	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-X18G	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	
2-CAC-X18H	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	
2-CAC-X18I	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-CAC-X18J	SUPPRESSION POOL VACUUM BREAKER CHV	D-02515 SH0001A / C-7	Aug-A/C	ACT	SC	18	VB	SA	C	O/C	N/A	LT	2Y	0PT-20.6	
												RPI	2Y	2-0PT-02.3.1	
												VB-SP	2Y	2-0MST-CAC500R	
												CVC	Q	2-0PT-02.3.1	
												CVO	Q	2-0PT-02.3.1	
												ST-C	Q	2-0PT-02.3.1	
												ST-O	Q	2-0PT-02.3.1	
2-DG1-SV-6552-1	DG ENG JET ASSIST SOL VLV	D-02265 SH0001A / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.3.2A	V-11
												FSO	Q	0PT-12.3.2A	V-11
												FC	Q	0PT-12.3.2A	
2-DG1-SV-6553-1	DG ENG START AIR LEFT HDR SOL VLV	D-02265 SH0001A / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.2A	V-12
												FSO	Q	0PT-12.2A	V-12
												FC	Q	0PT-12.2A	
2-DG1-SV-6554-1	DG ENG START AIR LEFT HDR SOL VLV	D-02265 SH0001A / B-3	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.2A	V-12
												FSO	Q	0PT-12.2A	V-12
												FC	Q	0PT-12.2A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-DG1-SV-6576 -1	DG ENG JET ASSIST SOL VLV	D-02265 SH0001A / B-3	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.3.2A	V-11
												FSO	Q	0PT-12.3.2A	V-11
												FC	Q	0PT-12.3.2A	
2-DG2-SV-6552 -2	DG ENG JET ASSIST SOL VLV	D-02265 SH0001B / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.3.2B	V-11
												FSO	Q	0PT-12.3.2B	V-11
												FC	Q	0PT-12.3.2B	
2-DG2-SV-6553 -2	DG ENG START AIR LEFT HDR SOL VLV	D-02265 SH0001B / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.2B	V-12
												FSO	Q	0PT-12.2B	V-12
												FC	Q	0PT-12.2B	
2-DG2-SV-6554 -2	DG ENG START AIR LEFT HDR SOL VLV	D-02265 SH0001B / B-3	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.2B	V-12
												FSO	Q	0PT-12.2B	V-12
												FC	Q	0PT-12.2B	
2-DG2-SV-6576 -2	DG ENG JET ASSIST SOL VLV	D-02265 SH0001B / B-3	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.3.2B	V-11
												FSO	Q	0PT-12.3.2B	V-11
												FC	Q	0PT-12.3.2B	
2-DG3-SV-6552 -3	DG ENG JET ASSIST SOL VLV	D-02266 SH0002A / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.3.2C	V-11
												FSO	Q	0PT-12.3.2C	V-11
												FC	Q	0PT-12.3.2C	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-DG3-SV-6553 -3	DG ENG START AIR LEFT HDR SOL VLV	D-02266 SH0002A / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.2C	V-12
												FSO	Q	0PT-12.2C	V-12
												FC	Q	0PT-12.2C	
2-DG3-SV-6554 -3	DG ENG START AIR LEFT HDR SOL VLV	D-02266 SH0002A / B-3	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.2C	V-12
												FSO	Q	0PT-12.2C	V-12
												FC	Q	0PT-12.2C	
2-DG3-SV-6576 -3	DG ENG JET ASSIST SOL VLV	D-02266 SH0002A / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.3.2C	V-11
												FSO	Q	0PT-12.3.2C	V-11
												FC	Q	0PT-12.3.2C	
2-DG4-SV-6552 -4	DG ENG JET ASSIST SOL VLV	D-02266 SH0002B / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.3.2D	V-11
												FSO	Q	0PT-12.3.2D	V-11
												FC	Q	0PT-12.3.2D	
2-DG4-SV-6553 -4	DG ENG START AIR LEFT HDR SOL VLV	D-02266 SH0002B / B-2	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.2D	V-12
												FSO	Q	0PT-12.2D	V-12
												FC	Q	0PT-12.2D	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-DG4-SV-6554 -4	DG ENG START AIR LEFT HDR SOL VLV	D-02266 SH0002B / B-3	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.2D	V-12
												FSO	Q	0PT-12.2D	V-12
												FC	Q	0PT-12.2D	
2-DG4-SV-6576 -4	DG ENG JET ASSIST SOL VLV	D-02266 SH0002B / B-3	Aug-B	ACT	SC	2	GA	SO	C	O/C	C	FSC	Q	0PT-12.3.2D	V-11
												FSO	Q	0PT-12.3.2D	V-11
												FC	Q	0PT-12.3.2D	
2-DSA-RV10	DG2 Eng PNL Control Air press Relief VLV	D-02265 SH0001B / F-2	Aug-C	ACT	SC	.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV12	DG3 STARTING AIR TANK A PRESS RELIEF VLV	D-02266 SH0002A / F-4	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV14	DG3 STARTING AIR TANK B PRESS RELIEF VLV	D-02266 SH0002A / F-6	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV15	DG3 Eng PNL Control Air press Relief VLV	D-02266 SH0002A / F-2	Aug-C	ACT	SC	.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV17	DG4 STARTING AIR TANK A PRESS RELIEF VLV	D-02266 SH0002B / F-4	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV19	DG4 STARTING AIR TANK B PRESS RELIEF VLV	D-02266 SH0002B / F-6	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV2	DG1 STARTING AIR TANK A PRESS RELIEF VLV	D-02265 SH0001A / F-4	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV20	DG4 Eng PNL Control Air press Relief VLV	D-02266 SH0002B / F-2	Aug-C	ACT	SC	.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV4	DG1 STARTING AIR TANK B PRESS RELIEF VLV	D-02265 SH0001A / F-5	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-DSA-RV5	DG1 Eng PNL Control Air press Relief VLV	D-02265 SH0001A / F-2	Aug-C	ACT	SC	.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV5031	DG1 STARTING AIR TANK C PRESS RELIEF VLV	D-02265 SH0001E / E-4	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV5034	DG1 STARTING AIR TANK D PRESS RELIEF VLV	D-02265 SH0001E / F-5	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV5043	DG3 STARTING AIR TANK C PRESS RELIEF VLV	D-02265 SH0001E / E-4	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV5046	DG3 STARTING AIR TANK D PRESS RELIEF VLV	D-02266 SH0002E / F-4	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV5049	DG4 STARTING AIR TANK C PRESS RELIEF VLV	D-02266 SH0002E / B-4	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV5052	DG4 STARTING AIR TANK D PRESS RELIEF VLV	D-02266 SH0002E / C-4	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV7	DG2 STARTING AIR TANK A PRESS RELIEF VLV	D-02265 SH0001B / F-3	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-RV9	DG2 STARTING AIR TANK B PRESS RELIEF VLV	D-02265 SH0001B / F-5	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-DSA-V100	DG3 ENG PNL CTRL AIR FROM TANK B CHK VLV	D-02266 SH0002A / E-5	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2C 0PT-12.3.2C	
2-DSA-V106	ADD PMID DIS DG3 Eng PNL Control Air check vlv	D-02266 SH0002A / F-1	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	DA CVO	2Y Q	PMID 78824 0PT-12.2C	V-13
2-DSA-V111	DG4 SUPPLY AIR TO TNK A	D-02266 SH0002B / E-3	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2D 0PT-12.3.2D	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-DSA-V118	DG4 ENG PNL CTRL AIR FROM TANK A CHK VLV	D-02266 SH0002B / E-5	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2D 0PT-12.3.2D	
2-DSA-V123	DG4 SUPPLY AIR TO TNK B	D-02266 SH0002B / E-6	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2D 0PT-12.3.2D	
2-DSA-V130	DG4 ENG PNL CTRL AIR FROM TANK B CHK VLV	D-02266 SH0002B / E-5	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2D 0PT-12.3.2D	
2-DSA-V136	ADD PMID DIS DG4 Eng PNL Control Air check vlv	D-02266 SH0002B / F-2	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	DA CVO	2Y Q	PMID 78829 0PT-12.2D	V-13
2-DSA-V141	DG1 ENG JET ASSIST LEFT HDR AIR CHECK VLV	D-02265 SH0001A / B-2	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA CVO	2Y Q	0MST-DG500R 0PT-12.3.2A	V-13 V-11
2-DSA-V142	DG1 ENG JET ASSIST RIGHT HDR AIR CHECK VLV	D-02265 SH0001A / B-3	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA CVO	2Y Q	0MST-DG500R 0PT-12.3.2A	V-13 V-11
2-DSA-V145	DG2 ENG JET ASSIST LEFT HDR AIR CHECK VLV	D-02265 SH0001B / B-2	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA CVO	2Y Q	0MST-DG500R 0PT-12.3.2B	V-13 V-11
2-DSA-V146	DG2 ENG JET ASSIST RIGHT HDR AIR CHECK VLV	D-02265 SH0001B / B-3	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA CVO	2Y Q	0MST-DG500R 0PT-12.3.2B	V-13 V-11

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-DSA-V149	DG3 ENG JET ASSIST LEFT HDR AIR CHECK VLV	D-02266 SH0002A / B-2	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA CVO	2Y Q	0MST-DG500R 0PT-12.3.2C	V-13 V-11
2-DSA-V150	DG3 ENG JET ASSIST RIGHT HDR AIR CHECK VLV	D-02266 SH0002A / B-2	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA CVO	2Y Q	0MST-DG500R 0PT-12.3.2C	V-13 V-11
2-DSA-V153	DG4 ENG JET ASSIST LEFT HDR AIR CHECK VLV	D-02266 SH0002B / B-2	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA CVO	2Y Q	0MST-DG500R 0PT-12.3.2D	V-13 V-11
2-DSA-V154	DG4 ENG JET ASSIST RIGHT HDR AIR CHECK VLV	D-02266 SH0002B / B-3	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA CVO	2Y Q	0MST-DG500R 0PT-12.3.2D	V-13 V-11
2-DSA-V21	DG1 SUPPLY AIR TO TNK A	D-02265 SH0001A / E-3	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2A 0PT-12.3.2A	
2-DSA-V28	DG1 ENG PNL CTRL AIR FROM TANK A CHK VLV	D-02265 SH0001A / F-4	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2A 0PT-12.3.2A	
2-DSA-V33	DG1 SUPPLY AIR TO TNK B	D-02265 SH0001A / E-6	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2A 0PT-12.3.2A	
2-DSA-V40	DG1 ENG PNL CTRL AIR FROM TANK B CHK VLV	D-02265 SH0001A / F-5	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2A 0PT-12.3.2A	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-DSA-V46	ADD PMID DIS DG1 Eng PNL Control Air check vlv	D-02265 SH0001A / F-2	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	DA CVO	2Y Q	PMID 78830 0PT-12.2A	V-13
2-DSA-V5000	DG1 SUPPLY AIR TO TNK A	D-02265 SH0001A / E-3	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2A 0PT-12.3.2A	
2-DSA-V5001	DG1 SUPPLY AIR TO TNK B	D-02265 SH0001A / E-6	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2A 0PT-12.3.2A	
2-DSA-V5002	DG2 SUPPLY AIR TO TNK A	D-02265 SH0001B / E-3	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2B 0PT-12.3.2B	
2-DSA-V5003	DG2 SUPPLY AIR TO TNK B	D-02265 SH0001B / E-5	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2B 0PT-12.3.2B	
2-DSA-V5004	DG3 SUPPLY AIR TO TNK A	D-02266 SH0002A / E-3	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2C 0PT-12.3.2C	
2-DSA-V5005	DG3 SUPPLY AIR TO TNK B	D-02266 SH0002A / E-6	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2C 0PT-12.3.2C	
2-DSA-V5006	DG4 SUPPLY AIR TO TNK A	D-02266 SH0002B / E-3	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2D 0PT-12.3.2D	
2-DSA-V5007	DG4 SUPPLY AIR TO TNK B	D-02266 SH0002B / E-6	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2D 0PT-12.3.2D	
2-DSA-V51	DG2 SUPPLY AIR TO TNK A	D-02265 SH0001B / E-3	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2B 0PT-12.3.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-DSA-V58	DG2 ENG PNL CTRL AIR FROM TANK A CHK VLV	D-02265 SH0001B / E-4	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2B 0PT-12.3.2B	
2-DSA-V63	DG2 SUPPLY AIR TO TNK B	D-02265 SH0001B / E-6	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2B 0PT-12.3.2B	
2-DSA-V70	DG2 ENG PNL CTRL AIR FROM TANK B CHK VLV	D-02265 SH0001B / E-4	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2B 0PT-12.3.2B	
2-DSA-V76	ADD PMID DIS DG2 Eng PNL Control Air check vlv	D-02265 SH0001B / F-2	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	DA CVO	2Y Q	PMID 78832 0PT-12.2B	V-13
2-DSA-V81	DG3 SUPPLY AIR TO TNK A	D-02266 SH0002A / E-3	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2C 0PT-12.3.2C	
2-DSA-V88	DG3 ENG PNL CTRL AIR FROM TANK A CHK VLV	D-02266 SH0002A / E-4	Aug-C	ACT	SC	.5	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2C 0PT-12.3.2C	
2-DSA-V93	DG3 SUPPLY AIR TO TNK B	D-02266 SH0002A / E-6	Aug-C	ACT	SC	.50	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q	0PT-12.3.2C 0PT-12.3.2C	
2-E11-F040	RHR TO RADWASTE OUTBOARD ISOLATION VALVE	D-02526 SH0002B / C-3	Aug-B	ACT	SC	4	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q	2-0PT-08.2.2B 2-0PT-08.2.2B 2-0PT-08.2.2B	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E11-F075	RHR SW INBOARD INJECTION VALVE	D-02526 SH0002B / B-1	Aug-B	PASS	NC	16	GA	MO	C	C	FAI	NTR	NR		V-17
2-E11-F089	INBOARD RHR KEEPFILL STATION CHECK VALVE	D-02526 SH0002B / F-3	Aug-C	ACT	SC	4	CK	SA	O/C	C	N/A	BDO CVC	Q Q	2-0PT-08.2.2B 2-0PT-08.2.2B	
2-E11-V192	DEMIN WTR OUTBOARD FILL CHECK VALVE	D-02525 SH0001B / F-7	Aug-C	ACT	SC	4	CK	SA	O/C	C	N/A	BDO CVC	Q Q	2-0PT-08.2.2C 2-0PT-08.2.2C	
2-E21-F029A	KEEPFILL STATION OUTBOARD CHECK VALVE	D-02524 SH0002 / C-5	Aug-C	ACT	NC	2	CK	SA	C	C	N/A	BDO CVC	Q Q	2-0PT-07.2.4A 2-0PT-07.2.4A	
2-E21-F029B	KEEPFILL STATION OUTBOARD CHECK VALVE	D-02524 SH0001 / E-5	Aug-C	ACT	NC	2	CK	SA	C	C	N/A	BDO CVC	Q Q	2-0PT-07.2.4B 2-0PT-07.2.4B	
2-E41-F001	HPCI TURBINE STEAM SUPPLY VALVE	D-02523 SH0002 / F-2	Aug-B	ACT	SC	10	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q	2-0PT-09.7 2-0PT-09.7 2-0PT-09.7	
2-E41-F004	CONDENSATE STORAGE TANK SUCTION VALVE	D-02523 SH0001 / E-2	Aug-B	ACT	SC	16	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q	2-0PT-09.7 2-0PT-09.7 2-0PT-09.7 2-0PT-09.7 2-0PT-09.7	
2-E41-F005	HPCI PUMP DISCHARGE LINE CHECK VALVE	D-02523 SH0001 / B-6	Aug-C	ACT	SC	14	CK	SA	C	O/C	N/A	CVC CVO	Q Q	2-0PT-09.2 2-0PT-09.2	
2-E41-F007	HPCI PUMP DISCHARGE MAIN LINE VALVE	D-02523 SH0001 / B-6	Aug-B	PASS	SC	14	GA	MO	O	O	FAI	RPI	2Y	2-0PT-09.7	V-16
2-E41-F008	HPCI BYPASS TO COND STO TK VLV	D-02523 SH0001 / D-5	Aug-B	PASS	SC	10	GL	MO	C	C	FAI	RPI	2Y	2-0PT-09.7	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E41-F011	REDUNDANT ISOL VLV TO COND STO TK FROM HPCI SYST	D-02523 SH0001 / F-3	Aug-B	PASS	SC	10	GA	MO	C	C	FAI	RPI	2Y	2-0PT-09.7	V-16
2-E41-F019	CONDENSATE STORAGE TNK SUCTION CHECK VLV	D-02523 SH0001 / E-2	Aug-C	ACT	SC	16	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-09.2	
												CVO	Q	2-0PT-09.2	
2-E41-F020	HPCI PUMP MAIN SUCTION LINE RELIEF VALVE	D-02523 SH0001 / D-4	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-E41-F026	HPCI COND PMP DISCH INBOARD ISV TO CRW	D-02523 SH0002 / A-4	Aug-B	ACT	SC	1	GA	AO	O/C	C	C	RPI	2Y	2-0PT-09.7	
												FC	Q	2-0PT-09.7	
												FSC	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
2-E41-F040	EXH DRN POT DRN LN TO SUPP POOL CHK VLV	D-02523 SH0002 / C-6	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	CVC	RO	2-0PT-20.2-151	RFJ-17
												DA	RO	2-0PT-11.1.2.3	
2-E41-F041	HPCI PMP SUCTION VLV FROM SUPP POOL	D-02523 SH0001 / E-4	Aug-B	ACT	SC	16	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-09.7	
												FSC	Q	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-C	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	
2-E41-F045	SUPPRESSION POOL SUCTION CHECK VALVE	D-02523 SH0002 / A-5	Aug-C	ACT	SC	16	CK	SA	C	O/C	N/A	PSO	Q	2-0PT-09.2	V-06
												DA	V	2-0PT-11.1.2.3	V-06
2-E41-F046	MINIMUM FLOW BYPASS CHECK VALVE	D-02523 SH0001 / A-5	Aug-C	ACT	SC	4	CK	SA	C	O	N/A	DA	2R	2-0PT-11.1.2.3	V-07
												PSO	Q	2-0PT-09.2	V-07

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									NORM	SAFE	FAIL				
2-E41-F048	CONDENSATE TO HPCI PUMP SUCTION LINE CHV	D-02523 SH0002 / B-4	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	PSO	Q	2-0PT-09.2	V-08
												DA	V	2-0PT-11.1.2.3	V-08
2-E41-F049	HPCI TURBINE EXHAUST LINE CHECK VALVE PM 86-039	D-02523 SH0002 / D-6	Aug-C	ACT	SC	20	CK	SA	C	O/C	N/A	CVO	Q	2-0PT-09.2	
												CVC	RO	2-0PT-20.2-152	RFJ-18
2-E41-F050	COOLING WATER SUPPLY LINE RELIEF VALVE	D-02523 SH0002 / B-5	Aug-C	ACT	SC	1.5	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-E41-F052	CONDENSATE PMP DISCHARGE LINE CHECK VLV	D-02523 SH0002 / A-2	Aug-C	ACT	SC	2	CK	SA	O/C	C	N/A	BDO	Q	2-0PT-09.2	
												CVC	Q	2-0PT-09.2	
2-E41-F057	LUBE OIL COOLER DISCHARGE CHECK VALVE	D-02523 SH0002 / B-3	Aug-C	ACT	SC	2	CK	SA	C	O	N/A	PSO	Q	2-0PT-09.2	V-08
												DA	V	2-0PT-11.1.2.3	V-08
2-E41-F059	TURB OIL COOLER COOLING WATER SUPPLY VLV	D-02523 SH0002 / C-5	Aug-B	ACT	SC	2	GL	MO	C	O	FAI	RPI	2Y	2-0PT-09.7	
												FSO	Q	2-0PT-09.7	
												ST-O	Q	2-0PT-09.7	
2-E41-PSE-D003	RUPTURE DISC FOR TURBINE EXH DRAIN	D-02523 SH0002 / D-6	Aug-D	ACT	SC	16	RD	SA	C	O/C	N/A	VI	5Y	PMID 39406-01	V-15
2-E41-PSE-D004	RUPTURE DISC FOR TURBINE EXH DRAIN	D-02523 SH0002 / E-6	Aug-D	ACT	NC	16	RD	SA	C	O/C	N/A	VI	5Y	PMID 39407-01	V-15
2-E41-V93	HPCI KEEPFILL STATION CHECK VALVE	D-02523 SH0001 / E-6	Aug-C	ACT	SC	2	CK	SA	C	C	N/A	BDO	Q	2-0PT-09.2	
												CVC	Q	2-0PT-09.2	

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-E41-V94	HPCI KEEPFILL STATION CHECK VALVE	D-02523 SH0001 / E-6	Aug-C	ACT	NC	2	CK	SA	C	C	N/A	BDO	Q	2-0PT-09.2	
												CVC	Q	2-0PT-09.2	
2-E51-F010	RCIC CONDENSATE STORAGE TANK SUCTION VLV	D-02529 SH0001 / E-4	Aug-B	ACT	SC	6	GA	MO	O	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	
2-E51-F011	RCIC CONDENSATE TANK CHECK VALVE TO PUMP	D-02529 SH0001 / D-4	Aug-C	ACT	SC	6	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-10.1.1	
												CVO	Q	2-0PT-10.1.1	
2-E51-F012	RCIC PUMP DISCHARGE VALVE	D-02529 SH0001 / B-6	Aug-B	PASS	SC	4	GA	MO	O	O	FAI	RPI	2Y	2-0PT-10.1.8	
2-E51-F014	RCIC PUMP DISCHARGE CHECK VALVE	D-02529 SH0001 / B-6	Aug-C	ACT	SC	4	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-10.1.1	
												CVO	Q	2-0PT-10.1.1	
2-E51-F017	RCIC SUCTION LINE PRESSURE RELIEF VALVE	D-02529 SH0001 / D-4	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-E51-F018	RCIC COOL WTR SUPPLY LN PRESS RELIEF VLV	D-02529 SH0002 / E-5	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-E51-F021	RCIC MIN FLOW BYPASS LINE CHECK VALVE	D-02529 SH0002 / C-2	Aug-C	ACT	SC	2	CK	SA	C	O/C	N/A	DA	2R	2-0PT-11.1.2.3	V-07
												PSO	Q	2-0PT-10.1.1	V-07

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									NORM	SAFE	FAIL				
2-E51-F022	RCIC BYPASS TO CONDENSATE STO TANK VLV	D-02529 SH0001 / D-5	Aug-B	ACT	SC	4	GL	MO	C	C	FAI	RPI	2Y	2-0PT-10.1.8	
												FSC	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
2-E51-F029	RCIC SUPP POOL SUCT VLV TO THE RCIC PMP	D-02529 SH0001 / D-4	Aug-B	ACT	SC	6	GA	MO	C	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	
2-E51-F030	RCIC SUPPRESSION POOL SUCTION CHECK VLV	D-02529 SH0002 / A-5	Aug-C	ACT	SC	6	CK	SA	C	O/C	N/A	PSO	Q	2-0PT-10.1.1	V-06
												DA	V	2-0PT-11.1.2.3	V-06
2-E51-F045	RCIC TURBINE STEAM SUPPLY VALVE	D-02529 SH0001 / D-2	Aug-B	ACT	SC	3	GL	MO	C	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	

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									NORM	SAFE	FAIL				
2-E51-F046	RCIC COOLING WATER SUPPLY VALVE	D-02529 SH0001 / B-4	Aug-B	ACT	SC	2	GL	MO	C	O/C	FAI	RPI	2Y	2-0PT-10.1.8	
												FSC	Q	2-0PT-10.1.8	
												FSO	Q	2-0PT-10.1.8	
												ST-C	Q	2-0PT-10.1.8	
												ST-O	Q	2-0PT-10.1.8	
2-E51-F047	RCIC COND PMP DISCH LINE TO RCIC PUMP CHECK VAL	D-02529 SH0002 / E-6	Aug-C	ACT	SC	2	CK	SA	C	C	N/A	BDO	Q	2-0PT-10.1.1	
												CVC	Q	2-0PT-10.1.1	
2-E51-PSE-D001	RUPTURE DIAPHRAGM FOR RCIC TURBINE EXHAUST DIAPH	D-02529 SH0002 / C-5	Aug-D	ACT	SC	8	RD	SA	C	O/C	N/A	VI	5Y	PMID 39408-01	V-15
2-E51-PSE-D002	RUPTURE DIAPHRAGM FOR RCIC TURBINE EXHAUST DIAPH	D-02529 SH0002 / C-5	Aug-D	ACT	SC	8	RD	SA	C	O/C	N/A	VI	5Y	PMID 39409-01	V-15
2-E51-V72	RCIC KEEPFILL STATION OUTLET CHECK VALVE	D-02529 SH0001 / A-5	Aug-C	ACT	NC	2	CK	SA	C	C	N/A	BDO	Q	2-0PT-10.1.1	
												CVC	Q	2-0PT-10.1.1	
2-E51-V73	RCIC KEEPFILL STATION OUTLET CHECK VALVE	D-02529 SH0001 / A-5	Aug-C	ACT	SC	2	CK	SA	C	C	N/A	BDO	Q	2-0PT-10.1.1	
												CVC	Q	2-0PT-10.1.1	
2-FOD-RV-1A	DG1 FUEL OIL XFER PMP 1A DISCH PRESS RELIEF	D-02268 SH0001A / B-3	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0 0MST-DG500R	
2-FOD-RV-1B	DG1 FUEL OIL XFER PMP 1B DISCH PRESS RELIEF VLV	D-02268 SH0001A / B-2	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0 0MST-DG500R	

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									NORM	SAFE	FAIL				
2-FOD-RV-2A	DG1 FUEL OIL XFER PMP 2A DISCH PRESS RELIEF	D-02268 SH0001B / B-3	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0 0MST-DG500R	
2-FOD-RV-2B	DG1 FUEL OIL XFER PMP 2B DISCH PRESS RELIEF	D-02268 SH0001B / B-2	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0 0MST-DG500R	
2-FOD-RV-3A	DG1 FUEL OIL XFER PMP 3A DISCH PRESS RELIEF	D-02269 SH0002A / B-3	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0 0MST-DG500R	
2-FOD-RV-3B	DG1 FUEL OIL XFER PMP 3B DISCH PRESS RELIEF	D-02269 SH0002A / B-2	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0 0MST-DG500R	
2-FOD-RV-4A	DG1 FUEL OIL XFER PMP 4A DISCH PRESS RELIEF	D-02269 SH0002B / B-3	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0 0MST-DG500R	
2-FOD-RV-4B	DG1 FUEL OIL XFER PMP 4B DISCH PRESS RELIEF	D-02269 SH0002B / B-2	Aug-C	ACT	SC	1	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0 0MST-DG500R	
2-FOD-V49	DG1 FUEL OIL XFER PMP 1B DISCH LINE CHV	D-02268 SH0001A / C-2	Aug-C	ACT	SC	1	CK	SA	C	O	N/A	BDC CVO	Q Q	0PT-12.4A 0PT-12.4A	
2-FOD-V50	DG1 FUEL OIL XFER PMP 1A DISCH LINE CHV	D-02268 SH0001A / C-3	Aug-C	ACT	SC	1	CK	SA	C	O	N/A	BDC CVO	Q Q	0PT-12.4A 0PT-12.4A	
2-FOD-V51	DG1 FUEL OIL XFER PMP 2B DISCH LINE CHV	D-02268 SH0001B / C-2	Aug-C	ACT	SC	1	CK	SA	C	O	N/A	BDC CVO	Q Q	0PT-12.4B 0PT-12.4B	
2-FOD-V52	DG1 FUEL OIL XFER PMP 2A DISCH LINE CHV	D-02268 SH0001B / C-3	Aug-C	ACT	SC	1	CK	SA	C	O	N/A	BDC CVO	Q Q	0PT-12.4B 0PT-12.4B	

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									NORM	SAFE	FAIL				
2-FOD-V53	DG1 FUEL OIL XFER PMP 3B DISCH LINE CHV	D-02269 SH0002A / C-2	Aug-C	ACT	SC	1	CK	SA	C	O	N/A	BDC	Q	0PT-12.4C	
												CVO	Q	0PT-12.4C	
2-FOD-V54	DG1 FUEL OIL XFER PMP 3A DISCH LINE CHV	D-02269 SH0002A / C-3	Aug-C	ACT	SC	1	CK	SA	C	O	N/A	BDC	Q	0PT-12.4C	
												CVO	Q	0PT-12.4C	
2-FOD-V55	DG1 FUEL OIL XFER PMP 4B DISCH LINE CHV	D-02269 SH0002B / C-2	Aug-C	ACT	SC	1	CK	SA	C	O	N/A	BDC	Q	0PT-12.4D	
												CVO	Q	0PT-12.4D	
2-FOD-V56	DG1 FUEL OIL XFER PMP 4A DISCH LINE CHV	D-02269 SH0002B / C-3	Aug-C	ACT	SC	1	CK	SA	C	O	N/A	BDC	Q	0PT-12.4D	
												CVO	Q	0PT-12.4D	
2-MS-F038A	MSL A Orifice Bypass VLV	D-02521 SH0001B / D-7	Aug-B	ACT	NC	2	GL	MO	C	O	FAI	RPI	2Y	2-0PT-25.4	
												FSO	CS	2-0PT-25.4	CSJ-14
												ST-O	CS	2-0PT-25.4	CSJ-14
2-MS-F038B	MSL A Orifice Bypass VLV	D-02521 SH0001B / C-8	Aug-B	ACT	NC	2	GL	MO	C	O	FAI	RPI	2Y	2-0PT-25.4	
												FSO	CS	2-0PT-25.4	CSJ-14
												ST-O	CS	2-0PT-25.4	CSJ-14
2-MS-F038C	MSL A Orifice Bypass VLV	D-02521 SH0001A / E-2	Aug-B	ACT	NC	2	GL	MO	C	O	FAI	RPI	2Y	2-0PT-25.4	
												FSO	CS	2-0PT-25.4	CSJ-14
												ST-O	CS	2-0PT-25.4	CSJ-14

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									NORM	SAFE	FAIL				
2-MS-F038D	MSL A Orifice Bypass VLV	D-02521 SH0001A / C-2	Aug-B	ACT	NC	2	GL	MO	C	O	FAI	RPI	2Y	2-0PT-25.4	
												FSO	CS	2-0PT-25.4	CSJ-14
												ST-O	CS	2-0PT-25.4	CSJ-14
2-MVD-F021	MSL Drn VLV	D-02521 SH0001B / D-8	Aug-B	ACT	SC	2	GL	MO	C	O	FAI	RPI	2Y	2-0PT-25.4	
												FSO	CS	2-0PT-25.4	CSJ-14
												ST-O	CS	2-0PT-25.4	CSJ-14
2-MVD-V5009	DRN LN 1-MVD-163-1/2-A-1 check valve	D-02028 / E-2	Aug-C	ACT	SC	2	CK	SA	O/C	C	N/A	DA	2R	2-0PT-11.1.2.3	RFJ-19
2-RNA-IV-2307	CAC-V5 INSTR AIR SUPPLY CHECK VALVE	D-07029 SH0002A / B-5	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-16.1.1	
2-RNA-IV-2311	CAC-V6 INSTR AIR SUPPLY CHECK VALVE	D-07029 SH0002A / E-6	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-16.1.1	
2-RNA-IV-2315	CAC-V7 INSTR AIR SUPPLY CHECK VALVE	D-07029 SH0002B / B-5	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-16.1.1	
2-RNA-IV-2319	CAC-V8 INSTR AIR SUPPLY ISOLATION VLV	D-07029 SH0002B / B-5	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-16.1.1	
2-RNA-IV-2323	CAC-V10 INSTR AIR SUPPLY CHECK VALVE	D-07206 / F-6	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-16.1.1	
2-RNA-IV-2327	CAC-V9 INSTR AIR SUPPLY CHECK VALVE	D-07206 / F-6	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-16.1.1	
2-RNA-IV-2331	CAC-V15 INSTR AIR SUPPLY CHECK VALVE	D-07029 SH0002A / E-7	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-16.1.1	

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									NORM	SAFE	FAIL				
2-RNA-IV-2641	CAC-V216 N2 BACK-UP LN CHK VLV	D-07029 SH0002B / C-4	Aug-C	ACT	SC	.75	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-20.9	
2-RNA-IV-2643	CAC-V7 N2 BACK-UP LN CHK VLV	D-07029 SH0002B / B-4	Aug-C	ACT	SC	.75	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-20.9	
2-RNA-IV-2647	CAC-V216 INSTR AIR LN CHK VLV	D-07029 SH0002B / C-4	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-20.9	
2-RNA-PRV-5256	DIV.II N2 BACKUP SUPPLY RELEIF VALVE	D-07368 / E-3	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-RNA-PRV-5258	DIV.I N2 BACKUP SUPPLY RELEIF VALVE	D-07368 / C-3	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-RNA-PRV-5259	DIV.II NITROGEN BACKUP SUPPLY PRV	D-07368 / E-7	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-RNA-PRV-5260	DIV.I NITROGEN BACKUP SUPPLY PRV	D-07368 / B-7	Aug-C	ACT	SC	.75	RV	SA	C	O/C	N/A	RV	10Y	2-0PT-11.0	
2-RNA-PSE-101	Div.II N2 Backup Supply HDR Rupture Diaphragm	D-07368 / E-7	Aug-D	ACT	SC	.75	RD	SA	C	O/C	N/A	RD	5Y	PMID 39404-01	
2-RNA-PSE-102	Div. I Backup N2 HDR Rupture Diaphragm	D-07368 / B-7	Aug-D	ACT	SC	.75	RD	SA	C	O/C	N/A	RD	5Y	PMID 39405-01	
2-RNA-SV-5481	DIV II RNA N2 BACKUP SUP SV	D-07368 / E-5	Aug-B	ACT	SC	.75	GL	SO	C	O/C	O	FO	Q	2-0PT-31.6	
												FSC	Q	2-0PT-31.6	
												FSO	Q	2-0PT-31.6	
												RPI	Q	2-0PT-20.4	
												ST-C	Q	2-0PT-31.6	
												ST-O	Q	2-0PT-31.6	

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									NORM	SAFE	FAIL				
2-RNA-SV-5482	DIV II RNA N2 BACKUP SUP SV	D-07368 / C-5	Aug-B	ACT	SC	.75	GL	SO	C	O/C	O	FO	Q	2-0PT-31.6	
												FSC	Q	2-0PT-31.6	
												FSO	Q	2-0PT-31.6	
												RPI	Q	2-0PT-20.4	
												ST-C	Q	2-0PT-31.6	
												ST-O	Q	2-0PT-31.6	
2-RNA-V295	Div. II Nitrogen Remote Supply Chk	D-07368 / F-5	Aug-C	ACT	SC	.75	CK	SA	C	C	N/A	BDO	RO	2-0PT-31.1	RFJ-04
												CVC	RO	2-0PT-31.1	RFJ-04
2-RNA-V297	Div. I Nitrogen Remote Supply Chk	D-07368 / C-5	Aug-C	ACT	SC	.75	CK	SA	C	C	N/A	BDO	RO	2-0PT-31.1	RFJ-04
												CVC	RO	2-0PT-31.1	RFJ-04
2-RNA-V305	DIV.II N2 BACKUP SUPPLY CHV TO CAC-V17	D-07368 / E-3	Aug-C	ACT	SC	.75	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-02.3.2	
2-RNA-V306	VLV CAC-V17 NON-INTERRUP INSTR AIR CHV PM 84-19	D-07029 SH0002B / B-3	Aug-C	ACT	SC	.75	CK	SA	O/C	O/C	N/A	CVC	Q	2-0PT-02.3.2	
												CVO	Q	2-0PT-02.3.2	
2-RNA-V307	DIV.I N2 BACKUP SUPPLY CHV TO CAC-V16	D-07368 / B-3	Aug-C	ACT	SC	.75	CK	SA	C	O/C	N/A	CVC	Q	2-0PT-20.9	
												CVO	Q	2-0PT-02.3.2	
2-RNA-V308	CAC-SV-4222 NON-INTERR INSTR AIR SUP CHV	D-07029 SH0002A / B-3	Aug-C	ACT	SC	.75	CK	SA	O	O/C	N/A	CVC	Q	2-0PT-02.3.2	
												CVO	Q	2-0PT-02.3.2	

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 2

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-RNA-V315	SRV ACCUMULATOR HEADER CHECK VALVE	D-07007 / E-2	Aug-C	ACT	SC	2	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-20.8 2-0PT-31.1	RFJ-12 RFJ-12
2-RNA-V316	SRV ACCUMULATOR HEADER CHECK VALVE	D-07007 / F-7	Aug-C	ACT	SC	2	CK	SA	O/C	O/C	N/A	CVC CVO	RO RO	2-0PT-20.8 2-0PT-31.1	RFJ-12 RFJ-12
2-RNA-V317	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V318	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V319	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V320	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V321	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V322	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V323	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V324	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V325	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V326	DIV.II INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 2

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-RNA-V327	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V328	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V329	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V330	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V331	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V332	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V333	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V334	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-7	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V335	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V336	DIV.I INSTR AIR SUPPLY N2 BACKUP CHV	D-07368 / C-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V5050	DIV. I N2 BACKUP CHV FOR 2-RNA-V279	D-07368 / C-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V5051	DIV. I N2 BACKUP CHV FOR 2-RNA-V280	D-07368 / C-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V5052	DIV. II N2 BACKUP CHV FOR 2-RNA-V270	D-07368 / E-8	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-RNA-V5053	DIV. II N2 BACKUP CHV FOR 2-RNA-V276	D-07368 / E-6	Aug-C	ACT	SC	.25	CK	SA	C	O	N/A	CVO	2Y	2-0PT-31.8	V-03
2-SW-V295	SW SUPPLY INBRD ISV TO CHLORINATION SYS	D-02041 SH0001 / F-7	Aug-B	PASS	NC	10	BF	MO	C	C	FAI	RPI	2Y	2-0PT-24.1.2	

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 2

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-SW-V3	SW HEADER OUTBOARD SUPPLY VALVE TO TURBINE BUILDNG	D-02041 SH0002 / F-7	Aug-B	ACT	SC	30	BF	MO	O	C	FAI	RPI	2Y	2-0PT-24.4	
												FSC	CS	2-0PT-24.4	CSJ-10
												ST-C	CS	2-0PT-24.4	CSJ-10
2-SW-V37	SW TO CW PUMPS BRGS OUTBOARD ISOL VALVE	D-02041 SH0001 / F-3	Aug-B	ACT	NC	4	BF	MO	O	C	FAI	RPI	2Y	2-0PT-24.4	
												FSC	RO	2-0PT-24.4	RFJ-16
												ST-C	RO	2-0PT-24.4	RFJ-16
2-VA-2A-BFIV-RB	RX BLDG VNT INBD SUP ISOL DAMPER	F-04073 SH0002 / F-7	Aug-B	ACT	SC	54	BF	AO	O	C	FAI	FSC	2Y	2-0PT-15.4A	V-04
												ST-C	2Y	2-0PT-15.4A	V-04
												FSC	Q	2PT-04.1.1	
2-VA-2A-CV-CB	CB2 VENT INLET TORNADO CHECK VLV	F-04080 SH0001 / C-3	Aug-C	ACT	SC	54	CK	SA	O	O	N/A	BDC	Q	2-0PT-23.1.2	
												CVO	Q	2-0PT-23.1.2	
2-VA-2B-BFIV-RB	RX BLDG VNT OTBD SUP ISOL DAMPER	F-04073 SH0002 / F-7	Aug-B	ACT	SC	54	BF	AO	O	C	FAI	FSC	2Y	2-0PT-15.4A	V-04
												ST-C	2Y	2-0PT-15.4A	V-04
												FSC	Q	2PT-04.1.1	
2-VA-2B-CV-CB	CB2 VENT INLET TORNADO CHECK VLV	F-04080 SH0001 / C-5	Aug-C	ACT	SC	48	CK	SA	O	O	N/A	BDC	Q	2-0PT-23.1.2	
												CVO	Q	2-0PT-23.1.2	

Valve Summary Listing Standard Code ISTC Augmented Valves - Unit 2

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VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2-VA-2C-BFIV-RB	RX BLDG VNT INBD SUP ISOL DAMPER	F-04073 SH0002 / E-2	Aug-B	ACT	SC	54	BF	AO	O	C	FAI	FSC	2Y	2-0PT-15.4A	V-04
												ST-C	2Y	2-0PT-15.4A	V-04
												FSC	Q	2PT-04.1.1	
2-VA-2D-BFIV-RB	RX BLDG VNT OTBD SUP ISOL DAMPER	F-04073 SH0002 / E-2	Aug-B	ACT	SC	54	BF	AO	O	C	FAI	FSC	2Y	2-0PT-15.4A	V-04
												ST-C	2Y	2-0PT-15.4A	V-04
												FSC	Q	2PT-04.1.1	

Component ID	Description	BPV Class	OM Class	Exempt
2-C12-114	HCU SCRAM DISCH VOL-RISER CHECK VLV		SC	Yes
2-C12-138	HCU COOLING WATER-RISER CHECK VALVE		2	Yes
2-C12-CV-126	HCU SCRAM WATER INLET ISOL VLV		2	Yes
2-C12-CV-127	HCU SCRAM WATER INLET ISOL VLV		2	Yes
2-C12-SV-120	DIRECTIONAL CONTROL SOLENIOD VALVE		2	Yes
2-C12-SV-121	DIRECTIONAL CONTROL SOLENIOD VALVE		2	Yes
2-C12-SV-122	DIRECTIONAL CONTROL SOLENIOD VALVE		2	Yes
2-C12-SV-123	DIRECTIONAL CONTROL SOLENIOD VALVE		2	Yes
2-E41-V8	HPCI TURBINE STOP VALVE		NC	Yes
2-E41-V9	HPCI TURBINE CONTROL VALVE		NC	Yes
2-E51-V8	RCIC TURBINE TRIP & THROTTLE VALVE		SC	Yes
2-E51-V9	RCIC TURBINE GOVERNOR VALVE		SC	Yes
2-FOD-V100	DG2 FUEL OIL BSTR PMP SUCT LINE CHV		NC	Yes
2-FOD-V101	DG2 FUEL OIL BSTR PMP PARALLEL LINE CHV		NC	Yes
2-FOD-V117	DG3 DUPLEX SUCT STRAINER INLET LINE CHV		NC	Yes
2-FOD-V119	DG3 AUX FUEL OIL BSTR PMP DISCH LINE CHV		NC	Yes
2-FOD-V122	DG3 FUEL OIL BSTR PMP SUCT LINE CHV		NC	Yes
2-FOD-V123	DG3 FUEL OIL BSTR PMP PARALLEL LINE CHV		NC	Yes
2-FOD-V139	DG4 DUPLEX SUCT STRAINER INLET LINE CHV		NC	Yes
2-FOD-V141	DG4 AUX FUEL OIL BSTR PMP DISCH LINE CHV		NC	Yes
2-FOD-V144	DG4 FUEL OIL BSTR PMP SUCT LINE CHV		NC	Yes
2-FOD-V145	DG4 FUEL OIL BSTR PMP PARALLEL LINE CHV		NC	Yes
2-FOD-V73	DG1 DUPLEX SUCT STRAINER INLET LINE CHV		NC	Yes
2-FOD-V75	DG1 AUX FUEL OIL BSTR PMP DISCH LINE CHV		NC	Yes
2-FOD-V78	DG1 FUEL OIL BSTR PMP SUCT LINE CHV		NC	Yes
2-FOD-V79	DG1 FUEL OIL BSTR PMP PARALLEL LINE CHV		NC	Yes
2-FOD-V95	DG2 DUPLEX SUCT STRAINER INLET LINE CHV		NC	Yes
2-FOD-V97	DG2 AUX FUEL OIL BSTR PMP DISCH LINE CHV		NC	Yes
2-LO-RV-11	RELIEF VLV AT DG2 ENG DRIVEN LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-RV-12	RELIEF VLV AT DG2 ENG AUX LUBE OIL PMP DISCH LINE		NC	Yes

Component ID	Description	BPV Class	OM Class	Exempt
2-LO-RV-13	RELIEF VLV AT DG2 LUBE OIL DUPLEX STR DISCH LINE		NC	Yes
2-LO-RV-15	RELIEF VLV AT DG2 FILTER & PRELUBE PMP DISCH DRAIN LINE		NC	Yes
2-LO-RV-17	RELIEF VLV AT DG3 ENG DRIVEN LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-RV-18	RELIEF VLV AT DG3 ENG AUX LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-RV-19	RELIEF VLV AT DG3 LUBE OIL DUPLEX STR DISCH LINE		NC	Yes
2-LO-RV-21	RELIEF VLV AT DG3 FLT & PRELUBE PMP DISCH DRAIN LN		NC	Yes
2-LO-RV-23	RELIEF VLV AT DG4 ENG DRIVEN LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-RV-24	RELIEF VLV AT DG4 ENG AUX LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-RV-25	RELIEF VLV AT DG4 LUBE OIL DUPLEX STR DISCH LINE		NC	Yes
2-LO-RV-27	RELIEF VLV AT DG4 FILTER & PRELUBE PMP DISCH DRAIN LINE		NC	Yes
2-LO-RV-5	RELIEF VLV AT DG1 ENG DRIVEN LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-RV-6	RELIEF VLV AT DG1 ENG AUX LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-RV-7	RELIEF VLV AT DG1 LUBE OIL DUPLEX STR DISCH LINE		NC	Yes
2-LO-RV-9	RELIEF VLV AT DG1 FLT & PRELUBE PMP DISCH DRN LN		NC	Yes
2-LO-V241	CHECK VLV AT DG1 ENG DRIVEN LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-V243	CHECK VLV AT DG1 ENG AUX LUBE OIL PUMP DISCH LINE		NC	Yes
2-LO-V261	CHECK VLV AT DG1 FLT & PRELUBE PMP DISCH LINE TO LUBE OIL COOLER		NC	Yes
2-LO-V277	CHECK VLV AT DG2 ENG DRIVEN LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-V279	CHECK VLV AT DG2 ENG AUX LUBE OIL PUMP DISCH LINE		NC	Yes
2-LO-V297	CHECK VLV AT DG2 FLT & PRELUBE PMP DISCH LINE TO LUBE OIL COOLER		NC	Yes
2-LO-V313	CHECK VLV AT DG3 ENG DRIVEN LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-V315	CHECK VLV AT DG3 ENG AUX LUBE OIL PUMP DISCH LINE		NC	Yes
2-LO-V333	CHECK VLV AT DG3 FLT & PRELUBE PMP DISCH LINE TO LUBE OIL COOLER		NC	Yes
2-LO-V349	CHECK VLV AT DG4 ENG DRIVEN LUBE OIL PMP DISCH LINE		NC	Yes
2-LO-V351	CHECK VLV AT DG4 ENG AUX LUBE OIL PUMP DISCH LINE		NC	Yes
2-LO-V369	CHECK VLV AT DG4 FLT & PRELUBE PMP DISCH LINE TO LUBE OIL COOLER		NC	Yes
2-MUD-V150	DG1 ENG DRIVEN JKT WTR PMP DISCH CHK VLV		NC	Yes
2-MUD-V154	DG1 ENG AUX JKT WTR PMP DISCH CHECK VLV		NC	Yes
2-MUD-V163	DG1 ENG JKT WTR HEATER DISCH CHECK VLV		NC	Yes

Component ID	Description	BPV Class	OM Class	Exempt
2-MUD-V186	DG2 ENG DRIVEN JKT WTR PMP DISCH CHK VLV		NC	Yes
2-MUD-V190	DG2 ENG AUX JKT WTR PMP DISCH CHECK VLV		NC	Yes
2-MUD-V199	DG2 ENG JKT WTR HEATER DISCH CHECK VLV		NC	Yes
2-MUD-V222	DG3 ENG DRIVEN JKT WTR PMP DISCH CHK VLV		NC	Yes
2-MUD-V226	DG3 ENG AUX JKT WTR PMP DISCH CHECK VLV		NC	Yes
2-MUD-V235	DG3 ENG JKT WTR HEATER DISCH CHECK VLV		NC	Yes
2-MUD-V258	DG4 ENG DRIVEN JKT WTR PMP DISCH CHK VLV		NC	Yes
2-MUD-V262	DG4 ENG AUX JKT WTR PMP DISCH CHECK VLV		NC	Yes
2-MUD-V271	DG4 ENG JKT WTR HEATER DISCH CHECK VLV		NC	Yes

SYSTEM:

Nuclear Steam Supply (D-02521 SH0001A&B, D-25021 SH0001A&B)

COMPONENTS:

1-B21-F022A, 1-B21-F022B, 1-B21-F022C, and 1-B21-F022D
1-B21-F028A, 1-B21-F028B, 1-B21-F028C, and 1-B21-F028D
2-B21-F022A, 2-B21-F022B, 2-B21-F022C, and 2-B21-F022D
2-B21-F028A, 2-B21-F028B, 2-B21-F028C, and 2-B21-F028D

CATEGORY:

A

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During normal plant steaming operation, these valves remain open to provide flow paths for steam from the reactor vessel to the main turbine generator. Full closure of one of these valves during steaming operations would result in transients in reactor power, reactor vessel level, and reactor pressure with the potential of creating an unstable condition ultimately resulting in a reactor shutdown or trip. In addition, per NUREG-0626, system transients resulting from full-stroke testing of main steam isolation valves can increase the chances of actuating primary system safety/relief valves.

ALTERNATE TESTING:

Each of these valves will be partial-stroke exercised quarterly and full-stroke exercised during cold shutdowns in accordance with ISTC-3521(b), subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Instrument Air Supply (D-70006 SH0004, D-07006 SH0004)

COMPONENTS:

1-B21-F029A thru 1-B21-F029D, 1-B21-V29A thru 1-B21-V29D
2-B21-F029A thru 2-B21-F029D, 2-B21-V29A thru 2-B21-V29D

CATEGORY:

Aug-A/C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves open to provide flow paths for supplying instrument air to the outboard main steam isolation valve (MSIV) operating system. They close to isolate the respective air accumulator to ensure an adequate supply of air to maintain the MSIV open, and provide closure air in the event of the loss of air pressure in the common supply headers.

These are simple check valves with no external means of exercising or determining obturator position. Testing these valves in the open and closed directions requires isolation of the uninterruptable instrument air system, removal of the MSIV vault shield plug, and entry into the MSIV vault for valve manipulation and pressure monitoring impractical during steaming operations due to environmental conditions and disruption of the main steam line radiation monitors. Partial-stroke exercising of these valves has the same impact and potential problems as does full closure, thus it is also not practical during steaming operations.

ALTERNATE TESTING:

Each of these valves will be exercised open and closed during cold shutdown periods in accordance with ISTC-3522(b), subject to the provision of ISTC-3522(d) and ISTC-3522(e).

SYSTEM:

Nuclear Steam Supply (NSSS) (D-02521 SH0001C, D-25021 SH0001C)

COMPONENTS:

1-B21-F032A and 1-B21-F032B
2-B21-F032A and 2-B21-F032B

CATEGORY:

A/C

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During plant steaming operations, closure of either of these valves would severely disrupt feedwater makeup to the reactor vessel, resulting in reactor water level transients and the potential for a plant shutdown. The effect of partial stroking these valves is essentially the same as full stroking, thus it also is impractical.

ALTERNATE TESTING:

Each of these valves will be exercised closed during cold shutdown periods in accordance with ISTC-3521(c) subject to the provisions of ISTC-3521(f), ISTC-3521(g), ISTC-3522(b), ISTC-3522(d) and ISTC-3522(e).

SYSTEM:

Reactor Recirculation (D-02518 SH0001A, D-02548 SH0002B, D-25018 SH0001A & D-25048 SH0002B)

COMPONENTS:

1-B32-F031A and 1-B32-F031B
2-B32-F031A and 2-B32-F031B

CATEGORY:

B

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These normally-open motor-operated valves provide recirculation flow paths from the recirculation pumps through the reactor core. Closing either of these valves during plant operation places the recirculation system in a "single loop" configuration. Although single-loop operation is possible, routinely entering into this configuration is undesirable, contrary to the prudent operation of the reactor plant, and is restricted by BSEP Technical Specifications. In addition, operation in a single loop configuration requires a significant power reduction. Partial closure of these valves has the same impacts as does full closure, thus it is also not practical during steaming operations.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c), subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Reactor Recirculation (D-02518 SH0001A, D-02548 SH0002B, D-25018 SH0001A, D-25048 SH0002B)

COMPONENTS:

1-B32-F032A and 1-B32-F032B
2-B32-F032A and 2-B32-F032B

CATEGORY:

B

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During normal plant steaming operations, these valves remain open to eliminate undesirable thermal stresses across the valves. (Reference General Electric SIL No. 104). If during testing, either of these valves were to fail in the closed position, a plant shutdown would be required to correct the problem and reopen the valve(s). Partial closure of these valves has the same impact and potential problems as does full closure; thus, it is also not practical during steaming operations.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c), subject to the provisions ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Reactor Recirculation (D-02518 SH0001A, D-02548 SH0002B, D-25018 SH0001A, D-25048 SH0002B)

COMPONENTS:

1-B32-V22 and 1-B32-V30
2-B32-V22 and 2-B32-V30

CATEGORY:

A

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During normal plant steaming operations, these valves remain open to provide seal water injection to the recirculation pump seals. If during testing, either of these valves were to fail in the closed position, the associated pump seal could suffer damage leading to premature seal failure and a potential plant shutdown. Partial closure of these valves has the same impact and potential problems as does full closure; thus, it is also not practical during steaming operations.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c), subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Residual Heat Removal (D-02525 SH0001B & D-25025 SH0001B)

COMPONENTS:

1-E11-F008 and 1-E11-F009
2-E11-F008 and 2-E11-F009

CATEGORY:

A

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During power operations, these normally-closed valves protect the low pressure rated RHR system piping from the high pressure of the reactor recirculation system. Under normal conditions, these valves could experience a differential pressure in excess of 900 psid. Opening these valves under these conditions could result in valve or actuator damage. In addition, with one of these valves in the open position, pressure isolation protection for the RHR system is limited to a single valve. These valves are electrically interlocked to prevent opening with reactor pressure greater than 137 psig. Partial closure of these valves has the same impact and potential problems as does full closure; thus, it is also not practical during steaming operations.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c), subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Residual Heat Removal (D-02525 SH0001B, D-02526 SH0002B, D-25025 SH0001B, D-25026 SH0002B)

COMPONENTS:

1-E11-F050A and 1-E11-F050B
2-E11-F050A and 2-E11-F050B

CATEGORY:

A/C

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During power operations, these normally-closed valves isolate the RHR system piping from the high pressure reactor recirculation system. These are simple check valves with no external means of operation or position indication; thus, the only method of exercising them is to observe system parameters during system operation where flow is directed and measured through each valve. With the reactor plant at normal steaming pressure, the RHR pumps cannot develop sufficient discharge pressure to fully or partial stroke open these valves.

ALTERNATE TESTING:

Each of these valves will be exercised open during cold shutdown periods in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(d) and ISTC-3522(e).

SYSTEM:

Service Water (D-02041 SH0002, D-20041 SH0002)

COMPONENTS:

1-SW-V3 and 1-SW-4
2-SW-V3 and 2-SW-4

CATEGORY:

Aug-B, B

CLASS:

SC, 3

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These normally-open motor-operated valves provide flow paths for cooling water from the service water system to the main turbine generator auxiliaries. They close in the event of an accident to direct full service water flow to critical safety equipment. Closure of these valves during plant steaming operations secures cooling water to the turbine generator support equipment and will result in over-heating and damage to associated plant equipment.

ALTERNATE TESTING:

Each of these valves will be exercised closed during cold shutdown periods in accordance with ISTC-3521(c), subject to the provision of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Reactor Building Closed Cooling Water (D-02538 SH0001, D-25028 SH0001)

COMPONENTS:

1-RCC-V28 and 1-RCC-V52
2-RCC-V28 and 2-RCC-V52

CATEGORY:

A

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During plant operation, these valves are open to provide flowpaths for supply and return of cooling water to and from reactor recirculation pump components and drywell coolers. Closing either of these valves interrupts cooling water flow and could result in damage to recirculation pump and motor components. If a valve were to fail to re-open, elevated temperatures in the drywell and of recirculation pump components would require an expedited plant shutdown and cooldown to preclude equipment damage.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c) subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Noninterruptible Air (D-70077 SH0003A, D-07077 SH0003A)

COMPONENTS:

1(2)-RNA-SV-5262
1(2)-RNA-SV-5261

CATEGORY:

A

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

Instrument air supplies various components in the primary containment which are essential for normal operation. Loss of instrument air during normal operation could result in a reactor scram. Valve design precludes partial stroke exercising.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c) subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Nuclear Steam Supply (D-02521 SH0001A&B, D-25021 SH0001A&B)

COMPONENTS:

1-B21-F022A thru 1-B21-F022D and 1-B21-F028A thru 1-B21-F028D
2-B21-F022A thru 2-B21-F022D and 2-B21-F028A thru 2-B21-F028D

CATEGORY:

A

CLASS:

1

TEST REQUIREMENT:

ISTC-3560 Fail-Safe Valves. Valves with fail-safe actuators shall be tested by observing the operation of the actuator upon loss of actuating power in accordance with the frequency of ISTC-3510 (nominally every 3 months)

BASIS:

As described in Cold Shutdown Justification CSJ-01, these valves can only be exercised (i.e. full-stroke) during cold shutdown periods. During normal valve stroking, the fail- safe feature related to loss of electric power is verified; however, the fail-safe performance of the valves on loss of operating air pressure is not typically tested. To do so requires realignment of the Main Steam Isolation Valve operating air supply system and, in the case of the B21-F022 valves, access to the drywell. The extent of the effort needed to perform this testing is beyond the normal scope of activities performed during short outages and would consume plant resources needed elsewhere for higher priority activities.

ALTERNATE TESTING:

During cold shutdown periods, the electrical fail-safe feature of these valves will be observed in conjunction with testing performed per CSJ-01, and at each refuel outage each valve will be observed to operate properly in the fail-safe mode upon loss of the operating air supply pressure.

SYSTEM:

Nuclear Steam Supply (D-02521 SH0001B & D-25021 SH0001B)

COMPONENTS:

1-MS-F038A/B/C/D, 1-MVD-F021
2-MS-F038A/B/C/D, 2-MVD-F021

CATEGORY:

Aug-B

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During normal plant steaming operation, these valves are closed. There is no additional isolation valve to limit flow through the valve during the stroke time. Stroking of these valves during steaming operations can result in damage to the seating surfaces as a result of the differential pressure across the valves at normal operating pressure (i.e. main steam line pressure to condenser). These valves are only to be used following an accident with the Main Steam Isolation Valves closed and with very little differential pressure across them. These valves are considered augmented. Commitments made to the NRC as part of the Alternate Source Term project was testing of these valves on a refueling frequency.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c), subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Reactor Water Cleanup (D-25027 SH0001B and D-02527 SH0001B)

COMPONENTS:

1(2)-G31-F001, 1(2)-G31-F004, 1(2)-G31-F042

CATEGORY:

A

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves are primary containment isolation valves and cannot be closed during plant operation without removing the Reactor Water Cleanup (RWCU) system from service. The RWCU system is in service during normal plant operations to maintain high reactor water purity by the removal of solid and dissolved impurities and corrosion products from reactor coolant. This system ensures that reactor coolant PH, chlorides, conductivity, sulfates, and activity are maintained within specified limits. These limits are established to prevent the likelihood of exceeding 10 CFR 50.67 release limits, and also to maintain compliance with the guidelines established by the BWR Owners Group and GE and AREVA Fuel Warranties. Additionally, water purity is maintained to minimize the occurrence of stress corrosion cracking of the reactor vessel and associated stainless steel piping systems. Removing the RWCU system from service contributes to accelerated degradation of RWCU circulating pump seals due to stopping and starting the pumps under reactor pressure which has contributed to an increased frequency of RWCU pump seal failures. Replacing pump seals results in Brunswick personnel exposure ranging from 0.5 to 1.2 REM per occurrence. Quarterly testing requirements for these valves contribute to accelerated equipment failure and increased personnel radiation exposure without a commensurate increase in reactor water quality or plant safety.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c), subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Core Spray (D-02524 SH0001&2, D-25024 SH0001&2)
Residual Heat Removal (D-02525 SH0001A, D-02525 SH0001B, D-02526 SH0002A, D-02526 SH0002B, D-25025 SH0001A, D-25025 SH0001B, D-25026 SH0002A, D-25026 SH0002B)

COMPONENTS:

1-E11-F015A, 1-E11-F015B, 1-E21-F005A, and 1-E21-F005B
2-E11-F015A, 2-E11-F015B, 2-E21-F005A, and 2-E21-F005B

CATEGORY:

A

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS FOR DEFERRING TESTING:

These normally closed motor operated valves close to provide containment isolation. The Core Spray inboard injection valves, E21-F005A and E21-F005B, open to allow water to flow from the Core Spray System to the reactor. The Residual Heat Removal inboard injection valves, E11-F015A and E11-F015B, open to permit LPCI flow to the Recirculation System loop during and following a postulated LOCA. These valves are pressure isolation valves (PIVs) designed to provide a high to low pressure barrier to prevent damage to the low pressure safety related ECCS piping and components while the reactor is at operating pressure.

During performance of their safety injection function these valves are designed to open against a differential pressure up to 425 psig. Per a valve thrust analysis, a potential for stalling the motor operators could be encountered if the valves were stroked against operating pressures of 1000 psid or more due to leakage past the downstream check valves, E21-F006A/B and E11-F050A/B. The calculated required thrust to open these valves could exceed the motor operator's available thrust to open. This could result in motor damage due to heating and/or tripping the operator's circuit breaker or thermal overloads.

Also, quarterly testing of these valves accelerates equipment wear, which can place the plant in an unsafe condition by potentially exposing low pressure piping to reactor coolant pressure. With this in mind, stroking these valves for testing at conditions of low reactor vessel pressure would minimize the probability of occurrence of the above conditions.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised during cold shutdowns in accordance with ISTC-3521(c), subject to the provisions of ISTC-3521(f) and ISTC-3521(g).

SYSTEM:

Nuclear Steam Supply (D-02521 SH0001C, D-25021 SH0001C)

COMPONENTS:

1-B21-F010A and 1-B21-F010B
2-B21-F010A and 2-B21-F010B

CATEGORY:

A/C

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves open to provide flow paths for HPCI and RCIC flow into the reactor vessel as well as normal reactor feedwater makeup. They close for reactor vessel and containment isolation. These are simple check valves, with no positive indication of disk position; thus, the only means of determining closure of these valves is by performing a back flow or leak test. Such a test requires drywell and steam tunnel entry plus extensive preparations of the feedwater system including draining approximately 2000 gallons of water. Furthermore, testing of 1/2-B21-F010B requires shutdown of the reactor water cleanup system, which is undesirable during operations or cold shutdown. Performance of these closure tests is impossible during plant operation, as it would require securing one-half of the feedwater makeup flow to the reactor vessel, and is impractical at cold shutdown due to the unreasonable burden it would place on the plant staff.

ALTERNATE TESTING:

Each of these valves will be closure verified during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Section 3.1.1.3.

SYSTEM:

Nuclear Steam Supply (D-02521 SH0001A&B, D-25021 SH0001A&B)

COMPONENTS:

1-B21-F013A thru 1-B21-F013L
2-B21-F013A thru 2-B21-F013L

CATEGORY:

B/C

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

The functions of these valves are to: (1) open upon receipt of an ADS signal to blow down the reactor vessel (for the ADS valves only), (2) act as primary system safety valves actuating on high system pressure or by manual actuation from the Control Room, and (3) to close to maintain the primary system pressure boundary and prevent uncontrolled de-pressurization of the reactor (i.e. stuck open relief valve). The function of the associated solenoid valves is to energize upon receipt of a manual or ADS actuation signal and, in so doing, vent the associated poppet valve assembly causing the main valve to open.

Testing of SRVs is performed to satisfy Technical Specifications Surveillance Requirements (SRs) and the ASME OM Code. Certain tests are performed with the SRVs installed (in situ), while others are performed as "bench tests" after the valve is removed and transported to a maintenance and testing facility. Exercising the main disk of the SRV after reinstallation can only be performed during reactor startup with primary system pressure greater than 175 psig. Although this plant evolution at low reactor power level provides sufficient steam pressure to actuate the main disk, it is also being conducted at a time of elevated potential for plant transients to occur. Each relief valve actuation transmits hydrodynamic loading to the torus, and quarterly testing of each of these valves could result in exceeding the torus design basis.

BASIS (cont):

Also, failure of any relief valve to close would cause an uncontrolled rapid depressurization of the primary system and plant shutdown. Several aspects of SRV design and operation can contribute to valve leakage. These include test pressure, pilot valve disc and rod configuration, and system and valve cleanliness. Actuation of the SRVs after laboratory testing by any means allows these contributors to impact the ability of the valve to reclose completely. Reduction of in situ valve testing that disturbs the pilot disc/seat interface is expected to have a positive impact in reducing SRV leakage and subsequent plant challenges.

Additionally, challenges to components and operation are presented by leaking SRVs as follows:

1. Leakage during operation may cause the valve to inadvertently actuate, possibly resulting in an unplanned plant shutdown, with its attendant challenges to plant safety systems and components.
2. Leaking SRVs create operational problems associated with the suppression pool. SRV leakage increases both pool temperature and level, requiring more frequent use of the suppression pool cooling mode of the Residual Heat Removal (RHR) system.
3. Plant efficiency is impacted because the transfer of heat to the suppression pool is a source of thermal heat loss from the power generation steam cycle, thereby reducing electrical generating capacity.
4. SRV leakage results in radiological challenges since radioactive nuclides contained in the steam can become a potential source for personnel contamination.

Reducing challenges to the SRVs is a recommendation of NUREG-0737, "TMI Action Plan Requirements" item II.K.3 (16), “Reduction of Challenges and Failures of Relief Valves”. This recommendation is based on a stuck open SRV being a possible cause of a Loss of Coolant Accident and recommends reducing the number of challenges to safety/relief valves. Testing during cold shutdown contradicts the recommendation.

ALTERNATE TESTING:

Each of these valves will be exercised open and verified to close following refueling outages in accordance with ISTC-3521(e), subject to the provision of ISTC-3521(h).

SYSTEM:

Instrument Air Supply (D-70007 SH0001, D-07007 SH0001)

COMPONENTS:

1-B21-F024A thru 1-B21-F024D, 1-B21-V28A thru 1-B21-V28D
2-B21-F024A thru 2-B21-F024D, 2-B21-V28A thru 2-B21-V28D

CATEGORY:

Aug-C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves open to provide flow paths for supplying instrument air to the inboard main steam isolation valve (MSIV) operating system. They close to isolate the respective air accumulator to ensure an adequate supply of air to maintain the MSIV open, and provide closure air in the event of the loss of air pressure in the common supply headers.

These are simple check valves, with no external means of exercising or determining obturator position. Testing these valves in the open and closed directions requires isolation of the uninterruptable instrument air system and entry into the drywell for valve manipulation and pressure monitoring. During cold shutdown periods, entry into the drywell would require de-inerting the drywell. Partial-stroke exercising of these valves has the same impact and potential problems as does full closure; thus, it is also not practical during steaming operations.

ALTERNATE TESTING:

Each of these valves will be closure verified during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Section 3.1.1.3.

SYSTEM:

Instrument Air Supply (D-70007 SH0001, D-07007 SH0001)

COMPONENTS:

1-B21-F036A thru 1-B21-F036L, 1-B21-V27A thru 1-B21-V27L
2-B21-F036A thru 2-B21-F036L, 2-B21-V27A thru 2-B21-V27L
1-RNA-V295, 1-RNA-V297
2-RNA-V295, 2-RNA-V297

CATEGORY:

Aug-C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves open to provide flowpaths for supplying instrument air to the automatic de-pressurization system (ADS) valves operating system. They close to isolate the respective air accumulator to ensure an adequate supply of air to provide closure air in the event of the loss of air pressure in the common supply headers.

These are simple check valves, with no external means of exercising or determining obturator position. Testing these valves in the open and closed directions requires isolation of the uninterruptable instrument air system and entry into the drywell for valve manipulation and pressure monitoring. During cold shutdown periods entry into the drywell would require de-inerting the drywell. Partial-stroke exercising of these valves has the same impact and potential problems as does full closure; thus, it is also not practical during steaming operations.

ALTERNATE TESTING:

Each of these valves will be exercised and verified to open and close during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Section 3.1.1.3.

SYSTEM:

Nuclear Steam Supply System (D-02521 SH0001A, D-25021 SH0001A)

COMPONENTS:

1-B21-F037A thru 1-B21-F037L
2-B21-F037A thru 2-B21-F037L

CATEGORY:

C

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves close to prevent venting steam into the drywell (i.e. bypassing the torus) in the event that the associated ADS valve opens. They open to prevent drawing a vacuum in the ADS tailpipes that could result in partial filling of the tailpipe with water from the torus. Excess quantities of water in a tailpipe could result in unacceptable forces generated on the piping and torus during blowdown.

These are exposed, spring-loaded check valves located in the drywell. These valves are typically exercised manually. Testing these valves requires plant shutdown and entry into the drywell. During cold shutdown periods, entry into the drywell would require de-inerting the drywell. Partial-stroke exercising of these valves has the same impact and potential problems as does full closure; thus, it is also not practical during steaming or cold shutdown conditions.

ALTERNATE TESTING:

Each of these valves will be exercised open and closed during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Section 3.1.1.3.

SYSTEM:

Traversing Incore Probe (TIP) (F-70081)

COMPONENTS:

1-C51-TIP-CHV
2-C51-TIP-CHV

CATEGORY:

A/C

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These are simple check valves with no external means of exercising, nor for determining disk position; thus, the only practical method of verifying closure is by performing a leak test. The method of leak testing this valve requires separation of the nitrogen supply tubing inside containment and, thus, is not practical during plant operation.

During cold shutdown periods, entry into the drywell would require de-inerting the drywell. Partial-stroke exercising of these valves has the same impact and potential problems as does full closure; thus, it is also not practical during steaming operations.

ALTERNATE TESTING:

Each of these valves will be exercised open and closed during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Section 3.1.1.3.

SYSTEM:

Reactor Coolant Recirculation (D-02518 SH0001A, D-02548 SH0002B, D-25018 SH0001A, D-25048 SH0002B)

COMPONENTS:

1-B32-V24 and 1-B32-V32
2-B32-V24 and 2-B32-V32

CATEGORY:

A/C

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These check valves open to provide flow paths for seal water flow to the recirculation pumps and close for containment isolation. They are simple check valves, with no positive indication of disk position; thus, the only means of determining closure of these valves is by performing a back flow or leak test. Such a test requires drywell entry plus extensive system re-alignment. Furthermore, testing requires shutdown of the respective recirculation pump, which is impossible during operations and undesirable during cold shutdown periods.

ALTERNATE TESTING:

Each of these valves will be open and closure verified during refueling outages in accordance with ISTC-3522(a)(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Section 3.1.1.3.

SYSTEM:

Core Spray (D-02524 SH0001&2, D-25024 SH0001&2)

COMPONENTS:

1-E21-F006A and 1-E21-F006B
2-E21-F006A and 2-E21-F006B

CATEGORY:

A/C

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These check valves open to provide flow paths for core spray to the reactor vessel. They close to isolate the low pressure-rated core spray system components from the reactor vessel. These are simple check valves, with no external means of exercising nor for determining disk position; thus, the only means of determining closure of these valves by performing a back flow or leak test. Such a test requires drywell entry plus extensive valve lineup alterations.

In order to full-stroke open these valves, the core spray pumps must be operated at rated flow discharging directly into the reactor vessel. This cannot be done during normal operation because the core spray pumps are not capable of overcoming reactor pressure. Core spray injection during cold shutdown with the reactor head in place is impractical due to the difficulty of controlling reactor vessel water level. Core spray injection at rated flow would result in a vessel level increase of approximately 30 inches per minute. With injection going into the vessel shroud region, the high rate of change in water level, and a possible difference in level between the shroud region and the main vessel, it would be possible to inadvertently flood the main steam lines or over-pressurize the reactor vessel if this test were performed at cold shutdown with the head in place. In addition, the extensive scope of preparations required to inject water via the core spray pumps would result in a significant burden on the plant operating staff.

ALTERNATE TESTING:

Each of these valves will be exercised open and closed during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Section 3.1.1.3.

SYSTEM:

Standby Liquid Control (D-02547, D-25047)

COMPONENTS:

1-C41-F006 and 1-C41-F007
2-C41-F006 and 2-C41-F007

CATEGORY:

A/C

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These check valves provide flow paths for borated water from the standby liquid control injection (SLC) header to the reactor vessel, and close for containment isolation. These are simple check valves, with no positive external means of determining disk position; thus, the only means of verifying closure of these valves is by performing a leak test. Such a test requires extensive preparations, and is impractical during plant operations or at cold shutdown due to the required plant conditions. Exercising these valves to the closed position requires the reactor vessel to be flooded for refueling and connection of hoses from the demineralized water system. The only practical means of exercising these valves to the open position requires connection of a hose and flow meter from the demineralized water system and injecting into the vessel. This cannot be done during normal operation or cold shutdown since the SLC system must be flushed to prevent contamination of the reactor coolant with sodium pentaborate.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised to the open and close positions during every refueling outage using 0PT-20.14, in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position as set forth in NUREG-1482, Revision 2, Paragraph 4.1.6.

SYSTEM:

Residual Heat Removal (D-02525 SH0001B, D-02526 SH0002B & D-25025 SH0001B, D-25026 SH0002B)

COMPONENTS:

1-E11-F050A and 1-E11-F050B
2-E11-F050A and 2-E11-F050B

CATEGORY:

A/C

CLASS:

1

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During power operation, these normally-closed valves isolate the RHR system piping from the high pressure reactor recirculation system. These are simple check valves, with no external means of operation or position indication; thus, the only method of exercising them is to observe system parameters during system operation.

The normal means of verifying closure of these valves requires entry into the drywell. Such an entry is not practical during plant operation or under inerted containment conditions due to personnel safety concerns. Verification of closure by back leakage methods at operating pressure would expose test personnel to a possible release of high pressure radioactive steam.

ALTERNATE TESTING:

Each of these valves will be verified closed during refueling outages in accordance with ISTC-3522(c), subject to the provisions of ISTC-3522(f). This is consistent with the NRC position provided in NUREG-1482, Revision 2, Paragraph 3.1.1.3.

SYSTEM:

Instrument Air Supply (D-70007, D-07007)

COMPONENTS:

1-RNA-V313, 1-RNA-V314, 1-RNA-V315, 1-RNA-V316
2-RNA-V313, 2-RNA-V314, 2-RNA-V315, 2-RNA-V316

CATEGORY:

C, Aug-C

CLASS:

2, SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves open to provide flow paths for supplying instrument air and backup nitrogen to the automatic de-pressurization system (ADS) valves operating system. They close to isolate the respective supply headers, and provide independent supply paths.

These are simple check valves, with no external means of exercising or determining obturator position. Testing these valves in the open direction requires isolation of the individual headers and entry into the drywell for valve manipulation and pressure monitoring. Furthermore, testing valves RNA-V315 and RNA-V316 to the closed position also requires entry into the drywell for valve manipulation and pressure monitoring. During cold shutdown periods, entry into the drywell would require de-inerting. Testing valves RNA-V313 and RNA-V314 to the closed position can be performed on-line. Yet, ISTC-3522(a) allows testing both directions of check valves at an interval when it is practicable to perform both. Since the testing of these valves in the open direction can only be performed when the plant is during refueling frequencies, closure testing should be performed at the same interval. Partial-stroke exercising of these valves requires the same plant conditions and access requirements as does full stroke exercising; thus, partial stroke exercising is also not practical during steaming operations or cold shutdown periods.

ALTERNATE TESTING:

Each of these valves will be exercised, and verified to open and close, during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC 3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Paragraph 3.1.1.3.

SYSTEM:

Instrument Air Supply (D-07007, D-70007)

COMPONENTS:

1-RNA-V350 and 1-RNA-V351
2-RNA-V350 and 2-RNA-V351

CATEGORY:

A/C

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves open to provide flow paths for supplying instrument air to various components inside the drywell and close for containment isolation.

These are simple check valves with no external means of exercising or determining obturator position. Testing these valves in the open direction requires entry into the drywell for valve manipulation and pressure monitoring. Testing in the closed direction also requires entry into the drywell and performance of a leak rate test. Partial-stroke exercising of these valves requires the same plant conditions and access requirements as does full stroke exercising; thus, partial stroke exercising is also not practical during steaming operations or cold shutdown periods.

ALTERNATE TESTING:

Each of these valves will be exercised, and verified to open and close, during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the NRC position stated in NUREG-1482, Revision 2, Paragraph 3.1.1.3.

SYSTEM:

Core Spray (D-25024 SH0002, D-02524 SH0002)

COMPONENTS:

1-E21-F015A and 1- E21-F015B
2-E21-F015A and 2- E21-F015B

CATEGORY:

B

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

During PT-07.2.4a(b), Core Spray System Operability Test, the E21-F015 Full Flow Test Bypass Valve is stroked and the low pressure alarm has been observed. Review of computer data during testing indicates that the pressure drops low enough to allow voiding in the upper elevations of Core Spray injection piping. This could cause significant water hammer if the pumps were started prior to refilling. Review of computer data for torus water level during the test, indicates that the torus water level increases during the time frame the F015 valve is stroked. This further validates that water is draining from the line and voiding is occurring in the upper elevation Core Spray piping.

PT-07.2.4a(b) is performed quarterly. The F015 valve is the last isolation valve prior to the Core Spray test return line entering the Torus and terminating under the water level. This valve is listed in TRM Appendix D, Table 3.6.1.3-2, Power Operated and Automatic PCIVs. SR 3.6.1.3.4 is specified. Per the TRM and SR 3.6.1.3.4, the allowable isolation time and test frequency is specified in accordance with the IST Program.

BASIS (cont):

The F015 full flow test bypass valve is only opened during PT-07.2.4a(b) for stroke testing (close) and for pump operability testing. The closing stroke time test is performed under static conditions. For pump operability testing the F015 is throttled open to achieve 4700 gpm. It is never fully opened during pump operation. Since this line does not have flow limiting orifices, opening the F015 full open could cause pump cavitation. The F015 is closed against full flow of 4700 gpm during the operability test which conservatively demonstrates that it can close as required to perform its PCIV function.

Partial voiding of Core Spray piping on a quarterly basis to perform stroke time testing of the F015 introduces the possibility of water hammer damage if a spurious or inadvertent Core Spray pump start were to occur. Requiring that the Core Spray pump motor be racked out during this portion of the procedure would be time consuming, reduces system availability, introduces additional steps and possibility of human error. Since closing the F015 valve against 4700 gpm flow adequately demonstrates the closing capability of the valve on a quarterly basis, stroke timing of this valve should be revised to be required only during refueling outages.

ALTERNATE TESTING:

Each of these valves will be stroked during refueling outages when the system is removed from normal service and the likelihood of an inadvertent pump start is minimized. This meets the criteria for refueling frequency in ISTC-3521(e).

SYSTEM:

Control Rod Drive (D-02517 SH0002A, D-25017 SH0002A)

COMPONENTS:

1-C11-115 (137 Valves)
2-C12-115 (137 Valves)

CATEGORY:

C

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves open to provide flow paths from the Control Rod Drive (CRD) pumps to the accumulators and drive water headers. They close to retain accumulator pressure in the event that the CRD pumps are shut down. They are simple check valves, with no external means of exercising or verifying obturator position, and can only be tested by de-pressurizing the charging water headers and performing a pressure decay test of the accumulators. During power operation, securing CRD flow will result in loss of control rod drive cooling water and probable seal damage. Additionally, this test should not be performed during cold shutdown periods with the recirculation pumps operating. The CRD pumps supply seal water to the recirculation pumps and securing seal water will require securing recirculation pumps. In addition, it is desirable to maintain CRD flow during cold shutdown periods to ensure flushing of the CRDs and prevent the accumulation of deposits of foreign matter in the drive mechanisms.

ALTERNATE TESTING:

Each of these valves will be exercised open and closed during refueling outages in accordance with ISTC-3522(c), subject to the provision of ISTC-3522(f). This is consistent with the ASME OM Code.

SYSTEM:

Service Water (D-02041 SH0002, D-20041 SH0002)

COMPONENTS:

1-SW-V36 and 1-SW-V37
2-SW-V36 and 2-SW-V37

CATEGORY:

B, Aug-B

CLASS:

3, SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These normally-open motor-operated valves provide flow paths for lubricating water from the service water system to the main circulating water pump seals. They close in the event of an accident to direct full service water flow to critical safety equipment. Closure of these valves during plant operation and cold shutdown secures seal water to the main circulating water pumps. This will automatically trip the circulating pumps which would, in turn, result in a plant trip on high condenser pressure and loss of primary heat sink.

ALTERNATE TESTING:

Each of these valves will be full-stroke exercised closed during refueling outage periods in accordance with ISTC-3521(e) subject to the provision of ISTC-3521(h).

SYSTEM:

High Pressure Coolant Injection (D-02523 SH0002 and D-25023 SH0002)

COMPONENTS:

1-E41-F040
2-E41-F040

CATEGORY:

C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves close for containment isolation and open to provide a flow path for draining the HPCI steam exhaust drain pot to the torus. Testing these valves to the closed position requires system realignment and set up of leak testing or similar equipment. To perform this testing quarterly or during cold shutdown outages would constitute a significant burden on staff resources with no commensurate benefit in plant safety.

ALTERNATE TESTING:

Each of these valves will be verified closed during refueling outages in accordance with ISTC-3522(c), subject to the provisions of ISTC-3522(f). This is in alignment with the NRC position provided in NUREG-1482, Revision 2, Paragraph 3.1.1.3.

SYSTEM:

High Pressure Coolant Injection (HPCI) (D-02523 SH0002 and D-25023 SH0002)
Reactor Core Isolation Cooling (RCIC) (D-02529 SH0002 and D-25029 SH0002)

COMPONENTS:

1-E41-F049 and 1-E51-F040
2-E41-F049 and 2-E51-F040

CATEGORY:

C

CLASS:

SC, 2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves close for containment isolation. They open to provide a flow path of HPCI and RCIC turbine steam exhaust to the torus. Testing these valves to the closed position requires system realignment and set up of leak testing or similar equipment. To perform this testing quarterly or during cold shutdown outages would constitute a significant burden on staff resources with no commensurate benefit in plant safety.

ALTERNATE TESTING:

Each of these valves will be verified closed during refueling outages in accordance with ISTC-3522(c), subject to the provisions of ISTC-3522(f). This is in alignment with the NRC position provided in NUREG-1482, Revision 2, Paragraph 3.1.1.3.

SYSTEM:

High Pressure Drains (MVD) (D-02028 and D-20028)

COMPONENTS:

1-MVD-V5008 and 1-MVD-V5009
2-MVD-V5009

CATEGORY:

Aug-C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

BASIS:

These valves close to isolate Reactor Feed Pump, Moisture Separator Removal, and Steam Jet Air Ejector drains from the main steam system during an accident. This isolation prevents bypassing the main steam lines flow path to the condenser as a way of safely directing Main Steam Isolation Valve (MSIV) leakage post-Loss of Coolant Accident (LOCA) using the main condenser as a filter. They open to allow condensate from the Reactor Feed Pump, Moisture Separator Removal, and Steam Jet Air Ejector drains to the condenser. Testing these valves during plant operation would result in high radiation exposure. Additionally, these valves are located in drains with limited inventory and have no instrumentation that can be used in support of normal test methodology. These valves are of a similar condition as that of ISTB-3430 'Pumps Lacking Required Fluid Inventory' where allowances are made for pumps that lack required inventory. In summary, there is no practical test method and sufficient flow cannot be achieved or verified for these check valves.

ALTERNATE TESTING:

These valves will be sample disassembled during refueling outages in accordance with ISTC-3522(c), subject to the provisions of ISTC-5221(c). This is in alignment with the NRC position provided in NUREG-1482, Revision 2, Paragraph 4.1.4.

DUKE ENERGY IST PROGRAM
PROPOSED ALTERNATIVE IN ACCORDANCE WITH 10 CFR 50.55a(z)(2)
VRR-01

PLANT/UNIT:	Brunswick Steam Electric Plant, Unit Nos. 1 and 2.
INTERVAL:	5th Interval beginning December 22, 2017 and ending December 21, 2027.
COMPONENTS AFFECTED:	1-B21-F013A thru 1-B21-F013L 2-B21-F013A thru 2-B21-F013L
CODE EDITION AND ADDENDA:	ASME OM Code 2004 Edition with Addenda through OM-2006.
REQUIREMENTS:	ISTC-5113(c) states that the stroke time of all valves shall be measured to at least the nearest second.
REASON FOR REQUEST:	This alternative is a re-submittal of NRC approved 4th Interval relief request VRR-01 that was based on the ASME OM Code-2001 Edition. This 5th Interval request for relief, VRR-01, is based on the ASME OM Code-2004 Edition with Addenda through OM-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. The functions of the primary steam line safety/relief valves are to: (1) open upon receipt of an Automatic Depressurization System (ADS) signal to blow down the reactor vessel (i.e. for the ADS valves only). (2) act as primary system safety valves actuating on high system pressure or by manual actuation from the Control Room, and (3) to close to maintain the primary system pressure boundary and prevent uncontrolled de-pressurization of the reactor (i.e. stuck open relief valve). The function of the solenoid valves is to energize upon receipt of a manual or ADS actuation signal and, in so doing, open the associated pilot valve to allow venting of the area behind the main piston resulting in the associated main valve disc opening. The valves are sent to a vendor (i.e. NTS Technologies) and as-found tested which includes visual inspection, leakage testing, stroke time tested and set pressure testing. The stroke time of the main disc is measured by using accelerometers. The acceptance criteria is set at <100 milliseconds. This verifies the valves will perform their desired function. The valves are full stroke exercised and remote position verified, in accordance with ASME OM Code and Technical Specification 3.4.3, *Safety/Relief Valves (SRVs)*. Temperature sensors and acoustic monitors downstream of the valves discharge nozzles are used to provide a positive valve position indication. The proposed alternative testing above, together with the extensive preventative maintenance requirements for these valves, gives adequate assurance that these valves will perform satisfactorily and reliably. This position and alternate testing conforms to the recommendations presented in NUREG-1482, Revision 1, paragraph 4.3.2.1.

PROPOSED ALTERNATIVE AND BASIS:	Each of these valves will be exercised open and closed, and proper operation will be ascertained by observing the response and changes in Main Steam parameters within a specified time period and observation of the outputs of the downstream temperature and acoustic sensors. Specific as-found stroke times, visual inspections, set pressure and leakage testing will be measured by the vendor.
DURATION:	5th Interval beginning December 22, 2017, and ending December 21, 2027. Reference ML17129A507 dated June 16, 2017.
PRECEDENTS:	This Relief Request was approved as VRR-01 for the Fourth 10 Year IST Interval.

PLANT/UNIT:	Brunswick Steam Electric Plant, Unit Nos. 1 and 2.
INTERVAL:	5th Interval beginning December 22, 2017 and December 21, 2027.
COMPONENTS AFFECTED:	1/2-B21-F008 1/2-B21-F014A 1/2-B21-F014B 1/2-B21-F014C 1/2-E21-F017B 1/2-B21-F014D 1/2-B21-F014E 1/2-B21-F014F 1/2-B21-F014G 1/2-E41-F023A 1/2-B21-F014H 1/2-B21-F014J 1/2-B21-F014K 1/2-B21-F014L 1/2-E41-F023B 1/2-B21-F014M 1/2-B21-F014N 1/2-B21-F014P 1/2-B21-F014R 1/2-E41-F023C 1/2-B21-F014S 1/2-B21-F040 1/2-B21-F042A 1/2-B21-F042B 1/2-E41-F023D 1/2-B21-F044A 1/2-B21-F044B 1/2-B21-F046A 1/2-B21-F046B 1/2-E51-F043A 1/2-B21-F047C 1/2-B21-F047D 1/2-B21-F048A 1/2-B21-F048B 1/2-E51-F043B 1/2-B21-F049C 1/2-B21-F049D 1/2-B21-F050A 1/2-B21-F050B 1/2-E51-F043C 1/2-B21-F050C 1/2-B21-F050D 1/2-B21-F052A 1/2-B21-F052B 1/2-E51-F043D 1/2-B21-F052C 1/2-B21-F052D 1/2-B21-F054 1/2-B21-F056 1/2-B32-F042D 1/2-B21-F058A 1/2-B21-F058B 1/2-B21-F058C 1/2-B21-F058D 1/2-B32-F058A 1/2-B21-F058E 1/2-B21-F058F 1/2-B21-F058G 1/2-B21-F058H 1/2-B32-F058B 1/2-B21-F058L 1/2-B21-F058M 1/2-B21-F058N 1/2-B21-F058P 1/2-E21-F017A 1/2-B21-F058R 1/2-B21-F058S 1/2-B21-F058T 1/2-B21-F058U 1/2-B21-F060 1/2-B21-IV-2149 1/2-B21-IV-2196 1/2-B21-IV-2455 1/2-B21-IV-2456 1/2-B32-F005A 1/2-B32-F005B 1/2-B32-F006A 1/2-B32-F006B 1/2-B32-F039A 1/2-B32-F039B 1/2-B32-F039C 1/2-B32-F039D 1/2-B32-F041A 1/2-B32-F041B 1/2-B32-F041C 1/2-B32-F041D 1/2-B32-F042A 1/2-B32-F042B 1/2-B32-F042C
CODE EDITION AND ADDENDA:	ASME OM Code 2004 Edition with Addenda through OM-2006.
REQUIREMENTS:	ISTC-3510 requires all active Category A, Category B, and Category C check valves be exercised nominally every 3 months. ISTC-3700 requires valves with remote position indicators to be observed locally at least once every 2 years to verify that valve operation is accurately indicated.

REASON FOR REQUEST:	Because of the design of excess flow check valves, verifying their closure indication requires a simulated instrument line break. Based on the burden and costs associated with testing these excess flow check valves, Duke Energy is proposing to perform the exercise tests and valve position verification tests on a sampling basis (i.e., approximately an equal number of excess flow check valves every 24 months such that each excess flow check valve is tested at least once every 10 years). Duke Energy has determined that alternative excess flow check valve testing will provide an acceptable level of quality and safety for the following reasons: 1. Excess flow check valves are a simple and reliable device. The major components are a poppet and spring. The spring holds the poppet open only under static conditions, such that 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 tube. The resultant increase in flow imposes a differential pressure across the poppet, which compresses the spring and decreases flow through the valve. 2. The Boiling Water Reactor Owners' Group (BWROG) has developed a basis, documented in Topical Report B21-00658-01, *Excess Flow Check Valve Testing Frequency Relaxation*, dated November 1998, for reducing the EFCV testing frequency. This report was initially submitted to the NRC as part of a Duane Arnold Energy Center proposed license amendment on April 12, 1999. The BWROG report was supplemented by BWROG letter dated January 6, 2000, *Generic Response to NRC Request For Additional Information on Lead Plant Technical Specification Change Request Regarding Excess Flow Check Valve Surveillance Requirements*. The report was approved for use by an NRC Safety Evaluation dated March 14, 2000. Additionally, issues raised by the NRC in the March 14, 2000, Safety Evaluation were addressed in the issuance of General Electric Topical Report NEDO-32977-A (i.e., BWROG Topical Report B21-00658-01), *Excess Flow Check Valve Testing Relaxation*, dated June 2000.

	Technical Specification Task Force (TSTF) Item Number 334 (i.e. TSTF-334) was previously submitted to the NRC and was approved on September 18, 2000. The BWROG topical report concluded that the change in excess flow check valve test frequency has an insignificant impact on excess flow check valve reliability. The topical report evaluated the reliability of excess flow check valves at various boiling water reactor plants, including BSEP, based on information covering a 10-year period. Industry experience with excess flow check valves indicate that they have very low failure rates. On October 4, 2001, the NRC issued License Amendments 215 and 242 for BSEP Units 1 and 2, respectively, revising the BSEP Technical Specifications to incorporate excess flow check valve testing requirements consistent with TSTF-334. Excess flow check valves have been extremely reliable throughout the industry. An orifice is installed on each of the affected instrument lines. The orifice limits leakage to a quantity where the integrity and functional performance of secondary containment and the associated safety systems are maintained. The process fluid loss for a postulated rupture of an instrument line is within the capability of the reactor coolant makeup systems. The reduced testing associated with the alternative will result in an increase in the availability of the associated instrumentation during plant refueling outages. The reduced testing associated with the alternative will also reduce occupational radiological exposure.
PROPOSED ALTERNATIVE AND BASIS:	Duke Energy proposes to test a representative sample of excess flow check valves consisting of an approximately equal number of excess flow check valves every 24 months, such that each excess flow check valve will be tested at least once every 10 years. In addition, Duke Energy proposes to verify the open position indication at a frequency more often than what the ASME Code requires, but verify the close position indication in conjunction with excess flow check valve exercise tests.
DURATION:	5th Interval beginning December 22, 2017, and ending December 21, 2027. Reference ML17129A507 dated June 16, 2017.
PRECEDENTS:	This Relief Request was approved as VRR-04 for the Fourth 10 Year IST Interval. NRC Regulatory Guide 1.11, *Instrument Lines Penetrating the Primary Reactor Containment.*

Program Remark P-02

SYSTEM:

High Pressure Coolant Injection (2095)

COMPONENTS:

1-E41-C001
2-E41-C001

PUMP GROUP:

Aug-B

CLASS:

SC

DISCUSSION:

ISTB requires inservice testing of each pump. There are no suitable provisions for measuring the pressure in the cross-over piping between the HPCI booster and main pumps. Since these pumps are driven by a common driver and are connected in tandem, they are necessarily tested together, simultaneously, under the same operating conditions (flow rate and speed). Therefore, measuring the inlet pressure of the booster pump and calculating the differential pressure of the pump combination will effectively verify operability and serve to monitor the performance of the pair.

During inservice testing of these pumps, the differential pressure of the pump combination will be determined from measurements of the suction and discharge pressures of the booster and main pumps, respectively. This data will be used to evaluate the performance of the pump combination in a manner such that the combination will be treated as a single multi-stage pump.

These pumps are included in the IST Program in an augmented basis; therefore, no relief request is necessary. Additionally, the booster pump is classified as skid-mounted per ISTB-1200(c).

Program Remark P-03

SYSTEM:

Residual Heat Removal (2045)
Core Spray (2035)

COMPONENTS:

1-E11-C002A, 1-E11-C002B, 1-E11-C002C, 1-E11-C002D
2-E11-C002A, 2-E11-C002B, 2-E11-C002C, 2-E11-C002D
1-E21-C001A, 1-E21-C001B
2-E21-C001A, 2-E21-C001B

PUMP GROUP:

RHR – A, CS – B

CLASS:

2

DISCUSSION:

This program remark establishes a technical position on the testing of the Core Spray and RHR pumps. These pumps are vertically mounted, centrifugal pumps. For the purposes of vibration testing, these pumps will be treated as vertical line shaft pumps. The bearings on the pumps themselves are hydrostatic bearings which would tend to dampen any vibration and do not provide a viable point of data for assessing the operational readiness of the pumps. These pumps will have vibration measurements taken at the top of the motor, where the bearing arrangement is of a conventional type of bearing that will provide the best transmission of vibration to measurement devices. For flow parameters, the RHR and Core Spray pumps will be treated as centrifugal pumps. This is the practice that has been used at BSEP Units 1 & 2 for the fourth 10-year interval but is not discussed in any program documents. This position was discussed in a telephone conversation with Mr. Robert Binz who serves on the OM Code committee for ISTB. He stated that this is the typical treatment for these types of pumps throughout the industry. He also stated that this has been discussed by the committee but not formally documented in a code interpretation.

SYSTEM:

High Pressure Injection System (D-02523, D-25023)

COMPONENTS:

1-E41-C001
2-E41-C001

CATEGORY:

Aug-B

CLASS:

SC

TEST REQUIREMENT:

ISTB-5323 Comprehensive Test Procedure. Comprehensive tests shall be conducted with the pump operating at a specified reference point. The test parameters shown in Table ISTB-3000-1 shall be determined and recorded as required. The test shall be conducted as follows:
(a) The pump shall be operated at nominal motor speed for constant speed drives or at a speed adjusted to the reference point (+1%) for variable speed drives.
(b) The resistance of the system shall be varied until the discharge pressure equals the reference point. The flow rate shall then be determined and compared to its reference value.
(c) Where system resistance cannot be varied, flow rate and pressure shall be determined and compared to their respective reference values.
(d) Vibration (displacement or velocity) shall be determined and compared with corresponding reference values. Vibration measurements are to be broad band (unfiltered). If velocity measurements are used, they shall be peak. If displacement amplitudes are used, they shall be peak-to-peak.

DISCUSSION:

These variable speed pumps have a safety function to provide high pressure injection flow to the reactor vessel. The pumps have a post Power Uprate range of 2100 rpm to 4100 rpm. HPCI is designed for reactor pressure from 1164 psid to 150 psig. The total TDH for both pumps is 2831-2832 feet at a flow rate of 4250 gpm. The minimum acceptable design basis flow for system level performance was reduced from 4250 gpm to 3825 gpm as part of the 120 percent power uprate. [UFSAR 6.3.2.2.1; DBD-19 Section 3.3.2.1]

DISCUSSION (cont.):

The governor speed controller for the HPCI pumps does not provide a constant speed. Speed cannot typically be maintained constant to much better than ± 15 rpm. This coupled with fluid density changes due to temperature variations of the CST, result in significant DP variations. Routine data taken with instrumentation meeting CPT requirements indicate that DP readings would frequently fail high. Therefore, the pumps would be subject to being declared inoperable without equipment degradation. This would put the plant in unnecessary Limiting Condition Operations (LCOs) as well as take unnecessary unavailability system time for an acceptable performing pump. The pumps are not within the ASME Code Class boundaries and have been re-designated from IST to Augmented. Therefore, submittal of a code relief to the NRC is not required.

ALTERNATE TESTING:

A pump hydraulic test (pump curve verification) and Group B pump testing per the ASME OM Code (including vibration testing) will be performed at the frequency required for CPT testing. The pump hydraulic test will be evaluated such that compensated performance will be compared against baseline performance. Any deviations larger than the tolerance allowed will require an NCR with appropriate follow up actions.

SYSTEM:

Diesel Fuel Oil System (5100)

COMPONENTS:

2-FOD-1A-XFER-PMP	2-FOD-3A-XFER-PMP
2-FOD-1B-XFER-PMP	2-FOD-3B-XFER-PMP
2-FOD-2A-XFER-PMP	2-FOD-4A-XFER-PMP
2-FOD-2B-XFER-PMP	2-FOD-4B-XFER-PMP

CATEGORY:

Aug-B

CLASS:

SC

TEST REQUIREMENT:

ISTB-5322 Group B Test Procedure. Group B tests shall be conducted with the pump operating at a specified reference point. The test parameter value identified in Table ISTB-3000-1 shall be determined and recorded as required. The test shall be conducted as follows:
(a) The pump shall be operated at nominal motor speed for constant speed drives or at a speed adjusted to the reference point (+1%) for variable speed drives.
(b) The flow rate shall be determined and compared to its reference value.
(c) System resistance may be varied as necessary to achieve the reference point.

ISTB-5323 Comprehensive Test Procedure. Comprehensive tests shall be conducted with the pump operating at a specified reference point. The test parameters shown in Table ISTB-3000-1 shall be determined and recorded as required. The test shall be conducted as follows: *(a)* The pump shall be operated at nominal motor speed for constant speed drives or at a speed adjusted to the reference point (+1%) for variable speed drives.
(b) The resistance of the system shall be varied until the discharge pressure equals the reference point. The flow rate shall then be determined and compared to its reference value.
(c) Where system resistance cannot be varied, flow rate and pressure shall be determined and compared to their respective reference values.
(d) Vibration (displacement or velocity) shall be determined and compared with corresponding reference values. Vibration measurements are to be broad band (unfiltered). If velocity measurements are used, they shall be peak. If displacement amplitudes are used, they shall be peak-to-peak.

DISCUSSION:

These rotary positive displacement pumps have a safety function to maintain the inventory of the fuel oil day tank for each diesel engine during sustained operation. The day tank capacity is 550 gallons and the fuel consumption rate of the diesel at full load is approximately 4 gpm. The system design specification calls for a pump capacity of 10 gpm. The design rating of each pump is 14 gpm at 3500 rpm and 25 psig discharge pressure. The rated pump motor speed is 3600 rpm and the actual pump capacity at this rotational speed is approximately 16 gpm (at 25 psig).

There is not flow indication to quantify the flow rate. EER 90-00247 Rev 2 was developed during the second interval of the Inservice Testing (IST) program and adopted during the third interval of the IST program. It specified that the pump flow rate is determined to be greater than the minimum system requirement by measuring the time required to fill the fuel oil day tank from the low level setpoint to the high level setpoint. The accuracy of the day tank level switches is plus or minus one inch. Thus acceptance criteria was developed to measure and trend the time required. This has been an acceptable means of evaluating pump performance as seen by the data taken over the last 10 years.

The time parameter along with the vibration parameters taken on a quarterly frequency has proven to be an acceptable means for evaluating operability of these pumps. Continuing to use this method will be more conservative than the testing criteria of Group B pump testing per the OM Code. Also the acceptance criteria are conservative enough to satisfy the intent of the Comprehensive Pump Testing. Thus, equipment and overall system reliability is adequately monitored and ensured. These pumps are not within the ASME Code Class boundaries and have been placed in the IST Program as Augmented; therefore, code relief is not required.

ALTERNATE TESTING:

Time required to fill the fuel oil tank from the low level setpoint to the high level setpoint will be measured and trended per acceptance criteria developed per EER 90-00247 Rev 2. Each pump will be tested per the time and vibration parameters on a quarterly basis.

SYSTEM:

Instrument Air Supply/Nitrogen Backup (6135)

COMPONENTS:

1-RNA-V317 thru 1-RNA-V336
2-RNA-V317 thru 2-RNA-V336
1-RNA-V5042 thru 1-RNA-V5045
2-RNA-V5050 thru 2-RNA-V5053

CATEGORY:

Aug-C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

ISTC-3522 Category C Check Valves. Each check valve exercise test shall include open and close tests.

DISCUSSION:

These are simple check valves that open to provide flow paths from the backup nitrogen storage bottles to the backup nitrogen headers. They have no external means of exercising or determining valve disc position.

The only practical method of testing to the open position is to isolate all of the bottles in the train, reduce downstream header pressure, and sequentially open and close each bottle isolation valve to verify flow. While the bottles are isolated, this source of nitrogen is unavailable in the event of a failure of the associated uninterruptable air supply header.

The only practical method of testing to the close position is to remove each bottle and verify no leakage.

These are small (i.e. 1/4-inch) stainless steel valves installed in a clean and dry system. In the past, there were no instances where these valves failed to open or close. In particular, even if they were in a degraded condition, with the potentially large differential pressure across each valve (i.e. greater than 750 psid), failure to open is extremely unlikely.

DISCUSSION (cont.):

Similarly, failure to close would only be significant when changing bottles if the isolation valve were not closed.

Reliability of the nitrogen source is increased by the inherent redundancy of 10 nitrogen bottles and 10 associated check valves. Given the redundancy and reliability of the nitrogen supply provided by the system design, the individual reliability of the valves, the relatively low probability of significant failure, and the effect of frequently imposing system downtime, the burden on the plant staff of performing these tests is not commensurate with the potential small gain in plant safety afforded by quarterly testing. Exercising these valves on a 2-year schedule will adequately ensure continued system availability.

These check valves are not within the ASME Code Class boundaries and have been placed in the Inservice Testing Program as Augmented; therefore, code relief is not required.

ALTERNATE TESTING:

Each of these valves will be exercised open at least once every two years.

Program Remark V-04

SYSTEM:

Reactor Building Ventilation (8185)

COMPONENTS:

1-VA-1A-BFIV-RB, 1-VA-1B-BFIV-RB, 1-VA-1C-BFIV-RB, and 1-VA-1D-BFIV-RB
2-VA-2A-BFIV-RB, 2-VA-2B-BFIV-RB, 2-VA-2C-BFIV-RB, and 2-VA-2D-BFIV-RB

CATEGORY:

Aug-B

CLASS:

SC

TEST REQUIREMENT:

ISTC-3521 Category A and Category B Valves. Category A and Category B valves shall be tested as follows: (a) full-stroke exercising of Category A and Category B valves during operation at power to the position(s) required to fulfill its function(s), and exercising or examining check valves during plant operation in a manner that verifies obturator travel to the closed, full-open, or partially open position required to fulfill its function(s).

DISCUSSION:

Testing to determine the operability of the secondary containment isolation dampers is performed per the requirements of Technical Specification Surveillance Requirement 3.6.4.2.1. The Technical Specification requires that these valves be exercised quarterly and requires exercise and stroke time tests to be performed at least once every 24 months. These valves are not within the ASME Code Class boundaries and have been placed in the Inservice Testing (IST) Program as Augmented; therefore, relief code relief is not required. The plant's position is that Technical Specification required testing is sufficient to ensure that the valves perform their safety function.

ALTERNATE TESTING:

Test valves in accordance with Technical Specifications.

Program Remark V-05

SYSTEM:

Containment Atmosphere Control (2070)

COMPONENTS:

2-CAC-CV-2889, 2-CAC-CV-2890

CATEGORY:

Aug-B

CLASS:

SC

DISCUSSION:

These valves are rapid-acting installed in a parallel arrangement in the AOG supply line to both units. The valves' control system is such that they share common control switch and indicating lights. The light indication indicates when either valve is in the open/closed position (e.g., if one valve is open and the other closed, the indication would show intermediate with both the open and closed lights illuminated).

These valves are common (i.e. shared) to both units.

ALTERNATE TESTING:

The stroke time for the pair will be measured and recorded as the stroke time for each valve. This time will be that of the slowest valve.

SYSTEM:

High Pressure Coolant Injection (2095) Reactor Core Isolation Cooling (2100)

COMPONENTS:

1-E41-F045 and 1-E51-F030
2-E41-F045 and 2-E51-F030

CATEGORY:

Aug-C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

DISCUSSION:

The E41-F045 and E51-F030 valves open to provide flow paths from the suppression pool to the suctions of the HPCI and RCIC pumps, respectively. They are simple check valves, with no external means of exercising or verifying obturator position; thus, the only method of determining valve operability is by observation of system parameters.

During quarterly pump testing, the pumps normally take suction from the condensate storage tank, recirculating water back to the condensate storage tank via the only available discharge flow path for the pumps since injection into the reactor vessel is impractical. If suction were to be switched to the suppression pool, pool water would be transferred to the condensate storage tanks. This would result in contaminating the contents of the condensate storage tanks both with radioactive contaminants as well as possible chemical impurities. Each of these valves has been inspected on a regular basis since 1989. In these cases, the valves were found to be free of any indications of wear or corrosion that challenged the valves' capability of performing their functions. These valves experience no flow except during test periods; thus, service-related degradation is not expected. These check valves are not within the ASME Code Class boundaries and have been placed in the Inservice Testing Program as Augmented; therefore, code relief is not required.

ALTERNATIVE TESTING:

Each of these valves will be partial flow exercised every 24 months and subjected to periodic disassembly and internal inspection consistent with their observed condition. Following re-assembly, each valve that was disassembled will be partial-flow exercised.

For grouping characteristics/groupings, refer to Engineering Procedure 0ENP-16.7, Administrative Control of the Check Valve Disassembly Program.

SYSTEM:

High Pressure Coolant Injection (2095)
Reactor Core Isolation Cooling (2100)

COMPONENTS:

1-E41-F046, 1-E51-F021
2-E41-F046, 2-E51-F021

CATEGORY:

Aug-C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

ISTC-5221 Valve Obturator Movement. If the test methods in ISTC-5221(a) and ISTC-5221(b) are impractical for certain check valves, or if sufficient flow cannot be achieved or verified, a sample disassembly examination program shall be used to verify valve obturator movement. [ISTB-5221(c)].

DISCUSSION:

These valves open to provide flow paths for minimum flow from the associated pump to prevent over-heating and damage under low-flow conditions. During normal quarterly pump testing, each valve is subjected to full-flow conditions; however, there is no installed instrumentation in the line that can verify, quantitatively, that full accident flow is present. Thus, this quarterly testing is considered to be partial-stroke exercising.

Each of these valves has been disassembled and inspected numerous times. In these cases, the valves were found to be free of any indications of wear or corrosion that challenged the valves' capability of performing their safety functions. These valves experience no flow or transients except for periodic testing; thus, service-related degradation is not expected. These check valves are not within the ASME Code Class boundaries and have been placed in the Inservice Testing Program as Augmented; therefore, code relief is not required.

ALTERNATIVE TESTING:

Each of these valves will be partial flow exercised quarterly and subjected to disassembly and internal inspection during refueling outages. Individual valves will be disassembled on a 2R frequency. ESR 94-00706 performed the justification to extend the disassembly. Following re-assembly, each valve that was disassembled will be partial-flow exercised.

For grouping characteristics/groupings, refer to Engineering Procedure 0ENP-16.7, Administrative Control of the Check Valve Disassembly Program.

SYSTEM:

High Pressure Coolant Injection (2095)

COMPONENTS:

1-E41-F048, 1-E41-F057
2-E41-F048, 2-E41-F057

CATEGORY:

Aug-C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

DISCUSSION:

These valves open to provide flow paths from the HPCI barometric condenser condensate pump and lube oil cooler to the suction of the HPCI pump. During routine testing of the HPCI pumps, these valves see accident flow; however, there is no instrumentation in the associated lines that can be used to verify flow. Opening without flow verification is considered to be a partial-stroke exercise test. Each of these valves has been inspected on a regular basis since 1996. In these cases, the valves were found to be free of any indications of wear or corrosion that challenged the valves' capability of performing their safety functions. These valves experience no flow or transients except for periodic testing; thus, service-related degradation is not expected. These check valves are not within the ASME Code Class boundaries and have been placed in the Inservice Testing Program as Augmented; therefore, code relief is not required.

ALTERNATIVE TESTING:

Each of these valves will be partial-stroke exercised every 24 months and disassembled and inspected on a periodic basis consistent with their observed condition. Following disassembly, the subject valve will be partial-flow exercised.

For grouping characteristics/groupings, refer to Engineering Procedure 0ENP-16.7, Administrative Control of the Check Valve Disassembly Program.

SYSTEM:

Emergency Diesel Generator Starting Air (5112)

COMPONENTS:

2-DG1-SV-6552-1	2-DG2-SV-6552-2
2-DG3-SV-6552-3	2-DG4-SV-6552-4
2-DG1-SV-6576-1	2-DG2-SV-6576-2
2-DG3-SV-6576-3	2-DG4-SV-6576-4
2-DSA-V141	2-DSA-V142
2-DSA-V145	2-DSA-V146
2-DSA-V149	2-DSA-V150
2-DSA-V153	2-DSA-V154

CATEGORIES:

Aug-B & Aug-C

CLASS:

SC

TEST REQUIREMENT:

The stroke time of all valves shall be measured to at least the nearest second [ISTC-5113(c)].

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. Each check valve exercise test shall include open and close tests. [ISTC-3522(a)].

DISCUSSION:

These valves open and close to direct and secure starting air to the emergency diesel generators jet assist headers. Proper operation of the diesel engine does not provide assurance that these valves operate properly; thus, simple observing the operation of the engine is not a definitive method of determining proper valve operation. They have no position indication, nor can shaft position be observed during valve operation; thus, stroke timing or direct observation is not possible. These valves are not within the ASME Code Class boundaries and have been placed in the Inservice Testing Program as Augmented; therefore, code relief is not required.

ALTERNATE TESTING:

Each of these solenoid valves will be exercised open and closed in conjunction with periodic emergency diesel generator testing, and each check valve will be confirmed to open. During these tests, satisfactory valve operation will be ascertained by observing changes in jet assist supply air pressures when these valves are cycled. No stroke times or flow rates will be measured.

Program Remark V-12

SYSTEM:

Emergency Diesel Generator Starting Air (5112)

COMPONENTS:

2-DG1-SV-6553-1	2-DG2-SV-6553-2
2-DG3-SV-6553-3	2-DG4-SV-6553-4
2-DG1-SV-6554-1	2-DG2-SV-6554-2
2-DG3-SV-6554-3	2-DG4-SV-6554-4

CATEGORY:

Aug-B

CLASS:

SC

TEST REQUIREMENT:

The stroke time of all valves shall be measured to at least the nearest second [ISTC-5113(c)].

DISCUSSION:

These solenoid valves open and close to direct and secure starting air to the emergency diesel generators starting air headers. They have no position indication, nor can shaft position be observed during valve operation; thus, stroke timing is not possible. These valves are not within the ASME Code Class boundaries and have been placed in the Inservice Testing Program as Augmented; therefore, code relief is not required.

ALTERNATE TESTING:

Each of these valves will be exercised open and closed in conjunction with periodic emergency diesel generator testing. During these tests, satisfactory valve operation will be ascertained by the satisfactory starting and operation of the diesel generators. Stroke times will not be measured.

SYSTEM:

Emergency Diesel Starting Air (5112)

COMPONENTS:

2-DSA-V46	2-DSA-V76	2-DSA-V106
2-DSA-V136	2-DSA-V141	2-DSA-V142
2-DSA-V145	2-DSA-V146	2-DSA-V149
2-DSA-V150	2-DSA-V153	2-DSA-V154

CATEGORY:

Aug-C

CLASS:

SC

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

ISTC-5221 Valve Obturator Movement. If the test methods in ISTC-5221(a) and ISTC-5221(b) are impractical for certain check valves, or if sufficient flow cannot be achieved or verified, a sample disassembly examination program shall be used to verify valve obturator movement. [ISTB-5221(c)].

DISCUSSION:

This program remark addresses testing for the emergency diesel generator starting air, jet assist supply, and control air check valves. The emergency diesel generator starting air jet assist supply check valves open to provide a flow path from the air receiver to the jet assist intake of the diesel engine and close to prevent backflow from the jet assist to the air receiver. The emergency diesel generator starting air control air check valves open to provide a flow path from the air volume tank to the control air system for the diesel engine and close to provide pressure boundary integrity to the control air system. These valves are simple check valves, with no external means of exercising the valve disk or for determining disk position. There is also no convenient method of determining disk position via a back leakage test.

Therefore, these valves are disassembled every 24 months. Note that this is in compliance with ISTC-5221(c).

SYSTEM:

RHR (2045)

COMPONENTS:

1-E11-F031A thru D 1-E11-F046A thru D
2-E11-F031A thru D 2-E11-F046A thru D

CATEGORY:

C

CLASS:

2

TEST REQUIREMENT:

ISTC-3510 Exercising Test Frequency. Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3570, ISTC-5221, and ISTC-5222.

ISTC-3522 Category C Check Valves. Each check valve exercise test shall include open and close tests.

DISCUSSION:

The testing methodology for the RHR Pump Discharge Check Valves (E11-F031A through D) and the RHR Minimum Flow Check Valves (E11-F046A through D) in the closed position was demonstrated per performance of 0PT-08.2.2b and 0PT-08.2.2c. These are Category C valves with a safety function in the open and closed position. The methodology of verifying the closure capability of these check valves was demonstration of the ability to establish a differential pressure of greater than or equal to 50 psid across the valves. This differential pressure was determined by the difference in indication between the Pump Discharge Pressure Indicators (e.g. E11-PI-R003B and E11-PI-R003D).

The methodology used in 0PT-08.2.2b and 0PT-08.2.2c for testing the subject check valves (i.e. closed position only) will be changed to comply with ASME OM Code. Per Plant Design Basis Document 17 the subject check valves have a safety function in the closed position to prevent diversion of loop flow in the event that the opposite loop RHR pump is in operation.

DISCUSSION (cont.):

The subject check valves are installed on the discharge of the respective pump (i.e. E11-F046A and E11-F031A are on the discharge of the "A" RHR Pump). These valves provide a barrier for recirculation flow. There is not a specified leakage limit for the subject check valves in the closed direction (i.e. they are classified as ASME Category C only and not A/C). The check valve leakage will remain in the pressure boundary of the RHR system and causes no adverse effects to the immediate area. Achievement of a single pump providing the required safety flow rate of 9000 gpm is considered an acceptable alternative in lieu of measuring the differential pressure. The flow indicator used for flow measurement is located downstream of where the two pump discharge lines merge thereby confirming actual delivered flow. This design eliminates any check valve back leakage from being measured as part of the total delivery to the Suppression Chamber or Reactor Vessel.

Any back flow through the check valves will simply recirculate back into the RHR system discharge of the opposite non running pump. The RHR pump discharge piping is Class 300 and leakage will result in the piping being pressurized to higher than designed. The differential pressure will continue to be monitored; however, it will not be used as a bases for check valve closure acceptance criteria. Monitoring and trending of the differential pressure will allow for planned maintenance of the subject check valves. There are no increases in radiological exposure resulting from the leakage past the check valves since the piping remains full of process water. No leakage to the environment results from these check valves leaking past their seats since the water is contained in the RHR system. In addition to forward flow measurement methodology, the absence of reverse rotation of the idle pump is also confirmed.

SYSTEM:

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

CLASS:

SC

COMPONENTS:

1-E41-PSE-D003, 1-E41-PSE-D004
1-E51-PSE-D001, 1-E51-PSE-D002
2-E41-PSE-D003, 2-E41-PSE-D004
2-E51-PSE-D001, 2-E51-PSE-D002

CATEGORY:

Aug-D

DISCUSSION:

These rupture disks retain the integrity of the HPCI and RCIC steam exhaust piping during system operation, and open (destructively) to prevent damage to the steam discharge piping and turbines in the event that the exhaust piping pressure becomes excessive. In each case, there are two disks in series with a vent between, to prevent steam exhaust into the reactor building in the event of pre-mature opening (failure) or leaking of the respective inboard disk. The cavities between the disks are also provided with pressure sensing devices that will automatically shutdown the system in the event of an opening of the inboard rupture disks.

These disks are of the “reverse buckling style” (MFG. Black, Sivalls, and Bryson), where the disk material is concave into the pressure side of the assembly, and an over-pressure condition deflects the “membrane” outward onto a cutter edge that breaks the material causing rapid opening. This design is somewhat unique in that the disk membrane is not scored or materially weakened, as others are, and the concave form eliminates fatigue failure as a realistic failure mode.

The disk membranes are made of corrosion resistant Inconel 600 material. The service of these lines is low pressure clean steam (typically less than 25 psig), and each of the systems run for an average of approximately 20 hours per year. Considering these mild service conditions, and that the disk membranes are made of corrosion resistant Inconel 600 material, there is a low probability of service-related failure.

DISCUSSION (cont.):

Based on the design and construction of these units and the minimal service conditions under which they operate, significant degradation is unlikely. It is expected that the most likely result of aging of these units is a reduction of the deflection pressure with an associated reduction in the burst pressure. This is conservative with respect the safety requirement associated with over-pressure protection. In addition, since the outboard disk sees essentially no pressure, service failure of the inboard disk due to aging is not significant with respect to system integrity and personnel safety.

Industry event databases were reviewed to determine failure causes for this type of application. Rupture discs have actuated due to actual over pressure conditions associated with water hammers. These events are not actual disc failures. Also these discs can be exposed to vacuum conditions. When the standard blow out type disc is exposed to a vacuum buckling can lead to failure. The reverse buckling disc is not subject to this failure mode. Rupture discs have also failed after significant service where operating pressures were greater than 70% of the rupture pressure. With the low operating pressures, this failure mode is not applicable to BNP. Failures have been attributed to improper maintenance during periodic replacements. This will not be applicable to BNP unless a requirement to implement a periodic replacement program is instituted. Cases were also noted where pinhole leaks were identified. This is the only failure mechanism that was found to be applicable to BNP. The BNP configuration allows this failure mechanism to be detected with simple inspections during the routine quarterly surveillance testing. The design would allow water to be detected coming from the orifice between the discs long before gross failure would be expected. Regular inspections will allow BNP to replace a leaking inboard disc on an as needed basis in a planned fashion with no risk to personnel or nuclear safety.

Given the low failure rate and intrinsic reliability of these rupture disks, along with the redundancy (i.e. two disks in series) that provides high reliable system integrity, the effort and cost associated with replacements is not commensurate with any associated improvement in plant safety that may be achieved due to replacement of these rupture disks on a periodic basis. These valves are not within the ASME Code Class boundaries and have been placed in the Inservice Testing Program as Augmented; therefore, code relief is not required.

ALTERNATE TESTING:

Each of these rupture disk assemblies will be subjected to a visual inspection at least once every five (5) years.

SYSTEM:

Nuclear Steam Supply (1005) Residual Heat Removal (2045)
High Pressure Injection Coolant (2095) Reactor Core Isolation Cooling (2100)

CLASS:

1, 2, 3, SC

COMPONENTS:

1-B21-F032A thru B	2-B21-F032A thru B
1-E11-F004A thru D	2-E11-F004A thru D
1-E11-F002A thru B	2-E11-F002A thru B
1-E11-F103A thru B	2-E11-F103A thru B
1-E11-F104A thru B	2-E11-F104A thru B
1-E41-F011	2-E41-F011
1-E41-F007	2-E41-F007
1-E51-F012	2-E51-F012

CATEGORY:

A/C, B, Aug-B

DISCUSSION:

Per 10 CFR 50.55a(b)(3)(ii) OM Condition: Motor Operated Valve (MOV) Testing, Licenses shall comply with the provisions for testing motor operated valves in OM Code ISTC 4.2, 1995 edition with 1996 and 1997 addenda, or ISTC-3500, 1998 edition through the latest edition and addenda incorporated by reference in paragraph (a)(1)(iv) of this section, *and must establish a program to ensure that MOVs continue to be capable of performing their design basis safety functions.* In the industry, this has been understood to include testing per the Motor Operated Valve (MOV) program.

The valves above are tested per the Inservice Testing program but are not tested per the MOV Program. These valves were reviewed for possible addition into the MOV Program to satisfy 10 CFR 50.55a(b)(3)(ii). Results of the review found that the current IST testing of the valves meet the intent of the requirement thus addition into the MOV Program is not necessary. This program remark is written to document the results of this review for the applicable valves above.

DISCUSSION (cont.):

B21-F032A/B, Feedwater Supply Line A/B Isolation Vlv., has a safety function to close for containment isolation. Generic Letters (GL) 89-10 and 96-05 only require site MOV Programs to test active valves with safety functions. The safety position for this valve is to close and the normal position is open. Per the generic letter requirement above, these valves should be in the MOV program. However, per UFSAR Table 3-1, the motor operator is used to add additional force to a self-actuated valve (i.e. the valve closes upon reversal of flow) to provide long term leakage protection upon operator judgment that continued makeup from the feedwater source is unnecessary. Additionally per UFSAR Table 6-11, the valves do not receive an automatic isolation signal. The motor operator is fed from an emergency bus (E5) but this load from the bus to the motor operator is not safety related. Thus, the motor operator is not needed to perform the safety function of these valves but should be tested to ensure operability when the operator is being used to assist closure. Per UFSAR 6.2.4.1.2.4.d.6, in the case of the feedwater line, the outside isolation is a motor operated globe stop check which is *capable* of remote operation. The valve is tested within the Inservice Testing and Appendix J programs.

These programs perform closure testing, remote position indication verification (in both directions), and leakage testing to ensure the valve can perform its safety function. These tests are effective in ensuring the valve will perform its safety function. Additional testing per the MOV program will not provide additional benefits in ensuring the valve will close since these valves are not subject to dynamic loads when closure is required. Therefore it is not recommended to add this valve to the MOV Program. Industry peers were benchmarked on how they test these valves. Most plants either have just a simple check valve or an air operated check valve. Susquehanna has the same configuration as Brunswick (two check valves in series one simple check valve inside containment and motor operated stop check valve outside containment) and based on not receiving an automatic operation signal and the operator can remotely close the valves for long term leakage protection (upon their judgment), they do not test these valves within their MOV Program.

E11-F004A/B/C/D, RHR PMP 2A/B/C/D Suppression Pool Suction Vlv, have a safety function to open to allow suction from suppression pool for LPCI and Containment Cooling. It closes to align RHR pumps to take suction from CST or Spent Fuel Pool for SDC or fuel pool cooling or closes to isolate RHR piping and components for maintenance. Generic Letter (GL) 89-10 and 96-05 only requires site MOV programs to test active valves with safety functions. Since these passive valves have a safety function (i.e. normal position is open and the safety position is open) they are not required to be tested per the BNP MOV Program. These valves are remote position verified per the Inservice Testing (IST) Program in both open and closed directions. This testing verifies the valve disc is in the required position so to ensure the light indication is working properly. This testing is effective in ensuring the valve will perform its safety function. Therefore, it is not recommended to add these valves to the MOV Program.

DISCUSSION (cont.):

E11-F002A/B, RHR HX 1(2)A/B SW Discharge Valve, have a safety function to open to allow RHRSW flow path to RHR Heat Exchanger. Since these passive valves have a safety function (i.e. normal position is open and the safety position is open) they are not required to be tested per the BNP MOV Program. These valves are remote position verified per the Inservice Testing (IST) Program in both open and closed directions. This testing verifies the valve disc is in the required position so to ensure the light indication is working properly. This testing is effective in ensuring the valve will perform its safety function. Therefore it is not recommended to add these valves to the MOV program.

E11-F103A/B, RHR Heat Exchanger 1(2)A/B Outboard Vent Vlv, and E11-F104A/B, RHR Heat Exchanger 1(2)A/B Inboard Vent Vlv, have a safety function to close for pressure boundary integrity. They open to vent RHR heat exchangers. Generic Letters (GL) 89-10 and 96-05 only require site MOV Programs to test active valves with safety functions. Since these passive valves have a safety function (i.e. normal position is closed and the safety position is close) they are not required to be tested per the BNP MOV Program. The valves are remote position verified per the Inservice Testing (IST) Program in both open and closed directions. This testing verifies the valve disc is in the required position so to ensure the light indication is working properly. This testing is effective in ensuring the valve will perform its safety function. Therefore it is not recommended to add these valves to the MOV program.

E41-F011, HPCI Redundant Shutoff VLV to Cond Storage Tank, has a safety function to close to prevent HPCI flow diversion. Normal position is close. It opens to allow routine testing of the HPCI system. This valve is Augmented. Generic Letters (GL) 89-10 and 96-05 only require site MOV Programs to test active valves with safety functions. Since this passive valve has a safety function (i.e. its normal position is closed and the safety position is close) it is not required to be tested per the BNP MOV Program. The valve is remote position verified per the Inservice Testing (IST) Augmented Program in both open and closed directions. This testing verifies the valve disc is in the required position so to ensure the light indication is working properly. This testing is effective in ensuring the valve will perform its safety function. Therefore it is not recommended to add this valve to the MOV program.

E41-F007, HPCI Pump Discharge Main Line Valve, is normally open to allow HPCI flow. It closes for maintenance only. This valve is Augmented. Generic Letters (GL) 89-10 and 96-05 only require site MOV Programs to test active valves with safety functions. Since this passive valve has a safety function (i.e. its normal position is open and the safety position is open) it is not required to be tested per the BNP MOV Program. The valve is remote position verified per the Inservice Testing (IST) Augmented Program in both open and closed directions. This testing verifies the valve disc is in the required position so to ensure the light indication is working properly. This testing is effective in ensuring the valve will perform its safety function. Therefore it is not recommended to add this valve to the MOV program.

DISCUSSION (cont.):

E51-F012, RCIC Pump Discharge Valve, is normally open to allow RCIC flow. It closes to isolate the RCIC pump discharge closed in support of test, vent, drain, instrument isolation, control, maintenance, or operator convenience activities. Containment isolation is performed by downstream valves F013 and V88. This valve is Augmented. Generic Letter (GL) 89-10 and 96-05 only require site MOV programs to test active valves with safety functions. Since this passive valve has a safety function (i.e. its normal position is open and the safety position is open) it is not required to be tested per the BNP MOV Program. The valve is remote position verified per the Inservice Testing (IST) Augmented Program in both open and closed directions. This testing verifies the valve disc is in the required position so to ensure the light indication is working properly. This testing is effective in ensuring the valve will perform its safety function. Therefore it is not recommended to add this valve to the MOV Program.

REFERENCES:

10 CFR 50.55a
0BNP-TR-015, IST Basis Document Fifth Ten-Year Inspection Interval
0BNP-TR-003, Motor Operated Valve (MOV) Scoping – GL 89-10 & GL 96-05
UFSAR Section 6.2.4.1.2
UFSAR Table 3-1
SD-12, Primary Containment Isolation System (Including Steam Leak Detection and Reactor Instrument Penetrations)
Industry Benchmark per ISTOG group email 9/23/08 and 9/29/08
NCR 293506 Self Assessment 274974 Deficiency #3: Reconcile Delta in MOV and IST Valves

SYSTEM:

Residual Heat Removal (2045)

CLASS:

NC - Seismic

COMPONENTS:

1-E11-F075 2-E11-F075

CATEGORY:

Aug-B

DISCUSSION:

Per 10 CFR 50.55a(f)(3)(v)(4) states *the inservice test requirements for pumps and valves that are within the scope of the ASME OM Code but are not classified as ASME BPV Code Class 1, Class 2, or Class 3 may be satisfied as an augmented IST program in accordance with paragraph (f)(6)(ii) of this section without requesting relief under paragraph (f)(5) of this section or alternatives under paragraph (z) of this section. This use of an augmented IST program may be acceptable provided the basis for deviations from the ASME OM Code, as incorporated by reference in this section, demonstrates an acceptable level of quality and safety, or that implementing the Code provisions would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, where documented and available for NRC review*.

Motor Operated Valves 1(2)-E11-F075 provide isolation control of the injection of SW into the RCS. The Service Water cross-tie provides water from the SW System to Reactor Vessel to provide emergency core and containment flooding. This capability is provided for a postulated event that is not within the plant's design basis conditions. [UFSAR 5.4.7.2.1.3.1, DBD-17 Section 1.3.4, 3.3.1.4.1].

The valves' (P&ID(s) D-25026, D-02526 sheet 2B) and system operating procedures (1OP-17, 2OP-17) require these valves to be locked close as their normal positions. This required position is necessary to prevent any inadvertent opening of the valves which would be detrimental to the Reactor Coolant System (RCS) chemistry quality.

This valve is seismically supported and is provided with remote position indication in the Main Control Room. ISTC-3700 would require valves with position indicators to be observed locally at least once every 2 years to verify operation is accurately indicated. This requirement would require these valves to be stroked open and returned closed thereby potentially introducing SW into the RCS. Consequently, no remote position indication will be performed. In essence, these valves are manual valves and are never stroked open because of their system location and overall function.

These valves are considered Augmented class in the BNP IST Program and have a safety function in the close position. These valves have been added to the program in support of exempting downstream check valves E11-F078. ISTC-5221 requires check valves to be bi-directionally tested which also would result in the introduction of SW into the RCS.

The decision to exempt these check valves and rely on the closure of these MOVs provides an acceptable level of quality and safety with a compensating increase in the level of quality and safety.

REFERENCES:

10 CFR 50.55a
1OP-17 Revision 130, Residual Heat Removal System Operating Procedure
2OP-17 Revision 175, Residual Heat Removal System Operating Procedure
UFSAR Section 5.4.7 Residual Heat Removal System
DBD-17 Revision 27, Residual Heat Removal System
P&ID D-25026 Sheet 2B Revision 70 Reactor Building Residual Heat Removal System Piping Diagram
P&ID D-02526 Sheet 2B Revision 81 Reactor Building Residual Heat Removal System Piping Diagram

Program Remark V-18

SYSTEM:

Residual Heat Removal (2045)

CLASS:

3

COMPONENTS:

1-E11-F073 2-E11-F073

CATEGORY:

B

DISCUSSION:

Motor Operated Valves 1(2)-E11-F073 must remain closed maintain RHRSW inventory and prevent diversion from the tube side of the RHR Heat Exchanger. [UFSAR 5.4.7.2.1.1, 5.4.7.2.1.2, 9.2.1.1.1, 9.2.1.2.1]

The valves' (P&ID(s) D-25037, D-02537 sheet 2) and system operating procedures (1OP-17, 2OP-17) require these valves to be locked close as their normal positions. This required position is necessary to prevent any inadvertent opening of the valves which would be detrimental to the Reactor Coolant System (RCS) chemistry quality and inventory. The power supply to the motor is disconnected under normal conditions even though the valve position indicating lights are on. To ensure valve operation, the local breaker/disconnect (motor power only) must be closed.

This valve is provided with remote position indication in the Main Control Room. ISTC-3700 would require valves with position indicators to be observed locally at least once every 2 years to verify operation is accurately indicated. This requirement would require these valves to be stroked open and returned closed thereby potentially introducing SW into the RCS. Consequently, no remote position indication will be performed. In essence, these valves are manual valves and are never stroked open because of their system location and overall function.

The decision to not perform a remote position indication test provides an acceptable level of quality and safety with a compensating increase in the level of quality and safety. Prior plant analysis supports this decision based on the prevention of inadvertent shorts that could potentially cause service water injection into the suppression pool or reactor vessel during a fire.

REFERENCES:

10 CFR 50.55a
1OP-17 Revision 130, Residual Heat Removal System Operating Procedure
2OP-17 Revision 175, Residual Heat Removal System Operating Procedure
UFSAR Section 5.4.7 Residual Heat Removal System
DBD-17 Revision 27, Residual Heat Removal System
P&ID D-25037 Sheet 2 Revision 91 Reactor Building Service Water System Piping Diagram
P&ID D-02537 Sheet 2 Revision 92 Reactor Building Service Water System Piping Diagram