Progress Energy

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10 CFR 50.55a

U.S. Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1
DOCKET NO. 50-400/LICENSE NO. NPF-63
RELIEF REQUEST FROM ASME OM CODE INSERVICE TESTING REQUIREMENTS FOR THE THIRD TEN-YEAR INTERVAL PLAN

Ladies and Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.55a, "Codes and Standards," paragraph (a)(f)(i), the Harris Nuclear Plant (HNP) of Carolina Power and Light Company (CP&L) doing business as Progress Energy Carolinas, Inc., submits the HNP Inservice Testing (IST) Program for the third ten-year interval. The third ten-year interval will be in effect from May 2, 2007 through and including May 1, 2017.

The enclosed IST Program Plan includes one relief request (AF-PR-1 on page "Attachment 5.2-1" of the enclosure), which was previously approved for the second ten-year interval. HNP requests NRC approval of this relief request for the third ten-year interval pursuant to 10 CFR 50.55a(3)(i) since the proposed alternative would provide an acceptable level of quality and safety to that of the applicable Code requirement.

HNP requests approval of this relief request by May 1, 2007 to support the interval transition. Once approved, this relief request will be incorporated within 60 days.

This document contains no new Regulatory Commitment.

Please refer any questions regarding this submittal to Mr. Dave Corlett at (919) 362-3137.

Sincerely,

C. S. Kamilaris
Manager, Site Support Services
Harris Nuclear Plant

A047

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CSK/jpy

Enclosure (139 Pages)

c: Mr. P. B. O'Bryan, NRC Sr. Resident Inspector
Mr. C. P. Patel, NRC Project Manager
Dr. W. D. Travers, NRC Regional Administrator

Progress Energy

HARRIS NUCLEAR PLANT

HNP IST Program Plan – 3rd Interval

HNP-IST-003

Revision 0

Prepared By	Curtis-Wright Flow Control Corp.	Date	12/1/06
IST Review	Tony Wayne Ray	Date	12/1/06
Approved By		Date	12/4/06

PLANT INFORMATION

Plant:	Harris Nuclear Plant New Hill, North Carolina
Owner:	Progress Energy, Inc. Raleigh, North Carolina
Commercial Service Date:	January 12, 1987

LIST OF EFFECTIVE PAGES		
Section	**Pages**	**Revision**
1.0	1-1 through 1-1	0
2.0	2-1 through 2-4	0
3.0	3-1 through 4-1	0
4.0	4-1 through 4-8	0
5.0	5-1	0
Attachment 5.1	Att. 5.1-1 through 5.1-5	0
Attachment 5.2	Att. 5.2-1	0
6.0	6-1	0
Attachment 6.1	Att. 6.1-1 through 6.1-68	0
Attachment 6.2	Att. 6.2-1 through 6.2-44	0

REVISION STATUS SHEET

Revision	Affected Pages	Description/Comments
0	All	General Revision to incorporate changes as required for the 3rd ten-year interval update.

TABLE OF CONTENTS

1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

This document represents the Harris Nuclear Plant (HNP) Inservice Testing (IST) Program for the third 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: HNP 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 1.2 (below), FSAR Section 3.9.6 and Technical Specification Surveillance Requirement 4.0.5.

1.2 Background

Testing and examination of the components described above was controlled by the Inservice Inspection Program Requirements Manual (ISIPRM) for the second interval. Revision of the ISIPRM for the third interval included relocating modules related to inservice testing into this IST Program. Separation of the inservice inspection and inservice testing requirements into different requirements manuals for the third inservice interval followed separation of the American Society of Mechanical Engineers (ASME) Codes – ASME Section XI for inservice inspection and ASME OM Code for inservice testing.

1.3 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.

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 pressurized 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 limitations and modifications listed in 10CFR50.55a(b)(3).

2.1.1 10CFR50.55a Limitations and Modifications

Limitations and modifications 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 modification/limitation is incorporated into the IST Program by means of reference to HNP's quality assurance program. Specifically, paragraphs 4.4, 4.7.2, 4.8.3, and NGGM-PM-0007 implement these requirements.

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

HNP 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 HNP motor-operated valve testing program is governed by EGR-NGGC-0101 and EGR-NGGC-0203.

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

No action required.

2.1.1.4 10CFR50.55a(b)(3)(iv) – Implementation of a Check Valve Condition Monitoring Program

All elements of this modification and limitation are incorporated into this IST Program. Specifically, procedure ISI-803 implements these requirements.

2.1.1.5 10CFR50.55a(b)(3)(v) – Dynamic Restraints

This modification does not apply to HNP because ASME Section XI or ASME OM Code is not used for testing/examination of dynamic restraints.

Dynamic restraints are not included in the scope of this IST Program. The HNP dynamic restraint testing and examination program is governed by Technical Specifications 4.0.2, 4.0.5, 3/4.7.8 and PLP-106.

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

This modification changes the exercise frequency for manual valves from 5 years as allowed by the OM Code to 2 years. This modification is implemented by procedure ISI-801.

2.2 Inspection Interval Information

2.2.1 Inspection Interval Dates

The first 120-month interval was originally expected to be applicable for the period of May 2, 1987 through and including May 1, 1997. However, the first interval was extended to February 2, 1998 as allowed by NUREG-1482, Section 3.3.1 and ASME Section XI, 1983 Edition, Article IWA-2400(c). The NRC was notified, by letter (reference 3.8 and 3.9), of the first interval extension.

The second 120-month interval was applicable from February 2, 1998 through and including May 1, 2007

The third 120-month interval is applicable from May 2, 2007 through and including May 1, 2017.

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.

2.3 Code of Record

In accordance with 10CFR50.55a, the code of record for the third interval IST Program is ASME OM Code, 2001 Edition through 2003 Addenda subject to limitations and modifications 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. 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 0.
- 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 test plan.

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.

Pump Relief Requests are located in Attachment 5.2 and valve Relief Requests are located in Attachment 6.2. They are numbered in a "**XX-YRN**" format where:

XX = System Acronym or GEN for general

YR = PR for pumps and VR for Valves

N = Unique sequential number (e.g., SI-VR2 would be the second relief request for valves in the safety injection system)

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", 2001 Edition through 2003 Addenda

3.2 Code of Federal Regulations, Title 10, Part 50, Section 55a, dated January 1, 2006

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

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

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

3.6 Generic Letter (GL) 89-04. Guidance on Developing Acceptable Inservice Testing Programs

3.7 HNP Final Safety Analysis Report, Section 3.2.2, System Quality Group Classifications

3.8 HNP Letter 97-073, dated April 4, 1997, "Extension of 1st Ten-Year ISI/IST Program Interval

3.9 HNP Letter 97-177, dated September 2, 1997, "Extension of 1st Ten-Year ISI/IST Program Interval

3.10 HNP Technical Specifications, Surveillance Requirement 4.0.5

3.11 ISI-800, Inservice Testing of Pumps

3.12 ISI-801, Inservice Testing of Valves

3.13 ISI-802, Inservice Testing of Pressure Relief Devices

3.14 MNT-NGGC-0050, Measuring & Test Equipment Calibration Program

3.15 NGGM-PM-0007, Quality Assurance Program Manual

3.16 NRC Letter dated February 1, 1999, "Relief Requests Associated with Second 10-Year Interval Inservice Testing Program - Shearon Harris Nuclear Power Plant, Unit 1 (TAC No. MA0815)

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

3.18 NUREG-1482, Revision 1, "Guidelines for Inservice Testing at Nuclear Power Plants"

3.19 PLP-106, Technical Specification Equipment List Program and Core Operating Limits Report

3.0 REFERENCES (Continued)

3.20 PLP-605, ASME Boiler and Pressure Vessel Code Section XI Repair and Replacement Program

3.21 Regulatory Guide 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code"

3.22 Regulatory Guide 1.193, "ASME Code Cases Not Approved For Use"

4.0 GENERAL REQUIREMENTS

4.1 Classification of Components and Systems

Safety classification of pumps, valves, and pressure relief devices at HNP is described in FSAR Section 3.2.2 and is shown in FSAR Table 3.2.1-1 and FSAR Figures depicting system flow diagrams. The FSAR Figure flow diagrams are equivalent to the "G" series flow diagrams provided in Table 4-1.

In accordance with 10CFR50.55a(f) and NUREG-1482, paragraphs 2.2 and 2.2.1, the scope of IST is limited to ASME code class 1, 2, 3 and MC components. Based on the FSAR comparison between safety class and code class described above, the HNP IST Program scope is limited to HNP safety class 1, 2, and 3 components. There are no ASME code class MC pumps, valves or pressure relief devices at HNP.

4.2 Systems and Flow Diagrams

The following list identifies the systems/boundaries contained in the IST Program. This list provides a cross reference between the "S" series simplified flow diagrams and the "G" series flow diagrams used in determining the safety classification.

Table 4-1, System and Flow Diagram Cross Reference

System	System Name	Valve ID Acronym	"S" Series Flow Diagram	"G" Series Flow Diagram
2050	Pressurizer	RC SI	2165-S-1301 2165-S-1309	2165-G-801 2165-G-809
2060	Chemical and Volume Control	CS	2165-S-1303 2165-S-1303 S01 2165-S-1303 S02 2165-S-1304 2165-S-1305 2165-S-1307	2165-G-803 2165-G-804 2165-G-805 2165-G-807
2070	Containment Spray	CT	2165-S-550	2165-G-050
2075	Post-Accident Hydrogen	CM SP	2165-S-605 2165-S-1017	2165-G-105 2165-G-517
2080	High Head Safety Injection	SI	2165-S-1308 2165-S-1310	2165-G-808 2165-G-810
2085	Low Head Safety Injection	RH	2165-S-1324	2165-G-824
2090	Passive Safety Injection	SI	2165-S-1309	2165-G-809
2115	Reactor Coolant Sampling	SP	2165-S-552	2165-G-052

4.2 Systems and Flow Diagrams (Continued)

System	System Name	Valve ID Acronym	"S" Series Flow Diagram	"G" Series Flow Diagram
2117	Post Accident Sampling	SP	2165-S-552	2165-G-052
3010	Steam Generator Blowdown	BD	2165-S-551	2165-G-051
3020	Main Steam	MS	2165-S-542	2165-G-042
3040	Auxiliary Steam	AS	2165-S-689	2165-G-189
3050	Main Feedwater	FW	2165-S-544	2165-G-044
3065	Auxiliary Feedwater	AF	2165-S-544	2165-G-044
3070	Condensate	CE	2165-S-545	2165-G-045
3100	Steam Cycle Sampling	SP	2165-S-551	2165-G-051
4060	Normal Service Water	SW	2165-S-547	2165-G-047
4065	Emergency Service Water	SW	2165-S-547 2165-S-998 S02 2165-S-999 S02	2165-G-047 2168-G-498 S02 2168-G-499 S02
4080	Component Cooling Water	CC DW	2165-S-1319 2165-S-1320 2165-S-1321 2165-S-1322 2165-S-1322 S01	2165-G-819 2165-G-820 2165-G-821 2165-G-822 2165-G-822 S01
4085	Essential Service Chilled Water	CH SW	2165-S-998 2165-S-998 S02 2165-S-998 S03 2165-S-998 S04 2165-S-999 2165-S-999 S02 2165-S-999 S03 2165-S-999 S04	2168-G-498 2168-G-498 S02 2168-G-498 S03 2168-G-499 2168-G-499 S02 2168-G-499 S03
4115	Emergency Screen Wash	SC	2165-S-808	2165-G-308
5100	Emergency Diesel Generator Fuel Oil Supply	DF	2165-S-563 2165-S-633 S03	2165-G-063 2165-G-133
5112	Emergency Diesel Generator Starting Air	EA	2165-S-633 S04	2165-G-133
6135	Instrument Air	IA	2165-S-801 2165-S-1017	2165-G-517
6140	Service Air	SA	2165-S-800 2165-S-998 S02 2165-S-999 S02	2165-G-300 2168-G-498 S02 2168-G-499 S02
6175	Site Fire Protection	FP	2165-S-888	2165-G-388
6240	Radioactive Equipment Drains	ED	2165-S-685 2165-S-1313	2165-G-185 2165-G-813
6270	Demineralized Water	DW	2165-S-799	2165-G-299
7005	Radiation Monitoring	SP	2165-S-605	2165-G-105
7110	Spent Fuel Pool Cooling	SF	2165-S-561 2165-S-805	2165-G-061 2165-G-305
8060	Containment Vacuum Breakers	CB	2165-S-1017 2166-B-431 DP38	2168-G-517 FSAR Tbl. 6.2.4-1
8070	Containment Pressurization	LT	2166-S-916	2165-G-416
8170	Containment Purge	CP	2165-S-1017 2166-B-431 DP39	2168-G-517 FSAR Tbl. 6.2.4-1

4.3 Definitions

Examination: observing, visual monitoring, or measuring to determine conformance to HNP-specified requirements.

Exercising: demonstration based on direct visual or indirect positive indications that the moving parts of a component function.

Full-Stroke Time: the time interval from initiation of the actuating signal to the indication of the end of the operating stroke.

Group A Pumps: pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operations.

Group B Pumps: pumps in standby systems that are not operated routinely except for testing.

Inservice Test: test to assess the operational readiness of a system, structure, or component after first electrical generation by nuclear heat.

Instrument Loop: two or more instruments or components working together to provide a single output.

Instrument Loop Accuracy: accuracy of an instrument loop based on the square root of the sum of the squares of the inaccuracies of each instrument or component in the loop when considered separately. Alternatively, the allowable inaccuracy of the instrument loop may be based on the output for a known input into the instrument loop.

Maintenance: replacement of parts, adjustments, and similar actions that do not change the design (configuration and material) of an item.

Modification: alteration in the design of a system, structure, or component.

Monitoring: continuous or periodic observation or measurement to ascertain the performance or obtain characteristics of a system, structure, or component.

Nonintrusive Testing: testing performed on a component without disassembly or disturbing the boundary of the component.

Normal Operating Conditions: operating conditions during reactor startup, operating at power, hot standby, reactor cooldown, and cold shutdown.

Obturator: valve closure member (disk, gate, plug, etc.).

Operational Readiness: the ability of a component to perform its specified functions.

Operational Readiness Testing: measurement of the parameters that verify snubber operational readiness.

Overpressure Protection: the means by which components are protected from overpressure by the use of pressure-relieving devices or other design provisions as required by the BPV Code, Section III, or other applicable construction codes.

Performance Testing: a test to determine whether a system or component meets specified acceptance criteria.

Plant Operation: the conditions of startup, operation at power, hot standby, and reactor cooldown, as defined by plant technical specifications.

4.3 Definitions (Continued)

Power-Operated Relief Valve (PORV): a power-operated valve that can perform a pressure-relieving function and is remotely actuated by either a signal from a pressure-sensing device or a control switch. A power-operated relief valve is not capacity certified under ASME Section III overpressure protection requirements.

Preservice Test: test performed after completion of construction activities related to the component and before first electrical generation by nuclear heat, or in an operating plant, before the component is initially placed in service.

Preservice Test Period: the period of time following completion of construction activities related to the component and before first electrical generation by nuclear heat, in which component and system testing takes place, or in an operating plant before the component being initially placed in service.

Pump: a mechanical device used to move fluid.

Qualitative Testing: testing performed to establish parameters without determining the specific measure of the parameter.

Quantitative Testing: testing performed to establish the specific measure or limit of a parameter, such as that required to establish that a parameter is within a specified range.

Reactor Coolant System Pressure Isolation: that function that prevents intersystem overpressurization between the reactor coolant system and connected low pressure systems.

Reference Point: a point of operation at which reference values are established and inservice test parameters are measured for comparison with applicable acceptance criteria.

Reference Values: one or more values of parameters as measured or determined when the equipment is known to be operating acceptably.

Repair: the process of restoring a degraded item to its original design requirements.

Routine Servicing: performance of planned, preventive maintenance.

Service Life: the period of time an item is expected to meet the operational readiness requirements without maintenance.

Skid-Mounted Pumps and Valves: pumps and valves integral to or that support operation of major components, even though these pumps and valves may not be located directly on the skid. In general, these pumps and valves are supplied by the manufacturer of the major component. Examples include:

a. diesel fuel oil pumps and valves;
b. steam admission and trip throttle valves for high-pressure coolant injection turbine-driven pumps;
c. steam admission and trip throttle valves for auxiliary feedwater turbine-driven pumps;
d. solenoid-operated valves provided to control an air-operated valve.

System Resistance: hydraulic resistance to flow.

4.3 Definitions (Continued)

Trending: a comparison of current data to previous data obtained under similar conditions for the same equipment.

Unexplained Failure: failure for which the cause has not been determined.

Valves, Active: valves that are required to change obturator position to accomplish a specific function in shutting down a reactor to the safe shutdown condition, maintaining the safe shutdown condition, or mitigating the consequences of an accident.

Valves, Passive: valves that maintain obturator position and are not required to change obturator position to accomplish the required function(s) in shutting down a reactor to the safe shutdown condition, maintaining the safe shutdown condition, or mitigating the consequences of an accident.

Vertical Line Shaft Pump: a vertically suspended pump where the pump driver and pump element are connected by a line shaft within an enclosed column.

4.4 HNP Responsibilities

Responsibilities of HNP 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 HNP's quality assurance program;
- qualify the application, method and capability of each nonintrusive technique;
- perform required tests and examinations;

4.4 HNP Responsibilities (Continued)

- 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.

4.5 Acceptance Criteria

The acceptance criteria established for IST are based on OM Code provisions or limits specified in Technical Specifications, FSAR, 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.

4.6 Corrective Actions

Corrective actions requiring repair/replacement activities shall be performed in accordance with reference 3.20.

4.7 Instrumentation and Test Equipment

4.7.1 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.

4.7.2 Calibration

All instruments and test equipment used in performing the examination and test program shall be calibrated and controlled in accordance with reference 3.14.

4.8 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. Calibration records shall be controlled and maintained in accordance with reference 3.14 as allowed by ISTA-4200.

4.8.1 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.

4.8.2 Corrective Action

HNP 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.

4.8.3 Maintenance of Records

HNP shall retain records identified in paragraph 4.8.1 as a minimum. The records shall be filed and maintained. HNP shall provide suitable protection from deterioration and damage for all records, in accordance with the HNP's quality assurance program (reference 3.15) 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.

4.8.4 Reproduction

Records shall be either the original or a legible copy.

4.8.5 Test and Examination Records

HNP 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 Attachment 5.1, IST Pump Table, located at the end of this section.

The IST Pump Program is implemented by HNP administrative procedure ISI-800, Inservice Testing of Pumps.

Attachment 5.1 - IST Pump Table

A complete list of pumps in the scope of the Pump IST Program is provided on the following pages in a tabular format. The IST Pump Table is sorted alpha-numerically by pump number. A description of each column in the IST Pump Table is shown below with applicable abbreviations.

Pump Number	Unique alpha-numeric designator assigned to each pump. The pump number used in the Pump Table is a combination of an abbreviation of the pump name and designator shown on the "S" and "G" series flow diagrams.
Nomenclature	Descriptive name of the pump.
Drawing	Simplified flow diagram which the pump is located. A complete list of flow diagrams is provided in paragraph 4.2.
Dwg Coord	Drawing coordinate of pump location on the simplified flow diagram.
Safety Class	Safety class of the pump as shown on FSAR Section 3.2.2 and "G" series flow diagrams. Paragraph 4.1 provides additional information concerning safety classification.
Pump Type (pump design)	**C-H** Centrifugal pump where orientation of the pump and motor shafts in the horizontal plane. **C-V** Centrifugal pump where orientation of the pump and motor shafts in the vertical plane. **VLS** Centrifugal vertically suspended pump where the pump driver and pumping element are connected by a line shaft within an enclosing column which contains the pump bearings.
Speed	Identifies whether the pump speed is fixed or variable. All pumps in the IST Program operate at speeds greater than 600 rpm. **Fixed** Speed is constant and is a function of the motor design **Vari** Speed is variable depending on steam input to the terry turbine
Pump Group	Pump Testing Group **A** Pumps that are operated continuously or routinely during normal plant operation, cold shutdown, or refueling outage. **B** Pumps in standby systems that are not operated routinely except for testing.
Test Type	Pump test method and parameters measured and evaluated during the pump test. **Comp.** Comprehensive pump test method. Parameters measured and evaluated during the pump test are listed. **Grp. A** Group A pump test method. Parameters measured and evaluated during the pump test are listed. **Grp. B** Group B pump test method. Parameters measured and evaluated during the pump test are listed. **dP** Pump differential pressure. **Q** Pump flow. **N** Pump speed (variable speed pumps only) **V** Pump or motor bearing vibration displacement or velocity
Test Freq	Frequency of pump testing per OM Code Q Quarterly 2Y Once at least every 2 years.
Relief Request	Pump relief requests are located in Attachment 5.2
Remarks	Applicable notes or other unique comments that provide clarification. All notes referenced in the Remarks column are located at the end of the Pump Table.

Attachment 5.1 - IST Pump Table

Notes

The following notes provide clarification to the method of testing applied to the associated pump and are included by reference in the Pump Listing column "Remarks".

1. Quarterly pump testing will be accomplished utilizing the small diameter recirculation line back to the CST. Full flow testing will be performed prior to plant cooldown.

2. This small centrifugal pump does not have bearings in the pump casing. The pump impeller is attached to the motor shaft. Therefore, vibration measurements will be taken on the inboard motor bearing housing in a plane approximately perpendicular to the rotating shaft in two orthogonal directions. In addition, vibration measurements will be taken in the axial direction on the motor thrust bearing. Ranges for vibration and hydraulic parameters will be in accordance with procedure ISI-800 for centrifugal pumps ≥600 rpm.

3. Any one of the three CCW pumps may function as an installed spare. One pump is normally running, the second is aligned as an automatic backup to the operating pump, and the third pump is electrically disconnected. In the event of a failure of the operating pump, the second (reserve) pump automatically starts upon detection of low CCW header pressure. The installed spare is electrically connected to the opposite emergency bus from the now operating (reserve) pump and placed in a standby reserve condition. The installed spare is required to be tested only when it is connected to the system.

4. This vertical centrifugal pump does not have bearings in the pump casing and does not fit the definition of a vertical line shaft pump. The pump impeller is attached to the motor shaft. Therefore, vibration measurements will be taken on each motor bearing housing in a plane approximately perpendicular to the rotating shaft in two orthogonal directions. In addition, vibration measurements will be taken in the axial direction on the motor thrust bearing. Ranges for vibration and hydraulic parameters will be in accordance with procedure ISI-800 for centrifugal pumps ≥600 rpm.

5. Pump differential pressure is calculated using pump bay level and discharge pressure. The bay level and discharge pressure will be measured after two minutes of operation at test conditions as stable as the system permits.

6. Any one of the three CSIPs may function as an installed spare. One pump is normally running, the second is aligned as a backup to the operating pump, and the third pump (normally "1C") is electrically disconnected. In the event of a failure of the operating pump, the installed spare is electrically connected to the opposite emergency bus from the now operating pump and placed in a standby reserve condition. The installed spare is required to be tested only when it is connected to the system.

Attachment 5.1 - IST Pump Table

Pump Number	Nomenclature	Drawing	Dwg Coord	Safety Class	Pump Type	Speed	Pump Group	Test Type	Test Freq	Relief Request	Remarks
AF1A-SA	MD Auxiliary Feedwater Pump "1A"	2165-S-544	M-5	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	AF-PR-1 AF-PR1	Note 1
AF1B-SB	MD Auxiliary Feedwater Pump "1B"	2165-S-544	M-8	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	AF-PR-1 AF-PR-1	Note 1
AF1X-SAB	TD Auxiliary Feedwater Pump 1X-SAB	2165-S-544	M-10	3	C-H	Vari	B	Comp. - N, Q, dP, V Grp. B - N, Q, dP	2YR Q	AF-PR-1 AF-PR-1	Note 1
BA1A-SA	Boric Acid Transfer Pump "1A"	2165-S-130	D-8	2	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 2
BA1B-SB	Boric Acid Transfer Pump "1B"	2165-S-130	G-8	2	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 2
CCW1A-SA	Component Cooling Water Pump "1A"	2165-S-131	F-7	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 3
CCW1B-SB	Component Cooling Water Pump "1B"	2165-S-131	L-7	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 3
CCW1C-SAB	Component Cooling Water Pump "1C"	2165-S-131	I-7	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 3
CT1A-SA	Containment Spray Pump "A"	2165-S-550	F-8	2	C-V	Fixed	B	Comp. - Q, dP, V Grp. B - Q, dP	2YR Q	n/a n/a	Note 4
CT1B-SB	Containment Spray Pump "B"	2165-S-550	L-8	2	C-V	Fixed	B	Comp. - Q, dP, V Grp. B - Q, dP	2YR Q	n/a n/a	Note 4
DFO1A-SA	D.G. Fuel Oil Transfer Pump "1A"	2165-S-563	F-2	3	C-H	Fixed	B	Comp. - Q, dP, V Grp. B - Q, dP	2YR Q	n/a n/a	None

Attachment 5.1 - IST Pump Table

Pump Number	Nomenclature	Drawing	Dwg Coord	Safety Class	Pump Type	Speed	Pump Group	Test Type	Test Freq	Relief Request	Remarks
DFO1B-SB	D.G. Fuel Oil Transfer Pump "1B"	2165-S-563	F-7	3	C-H	Fixed	B	Comp. - Q, dP, V Grp. B - Q, dP	2YR Q	n/a n/a	None
ESW1A-SA	Emergency Service Water Pump "1A"	2165-S-547	C-2	3	VLS	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 5
ESW1B-SB	Emergency Service Water Pump "1B"	2165-S-547	C-3	3	VLS	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 5
ESWSW1A-SA	Emergency Screenwash Pump "1A"	2165-S-808	C-15	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None
ESWSW1B-SB	Emergency Screenwash Pump "1B"	2165-S-808	C-12	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None
FPC1A-SA	Spent Fuel Pool Cooling Pump "1&4A"	2165-S-805	G-10	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None
FPC1B-SB	Spent Fuel Pool Cooling Pump "1&4B"	2165-S-805	K-10	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None
FPC2A-SA	Spent Fuel Cooling Pump "2&3A"	2165-S-805	G-12	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None
FPC2B-SB	Spent Fuel Cooling Pump 2&3B"	2165-S-807	K-12	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None
P41A-SA	Chilled Water Pump "1A"	2165-S-998	I-7	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None
P41B-SB	Chilled Water Pump "1B"	2165-S-999	I-7	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None

Attachment 5.1 - IST Pump Table

Pump Number	Nomenclature	Drawing	Dwg Coord	Safety Class	Pump Type	Speed	Pump Group	Test Type	Test Freq	Relief Request	Remarks
RHR1A-SA	Residual Heat Removal Pump "1A"	2165-S-132	L-11	2	C-V	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 4
RHR1B-SB	Residual Heat Removal Pump "1B"	2165-S-132	I-11	2	C-V	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 4
SI1A-SA	Charging/Safety Injection Pump (CSIP) "1A"	2165-S-130	H-9	2	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 6
SI1B-SB	Charging/Safety Injection Pump (CSIP) "1B"	2165-S-130	J-9	2	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 6
SI1C-SAB	Charging/Safety Injection Pump (CSIP) "1C"	2165-S-130	K-9	2	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	Note 6
SWB1A-SA	Emergency Service Water Booster Pump "1A"	2165-S-547	G-5	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None
SWB1B-SB	Emergency Service Water Booster Pump "1B"	2165-S-547	G-14	3	C-H	Fixed	A	Comp. - Q, dP, V Grp. A - Q, dP, V	2YR Q	n/a n/a	None

Attachment 5.2 - Pump Relief Requests

AF-PR-1

Component	Description	Flow Diagram	Dwg Coor	System	Pump Group
AF1A-SA	MD Auxiliary Feedwater Pump "1A"	2165-S-544	M-5	3065	A
AF1B-SB	MD Auxiliary Feedwater Pump "1B"	2165-S-544	M-8	3065	A
AF1X-SAB	TD Auxiliary Feedwater Pump 1X-SAB	2165-S-544	M-10	3065	B

Code Test Requirements

The full scale range of each analog instrument shall not be greater than three times the reference value [ISTB-3510(b)(1)].

Basis for Relief:

The permanently installed flow instrument which is utilized to conduct the quarterly pump tests of the two motor driven auxiliary feedwater pumps (AF1A-SA and AF1B-SB) has a calibrated full scale range which exceeds a factor of three times their reference values. The full scale range of the instrument, FI-2172, is 0-200 gpm while the reference value of each pump is 51 gpm. FI-2172 is installed in a common pump recirculation line which is shared by both the two motor driven AFW pumps and the single turbine driven AFW pump. The indicator is sized to accommodate the combined restricted flows of all three pumps simultaneously. Although the full scale range of FI-2172 does not comply with Code requirements, its accuracy of ±1% of full scale exceeds that which is required.

Even though FI-2172 does not meet the Code requirement for range, it is capable of providing an indicated accuracy at the reference value that is superior to the minimum indicated accuracy that would be required by the Code. Based on the least accurate instrument that would theoretically be allowed by the Code, the minimum required indicated accuracy is ±6%. (This fact is documented by NUREG-1482, paragraph 5.5.1.) The indicated accuracy of FI-2172, as derived based upon the current reference values, is as follows:

Reference value = 51 gpm
Full scale range = 200 gpm
Instrument tolerance = ±2 gpm (±1% x 200 gpm)

Therefore the indicated accuracy is:

±2 gpm / 51 gpm x 100% = ±3.9%

As demonstrated, the indicated accuracy of FI-2172 is better than that which is theoretically allowed by the Code.

This relief request was numbered AF-PR1 during the previous ten year interval and was approved by the NRC by letter dated February 1, 1999 (TAC No. MA0815). Relief is requested for the third ten-year interval pursuant to 10CFR50.55a(3)(i) since the proposed alternative would provide an acceptable level of quality and safety to that of the applicable Code requirement.

Alternate Test

The existing permanently installed pump instrument is acceptable because the indicated accuracy is less than or equal to ±6% as calculated at the reference value. No alternate testing or instrumentation will be utilized.

Approval Status

This relief request was approved for the second 10 year inspection interval and is being resubmitted to NRC for approval to use in the third 10 year inspection interval. It is not approved by the NRC at this time.

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 Attachment 6.1, IST Valve Table, located at the end of this section.

The IST Valve Testing Program is implemented by HNP administrative procedures ISI-801, Inservice Testing of Valves and ISI-802, Inservice Testing of Pressure Relief Devices.

Attachment 6.1 - IST Valve Table

A complete list of valve in the scope of the Pump IST Program is provided on the following pages in a tabular format. The IST Valve Table is sorted alpha-numerically by valve number. A description of each column in the IST Valve Table is shown below with applicable abbreviations.

Valve Number	Unique alpha-numeric designator assigned to each valve. The valve number used in the Valve Table is taken from the "S" flow diagram. A correlation between the different valve numbers on the "S" and "G" series flow diagrams is provided in the Passport Electronic Database.
Nomenclature	Descriptive name of the valve.
Drawing	Simplified flow diagram which the pump is located. A complete list of flow diagrams is provided in paragraph 4.2.
Dwg Coord	Drawing coordinate of pump location on the simplified flow diagram.
System	Unique number designator assigned to each system. Numbers for the different systems used in the Valve Listing are defined in paragraph 4.2
Size	Valve size, in inches, as defined by the "G" series drawings and Passport Equipment Database.
Body	Valve design body style. **3W** Three-way valve **BA** Ball valve **BF** Butterfly valve **CK** Check valve **EFC** Excess flow check valve **DA** Diaphragm valve **GA** Gate valve **GL** Globe valve **PL** Plug valve **RD** Rupture Disc **RV** Relief valve
Actuator	Actuator type used to change valve obturator position. **AO** Air operator **EH** Electro-hydraulic operator **MAN** Manual operator **MO** Motor operator **SA** Self actuated **SO** Solenoid operator
Safety Class	Safety class of the valve as shown on FSAR Section 3.2.2 and "G" series flow diagrams. Paragraph 4.1 provides additional information concerning safety classification.

Attachment 6.1 - IST Valve Table

OM Cat	ASME Code category as defined in ISTC-1300. **A** Valves for which seat leakage is limited to a specific amount in the closed position for fulfillment of their required function(s). **A/C** Valves which are both self actuating and for which seat leakage is limited to a specific amount in the closed position for fulfillment of their required function(s). **B** Valves for which seat leakage in the closed position is inconsequential for fulfillment of the required function(s). **C** Valves which are self-actuating in response to some system characteristic, such as pressure (relief valves) or flow direction (check valves) for fulfillment of the required function(s). **D** Valves which are actuated by an energy source capable of only one operation such as rupture disks or explosively actuated **Aug** Valves which are optionally included in the IST Program as augmented components. These augmented valves will be tested in accordance with the IST Program requirements to the extent practicable.
Act / Pass	Identifies whether the valve performs an active or passive safety function as defined by ISTA-2000, determined by review of the FSAR and operating procedures. **Act** Active valve **Pass** Passive valve
Norm Pos	Identifies the valve position during normal plant operation as defined by plant operating procedures. **C** Closed **LC** Locked Closed **LO** Locked Open **LT** Locked Throttled **O** Open **O/C** Open and Closed **T** Throttled
Safety Pos	Identifies the valve position required for the valve to perform its safety function. **C** Closed **O** Open **O/C** Open and Closed **T** Throttled
Fail Pos	Identifies the position of the valve on loss of actuator power. **AI** As-Is **C** Closed **O** Open **n/a** Not applicable. Valve does not have a fail position

Attachment 6.1 - IST Valve Table

Test Type	Identifies the test requirements which apply to the valve as determined by ISTC-3000 and ISTC-5000. **CM** Testing as required by the Check Valve Condition Monitoring Program (ISI-803). **CV** Closure verification of a check valve to satisfy bi-directional testing requirement. **FSC** Fail-safe closed exercise valve with a fail-safe actuator to the closed position. **FSO** Fail-safe open exercise valve with a fail-safe actuator to the open position. **LJ** Leak test per Appendix J, Type C (containment isolation function only). **LK** Leak test for valves other than containment isolation valves (e.g., pressure isolation valves). **MAN** Manual full stroke exercise. **OV** Open verification of a check valve to satisfy bi-directional testing requirements (full stroke exercise not required). **PIT** Verification of remote position indication. **SC** Full stroke close exercise of check valve. **SO** Full stroke open exercise of check valve. **SKID** Testing of the major component verifies the operational readiness of the skid mounted and component subassemblies. **SP** Relief valve testing. **STC** Stroke time of valve full stroke close. **STO** Stroke time of valve full stroke open.
Test Freq	Identifies the frequency required for valve testing as determined by ISTC-3000 and ISTC-5000. **Q** Quarterly, Once per 92 days **CM** Test frequency in accordance with the Check Valve Condition Monitoring Program. **CS** Cold Shutdown. Testing performed in the cold shutdown condition (if not performed in the previous 92 days). If required, testing may be performed during the transition period between normal operation and cold shutdown. **RO** Refueling Outage. **2YR** 2 Years **5YR** 5 Years **10YR** 10 Years
Deferred Test Just.	This field identifies, by unique number, for the deferred test justification (DTJ) or relief request (RR) that may be associated with the individual component. These documents are located in Attachment 6.2.
Remarks	Applicable notes or other unique comments that provide clarification. All notes referenced in the Remarks column are located at the end of the Valve Table.

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1AF-4	AFWP "1A" Recirc Line Check Vlv	2165-S-544	N-6	3065	2	CK	SA	3	C	Act	C	O	n/a	CV	Q	n/a
														SO	Q	n/a
1AF-16	AFWP "1A" Discharge Line Check Vlv	2165-S-544	L-6	3065	4	CK	SA	3	C	Act	C	O/C	n/a	SC	CS	DTJ-AF-1
														SO	CS	DTJ-AF-1
1AF-19	AFWP "1A" Pressure Control Vlv	2165-S-544	K-6	3065	4	GL	EH	3	B	Act	T	O	O	FSO	CS	DTJ-AF-2
														PIT	2YR	n/a
														STO	CS	DTJ-AF-2
1AF-23	AFWP "1B" Recirc Line Check Vlv	2165-S-544	N-9	3065	2	CK	SA	3	C	Act	C	O	n/a	CV	Q	n/a
														SO	Q	n/a
1AF-31	AFWP "1B" Discharge Line Check Vlv	2165-S-544	L-8	3065	4	CK	SA	3	C	Act	C	O/C	n/a	SC	CS	DTJ-AF-1
														SO	CS	DTJ-AF-1
1AF-34	AFWP "1B" Pressure Control Vlv	2165-S-544	K-8	3065	4	GL	EH	3	B	Act	T	O	O	FSO	CS	DTJ-AF-2
														PIT	2YR	n/a
														STO	CS	DTJ-AF-2
1AF-49	AFWP "1A & 1B" Flow Control Vlv to SG "A"	2165-S-544	J-6	3065	4	GL	EH	3	B	Act	O	O/C	O	FSO	Q	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-AF-3
														STC	Q	n/a
														STO	CS	DTJ-AF-3
														STO	Q	n/a
1AF-50	AFWP "1A & 1B" Flow Control Vlv to SG "C"	2165-S-544	J-7	3065	4	GL	EH	3	B	Act	O	O/C	O	FSO	Q	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-AF-3
														STC	Q	n/a
														STO	CS	DTJ-AF-3
														STO	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1AF-51	AFWP "1A & 1B" Flow Control Vlv to SG "B"	2165-S-544	J-8	3065	4	GL	EH	3	B	Act	O	O/C	C	FSO	Q	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-AF-3
														STC	Q	n/a
														STO	CS	AF-CSJ4
														STO	Q	n/a
1AF-54	MD AFWP Discharge Line Check Vlv to SG "A"	2165-S-544	G-6	3065	4	CK	SA	3	C	Act	C	O	n/a	CV	Q	n/a
														SO	CS	DTJ-AF-3
1AF-55	AFWP "1A & 1B" Iso Vlv to SG "A" (CIV)	2165-S-544	G-6	3065	4	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-68	SG "A" AFW Injection Check Vlv	2165-S-544	C-2	3065	6	CK	SA	2	C	Act	O	O	n/a	CM	CM	n/a
1AF-73	MD AFWP Discharge Line Check Vlv to SG "C"	2165-S-544	H-7	3065	4	CK	SA	3	C	Act	C	O	n/a	CV	Q	n/a
														SO	CS	DTJ-AF-3
1AF-74	AFWP "1A & 1B" Iso Vlv to SG "C" (CIV)	2165-S-544	G-7	3065	4	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-87	SG "C" AFW Injection Check Vlv	2165-S-544	K-2	3065	6	CK	SA	2	C	Act	O	O	n/a	CM	CM	n/a
1AF-92	MD AFWP Discharge Line Check Vlv to SG "B"	2165-S-544	I-8	3065	4	CK	SA	3	C	Act	C	O	n/a	CV	Q	n/a
														SO	CS	DTJ-AF-3
1AF-93	AFWP "1A & 1B" Iso Vlv to SG "B" (CIV)	2165-S-544	H-8	3065	4	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-106	SG "B" AFW Injection Check Vlv	2165-S-544	G-2	3065	6	CK	SA	2	C	Act	O	O	n/a	CM	CM	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1AF-110	Turbine Driven AFWP Recirc Line Check Vlv	2165-S-544	N-11	3065	2	CK	SA	3	C	Act	C	O	n/a	CV	Q	n/a
														SO	Q	n/a
1AF-117	Turbine Driven AFWP Discharge Line Check Vlv	2165-S-544	L-10	3065	6	CK	SA	3	C	Act	C	O	n/a	CM	CM	n/a
1AF-129	TD AFWP Flow Control Vlv to SG "A"	2165-S-544	J-9	3065	4	GL	EH	3	B	Act	O	O/C	O	FSO	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-130	TD AFWP Flow Control Vlv to SG "B"	2165-S-544	J-10	3065	4	GL	EH	3	B	Act	O	O/C	O	FSO	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-131	TD AFWP Flow Control Vlv to SG "C"	2165-S-544	J-11	3065	4	GL	EH	3	B	Act	O	O/C	O	FSO	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-136	TD AFWP Discharge Line Check Vlv to SG "A"	2165-S-544	G-6	3065	4	CK	SA	3	C	Act	C	O	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-4
1AF-137	TD AFWP Iso Vlv to SG "A" (CIV)	2165-S-544	G-6	3065	4	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-142	TD AFWP Discharge Line Check Vlv to SG "B"	2165-S-544	H-9	3065	4	CK	SA	3	C	Act	C	O	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-4
1AF-143	TD AFWP Iso Vlv to SG "B" (CIV)	2165-S-544	H-8	3065	4	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-148	TD AFWP Discharge Line Check Vlv to SG "C"	2165-S-544	G-8	3065	4	CK	SA	3	C	Act	C	O	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-4

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1AF-149	TD AFWP Iso Vlv to SG "C" (CIV)	2165-S-544	G-8	3065	4	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1AF-201	MD AFWP Discharge Line Check Vlv to SG "A"	2165-S-544	H-5	3065	4	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-3
1AF-202	MD AFWP Discharge Line Check Vlv to SG "B"	2165-S-544	I-8	3065	4	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-3
1AF-203	MD AFWP Discharge Line Check Vlv to SG "C"	2165-S-544	I-6	3065	4	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-3
1AF-204	TD AFWP Discharge Line Check Vlv to SG "A"	2165-S-544	H-7	3065	4	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-4
1AF-205	TD AFWP Discharge Line Check Vlv to SG "B"	2165-S-544	H-10	3065	4	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-4
1AF-206	TD AFWP Discharge Line Check Vlv to SG "C"	2165-S-544	H-11	3065	4	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	CS	DTJ-AF-4
1AS-344	Auxiliary Steam Excess Flow Check Vlv	2165-S-689	K-14	3040	3	CK	SA	3	C	Act	O	C	n/a	CM	CM	n/a
1AS-345	Auxiliary Steam Excess Flow Check Vlv	2165-S-689	K-14	3040	3	CK	SA	3	C	Act	O	C	n/a	CM	CM	n/a
1BD-1	SG "A" Tubesheet Blowdown Iso Vlv (Inbd)	2165-S-551	E-3	3010	4	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1BD-11	SG "A" Blowdown Iso Vlv (CIV)	2165-S-551	E-7	3010	4	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1BD-20	SG "B" Tubesheet Blowdown Iso Vlv (Inbd)	2165-S-551	J-3	3010	4	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1BD-30	SG "B" Blowdown Iso Vlv (CIV)	2165-S-551	I-6	3010	4	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1BD-39	SG "C" Tubesheet Blowdown Iso Vlv (Inbd)	2165-S-551	N-3	3010	4	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1BD-49	SG "C" Blowdown Iso Vlv (CIV)	2165-S-551	N-7	3010	4	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CB-2	Train "A" Containment Vacuum Relief Vlv (CIV)	2165-S-1017	G-15	8060	24	BF	AO	2	A/C	Act	C	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														SP	RO	n/a
														STC	Q	n/a
														STO	Q	n/a
1CB-3	Train "A" Containment Vacuum Relief Vlv (CIV)	2165-S-1017	G-16	8060	24	CK	SA	2	A/C	Act	C	O/C	n/a	LJ	2YR	n/a
														SC	RO	DTJ-CB-2
														SO	RO	DTJ-CB-2
														SP	RO	n/a
1CB-6	Train "B" Containment Vacuum Relief Vlv (CIV)	2165-S-1017	H-15	8060	24	BF	AO	2	A/C	Act	C	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														SP	RO	n/a
														STC	Q	n/a
														STO	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CB-7	Train "B" Containment Vacuum Relief Vlv (CIV)	2165-S-1017	H-16	8060	24	CK	SA	2	A/C	Act	C	O/C	n/a	LJ	2YR	n/a
														SC	RO	DTJ-CB-2
														SO	RO	DTJ-CB-2
														SP	RO	n/a
1CC-33	CCW Pump A Discharge Check Vlv	2165-S-1319	E-8	4080	18	CK	SA	3	C	Act	O/C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1CC-50	CCW Pump "B" Discharge Check Vlv	2165-S-1319	K-8	4080	18	CK	SA	3	C	Act	O/C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1CC-64	CCW Pump C Discharge Check Vlv	2165-S-1319	H-8	4080	18	CK	SA	3	C	Act	O/C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1CC-99	CCW Heat Exchanger "A" to Non-Essential Equipment Iso Vlv	2165-S-1319	F-16	4080	18	BF	MO	3	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1CC-113	CCW Heat Exchanger "B" to Non-Essential Equipment Iso Vlv	2165-S-1319	G-16	4080	18	BF	MO	3	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1CC-114	CCW Supply to Sample Heat Exchangers	2165-S-1319	G-18	4080	4	DA	AO	3	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CC-115	CCW Supply to Sample Heat Exchangers	2165-S-1319	G-18	4080	4	DA	AO	3	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CC-118	CCW Return from Sample Heat Exchangers	2165-S-1319	H-2	4080	4	CK	SA	3	C	Act	O/C	C	n/a	OV	Q	n/a
														SC	Q	n/a
1CC-119	CCW Return from Sample Heat Exchangers	2165-S-1319	H-2	4080	4	CK	SA	3	C	Act	O/C	C	n/a	OV	Q	n/a
														SC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CC-127	CCW Non-Essential Return to Header "B"	2165-S-1319	H-3	4080	18	BF	MO	3	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1CC-128	CCW Non-Essential Return to Header "A"	2165-S-1319	G-3	4080	18	BF	MO	3	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1CC-129	CCW Nonessential Return Relief Vlv	2165-S-1319	G-4	4080	.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CC-147	CCW From RHR Heat Exchanger "A" Outlet Iso Vlv.	2165-S-1320	A-7	4080	12	GA	MO	3	B	Act	C	O	AI	PIT	2YR	n/a
														STO	Q	n/a
1CC-167	CCW From RHR Heat Exchanger "B" Outlet Iso Vlv.	2165-S-1320	L-7	4080	12	GA	MO	3	B	Act	C	O	AI	PIT	2YR	n/a
														STO	Q	n/a
1CC-176	CCW to Excess LTDN & RCDT Heat Exchangers (CIV)	2165-S-1321	D-3	4080	6	GA	MO	2	B	Act	O	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CC-179	CCW to Excess LTDN & RCDT Heat Exchangers	2165-S-1321	D-3	4080	6	CK	SA	2	C	Act	O	O	n/a	CM	CM	n/a
1CC-186	CCW From RCDT Heat Exchanger Outlet Relief Vlv (CIV)	2165-S-1321	D-8	4080	0.75	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1CC-194	CCW From Excess LTDN Heat Exchanger Outlet Relief Vlv (CIV)	2165-S-1321	E-8	4080	3	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1CC-202	CCW from Excess LTDN & RCDT Heat Exchangers (CIV)	2165-S-1321	B-10	4080	6	GA	MO	2	B	Act	O	C	AI	PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CC-207	CCW Supply To RCPs Iso Vlv	2165-S-1321	E-1	4080	6	GA	MO	2	B	Act	O	C	AI	PIT STC	2YR RO	n/a DTJ-CC-2
1CC-208	CCW Supply To RCPs Iso Vlv - Outboard CIV	2165-S-1321	F-1	4080	6	GA	MO	2	A	Act	O	C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CC-2
1CC-211	CCW Supply to RCPs - Inboard CIV	2165-S-1321	F-1	4080	6	CK	SA	2	A/C	Act	O	O/C	n/a	LJ SC SO	2YR RO Q	n/a DTJ-CC-1 n/a
1CC-216	CCW To RCP "A" Thermal Barrier Inlet Check Vlv	2165-S-1321	N-2	4080	2	CK	SA	3	C	Act	O	C	n/a	CM	CM	n/a
1CC-219	CCW Return From RCP "A" Thermal Barrier Relief	2165-S-1321	N-4	4080	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CC-227	CCW To RCP "B" Thermal Barrier Inlet Check Vlv	2165-S-1321	N-5	4080	2	CK	SA	3	C	Act	O	C	n/a	CM	CM	n/a
1CC-230	CCW Return From RCP "B" Thermal Barrier Relief	2165-S-1321	N-8	4080	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CC-238	CCW To RCP "C" Thermal Barrier Inlet Check Vlv	2165-S-1321	N-9	4080	2	CK	SA	3	C	Act	O	C	n/a	CM	CM	n/a
1CC-241	CCW Return From RCP "C" Thermal Barrier Relief	2165-S-1321	N-11	4080	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CC-249	CCW Return From RCP Thermal Barriers - Inboard CIV	2165-S-1321	E-15	4080	4	GA	MO	2	A	Act	O	C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CC-2

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CC-250	CCW Return From RCP Thermal Barriers - Inboard CIV	2165-S-1321	F-16	4080	0.75	CK	SA	2	A/C	Act	C	O/C	n/a	LJ SC SO	2YR RO RO	n/a DTJ-CC-1 DTJ-CC-1
1CC-251	CCW Return From RCP Thermal Barriers - Outboard CIV	2165-S-1321	E-15	4080	4	GA	MO	2	A	Act	O	C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CC-2
1CC-252	CCW Return From RCPs Thermal Barrier Iso Vlv	2165-S-1321	D-15	4080	4	GA	MO	2	B	Act	O	C	AI	PIT STC	2YR RO	n/a DTJ-CC-2
1CC-294	CCW Return From RCP Mtr. Brg. Coolers Relief	2165-S-1321	F-12	4080	3	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CC-297	CCW Return From RCP Mtr. Brg. Coolers - Inboard CIV	2165-S-1321	E-12	4080	6	GA	MO	2	A	Act	O	C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CC-2
1CC-298	CCW Return From RCP Motor Bearing Coolers - Inboard CIV	2165-S-1321	F-13	4080	0.75	CK	SA	2	A/C	Act	C	O/C	n/a	LJ SC SO	2YR RO RO	n/a DTJ-CC-1 DTJ-CC-1
1CC-299	CCW Return From RCPs Iso Vlv - Outboard CIV	2165-S-1321	E-12	4080	6	GA	MO	2	A	Act	O	C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CC-2
1CC-304	CCW To Gross Failed Fuel Detector	2165-S-1322	A-6	4080	0.75	DA	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CC-305	CCW To Gross Failed Fuel Detector	2165-S-1322	B-6	4080	0.75	DA	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CC-306	CCW Return From Gross Failed Fuel Detector	2165-S-1322	C-6	4080	0.75	CK	SA	3	C	Act	O	C	n/a	CM	CM	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CC-307	CCW Return From Gross Failed Fuel Detector	2165-S-1322	C-6	4080	0.75	CK	SA	3	C	Act	O	C	n/a	CM	CM	n/a
1CC-313	CCW Outlet From Gross Failed Fuel Detector Relief	2165-S-1322	E-5	4080	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CC-556	RHR Htx "A" Press Relief Bypass Line Check Vlv	2165-S-1320	B-7	4080	1	CK	SA	3	C	Act	O/C	O	n/a	CM	CM	n/a
1CC-558	RHR Htx "B" Press Relief Bypass Line Check Vlv	2165-S-1320	M-7	4080	1	CK	SA	3	C	Act	O/C	O	n/a	CM	CM	n/a
1CC-561	Fuel Pool Heat Exchangers 1 & 4B Press. Relief Bypass Line Check	2165-S-1322 S01	J-5	4080	1	CK	SA	3	C	Act	O	O	n/a	CM	CM	n/a
1CC-563	Seal Water Hx Shell Side Thermal Relief	2165-S-1322	J-2	4080	.75	CK	SA	3	C	Act	O	O	n/a	CM	CM	n/a
1CC-565	Letdown Hx Shell Side Thermal Relief	2165-S-1322	J-4	4080	.75	CK	SA	3	C	Act	O	O	n/a	CM	CM	n/a
1CC-573	Fuel Pool Heat Exchangers 1 & 4A Press. Relief Bypass Line Check	2165-S-1322 S01	I-3	4080	1	CK	SA	3	C	Act	O	O	n/a	CM	CM	n/a
1CC-578	SFP HX 2&3A Thermal Relief Check Valve	2165-S-1322 S01	H-10	4080	0.75	CK	SA	3	C	Act	O	O	n/a	CM	CM	n/a
1CC-580	SFP HX 2&3B Thermal Relief Check Valve	2165-S-1322 S01	H-16	4080	0.75	CK	SA	3	C	Act	O	O	n/a	CM	CM	n/a
1CE-36	CST to MDAFWP "A" Inlet Check Vlv	2165-S-545	H-7	3070	6	CK	SA	3	C	Act	C	O/C	n/a	CM	CM	n/a
1CE-46	CST to MDAFWP "B" Inlet Check Vlv	2165-S-545	H-8	3070	6	CK	SA	3	C	Act	C	O/C	n/a	CM	CM	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CE-56	CST to TDAFWP Inlet Check Vlv	2165-S-545	H-9	3070	8	CK	SA	3	C	Act	C	O/C	n/a	CM	CM	n/a
1CE-1157	MDAFWP "A" Inlet Relief Vlv	2165-S-545	I-7	3070	1X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CE-1158	MDAFWP "B" Inlet Relief Vlv	2165-S-545	I-8	3070	1X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CE-1159	TDAFWP Inlet Relief Vlv	2165-S-545	I-9	3070	1X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CH-10	Chilled Water Pump "1A" Suction Relief Vlv	2165-S-998 S02	I-4	4085	1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CH-19	Chilled Water Pump "1A" Discharge Relief Vlv	2165-S-998 S02	H-8	4085	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CH-34	Chiller "A" Chilled Water Outlet Header Relief Vlv	2165-S-998 S02	F-11	4085	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CH-54	Chilled Water Pump "1B" Suction Relief Vlv	2165-S-999 S02	I-5	4085	1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CH-63	Chilled Water Pump "1B" Discharge Relief Vlv	2165-S-999 S02	H-8	4085	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CH-78	Chiller "B" Chilled Water Outlet Header Relief Vlv	2165-S-999 S02	G-12	4085	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CH-115	AH-30 and AH-63 (z) Chilled Water Train "A" Supply Iso Vlv	2165-S-998	H-14	4085	4	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CH-116	AH-30 and AH-63 (z) Chilled Water Train "A" Supply Iso Vlv	2165-S-998	H-14	4085	4	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CH-125	AH-30 and AH-63 (z) Chilled Water Train "A" Return Iso Vlv	2165-S-998	L-10	4085	4	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CH-126	AH-30 and AH-63 (z) Chilled Water Train "A" Return Iso Vlv	2165-S-998	L-10	4085	4	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CH-148	AH-30 and AH-63 (z) Chilled Water Train "B" Supply Iso Vlv	2165-S-999	A-16	4085	4	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CH-149	AH-30 and AH-63 (z) Chilled Water Train "B" Supply Iso Vlv	2165-S-999	A-16	4085	4	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CH-196	AH-30 and AH-63 (z) Chilled Water Train "B" Return Iso Vlv	2165-S-999	L-15	4085	4	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CH-197	AH-30 and AH-63 (z) Chilled Water Train "B" Return Iso Vlv	2165-S-999	L-15	4085	4	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CH-199	AH-5 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	B-1	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-213	AH-6 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	B-5	4085	3	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-232	AH-7 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	B-8	4085	3	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CH-251	AH-9 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	B-12	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-265	AH-10 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	B-15	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-279	AH-12 (1A-SA/1B-SB) Temperature Control Iso Vlv.	2165-S-998 S03	F-5	4085	4	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-323	AH-15 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	F-15	4085	2.5	3W	EH	3	B	Act	O/C	C	C	FSC STC	Q Q	n/a n/a
1CH-343	AH-16 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	K-1	4085	3	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-363	AH-17 (1-4A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	K-5	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-381	AH-19 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	K-8	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-394	AH-20 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	K-12	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-409	AH-23 (1X-SA) Temperature Control Iso Vlv.	2165-S-998 S04	B-1	4085	1	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-422	AH-24 (1X-SA) Temperature Control Iso Vlv.	2165-S-998 S04	B-5	4085	1.5	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CH-434	AH-26 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S04	B-8	4085	1.5	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-446	AH-28 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S04	B-12	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-460	AH-92 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S04	G-8	4085	1.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-472	AH-93 (1X-SA) Temperature Control Iso Vlv.	2165-S-998 S04	G-12	4085	1.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-485	AH-11 (1A-SA) Temperature Control Iso Vlv.	2165-S-998 S03	G-1	4085	2.5	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-551	AH-5 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S03	B-1	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-564	AH-6 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S03	B-5	4085	3	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-583	AH-7 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S03	B-8	4085	3	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-603	AH-8 (1X-SB) Temperature Control Iso Vlv.	2165-S-999 S03	B-13	4085	2.5	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-616	AH-9 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S03	F-5	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CH-630	AH-10 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S03	F-8	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-643	AH-11 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S03	K-1	4085	2.5	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-680	AH-13 (1A-SB/1B-SB) Temperature Control Iso Vlv.	2165-S-999 S03	K-9	4085	4	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-703	AH-15 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S03	F-13	4085	2.5	3W	EH	3	B	Act	O/C	C	C	FSC STC	Q Q	n/a n/a
1CH-726	AH-16 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S04	B-1	4085	3	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-745	AH-17 (1-4B-SB) Temperature Control Iso Vlv.	2165-S-999 S04	B-6	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-764	AH-19 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S04	B-9	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-777	AH-20 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S04	B-13	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-793	AH-25 (1X-SB) Temperature Control Iso Vlv.	2165-S-999 S04	G-7	4085	1.5	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-807	AH-26 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S04	K-1	4085	1.5	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CH-820	AH-28 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S04	K-5	4085	2.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-833	AH-29 (1X-SB) Temperature Control Iso Vlv.	2165-S-999 S04	K-9	4085	1	GL	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-846	AH-92 (1B-SB) Temperature Control Iso Vlv.	2165-S-999 S04	K-13	4085	1.5	3W	AO	3	B	Act	O/C	O	O	FSO STO	Q Q	n/a n/a
1CH-1406	DEMIN WTR TO A ESCW EXP TNK CHK VLV	2165-S-998 S02	G-4	4085	1	CK	SA	3	A/C	Act	O/C	C	n/a	OV SC	Q Q	n/a n/a
1CH-1407	DEMIN WTR TO B ESCW EXP TNK CHK VLV	2165-S-999 S02	G-4	4085	1	CK	SA	1	A/C	Act	O/C	C	n/a	OV SC	Q Q	n/a n/a
1CM-2	Hydrogen Purge Exhaust Iso (CIV)	2165-S-1017	C-16	2075	3	BF	AO	2	A	Pass	LC	C	C	LJ PIT	2YR 2YR	n/a n/a
1CM-4	Hydrogen Purge Exhaust Iso (CIV)	2165-S-1017	C-14	2075	3	BF	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1CM-5	Hydrogen Purge Makeup Iso (CIV)	2165-S-1017	I-14	2075	3	BF	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1CM-7	Hydrogen Purge Makeup Iso (CIV)	2165-S-1017	I-16	2075	3	CK	SA	2	A/C	Pass	C	C	n/a	LJ	2YR	n/a
1CP-1	Containment Pre-Entry Purge Exhaust Vlv (CIV)	2165-S-1017	E-15	8170	42	BF	AO	2	A	Act	LC	C	C	FSC LJ PIT STC	CS 2YR 2YR CS	DTJ-CP-1 n/a n/a DTJ-CP-1

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CP-3	Normal Containment Purge Exhaust Vlv (CIV)	2165-S-1017	F-15	8170	8	BF	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CP-4	Containment Pre-Entry Purge Exhaust Vlv (CIV)	2165-S-1017	E-16	8170	42	BF	AO	2	A	Act	LC	C	C	FSC	CS	DTJ-CP-1
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-CP-1
1CP-5	Normal Containment Purge Exhaust Vlv (CIV)	2165-S-1017	F-16	8170	8	BF	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CP-6	Normal Containment Purge Makeup Vlv (CIV)	2165-S-1017	F-15	8170	8	BF	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CP-7	Containment Pre-Entry Purge Makeup Vlv (CIV)	2165-S-1017	G-15	8170	42	BF	AO	2	A	Act	LC	C	C	FSC	CS	DTJ-CP-1
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-CP-1
1CP-9	Normal Containment Purge Makeup Vlv (CIV)	2165-S-1017	F-16	8170	8	BF	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CP-10	Containment Pre-Entry Purge Makeup Vlv (CIV)	2165-S-1017	G-16	8170	42	BF	AO	2	A	Act	LC	C	C	FSC	CS	DTJ-CP-1
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-CP-1

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CS-1	RCS Letdown Line Iso Vlv	2165-S-1303	A-3	2060	3	GL	AO	1	B	Act	O	C	C	FSC	CS	DTJ-CS-1
														PIT	2YR	n/a
														STC	CS	DTJ-CS-1
1CS-2	RCS Letdown Line Iso Vlv	2165-S-1303	A-3	2060	3	GL	AO	1	B	Act	O	C	C	FSC	CS	DTJ-CS-1
														PIT	2YR	n/a
														STC	CS	DTJ-CS-1
1CS-7	Letdown Orifice Iso Vlv - Orifice "A" 45 GPM (CIV)	2165-S-1303	B-10	2060	2	GL	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CS-8	Letdown Orifice Iso Vlv - Orifice "B" 60 GPM (CIV)	2165-S-1303	B-11	2060	2	GL	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CS-9	Letdown Orifice Iso Vlv - Orifice "C" 60 GPM (CIV)	2165-S-1303	B-12	2060	2	GL	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1CS-10	Letdown Line Relief Vlv (CIV)	2165-S-1303	A-11	2060	2	RV	SA	2	A/C	Act	C	O/C	n/a	LJ	2YR	n/a
														SP	10YR	n/a
1CS-11	Letdown Iso (CIV)	2165-S-1303	A-17	2060	3	GL	AO	2	A	Act	O	C	C	FSC	CS	DTJ-CS-1
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-CS-1
1CS-165	VCT Outlet Iso - LCV-115C	2165-S-1305	G-11	2060	4	GA	MO	2	B	Act	O	C	AI	PIT	2YR	n/a
														STC	CS	DTJ-CS-3
1CS-166	VCT Outlet Iso - LCV-115E	2165-S-1305	G-11	2060	4	GA	MO	2	B	Act	O	C	AI	PIT	2YR	n/a
														STC	CS	DTJ-CS-3

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CS-167	VCT Outlet Check Vlv	2165-S-1305	G-11	2060	4	CK	SA	2	A/C	Act	O	C	n/a	LK	2YR	n/a
														OV	RO	DTJ-CS-8
														SC	RO	DTJ-CS-8
1CS-168	CSIP Suction Header Cross Connect	2165-S-1305	I-11	2060	8	GA	MO	2	B	Pass	O	O	AI	PIT	2YR	n/a
1CS-169	CSIP Suction Header Cross Connect	2165-S-1305	J-11	2060	8	GA	MO	2	B	Pass	O	O	AI	PIT	2YR	n/a
1CS-170	CSIP Suction Header Cross Connect	2165-S-1305	I-11	2060	8	GA	MO	2	B	Pass	O	O	AI	PIT	2YR	n/a
1CS-171	CSIP Suction Header Cross Connect	2165-S-1305	K-11	2060	8	GA	MO	2	B	Pass	O	O	AI	PIT	2YR	n/a
1CS-178	CSIP "1A" Discharge Check Vlv	2165-S-1305	H-7	2060	3	CK	SA	2	C	Act	O/C	O/C	n/a	SC	RO	DTJ-CS-13
														SO	RO	DTJ-CS-13
1CS-179	CSIP "1A" Minimum Flow Recirculation Check Vlv	2165-S-1305	H-8	2060	2	CK	SA	2	C	Act	O/C	O/C	n/a	CM	CM	n/a
1CS-182	CSIP "1A" Minimum Flow Line Iso Vlv	2165-S-1305	G-7	2060	2	GL	MO	2	B	Act	O	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CS-192	CSIP "1B" Discharge Check Vlv	2165-S-1305	K-7	2060	3	CK	SA	2	C	Act	O/C	O/C	n/a	SC	RO	DTJ-CS-13
														SO	RO	DTJ-CS-13
1CS-193	CSIP "1B" Minimum Flow Recirculation Check Vlv	2165-S-1305	K-8	2060	2	CK	SA	2	C	Act	O/C	O/C	n/a	CM	CM	n/a
1CS-196	CSIP "1B" Minimum Flow Line Iso Vlv	2165-S-1305	J-7	2060	2	GL	MO	2	B	Act	O	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CS-206	CSIP "1C" Discharge Check Vlv	2165-S-1305	J-7	2060	3	CK	SA	2	C	Act	O/C	O/C	n/a	CM	CM	n/a
														SC	RO	DTJ-CS-13
														SO	RO	DTJ-CS-13

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CS-207	CSIP "1C" Minimum Flow Recirculation Check Vlv	2165-S-1305	I-8	2060	2	CK	SA	2	C	Act	O/C	O/C	n/a	CM	CM	n/a
1CS-210	CSIP "1C" Minimum Flow Line Iso Vlv	2165-S-1305	I-7	2060	2	GL	MO	2	B	Act	O	C	AI	PIT STC	2YR Q	n/a n/a
1CS-214	CSIP Minimum Flow Iso Vlv	2165-S-1305	G-4	2060	3	GA	MO	2	B	Act	O	C	AI	PIT STC	2YR Q	n/a n/a
1CS-217	CSIP Discharge Header Cross Connect	2165-S-1305	I-6	2060	4	GA	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1CS-218	CSIP Discharge Header Cross Connect	2165-S-1305	J-6	2060	4	GA	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1CS-219	CSIP Discharge Header Cross Connect	2165-S-1305	I-6	2060	4	GA	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1CS-220	CSIP Discharge Header Cross Connect	2165-S-1305	K-6	2060	4	GA	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1CS-231	Charging Flow Control Vlv	2165-S-1305	H-4	2060	3	GL	AO	2	B	Act	T	O	O	FSO STO	CS CS	DTJ-CS-2 DTJ-CS-2
1CS-235	Charging Line Iso Vlv	2165-S-1305	H-2	2060	3	GA	MO	2	B	Act	O	O/C	AI	PIT STC	2YR CS	n/a DTJ-CS-2
1CS-238	Charging Line Iso Vlv - CIV (otbd)	2165-S-1303	B-17	2060	3	GA	MO	2	A	Act	O	O/C	AI	LJ PIT STC	2YR 2YR CS	n/a n/a DTJ-CS-1
1CS-240	Seal Inj FCV Inlet Isol Vlv	2165-S-1305	M-5	2060	2	GL	MO	2	B	Pass	O	O	AI	PIT	2YR	n/a
1CS-250	Seal Inj FCV Inlet Isol Vlv	2165-S-1305	M-5	2060	2	GL	MO	2	B	Pass	O/C	O/C	AI	PIT	2YR	n/a
1CS-253	Seal Inj FCV Inlet Isol Vlv	2165-S-1305	M-5	2060	2	GL	MO	2	B	Pass	C	C	AI	PIT	2YR	n/a
1CS-254	Seal Inj FCV Inlet Isol Vlv	2165-S-1305	M-5	2060	2	GL	MO	2	B	Pass	O/C	O/C	AI	PIT	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CS-257	Seal Inj FCV Inlet Isol Vlv	2165-S-1305	M-5	2060	2	GL	MO	2	B	Pass	O/C	O/C	AI	PIT	2YR	n/a
1CS-260	Seal Inj FCV Inlet Isol Vlv	2165-S-1305	M-1	2060	2	GL	MO	2	B	Pass	C	C	AI	PIT	2YR	n/a
1CS-261	Seal Inj FCV Inlet Isol Vlv	2165-S-1305	M-5	2060	2	GL	MO	2	B	Pass	O/C	O/C	AI	PIT	2YR	n/a
1CS-278	BAT Pumps to CSIP Common Supply Header Iso Vlv	2165-S-1305	J-16	2060	2	GL	MO	2	B	Act	C	O	AI	PIT STO	2YR Q	n/a n/a
1CS-279	BAT Pumps to CSIP Supply Check Vlv	2165-S-1305	J-17	2060	2	CK	SA	2	C	Act	C	O	n/a	CV SO	CS CS	DTJ-CS-4 DTJ-CS-4
1CS-283	Boric Acid Makeup to the VCT Flow Control Vlv FCV-113A	2165-S-1305	J-14	2060	2	GL	AO	2	B	Act	O/C	C	O	PIT STC	2YR Q	n/a n/a
1CS-290	RHRS "A" HX to CSIP Suction Relief Vlv	2165-S-1305	J-12	2060	.75X1	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1CS-291	CSIP Suction from RWST Iso Vlv - LCV-115B	2165-S-1305	I-12	2060	8	GA	MO	2	B	Act	C	O/C	AI	PIT STC STO	2YR CS CS	n/a DTJ-CS-3 DTJ-CS-3
1CS-292	CSIP Suction from RWST Iso Vlv - LCV-115D	2165-S-1305	K-12	2060	8	GA	MO	2	B	Act	C	O/C	AI	PIT STC STO	2YR CS CS	n/a DTJ-CS-3 DTJ-CS-3
1CS-293	RHRS "B" HX to CSIP Suction Relief Vlv	2165-S-1305	K-13	2060	.75X1	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1CS-294	RWST to CSIP Suction Supply Check Vlv	2165-S-1305	K-14	2060	8	CK	SA	2	A	Act	C	O/C	n/a	SC SO	CS RO	DTJ-CS-5 DTJ-CS-9
1CS-341	RCP "A" Seal Water Injection Iso Vlv (CIV)	2165-S-1303	K-3	2060	1.5	GL	MO	2	A	Act	O	O/C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CS-10

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CS-344	RCP "A" Seal Water Injection Check Vlv (CIV)	2165-S-1303	K-3	2060	1.5	CK	SA	2	A/C	Act	O	O/C	n/a	LJ SC SO	2YR RO Q	n/a DTJ-CS-7 n/a
1CS-348	RCP "A" Seal Water Injection Check	2165-S-1303	J-3	2060	1.5	CK	SA	1	C	Act	O	O/C	n/a	CM	CM	n/a
1CS-349	RCP "A" Seal Water Injection Check	2165-S-1303	I-3	2060	1.5	CK	SA	1	C	Act	O	O/C	n/a	CM	CM	n/a
1CS-382	RCP "B" Seal Water Injection Iso Vlv (CIV)	2165-S-1303 S01	L-3	2060	1.5	GL	MO	2	A	Act	O	O/C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CS-10
1CS-385	RCP "B" Seal Water Injection Check Vlv (CIV)	2165-S-1303 S01	K-3	2060	1.5	CK	SA	2	A/C	Act	O	O/C	n/a	LJ SC SO	2YR RO Q	n/a DTJ-CS-7 n/a
1CS-389	RCP "B" Seal Water Injection Check	2165-S-1303 S01	J-3	2060	1.5	CK	SA	1	C	Act	O	O/C	n/a	CM	CM	n/a
1CS-390	RCP "B" Seal Water Injection Check	2165-S-1303 S01	I-3	2060	1.5	CK	SA	1	C	Act	O	O/C	n/a	CM	CM	n/a
1CS-423	RCP "C" Seal Water Injection Iso Vlv (CIV)	2165-S-1303 S02	K-3	2060	1.5	GL	MO	2	A	Act	O	O/C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CS-10
1CS-426	RCP "C" Seal Water Injection Check Vlv (CIV)	2165-S-1303 S02	K-3	2060	1.5	CK	SA	2	A/C	Act	O	O/C	n/a	LJ SC SO	2YR RO Q	n/a DTJ-CS-7 n/a
1CS-430	RCP "C" Seal Water Injection Check	2165-S-1303 S02	J-3	2060	1.5	CK	SA	1	C	Act	O	O/C	n/a	CM	CM	n/a
1CS-431	RCP "C" Seal Water Injection Check	2165-S-1303 S02	I-3	2060	1.5	CK	SA	1	C	Act	O	O/C	n/a	CM	CM	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CS-460	RCS Excess Letdown Upstream Iso Vlv	2165-S-1303	D-8	2060	1	GL	AO	1	B	Act	C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CS-461	RCS Excess Letdown Downstream Iso Vlv	2165-S-1303	D-8	2060	1	GL	AO	1	B	Act	C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1CS-467	RCP Seal Water Return & Excess LTDN Line Relief Vlv	2165-S-1303	D-16	2060	2	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1CS-470	RCP Seal Water Return & Excess LTDN (CIV)	2165-S-1303	D-16	2060	2	GL	MO	2	A	Act	O	C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CS-10
1CS-471	RCP Seal Water Return & Excess Letdown Thermal Relief Check (CIV)	2165-S-1303	E-16	2060	0.75	CK	SA	2	A/C	Act	C	O/C	n/a	LJ SC SO	2YR RO RO	n/a DTJ-CS-7 DTJ-CS-7
1CS-472	RCP Seal Water Return & Excess LTDN (CIV)	2165-S-1303	D-17	2060	2	GL	MO	2	A	Act	O	C	AI	LJ PIT STC	2YR 2YR RO	n/a n/a DTJ-CS-10
1CS-477	CVCS Normal Charging Line Check Vlv (CIV)	2165-S-1303	B-16	2060	3	CK	SA	2	A/C	Act	O	O/C	n/a	LJ SC SO	2YR RO Q	n/a DTJ-CS-7 n/a
1CS-480	Alternate Charging Line Iso Vlv	2165-S-1303	B-4	2060	3	GL	AO	2	B	Act	C	O/C	O	FSO PIT STO	CS 2YR CS	DTJ-CS-6 n/a DTJ-CS-6
1CS-483	RCS Alternate Charging Line Check Vlv	2165-S-1303	B-3	2060	3	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1CS-486	RCS Alternate Charging Line Check Vlv	2165-S-1303	B-3	2060	3	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CS-487	Pressurizer Auxiliary Spray Vlv	2165-S-1303	D-4	2060	2	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1CS-488	Pressurizer Auxiliary Spray Line Injection Check Vlv	2165-S-1303	C-3	2060	2	CK	SA	1	C	Act	C	C	n/a	CM	CM	n/a
1CS-491	Pressurizer Auxiliary Spray Line Injection Check Vlv	2165-S-1303	C-3	2060	2	CK	SA	1	C	Act	C	C	n/a	CM	CM	n/a
1CS-492	Normal Charging Line Iso Vlv	2165-S-1303	C-4	2060	3	GL	AO	2	B	Act	O	O/C	O	FSO PIT STC	CS 2YR CS	DTJ-CS-6 n/a DTJ-CS-6
1CS-493	RCS Normal Charging Isolation Valve Bypass	2165-S-1303	C-4	2060	.75	CK	SA	2	C	Act	C	O	n/a	CM	CM	n/a
1CS-497	RCS Normal Charging Line Check Vlv	2165-S-1303	C-3	2060	3	CK	SA	1	C	Act	O	O/C	n/a	CM	CM	n/a
1CS-500	RCS Normal Charging Line Check Vlv	2165-S-1303	B-3	2060	3	CK	SA	1	C	Act	O	O/C	n/a	CM	CM	n/a
1CS-525	Boric Acid Gravity Feed Line Check Vlv	2165-S-1307	F-9	2060	3	CK	SA	3	C	Act	C	O	n/a	CV SO	RO RO	DTJ-CS-11 DTJ-CS-11
1CS-526	Boric Acid Gravity Feed Line Manual Isolation Vlv	2165-S-1307	E-10	2060	3	DA	MAN	2	B	Act	C	O/C	n/a	MAN	2YR	n/a
1CS-536	Boric Acid Transfer Pump "A" Discharge Check Vlv	2165-S-1307	E-7	2060	2	CK	SA	3	C	Act	C	O/C	n/a	SC SO	Q Q	n/a n/a
1CS-546	Boric Acid Transfer Pump "B" Discharge Check Vlv	2165-S-1307	G-7	2060	2	CK	SA	3	C	Act	C	O/C	n/a	SC SO	Q Q	n/a n/a
1CS-559	Boric Acid Filter Inlet Iso Vlv	2165-S-1307	E-3	2060	2	PL	AO	3	B	Pass	O	O	O	PIT	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CS-562	Boric Acid Filter Backwash Iso Vlv	2165-S-1307	D-3	2060	2	PL	AO	3	B	Pass	C	C	C	PIT	2YR	n/a
1CS-563	Boric Acid Filter Outlet Iso Vlv	2165-S-1307	E-2	2060	2	PL	AO	3	B	Pass	O	O	O	PIT	2YR	n/a
1CS-745	CSIP Alternate Minimum Flow Line Iso Vlv	2165-S-1304	H-16	2060	2	GL	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CS-746	CSIP Alternate Minimum Flow Line Iso Vlv	2165-S-1304	H-17	2060	2	GL	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1CS-752	CSIP Alternate Minimum Flow Line Iso Vlv	2165-S-1304	J-16	2060	2	GL	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1CS-753	CSIP Alternate Minimum Flow Line Iso Vlv	2165-S-1304	J-16	2060	2	GL	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CS-774	RCS Normal Charging Isolation Valve Bypass	2165-S-1303	C-5	2060	.75	CK	SA	2	C	Act	C	O	n/a	CM	CM	
1CS-775	CSIP Supply Check Vlv From The RHR 1B Heat Exchanger	2165-S-1305	J-13	2060	8	CK	SA	2	C	Act	C	O/C	n/a	SC	RO	DTJ-CS-12
														SO	RO	DTJ-CS-12
1CS-776	CSIP Supply Check Vlv From The RHR 1A Heat Exchanger	2165-S-1305	K-13	2060	8	CK	SA	2	C	Act	C	O/C	n/a	SC	RO	DTJ-CS-12
														SO	RO	DTJ-CS-12
1CT-5	Containment Spray Add. Tank Relief Vlv	2165-S-550	B-9	2070	1X1.5	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CT-11	Containment Spray Chemical Addition Iso Vlv	2165-S-550	I-12	2070	2	GL	MO	3	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	CS	DTJ-CT-2
														STO	CS	DTJ-CT-2

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CT-12	Containment Spray Chemical Addition Iso Vlv	2165-S-550	H-12	2070	2	GL	MO	3	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	CS	DTJ-CT-2
														STO	CS	DTJ-CT-2
1CT-24	Containment Spray Eductor Test Iso Vlv	2165-S-550	H-14	2070	2	GL	MO	2	B	Act	C	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CT-25	Containment Spray Eductor Test Iso Vlv	2165-S-550	H-14	2070	2	GL	MO	2	B	Act	C	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CT-26	RWST to Containment Spray Pump "A" Iso Vlv	2165-S-550	F-15	2070	12	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CT-27	RWST to Containment Spray Pump "A" Check Vlv	2165-S-550	F-14	2070	12	CK	SA	2	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1CT-47	Containment Spray Pump "A" Test Line to RWST Iso Vlv	2165-S-550	E-5	2070	6	GA	MO	2	B	Act	C	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CT-50	Containment Spray Pump "A" Disch to Nozzles Iso Vlv (CIV)	2165-S-550	F-4	2070	8	GA	MO	2	A	Act	C	O/C	AI	LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1CT-53	Containment Spray Pump "A" Disch to Nozzles Check Vlv (CIV)	2165-S-550	F-3	2070	8	CK	SA	2	A/C	Act	C	O/C	n/a	CM	CM	n/a
														LJ	2YR	n/a
1CT-62	CS Pump "A" Chemical Addition Check Vlv	2165-S-550	H-7	2070	2	CK	SA	2	C	Act	C	O/C	n/a	SC	CS	DTJ-CT-2
														SO	Q	n/a
1CT-65	CS Pump "B" Chemical Addition Check Vlv	2165-S-550	J-7	2070	2	CK	SA	2	C	Act	C	O/C	n/a	SC	CS	DTJ-CT-2
														SO	Q	n/a
1CT-71	RWST to Containment Spray Pump "B" Iso Vlv	2165-S-550	K-16	2070	12	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1CT-72	RWST to Containment Spray Pump "B" Check Vlv	2165-S-550	K-15	2070	12	CK	SA	2	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1CT-88	Containment Spray Pump "B" Disch to Nozzles Iso Vlv (CIV)	2165-S-550	K-4	2070	8	GA	MO	2	A	Act	C	O/C	AI	LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1CT-91	Containment Spray Pump "B" Disch to Nozzles Check Vlv (CIV)	2165-S-550	K-3	2070	8	CK	SA	2	A/C	Act	C	O/C	n/a	CM	CM	n/a
														LJ	2YR	n/a
1CT-95	Containment Spray Pump "B" Test Line to RWST Iso Vlv	2165-S-550	L-5	2070	6	GA	MO	2	B	Act	C	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1CT-102	Containment Sump to CS Pump "B" Iso Vlv (CIV)	2165-S-550	M-7	2070	12	GA	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	CS	DTJ-CT-1
														STO	CS	DTJ-CT-1
1CT-105	Containment Sump to CS Pump "A" Iso Vlv (CIV)	2165-S-550	N-7	2070	12	GA	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	CS	DTJ-CT-1
														STO	CS	DTJ-CT-1
1CT-E017	Containment Spray Add. Tank Vacuum Breaker	2165-S-550	A-8	2070	2	CK	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1CT-E018	Containment Spray Add. Tank Vacuum Breaker	2165-S-550	A-8	2070	2	CK	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1DFO-168	F.O. Transfer Pump "1A" Discharge Check Vlv	2165-S-563	G-2	5100	2	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1DFO-170	F.O. Transfer Pump "1A" Discharge Relief Vlv	2165-S-563	G-1	5100	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1DFO-173	F.O. Day Tank "1A" Inlet Iso Vlv	2165-S-633 S03	A-6	5100	2	GL	SO	3	B	Act	O/C	O/C	O	FSO	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1DFO-176	EDG "1A" Fuel Oil Circulating Hdr. Relief Vlv	2165-S-633 S03	A-10	5100	1.5	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1DFO-186	F.O. Transfer Pump "1B" Discharge Check Vlv	2165-S-563	G-7	5100	2	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1DFO-188	F.O. Transfer Pump "1B" Discharge Relief Vlv	2165-S-563	G-5	5100	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1DFO-191	F.O. Day Tank "1B" Inlet Iso Vlv	2165-S-633 S03	H-6	5100	2	GL	SO	3	B	Act	O/C	O/C	O	FSO	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1DFO-194	EDG "1B" Fuel Oil Circulating Hdr. Relief Vlv	2165-S-633 S03	H-10	5100	1.5	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1DFO-214	DFO Transfer Pump 1A-SA Suction Strainer Bypass	2165-S-563	F-2	5100	2	GA	MAN	3	B	Act	LC	O	n/a	MAN	2YR	n/a
1DFO-215	DFO Transfer Pump 1B-SB Suction Strainer Bypass	2165-S-563	F-7	5100	2	GA	MAN	3	B	Act	LC	O	n/a	MAN	2YR	n/a
1DW-15	Demin Water Make-up Vlv to CCW Pump Suction	2165-S-1319	F-2	4080	3	DA	AO	3	B	Pass	C	C	n/a	PIT	2YR	n/a
1DW-63	Demin Water Supply to Primary Cont. (CIV)	2165-S-799	H-5	6270	3	GA	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1DW-65	Demin Water Supply to Primary Cont. (CIV)	2165-S-799	H-6	6270	3	CK	SA	2	A/C	Act	C	O/C	n/a	LJ	2YR	n/a
														SC	RO	DTJ-DW-1
														SO	RO	DTJ-DW-1

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1EA-4	Starting Air Tank "1A" Inlet Check Vlv	2165-S-633 S04	C-11	5112	1.5	CK	SA	3	C	Act	O/C	C	n/a	OV	Q	n/a
														SC	Q	n/a
1EA-6	Starting Air Tank "1A" Relief Vlv	2165-S-633 S04	A-12	5112	1.5	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1EA-19	Starting Air Tank "1B" Inlet Check Vlv	2165-S-633 S04	F-11	5112	1.5	CK	SA	3	C	Act	O/C	C	n/a	OV	Q	n/a
														SC	Q	n/a
1EA-21	Starting Air Tank "1B" Relief Vlv	2165-S-633 S04	E-12	5112	1.5	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1EA-35	Starting Air Tank "1C" Inlet Check Vlv	2165-S-633 S04	J-11	5112	1.5	CK	SA	3	C	Act	O/C	C	n/a	OV	Q	n/a
														SC	Q	n/a
1EA-37	Starting Air Tank "1C" Relief Vlv	2165-S-633 S04	H-12	5112	1.5	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1EA-50	Starting Air Tank "1D" Inlet Check Vlv	2165-S-633 S04	M-11	5112	1.5	CK	SA	3	C	Act	O/C	C	n/a	OV	Q	n/a
														SC	Q	n/a
1EA-52	Starting Air Tank "1D" Relief Vlv	2165-S-633 S04	L-12	5112	1.5	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1ED-94	Containment Sump Disch. Iso Vlv (CIV)	2165-S-685	M-7	6240	3	GA	MO	2	A	Act	O	C	AI	LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1ED-95	Containment Sump Disch. Iso Vlv (CIV)	2165-S-685	M-7	6240	3	GA	MO	2	A	Act	O	C	AI	LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1ED-119	RCDT Pump Disch Bypass Iso Vlv (CIV)	2165-S-1313	E-17	6240	3	DA	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1ED-121	RCDT Pump Disch Level Control Vlv (CIV)	2165-S-1313	E-16	6240	3	GL	AO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1ED-125	RCDT Pump Disch Iso Vlv (CIV)	2165-S-1313	D-16	6240	3	DA	AO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1ED-164	RCDT Hydrogen Connection Iso Vlv (CIV)	2165-S-1313	E-6	6240	0.75	DA	AO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1FB-7	FILTER B/W OUTLET VLV	2165-S-1329	I-5	2060	3	GL	MO	2	B	Pass	C	C	AI	PIT	2YR	n/a
1FB-8	FILTER B/W OUTLET VLV	2165-S-1329	K-6	2060	3	GL	MO	2	B	Pass	C	C	AI	PIT	2YR	n/a
1FP-347	Fire Water Sprinkler Supply Iso Vlv (CIV)	2165-S-888	L-2	6175	8	BF	AO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1FP-349	Fire Water Sprinkler Supply Check Vlv (CIV)	2165-S-888	L-3	6175	6	CK	SA	2	A/C	Act	C	O/C	n/a	LJ	2YR	n/a
														SC	RO	DTJ-FP-1
														SO	RO	DTJ-FP-1
1FP-355	Fire Water Standpipe Supply Iso Vlv (CIV)	2165-S-888	M-2	6175	4	GA	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1FP-357	Fire Water Standpipe Supply Check Vlv (CIV)	2165-S-888	L-3	6175	4	CK	SA	2	A/C	Act	C	O/C	n/a	LJ	2YR	n/a
														SC	RO	DTJ-FP-1
														SO	RO	DTJ-FP-1

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1FW-158	Feedwater Injection Check Vlv to S/G "A"	2165-S-544	B-7	3050	16	CK	SA	2	C	Act	O	C	n/a	CM	CM	n/a
1FW-159	Feedwater Line Iso Vlv to S/G "A" (CIV)	2165-S-544	B-6	3050	16	GA	AO	2	B	Act	O	C	C	FSC PIT STC	CS 2YR CS	DTJ-FW-1 n/a DTJ-FW-1
1FW-216	Feedwater Injection Check Vlv to S/G "C"	2165-S-544	D-5	3050	16	CK	SA	2	C	Act	O	C	n/a	CM	CM	n/a
1FW-217	Feedwater Line Iso Vlv to S/G "C" (CIV)	2165-S-544	D-4	3050	16	GA	AO	2	B	Act	O	C	C	FSC PIT STC	CS 2YR CS	DTJ-FW-1 n/a DTJ-FW-1
1FW-276	Feedwater Injection Check Vlv to S/G "B"	2165-S-544	E-4	3050	16	CK	SA	2	C	Act	O	C	n/a	CM	CM	n/a
1FW-277	Feedwater Line Iso Vlv to S/G "B" (CIV)	2165-S-544	E-4	3050	16	GA	AO	2	B	Act	O	C	C	FSC PIT STC	CS 2YR CS	DTJ-FW-1 n/a DTJ-FW-1
1FW-403	N2 Supply to MFIV 1FW-159 Class Break Check Vlv	2165-S-544 SO2	G-6	3050		CK	SA	2	A/C	Act	O/C	C	n/a	LK OV SC	2YR Q Q	n/a n/a n/a
1FW-406	MFIV 1FW-159 Accum. (1FW-E078) Relief Vlv	2165-S-544 SO2	G-6	3050		RV	SA	2	A/C	Act	C	O/C	n/a	LK SP	2YR 10YR	n/a n/a
1FW-412	N2 Supply to MFIV 1FW-277 Class Break Check Vlv	2165-S-544 SO2	G-9	3050		CK	SA	2	A/C	Act	O/C	C	n/a	LK OV SC	2YR Q Q	n/a n/a n/a
1FW-415	MFIV 1FW-277 Accum. (1FW-E083) Relief Vlv	2165-S-544	G-10	3050		RV	SA	2	A/C	Act	C	O/C	n/a	LK SP	2YR 10YR	n/a n/a
1FW-421	N2 Supply to MFIV 1FW-217 Class Break Check Vlv	2165-S-544 SO2	G-13	3050		CK	SA	2	A/C	Act	O/C	C	n/a	LK OV SC	2YR Q Q	n/a n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1FW-424	MFIV 1FW-217 Accum. (1FW-E088) Relief Vlv	2165-S-544	G-14	3050		RV	SA	2	A/C	Act	C	O/C	n/a	LK SP	2YR 10YR	n/a n/a
1IA-220	Instrument Air Supply to Containment Check Vlv (CIV)	2165-S-801	D-12	6135	3	CK	SA	2	A/C	Act	O	C	n/a	LJ OV SC	2YR RO RO	n/a DTJ-IA-2 DTJ-IA-2
1IA-786	Instrument Air Supply Check to Accum. Tk. 1A-SA (Series with 1IA-787)	2165-S-1017	G-13	6135	0.75	CK	SA	2	C	Act	O/C	C	n/a	OV SC	RO RO	DTJ-IA-3 DTJ-IA-3
1IA-787	Instrument Air Supply Check to Accum. Tk. 1A-SA (Series with 1IA-786)	2165-S-1017	G-3	6135	0.75	CK	SA	2	C	Act	O/C	C	n/a	OV SC	RO RO	DTJ-IA-3 DTJ-IA-3
1IA-788	Instrument Air Supply Check to Accum. Tk. 1B-SB (Series with 1IA-789)	2165-S-1017	H-13	6135	0.75	CK	SA	2	C	Act	O/C	C	n/a	OV SC	RO RO	DTJ-IA-3 DTJ-IA-3
1IA-789	Instrument Air Supply Check to Accum. Tk. 1B-SB (Series with 1IA-788)	2165-S-1017	H-13	6135	0.75	CK	SA	2	C	Act	O/C	C	n/a	OV SC	RO RO	DTJ-IA-3 DTJ-IA-3
1IA-819	Instrument Air Supply to Containment Iso Vlv (CIV)	2165-S-801	C-3	6135	3	GL	AO	2	A	Act	O	C	C	FSC LJ PIT STC	CS 2YR 2YR CS	DTJ-IA-1 n/a n/a DTJ-IA-1
1LT-4	Containment ILRT Iso Vlv (CIV)	2166-S-916	D-4	8070	8	GA	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1LT-6	Containment ILRT Iso Vlv (CIV)	2166-S-916	D-6	8070	1	GL	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1LT-10	Containment ILRT Iso Vlv (CIV)	2166-S-916	D-6	8070	1	GL	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1MS-G	AFWP Turbine Governing Vlv	2165-S-542	N-1	3065	4	GL	EH	3	B	Act	O	T	O	SKID	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1MS-T	AFWP Turbine Trip Throttle Vlv	2165-S-542	N-1	3065	4	GL	MO	3	B	Act	O	O/C	O	SKID	Q	n/a
1MS-25	MS Line "A" to Sampling System (CIV)	2165-S-542	D-2	3020	1	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1MS-27	MS Line "B" to Sampling System (CIV)	2165-S-542	G-2	3020	1	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1MS-29	MS Line "C" to Sampling System (CIV)	2165-S-542	K-2	3020	1	GL	AO	2	B	Act	O	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1MS-43	Main Steam Line "A" Safety Vlv (CIV)	2165-S-542	C-3	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-44	Main Steam Line "B" Safety Vlv (CIV)	2165-S-542	G-3	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-45	Main Steam Line "C" Safety Vlv (CIV)	2165-S-542	J-3	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-46	Main Steam Line "A" Safety Vlv (CIV)	2165-S-542	C-4	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-47	Main Steam Line "B" Safety Vlv (CIV)	2165-S-542	G-4	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-48	Main Steam Line "C" Safety Vlv (CIV)	2165-S-542	J-4	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-49	Main Steam Line "A" Safety Vlv (CIV)	2165-S-542	C-5	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-50	Main Steam Line "B" Safety Vlv (CIV)	2165-S-542	G-5	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1MS-51	Main Steam Line "C" Safety Vlv (CIV)	2165-S-542	J-5	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-52	Main Steam Line "A" Safety Vlv (CIV)	2165-S-542	C-6	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-53	Main Steam Line "B" Safety Vlv (CIV)	2165-S-542	G-6	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-54	Main Steam Line "C" Safety Vlv (CIV)	2165-S-542	J-6	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-55	Main Steam Line "A" Safety Vlv (CIV)	2165-S-542	C-6	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-56	Main Steam Line "B" Safety Vlv (CIV)	2165-S-542	G-6	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-57	Main Steam Line "C" Safety Vlv (CIV)	2165-S-542	J-6	3020	6X10	RV	SA	2	C	Act	C	O/C	n/a	SP	5YR	n/a
1MS-58	MS Line "A" PORV (CIV)	2165-S-542	C-8	3020	8	GL	EH	2	B	Act	C	O/C	C	FSC PIT STC STO	Q 2YR Q Q	n/a n/a n/a n/a
1MS-59	MS Line "A" PORV Block Vlv	2165-S-542	C-8	3020	8	GA	MAN	2	B	Act	O	O/C	n/a	MAN	2YR	n/a
1MS-60	MS Line "B" PORV (CIV)	2165-S-542	F-8	3020	8	GL	EH	2	B	Act	C	O/C	C	FSC PIT STC STO	Q 2YR Q Q	n/a n/a n/a n/a
1MS-61	MS Line "B" PORV Block Vlv	2165-S-542	G-8	3020	8	GA	MAN	2	B	Act	O	O/C	n/a	MAN	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1MS-62	MS Line "C" PORV (CIV)	2165-S-542	J-8	3020	8	GL	EH	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1MS-63	MS Line "C" PORV Block Vlv	2165-S-542	J-8	3020	8	GA	MAN	2	B	Act	O	O/C	n/a	MAN	2YR	n/a
1MS-70	MS "B" to AFW Turbine Block Vlv (CIV)	2165-S-542	H-7	3020	6	GA	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1MS-71	MS "B" to AFW Turbine Check Vlv	2165-S-542	H-7	3020	6	CK	SA	3	C	Act	C	O/C	n/a	CM	CM	n/a
1MS-72	MS "C" to AFW Turbine Block Vlv (CIV)	2165-S-542	K-7	3020	6	GA	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1MS-73	MS "C" to AFW Turbine Check Vlv	2165-S-542	K-7	3020	6	CK	SA	3	C	Act	C	O/C	n/a	CM	CM	n/a
1MS-80	Main Steam Iso Vlv (MSIV) for MS Hdr "A" (CIV)	2165-S-542	D-9	3020	32	GL	AO	2	B	Act	O	C	C	FSC	CS	DTJ-MS-1
														PIT	2YR	n/a
														STC	CS	DTJ-MS-1
1MS-81	MS Hdr "A" MSIV Bypass Iso Vlv (CIV)	2165-S-542	D-9	3020	3	GL	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1MS-82	Main Steam Iso Vlv (MSIV) for MS Hdr "B" (CIV)	2165-S-542	G-9	3020	32	GL	AO	2	B	Act	O	C	C	FSC	CS	DTJ-MS-1
														PIT	2YR	n/a
														STC	CS	DTJ-MS-1
1MS-83	MS Hdr "B" MSIV Bypass Iso Vlv (CIV)	2165-S-542	H-9	3020	3	GL	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1MS-84	Main Steam Iso Vlv (MSIV) for MS Hdr "C" (CIV)	2165-S-542	J-9	3020	32	GL	AO	2	B	Act	O	C	C	FSC PIT STC	CS 2YR CS	DTJ-MS-1 n/a DTJ-MS-1
1MS-85	MS Hdr "C" MSIV Bypass Iso Vlv (CIV)	2165-S-542	K-9	3020	3	GL	AO	2	B	Act	O/C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1MS-231	MS Hdr "A" Drip Leg Drain Iso Vlv (CIV)	2165-S-542	E-8	3020	2	GL	AO	2	B	Act	O/C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1MS-266	MS Hdr "B" Drip Leg Drain Iso Vlv (CIV)	2165-S-542	I-8	3020	2	GL	AO	2	B	Act	O/C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1MS-301	MS Hdr "C" Drip Leg Drain Iso Vlv (CIV)	2165-S-542	L-8	3020	2	GL	AO	2	B	Act	O/C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1MS-E018	TDAFW Pump Turbine Rupture Disc	2165-S-542	N-3	3020	16	RD	SA	3	D	Act	C	O/C	n/a	SP	5YR	n/a
1NI-107	FILTER B/W NITROGEN SUPPLY VLV	2165-S-1329	I-5	2060	.75	GL	AO	2	B	Pass	C	C	AI	PIT	2YR	n/a
1NI-109	FILTER B/W NITROGEN SUPPLY VLV	2165-S-1329	G-5	2060	.75	GL	AO	2	B	Pass	C	C	AI	PIT	2YR	n/a
1PM-87	FILTER B/W PRIMARY WTR SUPPLY VLV	2165-S-1329	J-6	2110	.75	GL	MO	2	B	Pass	C	C	AI	PIT	2YR	n/a
1PM-92	FILTER B/W PRIMARY WTR SUPPLY VLV	2165-S-1329	H-5	2110	.75	GL	MO	2	B	Pass	C	C	AI	PIT	2YR	n/a
1RC-113	PRZ PORV "1RC-114" Block Vlv	2165-S-1301	H-2	2050	3	GA	MO	1	B	Act	O	O/C	AI	PIT STC STO	2YR Q Q	n/a n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1RC-114	PRZ PORV PCV-444B	2165-S-1301	H-1	2050	3	GL	AO	1	B	Act	C	O/C	C	FSC	CS	DTJ-RC-1
														PIT	2YR	n/a
														STC	CS	DTJ-RC-1
														STO	CS	DTJ-RC-1
1RC-115	PRZ PORV "1RC-116" Block Vlv	2165-S-1301	F-2	2050	3	GA	MO	1	B	Act	O	C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1RC-116	PRZ PORV PCV-445B	2165-S-1301	F-1	2050	3	GL	AO	1	B	Act	C	C	C	FSC	CS	DTJ-RC-1
														PIT	2YR	n/a
														STC	CS	DTJ-RC-1
														STO	CS	DTJ-RC-1
1RC-117	PRZ PORV "1RC-118" Block Vlv	2165-S-1301	E-2	2050	3	GA	MO	1	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1RC-118	PRZ PORV PCV-445A	2165-S-1301	E-1	2050	3	GL	AO	1	B	Act	C	O/C	C	FSC	CS	DTJ-RC-1
														PIT	2YR	n/a
														STC	CS	DTJ-RC-1
														STO	CS	DTJ-RC-1
1RC-123	PRZ Safety Vlv	2165-S-1301	F-4	2050	6X6	RV	SA	1	C	Act	C	O/C	n/a	SP	5YR	n/a
1RC-125	PRZ Safety Vlv	2165-S-1301	F-6	2050	6X6	RV	SA	1	C	Act	C	O/C	n/a	SP	5YR	n/a
1RC-127	PRZ Safety Vlv	2165-S-1301	F-8	2050	6X6	RV	SA	1	C	Act	C	O/C	n/a	SP	5YR	n/a
1RC-141	N2 Supply to PRT Iso Vlv (CIV)	2165-S-1301	C-16	2050	1	DA	AO	2	A	Act	C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1RC-144	N2 Supply to PRT Iso Vlv (CIV)	2165-S-1301	C-17	2050	1	DA	AO	2	A	Act	C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1RC-161	RMW to PRT Iso Vlv (CIV)	2165-S-1301	D-17	2050	3	DA	AO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1RC-164	RMW to PRT Iso Vlv (CIV)	2165-S-1301	D-16	2050	3	CK	SA	2	A/C	Act	O/C	O/C	n/a	LJ	2YR	n/a
														SC	RO	DTJ-RC-3
														SO	Q	n/a
1RC-174	N2 Inlet Check Vlv to PORV N2/Air Accum. Tank 1A-SA	2165-S-1309	B-9	2050	1	CK	SA	3	A/C	Act	O/C	C	n/a	LK	2YR	n/a
														OV	RO	DTJ-RC-4
														SC	RO	DTJ-RC-4
1RC-176	N2 Inlet Check Vlv to PORV N2/Air Accum. Tank 1C-SB	2165-S-1309	A-9	2050	1	CK	SA	3	A/C	Act	O/C	C	n/a	LK	2YR	n/a
														OV	RO	DTJ-RC-4
														SC	RO	DTJ-RC-4
1RC-900	Reactor Vessel Head Vent Vlv	2165-S-1301	A-7	2050	1	GL	SO	2	B	Act	C	O/C	C	FSC	CS	DTJ-RC-2
														PIT	2YR	n/a
														STC	CS	DTJ-RC-2
														STO	CS	DTJ-RC-2
1RC-901	Reactor Vessel Head Vent Vlv	2165-S-1301	A-7	2050	1	GL	SO	2	B	Act	C	O/C	C	FSC	CS	DTJ-RC-2
														PIT	2YR	n/a
														STC	CS	DTJ-RC-2
														STO	CS	DTJ-RC-2
1RC-902	Pressurizer Steam Space Vent Vlv	2165-S-1301	C-7	2050	1	GL	SO	2	B	Act	C	O/C	C	FSC	CS	DTJ-RC-2
														PIT	2YR	n/a
														STC	CS	DTJ-RC-2
														STO	CS	DTJ-RC-2

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1RC-903	Pressurizer Steam Space Vent Vlv	2165-S-1301	B-7	2050	1	GL	SO	2	B	Act	C	O/C	C	FSC	CS	DTJ-RC-2
														PIT	2YR	n/a
														STC	CS	DTJ-RC-2
														STO	CS	DTJ-RC-2
1RC-904	Vent Path to the Containment Atmosphere	2165-S-1301	C-5	2050	1	GL	SO	2	B	Act	C	O/C	C	FSC	CS	DTJ-RC-2
														PIT	2YR	n/a
														STC	CS	DTJ-RC-2
														STO	CS	DTJ-RC-2
1RC-905	Vent Path to the PRT	2165-S-1301	A-8	2050	1	GL	SO	2	B	Act	C	O/C	C	FSC	CS	DTJ-RC-2
														PIT	2YR	n/a
														STC	CS	DTJ-RC-2
														STO	CS	DTJ-RC-2
1RC-1003	PORV N2/Air Accum. Tank 1A-SA Relief Vlv	2165-S-1309	B-9	2050	1X2	RV	SA	3	A/C	Act	C	O/C	n/a	LK	2YR	n/a
														SP	10YR	n/a
1RC-1004	PORV N2/Air Accum. Tank 1C-SB Relief Vlv	2165-S-1309	A-9	2050	1X2	RV	SA	3	A/C	Act	C	O/C	n/a	LK	2YR	n/a
														SP	10YR	n/a
1RH-1	RCS Loop 1-HL to RHR Pump A-SA Iso Vlv (PIV)	2165-S-1324	L-3	2085	12	GA	MO	1	Aug	Act	C	O/C	AI	LK	RO	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-RH-1
														STO	CS	DTJ-RH-1
1RH-2	RCS Loop 1-HL to RHR Pump A-SA Iso Vlv (CIV) (PIV)	2165-S-1324	L-4	2085	12	GA	MO	1	A	Act	C	O/C	AI	LK	RO	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-RH-1
														STO	CS	DTJ-RH-1
1RH-7	RHR Pump 1A-SA Suction Relief Vlv (CIV)	2165-S-1324	K-6	2085	3	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1RH-16	RHR Pump "A" to PASS Iso Vlv	2165-S-1324	L-14	2085	0.75	GL	SO	2	B	Pass	C	C	C	PIT	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1RH-20	RHR Htx "A" Bypass Flow Control Vlv	2165-S-1324	D-11	2085	8	BF	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1RH-25	CSIP Suction Supply Iso Vlv From RHR Htx "A"	2165-S-1324	C-12	2085	8	GA	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STO	Q	n/a
1RH-30	RHR Htx "A" Outlet Flow Control Vlv	2165-S-1324	C-11	2085	10	BF	AO	2	B	Act	O/C	O	O	FSO	Q	n/a
														PIT	2YR	n/a
														STO	Q	n/a
1RH-31	RHR Pump "A" Min Flow Line Iso Vlv	2165-S-1324	G-7	2085	3	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1RH-34	RHR Header "A" Discharge Check Vlv	2165-S-1324	C-7	2085	10	CK	SA	2	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1RH-39	RCS Loop 3-HL to RHR Pump B-SB Iso Vlv (PIV)	2165-S-1324	I-3	2085	12	GA	MO	1	Aug	Act	C	O/C	AI	LK	RO	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-RH-1
														STO	CS	DTJ-RH-1
1RH-40	RCS Loop 3-HL to RHR Pump B-SB Iso Vlv (CIV)(PIV)	2165-S-1324	I-4	2085	12	GA	MO	1	A	Act	C	O/C	AI	LK	RO	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-RH-1
														STO	CS	DTJ-RH-1
1RH-45	RHR Pump 1B-SBA Suction Relief Vlv (CIV)	2165-S-1324	H-6	2085	3	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1RH-54	RHR Pump "B" to PASS Iso Vlv	2165-S-1324	H-14	2085	0.75	GL	SO	2	B	Pass	C	C	C	PIT	2YR	n/a
1RH-58	RHR Htx "B" Bypass Iso Vlv	2165-S-1324	G-13	2085	8	BF	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1RH-63	CSIP Suction Supply Iso Vlv From RHR Htx "B"	2165-S-1324	F-12	2085	8	GA	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STO	Q	n/a
1RH-66	RHR Htx "B" Outlet Flow Control Vlv	2165-S-1324	E-11	2085	10	BF	AO	2	B	Act	O/C	O	O	FSO	Q	n/a
														PIT	2YR	n/a
														STO	Q	n/a
1RH-69	RHR Pump "B" Min Flow Line Iso Vlv	2165-S-1324	G-8	2085	3	GA	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1RH-70	RHR Header "B" Discharge Check Vlv	2165-S-1324	F-8	2085	10	CK	SA	2	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1RH-120	RHR Train "B" Inlet Piping Relief Vlv	2165-S-1324	I-4	2085	0.75	RV	SA	1	C	Act	C	O/C	n/a	SP	10YR	n/a
1RH-121	RHR Train "A" Inlet Piping Relief Vlv	2165-S-1324	L-4	2085	0.75	RV	SA	1	C	Act	C	O/C	n/a	SP	10YR	n/a
1SA-80	Service Air to Containment (CIV)	2165-S-800	C-2	6140	2	GL	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1SA-82	Service Air to Containment (CIV)	2165-S-800	C-3	6140	2	CK	SA	2	A/C	Act	C	C	n/a	LJ	2YR	n/a
														OV	RO	DTJ-SA-1
														SC	RO	DTJ-SA-1
1SC-20	Screen Wash to Main Reservoir Bay 8 Supply Iso Vlv.	2165-S-808	D-16	4115	3	GL	EH	3	B	Act	O/C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SC-30	Screen Wash to Main Reservoir Bay 6 Supply Iso Vlv.	2165-S-808	D-13	4115	3	GL	EH	3	B	Act	O/C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SC-37	Screen Wash to Auxiliary Reservoir Bay 6 Supply Iso Vlv.	2165-S-808	B-13	4115	3	GL	EH	3	B	Act	O/C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SC-40	Screen Wash to Auxiliary Reservoir Bay 8 Supply Iso Vlv.	2165-S-808	B-16	4115	3	GL	EH	3	B	Act	O/C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SF-3	FPC Pump "1 & 4A-SA" Discharge Check Vlv	2165-S-805	G-9	7110	12	CK	SA	3	C	Act	O/C	O	n/a	CV	Q	n/a
														SO	Q	n/a
1SF-13	FPC Pump "1 & 4B-SB" Discharge Check Vlv	2165-S-805	J-9	7110	12	CK	SA	3	C	Act	O/C	O	n/a	CV	Q	n/a
														SO	Q	n/a
1SF-45	Fuel Pool Hx "1 & 4A-SA" Relief Vlv	2165-S-805	H-3	7110	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SF-66	Fuel Pool Hx "1 & 4B-SB" Relief Vlv	2165-S-805	K-3	7110	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SF-118	FPCS Purif Pump Suction from Refueling Cavity (CIV)	2165-S-561	E-2	7115	4	DA	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1SF-119	FPCS Purif Pump Suction from Refueling Cavity (CIV)	2165-S-561	E-3	7115	4	DA	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1SF-144	FPCS Purif Pump Return to Refueling Cavity (CIV)	2165-S-561	A-3	7115	4	DA	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a
1SF-145	FPCS Purif Pump Return to Refueling Cavity (CIV)	2165-S-561	A-2	7115	4	DA	MAN	2	A	Pass	LC	C	n/a	LJ	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SI-3	Boron Injection Tank (BIT) Outlet Iso Vlv (CIV)	2165-S-1308	I-2	2080	3	GA	MO	2	B	Act	C	O/C	AI	PIT STC STO	2YR RO RO	DTJ-SI-3 DTJ-SI-3 DTJ-SI-3
1SI-4	Boron Injection Tank (BIT) Outlet Iso Vlv (CIV)	2165-S-1308	I-3	2080	3	GA	MO	2	B	Act	C	O/C	AI	PIT STC STO	2YR RO RO	DTJ-SI-3 DTJ-SI-3 DTJ-SI-3
1SI-8	RCS Cold Leg Loop 1 Inj Ck Vlv (CIV)	2165-S-1308	E-3	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-9	RCS Cold Leg Loop 2 Inj Ck Vlv (CIV)	2165-S-1308	E-4	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-10	RCS Cold Leg Loop 3 Inj Ck Vlv (CIV)	2165-S-1308	E-5	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-52	Alternate High Head SI to Cold Leg (CIV)	2165-S-1308	H-10	2080	3	GA	MO	2	B	Act	C	O/C	AI	PIT STC STO	2YR RO RO	n/a DTJ-SI-3 DTJ-SI-3
1SI-72	RCS Cold Leg Loop 1 Alt. Inj Ck Vlv (CIV)	2165-S-1308	E-6	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-73	RCS Cold Leg Loop 2 Alt. Inj Ck Vlv (CIV)	2165-S-1308	E-7	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-74	RCS Cold Leg Loop 3 Alt. Inj Ck Vlv (CIV)	2165-S-1308	E-8	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-81	RCS Cold Leg Loop 1 Injection Check	2165-S-1308	B-3	2080	6	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-82	RCS Cold Leg Loop 2 Injection Check	2165-S-1308	C-3	2080	6	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-83	RCS Cold Leg Loop 3 Injection Check	2165-S-1308	D-3	2080	6	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SI-86	High Head SI to Hot Leg (CIV)	2165-S-1308	H-12	2080	3	GA	MO	2	B	Act	C	O/C	AI	PIT STC STO	2YR RO RO	n/a DTJ-SI-3 DTJ-SI-3
1SI-104	RCS Hot Leg Loop 1 Inj Ck Vlv (CIV)	2165-S-1308	E-12	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-105	RCS Hot Leg Loop 2 Inj Ck Vlv (CIV)	2165-S-1308	E-13	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-106	RCS Hot Leg Loop 3 Inj Ck Vlv (CIV)	2165-S-1308	E-14	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-107	Alternate High Head SI to Hot Leg (CIV)	2165-S-1308	H-15	2080	3	GA	MO	2	B	Act	C	O/C	AI	PIT STC STO	2YR RO RO	n/a DTJ-SI-3 DTJ-SI-3
1SI-127	RCS Hot Leg Loop 1 Inj Ck Vlv (CIV)	2165-S-1308	E-15	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-128	RCS Hot Leg Loop 2 Inj Ck Vlv (CIV)	2165-S-1308	E-16	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-129	RCS Hot Leg Loop 3 Injn Ck Vlv (CIV)	2165-S-1308	E-17	2080	2	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-134	SI Low Head to RCS Hot Leg Loop 1 (CIV) (PIV)	2165-S-1308	B-11	2080	6	CK	SA	1	A/C	Act	C	O/C	n/a	CM LK	CM RO	n/a n/a
1SI-135	SI Low Head to RCS Hot Leg Loop 2 (CIV) (PIV)	2165-S-1308	C-11	2080	6	CK	SA	1	A/C	Act	C	O/C	n/a	CM LK	CM RO	n/a n/a
1SI-136	RCS Hot Leg Loop 1 Inj Ck Vlv	2165-S-1308	B-17	2080	6	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-137	RCS Hot Leg Loop 2 Inj Ck Vlv	2165-S-1308	C-17	2080	6	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a
1SI-138	RCS Hot Leg Loop 3 Inj Ck Vlv	2165-S-1308	D-17	2080	6	CK	SA	1	C	Act	C	O/C	n/a	CM	CM	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SI-179	Accumulator Fill from RWST (CIV)	2165-S-1309	J-17	2090	1	GL	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SI-182	Accumulator Fill from RWST (CIV)	2165-S-1309	J-16	2090	1	CK	SA	2	A/C	Act	O/C	O/C	n/a	LJ	2YR	n/a
														SC	RO	DTJ-SI-4
														SO	CS	DTJ-SI-2
1SI-186	Accumulator "A" Fill from RWST	2165-S-1309	D-13	2090	1	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-187	Accumulator "B" Fill from RWST	2165-S-1309	G-13	2090	1	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-188	Accumulator "C" Fill from RWST	2165-S-1309	K-13	2090	1	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-225	SI Accumulator "A" Pressure Relief Vlv	2165-S-1309	B-12	2090	1	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SI-226	SI Accumulator "B" Pressure Relief Vlv	2165-S-1309	E-12	2090	1	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SI-227	SI Accumulator "C" Pressure Relief Vlv	2165-S-1309	I-12	2090	1	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SI-246	SI Accumulator "A" Discharge Iso Vlv	2165-S-1309	D-10	2090	12	GA	MO	2	B	Pass	O	O	AI	PIT	2YR	n/a
1SI-247	SI Accumulator "B" Discharge Iso Vlv	2165-S-1309	G-10	2090	12	GA	MO	2	B	Pass	O	O	AI	PIT	2YR	n/a
1SI-248	SI Accumulator "C" Discharge Iso Vlv	2165-S-1309	K-10	2090	12	GA	MO	2	B	Pass	O	O	AI	PIT	2YR	n/a
1SI-249	SI Accumulator "A" Discharge Check Vlv (PIV)	2165-S-1309	D-6	2090	12	CK	SA	1	A/C	Act	C	O/C	n/a	CM	CM	n/a
														LK	RO	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SI-250	SI Accumulator "A" Discharge Check Vlv (PIV)	2165-S-1309	D-3	2090	12	CK	SA	1	A/C	Act	C	O/C	n/a	CM LK	CM RO	n/a n/a
1SI-251	SI Accumulator "B" Discharge Check Vlv (PIV)	2165-S-1309	G-6	2090	12	CK	SA	1	A/C	Act	C	O/C	n/a	CM LK	CM RO	n/a n/a
1SI-252	SI Accumulator "B" Discharge Check Vlv (PIV)	2165-S-1309	G-3	2090	12	CK	SA	1	A/C	Act	C	O/C	n/a	CM LK	CM RO	n/a n/a
1SI-253	SI Accumulator "C" Discharge Check Vlv (PIV)	2165-S-1309	J-6	2090	12	CK	SA	1	A/C	Act	C	O/C	n/a	CM LK	CM RO	n/a n/a
1SI-254	SI Accumulator "C" Discharge Check Vlv (PIV)	2165-S-1309	J-3	2090	12	CK	SA	1	A/C	Act	C	O/C	n/a	CM LK	CM RO	n/a n/a
1SI-255	Accumulator "A" Check Vlv Test Line Iso Vlv	2165-S-1309	E-7	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-256	Accumulator "A" Check Vlv Test Line Iso Vlv	2165-S-1309	E-6	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-257	Accumulator "B" Check Vlv Test Line Iso Vlv	2165-S-1309	H-7	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-258	Accumulator "B" Check Vlv Test Line Iso Vlv	2165-S-1309	H-6	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-259	Accumulator "C" Check Vlv Test Line Iso Vlv	2165-S-1309	K-7	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-260	Accumulator "C" Check Vlv Test Line Iso Vlv	2165-S-1309	K-6	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SI-263	Accumulator Check Vlv Test Return to RWST (CIV)	2165-S-1309	D-5	2090	0.75	GL	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SI-264	Accumulator Check Vlv Test Return to RWST (CIV)	2165-S-1309	D-4	2090	0.75	GL	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SI-287	Accumulators & Prz PORV N2 Supply Iso Vlv (CIV)	2165-S-1309	B-18	2090	1	GL	AO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SI-290	Accumulators & Prz PORV N2 Supply Check Vlv (CIV)	2165-S-1309	B-17	2090	1	CK	SA	2	A/C	Act	O/C	C	n/a	LJ	2YR	n/a
														OV	RO	DTJ-SI-4
														SC	RO	DTJ-SI-4
1SI-295	Accumulator "A" N2 Supply and Vent	2165-S-1309	C-11	2090	1	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-296	Accumulator "B" N2 Supply and Vent	2165-S-1309	E-11	2090	1	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-297	Accumulator "C" N2 Supply and Vent	2165-S-1309	I-11	2090	1	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-300	Containment Sump to RHR Pump "A" Iso Vlv (CIV)	2165-S-1310	N-6	2085	14	GA	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SI-301	Containment Sump to RHR Pump "B" Iso Vlv (CIV)	2165-S-1310	M-6	2085	14	GA	MO	2	B	Act	C	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SI-310	Containment Sump to RHR Pump "A" Iso Vlv	2165-S-1310	N-7	2085	14	GA	MO	2	B	Act	C	O/C	AI	PIT STO	2YR Q	n/a n/a
1SI-311	Containment Sump to RHR Pump "B" Iso Vlv	2165-S-1310	M-7	2085	14	GA	MO	2	B	Act	C	O/C	AI	PIT STO	2YR Q	n/a n/a
1SI-320	RHR Pump "A" Suction Supply Check Vlv. from RWST	2165-S-1310	N-12	2085	14	CK	SA	2	C	Act	C	O/C	n/a	SC SO	RO Q	DTJ-SI-5 n/a
1SI-321	RHR Pump "B" Suction Supply Check Vlv. from RWST	2165-S-1310	M-12	2085	14	CK	SA	2	C	Act	C	O/C	n/a	SC SO	RO Q	DTJ-SI-5 n/a
1SI-322	RHR Pump "A" Suction Supply Iso Vlv. from RWST	2165-S-1310	N-10	2085	14	GA	MO	2	B	Act	O	O/C	AI	PIT STC STO	2YR Q Q	n/a n/a n/a
1SI-323	RHR Pump "B" Suction Supply Iso Vlv. from RWST	2165-S-1310	M-10	2085	14	GA	MO	2	B	Act	O	O/C	AI	PIT STC STO	2YR Q Q	n/a n/a n/a
1SI-326	Low Head SI Train "A" to Hot Leg Crossover	2165-S-1310	D-6	2085	10	GA	MO	2	B	Act	O	O/C	AI	PIT STC STO	2YR Q Q	n/a n/a n/a
1SI-327	Low Head SI Train "A" to Hot Leg Crossover	2165-S-1310	E-6	2085	10	GA	MO	2	B	Act	O	O/C	AI	PIT STC STO	2YR Q Q	n/a n/a n/a
1SI-328	LHSI Header "A" Relief Vlv	2165-S-1310	B-4	2085	0.75	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SI-329	LHSI Header "B" Relief Vlv	2165-S-1310	E-4	2085	0.75	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SI-330	RHR to Hot Leg Relief Vlv	2165-S-1310	B-5	2085	0.75	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SI-340	LHSI Train "A" to Cold Legs (CIV)	2165-S-1310	C-4	2085	10	GA	MO	2	A	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SI-341	LHSI Train "B" to Cold Legs (CIV)	2165-S-1310	E-4	2085	10	GA	MO	2	A	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SI-346	LHSI Train "A" to Cold Legs Inj. Check (PIV/CIV)	2165-S-1310	C-3	2085	10	CK	SA	2	A/C	Act	C	O/C	n/a	CM	CM	n/a
														LK	RO	n/a
1SI-347	LHSI Train "B" to Cold Legs Inj. Check (PIV/CIV)	2165-S-1310	E-3	2085	10	CK	SA	2	A/C	Act	C	O/C	n/a	CM	CM	n/a
														LK	RO	n/a
														SO	CS	n/a
1SI-356	LHSI to RCS Cold Leg Loop 1 (PIV)	2165-S-1310	C-2	2085	6	CK	SA	1	A/C	Act	C	O/C	n/a	CM	CM	n/a
														LK	RO	n/a
1SI-357	LHSI to RCS Cold Leg Loop 2 (PIV)	2165-S-1310	E-2	2085	6	CK	SA	1	A/C	Act	C	O/C	n/a	CM	CM	n/a
														LK	RO	n/a
1SI-358	LHSI to RCS Cold Leg Loop 3 (PIV)	2165-S-1310	E-2	2085	6	CK	SA	1	A/C	Act	C	O/C	n/a	CM	CM	n/a
														LK	RO	n/a
1SI-359	LHSI Trains "A" and "B" to RCS Hot Legs Loops 1 and 2 (CIV) (PIV)	2165-S-1310	B-4	2085	10	GA	MO	2	A	Act	C	O/C	AI	LK	RO	n/a
														PIT	2YR	n/a
														STC	CS	DTJ-SI-1
														STO	CS	DTJ-SI-1
1SI-379	Hot Leg Check Vlv Test Line Iso Vlv	2165-S-1308	B-11	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-380	Hot Leg Check Vlv Test Line Iso Vlv	2165-S-1308	A-17	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-381	Cold Leg Check Vlv Test Line Iso Vlv	2165-S-1308	A-7	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SI-382	Cold Leg Check Vlv Test Line Iso Vlv	2165-S-1308	B-8	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-383	Cold Leg Check Vlv Test Line Iso Vlv	2165-S-1308	C-8	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-384	Accumulator "A" Cold Leg Check Vlv Test Line Iso Vlv	2165-S-1309	E-6	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-385	Accumulator "B" Cold Leg Check Vlv Test Line Iso Vlv	2165-S-1309	I-6	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-386	Accumulator "C" Cold Leg Check Vlv Test Line Iso Vlv	2165-S-1309	L-6	2090	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-387	Hot Leg Check Vlv Test Line Iso Vlv (CIV)	2165-S-1310	A-2	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-388	Cold Leg Check Vlv Test Line Iso Vlv (CIV)	2165-S-1310	D-2	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-389	Cold Leg Check Vlv Test Line Iso Vlv	2165-S-1310	B-2	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-390	Cold Leg Check Vlv Test Line Iso Vlv	2165-S-1310	C-2	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-391	Cold Leg Check Vlv Test Line Iso Vlv (CIV)	2165-S-1310	F-2	2085	0.75	GL	AO	2	B	Pass	C	C	C	PIT	2YR	n/a
1SI-444	Instr. Air Inlet Check Vlv to PORV N2/Air Accum. Tank 1A-SA	2165-S-1309	B-6	2050	1	CK	SA	3	A/C	Act	O/C	C	n/a	LK OV SC	2YR RO RO	n/a DTJ-RC-4 DTJ-RC-4
1SI-446	Instr. Air Inlet Check Vlv to PORV N2/Air Accum. Tank 1C-SB	2165-S-1309	A-6	2050	1	CK	SA	3	A/C	Act	O/C	C	n/a	LK OV SC	2YR RO RO	n/a DTJ-RC-4 DTJ-RC-4

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SP-12	Hydrogen Analyzer Cabinet "1A" Supply Iso Vlv (CIV)	2165-S-605	C-12	2075	1	GL	SO	2	A	Act	O	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-16	REM-3502A Inlet from Containment Atmosphere Iso Vlv (CIV)	2165-S-605	F-12	7005	1	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-40	Pzr Liquid Space Sample Iso Vlv (CIV)	2165-S-552	C-4	2115	0.375	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-41	Pzr Liquid Space Sample Iso Vlv (CIV)	2165-S-552	C-5	2115	0.375	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-42	Hydrogen Analyzer Cabinet "1B" Supply Iso Vlv (CIV)	2165-S-605	G-12	2075	1	GL	SO	2	A	Act	C	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-59	Pzr Steam Space Sample Iso Vlv (CIV)	2165-S-552	D-4	2115	0.375	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SP-60	Pzr Steam Space Sample Iso Vlv (CIV)	2165-S-552	D-5	2115	0.375	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-62	Hydrogen Analyzer Cabinet "1B" Return Iso Vlv (CIV)	2165-S-605	I-12	2075	1	GL	SO	2	A	Act	C	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-78	SIS Accumulator "A" Sample Iso Vlv (CIV)	2165-S-552	D-3	2115	0.375	GL	SO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-81	SIS Accumulator "B" Sample Iso Vlv (CIV)	2165-S-552	E-3	2115	0.375	GL	SO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-84	SIS Accumulator "C" Sample Iso Vlv (CIV)	2165-S-552	F-3	2115	0.375	GL	SO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-85	SIS Accumulator Sample Iso Vlv (CIV)	2165-S-552	E-4	2115	0.375	GL	SO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-200	PASS Liquid Return Hdr Iso Vlv (CIV)	2165-S-552	N-6	2117	1	GL	SO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SP-201	PASS Liquid Return Hdr Iso Vlv (CIV)	2165-S-552	N-5	2117	1	GL	SO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-208	PASS Gas Return Hdr Iso Vlv (CIV)	2165-S-552	N-6	2117	0.75	GL	SO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-209	PASS Gas Return Hdr Iso Vlv (CIV)	2165-S-552	N-5	2117	0.75	GL	SO	2	A	Act	O/C	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-214	SG "A" Shell Outlet to Sample Panel Iso Vlv	2165-S-551	C-5	3100	0.75	GA	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-216	SG "A" Tube Outlet to Sample Panel Iso Vlv	2165-S-551	D-5	3100	0.75	GA	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-217	SG "A" to Sample Panel Iso Vlv (CIV)	2165-S-551	C-6	3100	0.75	GL	SO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-219	SG "B" Shell Outlet to Sample Panel Iso Vlv	2165-S-551	H-5	3100	0.75	GA	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-221	SG "B" Tube Outlet to Sample Panel Iso Vlv	2165-S-551	I-5	3100	0.75	GA	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SP-222	SG "B" to Sample Panel Iso Vlv (CIV)	2165-S-551	H-6	3100	0.75	GL	SO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-224	SG "C" Shell Outlet to Sample Panel Iso Vlv	2165-S-551	L-5	3100	0.75	GA	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-226	SG "C" Tube Outlet to Sample Panel Iso Vlv	2165-S-551	M-5	3100	0.75	GA	AO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-227	SG "C" to Sample Panel Iso Vlv (CIV)	2165-S-551	M-6	3100	0.75	GL	SO	2	B	Act	O/C	C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-901	H2 Analyzer Cabinet "1A" Supply from Dome Iso Vlv	2165-S-605	A-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-902	H2 Analyzer Cabinet "1A" Supply from RCP & SG "C" Iso Vlv	2165-S-605	C-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-903	H2 Analyzer Cabinet "1A" Supply from RCP & SG "B" Iso Vlv	2165-S-605	C-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-904	H2 Analyzer Cabinet "1A" Supply from RCP & SG "A" Iso Vlv	2165-S-605	B-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SP-905	H2 Analyzer Cabinet "1A" Supply from Below Flux Mapping Rm Floor Iso Vlv	2165-S-605	D-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-906	H2 Analyzer Cabinet "1A" Supply from Pressurizer Iso Vlv	2165-S-605	D-9	2075	0.375	GL	SO	2	B	Act	O	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-907	H2 Analyzer Cabinet "1B" Supply from Dome Iso Vlv	2165-S-605	F-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-908	H2 Analyzer Cabinet "1B" Supply from RCP & SG "C" Iso Vlv	2165-S-605	G-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-909	H2 Analyzer Cabinet "1B" Supply from RCP & SG "B" Iso Vlv	2165-S-605	F-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-910	H2 Analyzer Cabinet "1B" Supply from RCP & SG "A" Iso Vlv	2165-S-605	F-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-911	H2 Analyzer Cabinet "1B" Supply from Below Flux Mapping Rm Floor Iso Vlv	2165-S-605	G-9	2075	0.375	GL	SO	2	B	Act	C	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SP-912	H2 Analyzer Cabinet "1B" Supply from Pressurizer Iso Vlv	2165-S-605	G-9	2075	0.375	GL	SO	2	B	Act	O	O/C	C	FSC	Q	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-915	Hydrogen Analyzer Cabinet "1A" Supply Iso Vlv (CIV)	2165-S-605	C-12	2075	1	GL	SO	2	A	Act	O	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-916	REM-3502A Inlet from Containment Atmosphere Iso Vlv (CIV)	2165-S-605	F-12	7005	1	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-917	Hydrogen Analyzer Cabinet "1A" Return Iso Vlv (CIV)	2165-S-605	D-12	2075	1	GL	SO	2	A	Act	O	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-918	REM-3502A Sample Return to Containment Atmosphere Iso Vlv (CIV)	2165-S-605	F-12	7005	1	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-919	Hydrogen Analyzer Cabinet "1B" Supply Iso Vlv (CIV)	2165-S-605	G-12	2075	1	GL	SO	2	A	Act	C	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SP-939	REM-3502A Sample Return to Containment Atmosphere Iso Vlv (CIV)	2165-S-605	F-12	7005	1	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-941	Hydrogen Analyzer Cabinet "1A" Return Iso Vlv (CIV)	2165-S-605	D-12	2075	1	GL	SO	2	A	Act	O	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-943	Hydrogen Analyzer Cabinet "1B" Return Iso Vlv (CIV)	2165-S-605	I-12	2075	1	GL	SO	2	A	Act	C	O/C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
														STO	Q	n/a
1SP-948	RCS Sample Line Iso Vlv (CIV)	2165-S-552	B-4	2115	0.375	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SP-949	RCS Sample Line Iso Vlv (CIV)	2165-S-552	B-5	2115	0.375	GL	SO	2	A	Act	O	C	C	FSC	Q	n/a
														LJ	2YR	n/a
														PIT	2YR	n/a
														STC	Q	n/a
1SW-1	Aux. Reservoir Supply to ESW Header "A" Iso Vlv	2165-S-547	B-5	4065	30	BF	MAN	3	B	Act	LO	O/C	n/a	MAN	2YR	n/a
														PIT	2YR	n/a
1SW-2	Aux. Reservoir Supply to ESW Header "B" Iso Vlv	2165-S-547	B-4	4065	30	BF	MAN	3	B	Act	LO	O/C	n/a	MAN	2YR	n/a
														PIT	2YR	n/a
1SW-3	Main Reservoir Supply to ESW Header "A" Iso Vlv	2165-S-547	B-1	4065	30	BF	MAN	3	B	Act	LC	O/C	n/a	MAN	2YR	n/a
														PIT	2YR	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SW-4	Main Reservoir Supply to ESW Header "B" Iso Vlv	2165-S-547	B-3	4065	30	BF	MAN	3	B	Act	LC	O/C	n/a	MAN	2YR	n/a
														PIT	2YR	n/a
1SW-9	ESW Pump "A" Discharge Check Vlv	2165-S-547	D-2	4065	30	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1SW-10	ESW Pump "B" Discharge Check Vlv	2165-S-547	D-3	4065	30	CK	SA	3	C	Act	C	O/C	n/a	SC	Q	n/a
														SO	Q	n/a
1SW-20	ESW Strainer "1A" Backwash Iso Vlv	2165-S-547	E-1	4065	3	BA	AO	3	B	Act	O/C	O	O	FSO	Q	n/a
														STO	Q	n/a
1SW-23	ESW Strainer "1B" Backwash Iso Vlv	2165-S-547	E-3	4065	3	BA	AO	3	B	Act	O/C	O	O	FSO	Q	n/a
														STO	Q	n/a
1SW-25	ESW Hdr "A" Strainer Outlet Iso Vlv	2165-S-547	F-2	4065	30	BF	MAN	3	B	Pass	O	O	n/a	PIT	2YR	n/a
1SW-26	ESW Hdr "B" Strainer Outlet Iso Vlv	2165-S-547	F-3	4065	30	BF	MAN	3	B	Pass	O	O	n/a	PIT	2YR	n/a
1SW-33	ESW Hdr. "A" Iso Vlv	2165-S-547	G-1	4065	30	BF	MAN	3	B	Pass	O	O	n/a	PIT	2YR	n/a
1SW-34	ESW Hdr. "B" Iso Vlv	2165-S-547	G-2	4065	30	BF	MAN	3	B	Pass	O	O	n/a	PIT	2YR	n/a
1SW-39	NSW Supply to ESW Header "A" Iso Vlv	2165-S-547	I-1	4065	30	BF	MO	3	B	Act	O/C	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1SW-40	NSW Supply to ESW Header "B" Iso Vlv	2165-S-547	I-2	4065	30	BF	MO	3	B	Act	O/C	C	AI	PIT	2YR	n/a
														STC	Q	n/a
1SW-60	ESW to CCW Htx "1A" Thermal Relief Vlv	2165-S-547	I-6	4065	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-86	SW Booster Pump "1A" Bypass Check Vlv	2165-S-547	F-6	4065	14	CK	SA	3	C	Act	O/C	C	n/a	OV	Q	n/a
														SC	Q	n/a
1SW-91	ESW to AH-2 Supply Iso Vlv (CIV)	2165-S-547	D-6	4065	8	BF	MO	2	B	Act	O	O/C	AI	PIT	2YR	n/a
														STC	Q	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SW-92	ESW to AH-3 Supply Iso Vlv (CIV)	2165-S-547	D-7	4065	8	BF	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1SW-95	ESW from AH-3 Return Relief Vlv (CIV)	2165-S-547	D-8	4065	1X1.25	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-96	ESW from AH-1 Return Relief Vlv (CIV)	2165-S-547	D-9	4065	1X1.25	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-97	ESW from AH-3 Return Iso Vlv (CIV)	2165-S-547	D-8	4065	8	BF	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1SW-98	ESW from AH-1 Return Iso Vlv (CIV)	2165-S-547	D-9	4065	8	BF	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1SW-107	ESW from AH-2 Return Relief Vlv (CIV)	2165-S-547	D-12	4065	1X1.25	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-108	ESW from AH-4 Return Relief Vlv (CIV)	2165-S-547	C-13	4065	1X1.25	RV	SA	2	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-109	ESW from AH-2 Return Iso Vlv (CIV)	2165-S-547	C-12	4065	8	BF	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1SW-110	ESW from AH-4 Return Iso Vlv (CIV)	2165-S-547	C-13	4065	8	BF	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1SW-116	Contmt Fan CLR AH-2&3 ESW Return Orifice Bypass Iso Vlv	2165-S-547	H-7	4065	14	BF	AO	2	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1SW-118	Contmt Fan CLR AH-1&4 ESW Return Orifice Bypass Iso Vlv	2165-S-547	G-13	4065	14	BF	AO	3	B	Act	O	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1SW-121	ESW Header "A" Supply to MDAFWP "1A-SA" Iso Vlv	2165-S-547	I-8	4065	8	BF	MO	3	B	Act	C	O	AI	PIT STO	2YR Q	n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SW-123	ESW Header "A" Supply to MDAFWP "1A-SA" Iso Vlv	2165-S-547	J-8	4065	8	BF	MO	3	B	Act	C	O	AI	PIT STO	2YR Q	n/a n/a
1SW-124	ESW Header "A" Supply to TDAFWP "1X-SAB" Iso Vlv	2165-S-547	I-8	4065	8	BF	MO	3	B	Act	C	O/C	AI	PIT STO	2YR Q	n/a n/a
1SW-126	ESW Header "A" Supply to TDAFWP "1X-SAB" Iso Vlv	2165-S-547	I-9	4065	8	BF	MO	3	B	Act	C	O/C	AI	PIT STO	2YR Q	n/a n/a
1SW-127	ESW Header "B" Supply to TDAFWP "1X-SAB" Iso Vlv	2165-S-547	I-9	4065	8	BF	MO	3	B	Act	C	O/C	AI	PIT STO	2YR Q	n/a n/a
1SW-129	ESW Header "B" Supply to TDAFWP "1X-SAB" Iso Vlv	2165-S-547	I-9	4065	8	BF	MO	3	B	Act	C	O/C	AI	PIT STO	2YR Q	n/a n/a
1SW-130	ESW Header "B" Supply to MDAFWP "1B-SB" Iso Vlv	2165-S-547	I-9	4065	8	BF	MO	3	B	Act	C	O	AI	PIT STO	2YR Q	n/a n/a
1SW-132	ESW Header "B" Supply to MDAFWP "1B-SB" Iso Vlv	2165-S-547	J-10	4065	8	BF	MO	3	B	Act	C	O	AI	PIT STO	2YR Q	n/a n/a
1SW-141	ESW HDR "A" to CSIP "1A" Oil CLR Check Vlv	2165-S-547	H-8	4065	1.5	CK	SA	3	C	Act	O	O	n/a	CM	CM	n/a
1SW-150	CSIP "1A" Oil CLR ESW Outlet Relief Vlv	2165-S-547	F-8	4065	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-152	ESW HDR "A" to CSIP "1C" Oil CLR Check Vlv	2165-S-547	H-10	4065	1.5	CK	SA	3	C	Act	O/C	O	n/a	CM	CM	n/a
1SW-154	ESW HDR "B" to CSIP "1C" Oil CLR Check Vlv	2165-S-547	H-10	4065	1.5	CK	SA	2	C	Act	O/C	O	n/a	CM	CM	n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SW-160	CSIP "1C" Oil CLR ESW Outlet Relief Vlv	2165-S-547	F-9	4065	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-163	ESW HDR "B" to CSIP "1B" Oil CLR Check Vlv	2165-S-547	H-10	4065	1.5	CK	SA	3	C	Act	O/C	O	n/a	CM	CM	n/a
1SW-171	CSIP "1B" Oil CLR ESW Outlet Relief Vlv	2165-S-547	F-10	4065	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-179	ESW Hdr "A" Supply to CVCS Chiller Condensers Iso Vlv	2165-S-547	I-15	4065	4	GA	AO	3	B	Act	C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1SW-180	ESW Hdr "B" Supply to CVCS Chiller Condensers Iso Vlv	2165-S-547	I-15	4065	4	GA	AO	3	B	Act	C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1SW-204	ESW Hdr "B" Return from CVCS Chiller Condensers Iso Vlv	2165-S-547	K-17	4065	4	GA	AO	3	B	Act	C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1SW-206	ESW Hdr "A" Return from CVCS Chiller Condensers Iso Vlv	2165-S-547	K-16	4065	4	GA	AO	3	B	Act	C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
1SW-220	SW Booster Pump "1B" Bypass Check Vlv	2165-S-547	F-14	4065	14	CK	SA	3	C	Act	O/C	C	n/a	OV	Q	n/a
1SW-225	ESW to AH-1 Supply Iso Vlv (CIV)	2165-S-547	D-14	4065	8	BF	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1SW-227	ESW to AH-4 Supply Iso Vlv (CIV)	2165-S-547	D-14	4065	8	BF	MO	2	B	Act	O	O/C	AI	PIT STC	2YR Q	n/a n/a
1SW-231	SW Supply to Containment Fan Coil Units Iso Vlv (CIV)	2165-S-547	D-15	4060	12	BF	AO	2	A	Act	O	C	C	FSC LJ PIT STC	Q 2YR 2YR Q	n/a n/a n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SW-233	SW Supply to Containment Fan Coil Units Check Vlv (CIV)	2165-S-547	C-15	4060	12	CK	SA	2	A/C	Act	O	O/C	n/a	LJ SC	2YR RO	n/a DTJ-SW-1
1SW-240	SW Return from Containment Fan Coil Units Iso Vlv (CIV)	2165-S-547	D-17	4060	12	BF	AO	2	A	Act	O	C	C	FSC LJ PIT STC	Q 2YR 2YR Q	n/a n/a n/a n/a
1SW-242	SW Return from Containment Fan Coil Units Iso Vlv (CIV)	2165-S-547	F-17	4060	12	BF	AO	2	A	Act	O	C	C	FSC LJ PIT STC	Q 2YR 2YR Q	n/a n/a n/a n/a
1SW-257	ESW to CCW Htx "1B" Thermal Relief Vlv	2165-S-547	I-13	4065	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-270	ESW Hdr "A" Discharge to Aux Reservoir Iso Vlv	2165-S-547	J-17	4065	30	BF	MO	3	B	Act	C	O	AI	PIT STO	2YR Q	n/a n/a
1SW-271	ESW Hdr "B" Discharge to Aux Reservoir Iso Vlv	2165-S-547	I-17	4065	30	BF	MO	3	B	Act	C	O	AI	PIT STO	2YR Q	n/a n/a
1SW-274	ESW Return Hdr "B" to NSW Disch. Hdr Iso Vlv	2165-S-547	L-16	4065	30	BF	MO	3	B	Act	O	C	AI	PIT STC	2YR Q	n/a n/a
1SW-275	ESW Return Hdr "A" to NSW Disch. Hdr Iso Vlv	2165-S-547	L-15	4065	30	BF	MO	3	B	Act	O	C	AI	PIT STC	2YR Q	n/a n/a
1SW-276	Common Disch to NSWS Hdr Iso Vlv	2165-S-547	M-15	4065	36	BF	MO	3	B	Act	O	C	AI	PIT STC	2YR Q	n/a n/a
1SW-1055	SW Outlet from WC-2 A-SA Condenser FCV	2165-S-998 S02	F-13	4085	10	BF	EH	3	B	Act	T	O	O	FSO PIT STO	Q 2YR Q	n/a n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SW-1078	Condenser Recircuation Pump Train "A" Discharge Relief	2165-S-998 S02	B-8	4085	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-1079	Condenser Recirculation Pump Train "A" Discharge Check Vlv	2165-S-998 S02	C-8	4085	8	CK	SA	3	C	Act	O/C	C	n/a	OV SC	Q Q	n/a n/a
1SW-1170	ESW/SW Makeup to Train "A" ESCW Check Vlv	2165-S-998 S02	G-5	4065	1	CK	SA	3	C	Act	C	O	n/a	CM	CM	n/a
1SW-1171	ESW/SW Makeup to Train "A" ESCW Iso Vlv	2165-S-998 S02	G-5	4085	1	GL	SO	3	B	Act	C	O/C	C	FSC PIT STC STO	Q 2YR Q Q	n/a n/a n/a n/a
1SW-1203	ESW/SW Makeup to Train "B" ESCW Check Vlv	2165-S-999 S02	G-5	4065	1	CK	SA	3	C	Act	C	O	n/a	CM	CM	n/a
1SW-1204	ESW/SW Makeup to Train "B" ESCW Iso Vlv	2165-S-999 S02	G-5	4085	1	GL	SO	3	B	Act	C	O/C	C	FSC PIT STC STO	Q 2YR Q Q	n/a n/a n/a n/a
1SW-1208	SW Outlet from WC-2 B-SB Condenser FCV	2165-S-999 S02	F-13	4085	10	BF	EH	3	B	Act	T	O	O	FSO PIT STO	Q 2YR Q	n/a n/a n/a
1SW-1231	Condenser Recircuation Pump Train "B" Discharge Relief	2165-S-999 S02	B-8	4085	0.75	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
1SW-1232	Condenser Recirculation Pump Train "B" Discharge Check Vlv	2165-S-999 S02	C-8	4085	8	CK	SA	3	C	Act	O/C	C	n/a	OV SC	Q Q	n/a n/a

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
1SW-1494	Containment Penetration M-91 Pressure Relief Valve (CIV)	2165-S-547	E-17	4060	.75	RV	SA	2	A/C	Act	C	O/C	n/a	LJ SP	2YR 10YR	n/a n/a
2SF-3	FPC Pump "2 & 3A-SA" Discharge Check Vlv	2165-S-807	G-10	7110	12	CK	SA	3	C	Act	O/C	O	n/a	CV SO	Q Q	n/a n/a
2SF-13	FPC Pump "2 & 3B-SB" Discharge Check Vlv	2165-S-807	K-10	7110	12	CK	SA	3	C	Act	O/C	O	n/a	CV SO	Q Q	n/a n/a
2SF-45	Fuel Pool Hx "2 & 3A-SA" Relief Vlv	2165-S-807	G-4	7110	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
2SF-66	Fuel Pool Hx "2 & 3B-SB" Relief Vlv	2165-S-807	K-4	7110	.75X1	RV	SA	3	C	Act	C	O/C	n/a	SP	10YR	n/a
3SC-41	Fire Service Screen Wash to Bay 8 Supply Iso Vlv.	2165-S-808	B-16	4115	3	GL	EH	3	B	Act	O/C	C	C	FSC PIT STC	Q 2YR Q	n/a n/a n/a
PDT-01CB-7680A1SA-CV	PDT-7680A1 Outside Containment Pressure (CIV)	2166-B-431 DP38	n/a	8060	.75	EFC	SA	2	C	Act	O	O/C	n/a	OV PIT SC	RO 2YR RO	DTJ-CB-1 n/a DTJ-CB-1
PDT-01CB-7680ASA-CV	PDT-7680A Outside Containment Pressure (CIV)	2166-B-431 DP38	n/a	8060	.75	EFC	SA	2	C	Act	O	O/C	n/a	OV PIT SC	RO 2YR RO	DTJ-CB-1 n/a DTJ-CB-1
PDT-01CB-7680B1SB-CV	PDT-7680B1 Outside Containment Pressure (CIV)	2166-B-431 DP38	n/a	8060	.75	EFC	SA	2	C	Act	O	O/C	n/a	OV PIT SC	RO 2YR RO	DTJ-CB-1 n/a DTJ-CB-1
PDT-01CB-7680BSB-CV	PDT-7680B Outside Containment Pressure (CIV)	2166-B-431 DP38	n/a	8060	.75	EFC	SA	2	C	Act	O	O/C	n/a	OV PIT SC	RO 2YR RO	DTJ-CB-1 n/a DTJ-CB-1

Attachment 6.1 - IST Valve Table

Valve Number	Nomenclature	Flow Diagram	Dwg Coord	System	Size (inch)	Body	Actuator	Safety Class	OM Cat	Act / Pass	Norm Pos	Safety Pos	Fail Pos	Test Type	Test Freq	Deferred Test Just.
PDT-01CP-7611S-CV	PDT-01CP-7611S Excess Flow Check Valve (CIV)	2166-B-431 DP39	n/a	8170	.75	EFC	SA	2	C	Act	O	O/C	n/a	OV	RO	DTJ-CB-1
														PIT	2YR	n/a
														SC	RO	DTJ-CB-1

Attachment 6.2 - Deferred Test Justifications

DTJ-AF-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1AF-16	AFWP "1A" Discharge Line Check Vlv	2165-S-544	L-6	3065	3	C	C	O/C
1AF-31	AFWP "1B" Discharge Line Check Vlv	2165-S-544	L-8	3065	3	C	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, full stroke open and closed exercising requires operating the motor driven auxiliary feedwater pumps and injecting relatively cold condensate water directly into the hot steam generators. The introduction of cold water into the hot steam generators during normal operation results in thermal shock to the feedwater piping and associated nozzles. Allowing excessive thermal transients on the feedwater piping and nozzles could lead to their premature failure due to thermally induced stress cracking. In addition, to test auxiliary feedwater during normal operation would require starting the auxiliary feedwater pumps which would have an adverse effect on steam generator water level control potentially causing a forced plant shutdown. Quarterly pump testing is done through the pump recirculation lines and the downstream flow control valves automatically closed so that the pumps are essentially isolated from each other and reverse flow closure of these pump discharge check valves cannot be verified until full auxiliary feedwater flow is injected into the Steam Generators.

Alternate Test

(SO) Stroke open at (CS) cold shutdown
(SC) Stroke close at (CS) cold shutdown
(ref. ISTC-3522(b))

Attachment 6.2 - Deferred Test Justifications

DTJ-AF-2

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1AF-19	AFWP "1A" Pressure Control Vlv	2165-S-544	K-6	3065	3	B	T	O
1AF-34	AFWP "1B" Pressure Control Vlv	2165-S-544	K-8	3065	3	B	T	O

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally throttled, the position of valves 1AF-19 and 1AF-34 is automatically modulated during pump operation to protect against run out conditions. Testing of these valves would require the use of control logic defeating methods, such as temporary jumpers. Defeating the control logic associated with these valves to facilitate testing would render them incapable of performing their modulating function should an auxiliary feedwater initiation signal occur during testing.

Alternate Test

(STO) Stroke time open at (CS) cold shutdown
(FSO) Fail-safe open at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-AF-3

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1AF-201	MD AFWP Discharge Line Check Vlv to SG "A"	2165-S-544	H-5	3065	3	C	C	O/C
1AF-202	MD AFWP Discharge Line Check Vlv to SG "B"	2165-S-544	I-8	3065	3	C	C	O/C
1AF-203	MD AFWP Discharge Line Check Vlv to SG "C"	2165-S-544	I-6	3065	3	C	C	O/C
1AF-49	AFWP "1A & 1B" Flow Control Vlv to SG "A"	2165-S-544	J-6	3065	3	B	O	O/C
1AF-50	AFWP "1A & 1B" Flow Control Vlv to SG "C"	2165-S-544	J-7	3065	3	B	O	O/C
1AF-51	AFWP "1A & 1B" Flow Control Vlv to SG "B"	2165-S-544	J-8	3065	3	B	O	O/C
1AF-54	MD AFWP Discharge Line Check Vlv to SG "A"	2165-S-544	G-6	3065	3	C	C	O
1AF-73	MD AFWP Discharge Line Check Vlv to SG "C"	2165-S-544	H-7	3065	3	C	C	O
1AF-92	MD AFWP Discharge Line Check Vlv to SG "B"	2165-S-544	I-8	3065	3	C	C	O

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.
Active Category A valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, full stroke open exercising requires operating the motor driven auxiliary feedwater pumps and injecting relatively cold condensate water directly into the hot steam generators. The introduction of cold water into the hot steam generators during normal operation results in thermal shock to the feedwater piping and associated nozzles. Allowing excessive thermal transients on the feedwater piping and nozzles could lead to their premature failure due to thermally induced stress cracking. In addition, to test auxiliary feedwater during normal operation would require starting the auxiliary feedwater pumps which would have an adverse effect on steam generator water level control potentially causing a forced plant shutdown. Part stroke exercising in the forward direction during normal operation would result in the same consequences as full flow exercising. (Valves 1AF-201, 1AF-202, and 1AF-203 are verified closed quarterly).

EST-411 also strokes valves 1AF-49, 1AF-50, and 1AF-51 in both directions in order to satisfy the Bases requirements of Technical Specification 4.7.1.2.1.c.1 in Mode 3. This additional test has been determined to be an IST Program related test per the OM Code which requires Mode 3 conditions. Reference NCR 93463.

Alternate Test

(SO) Stroke open at (CS) cold shutdown
(ref. ISTC-3522(b))
(STO) Stroke time open at (CS) cold shutdown
(STC) Stroke time closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-AF-4

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1AF-136	TD AFWP Discharge Line Check Vlv to SG "A"	2165-S-544	G-6	3065	3	C	C	O
1AF-142	TD AFWP Discharge Line Check Vlv to SG "B"	2165-S-544	H-9	3065	3	C	C	O
1AF-148	TD AFWP Discharge Line Check Vlv to SG "C"	2165-S-544	G-8	3065	3	C	C	O
1AF-204	TD AFWP Discharge Line Check Vlv to SG "A"	2165-S-544	H-7	3065	3	C	C	O/C
1AF-205	TD AFWP Discharge Line Check Vlv to SG "B"	2165-S-544	H-10	3065	3	C	C	O/C
1AF-206	TD AFWP Discharge Line Check Vlv to SG "C"	2165-S-544	H-11	3065	3	C	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, full stroke exercising open requires operating the turbine driven auxiliary feedwater pump and injecting relatively cold condensate water directly into the hot steam generators. The introduction of cold water into the hot steam generators during normal operation results in thermal shock to the feedwater piping and associated nozzles. Allowing excessive thermal transients on the feedwater piping and nozzles could lead to their premature failure due to thermally induced stress cracking. In addition, to test auxiliary feedwater during normal operation would require starting the auxiliary feedwater pumps which would have an adverse effect on steam generator water level control potentially causing a forced plant shutdown.

Part stroke exercising in the forward direction during normal operation would result in the same consequences as full flow exercising. The only source of steam to the steam driven turbine is from the main steam system. To operate the turbine requires that the steam generators be producing sufficient steam to drive the turbine. The control of steam generator water level when producing steam is much more critical than during the refilling process when the motor driven pumps are tested. To perform flow testing during steam production would have a significant impact on steam generator water level control on all three steam generators possibly resulting in a reactor trip. Additionally, full flow testing should be performed at a point when sufficient steam pressure has been established to minimize a delay in plant restart. (Valves 1AF-204, 205, and 206 are verified closed quarterly).

Alternate Test

(SO) Stroke open at (CS) cold shutdown
(ref. ISTC-3522(b))

Attachment 6.2 - Deferred Test Justifications

DTJ-CB-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
PDT-01CB-	PDT-7680A1 Outside Containment Pressure (CIV)	2166-B-431 D	n/a	8060	2	C	O	O/C
PDT-01CB-	PDT-7680A Outside Containment Pressure (CIV)	2166-B-431 D	n/a	8060	2	C	O	O/C
PDT-01CB-	PDT-7680B1 Outside Containment Pressure (CIV)	2166-B-431 D	n/a	8060	2	C	O	O/C
PDT-01CB-	PDT-7680B Outside Containment Pressure (CIV)	2166-B-431 D	n/a	8060	2	C	O	O/C
PDT-01CP-	PDT-01CP-7611S Excess Flow Check Valve (CIV)	2166-B-431 D	n/a	8170	2	C	O	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

These excess flow check valves are located oustide containment in instrument sensing lines. These valves are normally open by spring force and close with high flow from a downstream instrument line break. The upstream side of these check valves is open to containment atmosphere at negative pressure and does not have test connections. Closure verification of these valves requires installation of test equipment consisting of a pressure regulator, flowmeter, pressure gauge, air filter, additional tubing/fittings, and an instrument air source. Actual testing involves disconnection of the low side of the assocated pressure transmitter and capping it off. Upstream of this section of tubing, a flowmeter is installed at the calibration valve. This valve is downstream of the typical check to be tested. Upstream of the check valve, the regulator, gauge, and instrument air source is connected. Air is flowed against the check valve, pressure measured, and check valve is verified shut by the flowmeter.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

Open verification testing of these check valves will be performed at the same frequency as the stroke close test frequency as allowed by ISTC-3522(a).

Alternate Test

(SC) Stroke close at (RO) refueling outage
(OV) Open verification at (RO) refueling outage
(ref. ISTC-3522(a) and (2))

Attachment 6.2 - Deferred Test Justifications

DTJ-CB-2

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CB-3	Train "A" Containment Vacuum Relief Vlv (CIV)	2165-S-1017	G-16	8060	2	A/C	C	O/C
1CB-7	Train "B" Containment Vacuum Relief Vlv (CIV)	2165-S-1017	H-16	8060	2	A/C	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

These vacuum breaker check valves are self-actuated and are located inside the primary reactor containment. Due to their physical location, there is no practical means to verify the open and close capability on a 3 month frequency as required by ISTC-3510.

These valves are 24" swing type check valves with no pressure or position sensing accessories. The valve disk is normally held in the closed position by the force of two springs mounted on the valve pivot shaft. At a predetermined set pressure, an equilibrium exists where the seal area times set pressure are equal to and balanced against the spring when the valve is closed. When a differential across the valve causes a torque about the shaft greater than that produced by these forces, the valve will open as long as this force remains greater than the closing force produced by the two springs. When the flow and differential pressure drops to the extent that they produce less torque than the two springs, the valve will close.

The only practical method to verify the open and close capability is to manually exercise the valve disk through a complete cycle. The Containment Vacuum Relief System is not provided with the means to actuate these valves to the open or closed position with flow. Since, these valves are normally seated by spring pressure, the only practical method to verify the setpoint of the valves is to use a calibrated spring scale to measure the force required to unseat the disk.

Each of these activities would require entry into primary containment at power which is impractical. Containment entries during operational modes 1 through 4 are undesirable from a personal safety standpoint due to the high radiation environment and the high ambient temperatures affecting work conditions. Additionally, entry into containment during power operation is administratively controlled by a plant procedure with requirements to perform pre-entry airborne radioactivity and air quality samples, implementation of heat stress controls, control of materials, radiological controls, a containment closeout inspection and a local leakage rate test of the applicable entry hatch seals.

Testing during non-planned cold shutdown periods is also impractical due to the requirement to enter containment and the need to build scaffolding to access the valves. Additionally, in order to complete the testing of the subject valves, test equipment to verify the opening setpoint must be installed and subsequently removed.

Alternate Test

(SC) Stroke close at (RO) refueling outage
(SO) Stroke open at (RO) refueling outage
(ref. ISTC-3522(c))
This testing will be performed in conjunction with setpoint testing (SP) in accordance with OM Code, App. I. These tests wil satisfy both ISTC and APP. I requirements.

Attachment 6.2 - Deferred Test Justifications

DTJ-CC-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CC-211	CCW Supply to RCPs - Inboard CIV	2165-S-1321	F-1	4080	2	A/C	O	O/C
1CC-250	CCW Return From RCP Thermal Barriers - Inboard CIV	2165-S-1321	F-16	4080	2	A/C	C	O/C
1CC-298	CCW Return From RCP Motor Bearing Coolers - Inboard CIV	2165-S-1321	F-13	4080	2	A/C	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

1CC-211 is normally open and 1CC-250 and 1CC-298 are normally closed. Testing these valves quarterly during power operation and during cold shutdowns of short duration is not practical due to the interruption of cooling water flow to the RCPs required to align for the test configuration. These check valves are located inside primary containment serving as inboard containment isolation valves and are not provided with position indication. The only method available to verify reverse flow closure capability of these check valves is by interrupting their normal process functions and performing seat leakage testing. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry in order to verify their closure capability. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

Alternate Test

(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(SO) Stroke open at (RO) refueling outage
(ref. ISTC-3522(c) and Section 4.1.6 of USNRC NUREG-1482)
1CC-211 only (SO) Stroke open is verified (Q) quarterly

Attachment 6.2 - Deferred Test Justifications

DTJ-CC-2

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CC-207	CCW Supply To RCPs Iso Vlv	2165-S-1321	E-1	4080	2	B	O	C
1CC-208	CCW Supply To RCPs Iso Vlv - Outboard CIV	2165-S-1321	F-1	4080	2	A	O	C
1CC-249	CCW Return From RCP Thermal Barriers - Inboard CIV	2165-S-1321	E-15	4080	2	A	O	C
1CC-251	CCW Return From RCP Thermal Barriers - Outboard CIV	2165-S-1321	E-15	4080	2	A	O	C
1CC-252	CCW Return From RCPs Thermal Barrier Iso Vlv	2165-S-1321	D-15	4080	2	B	O	C
1CC-297	CCW Return From RCP Mtr. Brg. Coolers - Inboard CIV	2165-S-1321	E-12	4080	2	A	O	C
1CC-299	CCW Return From RCPs Iso Vlv - Outboard CIV	2165-S-1321	E-12	4080	2	A	O	C

Code Test Requirements

Active Category A and B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, these are the containment isolation and block valves located in the RCP thermal barrier and bearing oil cooler lines. Testing these valves quarterly during power operation and during cold shutdowns of short duration is not practical due to the interruption of cooling water flow to the RCPs. Failure for these valves to open subsequent to closure would result in a complete loss of cooling water flow to the RCPs. A loss of cooling water for more than a few minutes could result in extensive damage to the pumps and pump motors and potentially cause a plant trip. Westinghouse Document 1B5710-100-07A states that cooling water must be provided to the pumps at all times when the RCS temperature is above 200°F. Plant procedures indicate that it is desireable to operate the pumps during cold shutdown and that at least one RCP be operating when RSC temperature is > 160 degrees F. Testing during cold shutdown is not practical since cooling water to the reactor coolant pump thermal barriers and motor bearings must be isolated to perfom the test. This would require all reactor coolant pumps to be stopped.

NUREG-1482, Section 3.1.1.4 indicates the need to stop reactor coolant pumps is adequate justification to defer testing to refuel outages.

Alternate Test

(STC) Stroke time closed at (RO) refueling outage when the RCP's can be removed from service.
(ref. ISTC-3521(e))

Attachment 6.2 - Deferred Test Justifications

DTJ-CP-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CP-1	Containment Pre-Entry Purge Exhaust Vlv (CIV)	2165-S-1017	E-15	8170	2	A	LC	C
1CP-10	Containment Pre-Entry Purge Makeup Vlv (CIV)	2165-S-1017	G-16	8170	2	A	LC	C
1CP-4	Containment Pre-Entry Purge Exhaust Vlv (CIV)	2165-S-1017	E-16	8170	2	A	LC	C
1CP-7	Containment Pre-Entry Purge Makeup Vlv (CIV)	2165-S-1017	G-15	8170	2	A	LC	C

Code Test Requirements

Active Category A valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, these 42 inch valves are maintained in the locked closed position during power operation and are tagged out of service. The only time the active function of the valves must be operable is during modes 5 or 6 when containment closure (core alterations) is required and the valves are in operation for containment purge. In accordance with ISTC-3570, these valves will be exercised within 3 months prior to the time they are required to be operable during refueling outages. Each valve's passive function of maintaining containment integrity applies to modes 1-4 and will be tested in accordance with 10CFR50, Appendix J.

Alternate Test

(STC) Stroke time closed at (CS) cold shutdown or prior to being made operable for containment closure per ISTC-3570.
(FSC) Fail-safe closed at (CS) cold shutdown or prior to being made operable for containment closure per ISTC-3570.
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-1	RCS Letdown Line Iso Vlv	2165-S-1303	A-3	2060	1	B	O	C
1CS-11	Letdown Iso (CIV)	2165-S-1303	A-17	2060	2	A	O	C
1CS-2	RCS Letdown Line Iso Vlv	2165-S-1303	A-3	2060	1	B	O	C
1CS-238	Charging Line Iso Vlv - CIV (otbd)	2165-S-1303	B-17	2060	2	A	O	O/C

Code Test Requirements

Active Category A and B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, these valves are located in the normal letdown and charging lines to the RCS. Exercising these valves closed quarterly during normal operation would interrupt normal RCS charging or letdown flow which could cause pressurizer level control transients potentially resulting in a reactor trip. Failure of a letdown valve in the closed position coincident with normal charging flow could result in a high RCS water level trip. Additionally, closure of 1CS-238 would isolate charging flow to the regenerative heat exchanger resulting in high letdown temperatures. Reestablishing flow to the heat exchanger could lead to thermal shocking resulting in premature failure. The control circuitry associated with these valves is not provided with partial stroke capability.

Alternate Test

(STC) Stroke time closed at (CS) cold shutdown
(FSC) Fail-safe closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-2

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-231	Charging Flow Control Vlv	2165-S-1305	H-4	2060	2	B	T	O
1CS-235	Charging Line Iso Vlv	2165-S-1305	H-2	2060	2	B	O	O/C

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

1CS-231 is normally throttled and 1CS-235 is normally open. These valves are located in the normal charging line to the RCS. Exercising these valves quarterly during normal operation would interrupt normal RCS charging flow which could cause pressurizer level control transients potentially resulting in a reactor trip. The interruption of normal charging flow would also result in high letdown temperatures. The control circuitry associated with these valves is not provided with partial stroke capability.

Alternate Test

1CS-231
(STO) Stroke time open at (CS) cold shutdown
(FSO) Fail-safe open at (CS) cold shutdown
(ref. ISTC-3521(c))
1CS-235
(STC) Stroke time closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-3

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-165	VCT Outlet Iso - LCV-115C	2165-S-1305	G-11	2060	2	B	O	C
1CS-166	VCT Outlet Iso - LCV-115E	2165-S-1305	G-11	2060	2	B	O	C
1CS-291	CSIP Suction from RWST Iso Vlv - LCV-115B	2165-S-1305	I-12	2060	2	B	C	O/C
1CS-292	CSIP Suction from RWST Iso Vlv - LCV-115D	2165-S-1305	K-12	2060	2	B	C	O/C

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

1CS-165 and 1CS-166 are normally open and 1CS-291 and 1CS-292 are normally closed. These isolation valves are located in the charging pump suction supply lines from the volume control tank (VCT) and the refueling water storage tank (RWST). These valves are designed with interlocks which prevents both sets of valves from simultaneously being in the same position. Therefore, exercising these valves quarterly would result in aligning the RWST to the suction of the charging pumps. This alignment would allow RWST inventory, with its high boric acid concentration, to be injected into the RCS via the charging line and the RCP pump seals causing power fluctuations and possible plant shutdown. The control circuitry associated with these valves is not provided with partial stroke capability.

Alternate Test

1CS-165 and 1CS-166
(STC) Stroke time closed at (CS) cold shutdown
(ref. ISTC-3521(c))
1CS-291 and 1CS-292
(STO) Stroke time open at (CS) cold shutdown
(STC) Stroke time closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-4

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-279	BAT Pumps to CSIP Supply Check Vlv	2165-S-1305	J-17	2060	2	C	C	O

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, this check valve is located in the supply line to the charging pump suction header from the boric acid filter. Forward flow exercising this check valve quarterly during power operation would require injecting a highly concentrated boric acid solution from the boric acid storage tanks into the RCS via the operating charging pump. Injecting a highly concentrated boric acid solution into the RCS would result in severe power fluctuations and the possible shutdown of the reactor. Partial stroke exercising this check valve would result in the same consequences as full stroke exercising.

Close verification testing of this check valve will be performed at the same frequency as the stroke close test frequency as allowed by ISTC-3522(a).

Alternate Test

(SO) Stroke open at (CS) cold shutdown
(CV) Close verfication at (CS) cold shutdown
(ref. ISTC-3522(a) and (b))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-5

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-294	RWST to CSIP Suction Supply Check Vlv	2165-S-1305	K-14	2060	2	A	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, this simple check valve is located in the supply line from the RWST to the charging pump's suction header. The valve is not provided with position indication and has no design provisions (such as test connections) to facilitate reverse exercising. To verify reverse flow closure capability quarterly during power operation would require opening the downstream power operated valves to allow the check valve to communicate with the static pressure of the VCT. Furthermore, aligning the RWST to the charging pump's suction header would allow injection of the highly borated solution contained in the RWST into the RCS via the charging pumps. This RCS injection from the RWST would result in severe power fluctuations and possible plant shutdown.

Alternate Test

(SC) Stroke closed at (CS) cold shutdown
(ref. ISTC-3522(b))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-6

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-480	Alternate Charging Line Iso Vlv	2165-S-1303	B-4	2060	2	B	C	O/C
1CS-492	Normal Charging Line Iso Vlv	2165-S-1303	C-4	2060	2	B	O	O/C

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.□Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, exercising valves 1CS-480, 1CS-483, 1CS-486 quarterly during power operation has been determined to cause thermal cycling of the alternate charging path piping which could lead to premature failure. This problem has been documented by Westinghouse in letter CQL-90-562, dated 09/27/90. Likewise, the normally open normal charging line isolation valve 1CS-492 cannot be exercised since this would require flowing through the alternate path to avoid isolation of normal charging and letdown flow. These valves will be tested on a cold shutdown frequency. Partial stroke exercising of the alternate charging line check valves would result in the same consequences previously discussed. The control circuitry associated with the Category B valves is not provided with partial stroke capability.

Alternate Test

1CS-480
(STO) Stroke time open at (CS) cold shutdown
(FSO) Fail-safe open at (CS) cold shutdown
(ref. ISTC-3521(c))
1CS-492
(STC) Stroke time closed at (CS) cold shutdown
(FSO) Fail-safe open at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-7

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-344	RCP "A" Seal Water Injection Check Vlv (CIV)	2165-S-1303	K-3	2060	2	A/C	O	O/C
1CS-385	RCP "B" Seal Water Injection Check Vlv (CIV)	2165-S-1303 S	K-3	2060	2	A/C	O	O/C
1CS-426	RCP "C" Seal Water Injection Check Vlv (CIV)	2165-S-1303 S	K-3	2060	2	A/C	O	O/C
1CS-471	RCP Seal Water Return & Excess Letdown Thermal Relief Check (CIV)	2165-S-1303	E-16	2060	2	A/C	C	O/C
1CS-477	CVCS Normal Charging Line Check Vlv (CIV)	2165-S-1303	B-16	2060	2	A/C	O	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements on ISTC-3510.

Basis for Relief

1CS-344, 1CS-385, 1CS-426, and 1CS-477 are normally open and 1CS-471 is normally closed. These simple check valves are located inside primary containment serving as inboard containment isolation valves and are not provided with position indication. The only method available to verify reverse flow closure capability of these check valves is by seat leakage testing. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry and the interruption of the valves' normal process functions in order to verify their closure capability. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment. Performing this test activity during cold shutdowns is not desirable due to personnel hazards and ALARA concerns and the requirement to shut down and restart the reactor coolant pumps (RCP)'s. Plant procedures indicate that it is desireable to operate the pumps during cold shutdown and that at least one RCP be operating when RSC temperature is > 160 degrees F.

Alternate Test

(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(SO) (1CS-471 only) Stroke open at (RO) refueling outage
All other valves (SO) Stroke open is verified (Q) quarterly.
(ref. ISTC-3522(c) and Section 4.1.6 of USNRC NUREG-1482)

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-8

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-167	VCT Outlet Check Vlv	2165-S-1305	G-11	2060	2	A/C	O	C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, this simple check valve is located in the discharge piping from the volume control tank (VCT) to the charging pump suction header. Reverse exercising this check valve quarterly during power operation would require isolation of the VCT inlet piping and RCP seal return piping, operation of RHR pump discharge to charging pump suction and monitoring for a VCT level increase. This is not practicable during normal operation due to pressurizer level control transients potentially resulting in a reactor trip.

Also, this test is not practicable during cold shutdown for the following reasons. Temporary jumpers must be installed to simulate closure of loop suction valves 1RH-1 (1RH-39) and 1RH-2 (1RH-40) in order to open RHR/CS cross-connect valve 1RH-25 (1RH-63) and provide flow through the subject check valves. Installation of these jumpers requires one train of RHR to be declared inoperable. While in this alignment, the RCS would have to be vented to keep RHR pump discharge pressure below the design pressure of charging pump suction piping. Per NRC Information Notice 95-35, plant shutdown risk management procedures requires both loops of RHR to be operable in cold shutdown with RCS pressure less than 130 psig.

Open verification testing of this check valve will be performed at the same frequency as the stroke close test frequency as allowed by ISTC-3522(a).

Alternate Test

(SC) Stroke closed at (CS) cold shutdown
(OV) Open verification at (CS) cold shutdown
(ref. ISTC-3522(a) and (b))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-9

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-294	RWST to CSIP Suction Supply Check Vlv	2165-S-1305	K-14	2060	2	A	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, this check valve is located in the supply line from the RWST to the charging pump's suction header. Verification of forward flow operability quarterly during power operation would require injecting RWST water into the RCS. Aligning the RWST to the charging pump's suction header would cause injection of the highly borated solution contained in the RWST into the RCS via the charging pumps. This RCS injection from the RWST would result in severe power fluctuations and possible plant shutdown. Partial stroke exercising this check valve quarterly during normal operation is prevented for the same reasons as full flow exercising. Full flow exercising these valves at cold shutdown could result in low-temperature overpressurization of the RCS due to the lack of sufficient expansion volume necessary to establish the design accident flow rate.

Alternate Test

(SO) Stroke open at (RO) refueling outage
(ref. ISTC-3522(c))
(SC) Stroke closed is verified per DTJ-CS-5

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-10

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-341	RCP "A" Seal Water Injection Iso Vlv (CIV)	2165-S-1303	K-3	2060	2	A	O	O/C
1CS-382	RCP "B" Seal Water Injection Iso Vlv (CIV)	2165-S-1303 S	L-3	2060	2	A	O	O/C
1CS-423	RCP "C" Seal Water Injection Iso Vlv (CIV)	2165-S-1303 S	K-3	2060	2	A	O	O/C
1CS-470	RCP Seal Water Return & Excess LTDN (CIV)	2165-S-1303	D-16	2060	2	A	O	C
1CS-472	RCP Seal Water Return & Excess LTDN (CIV)	2165-S-1303	D-17	2060	2	A	O	C

Code Test Requirements

Active Category A valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, exercising these valves closed quarterly during normal operation would require interrupting seal water flow to the RCP shaft seals. The interruption of seal water flow to the RCP shaft seals is not practical during power operation due to the potential of causing damage to the seals. Exercising these valves closed during cold shutdowns, if the RCS were pressurized, or filled above the seal package level, could allow the RCS to flow through the pump seals. This flow could introduce particulates suspended in the RCS into the pump seals which would accelerate seal wear potentially resulting in premature failure. Testing these valves at refueling outages when the RCS drained to a level below the RCP seal packages would preclude damage to the seals.

Alternate Test

(STC) Stroke time close at (RO) refueling outage
(ref. ISTC-3521(e))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-11

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-525	Boric Acid Gravity Feed Line Check Vlv	2165-S-1307	F-9	2060	3	C	C	O

Code Test Requirements

Active Category B, and C check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

These normally closed system isolation valves are located in the boric acid gravity feed line to the charging/safety injection pumps and may be used to supply water directly from the Boric Acid Tank to the suction of the CSIPs via gravity feed, if the Boric Acid Pumps are not operable. This flow path is optionally required to be operable per T.S.3.1.2.1 in Modes 4, 5 and 6.

Opening manual isolation valve 1CS-526 during normal operation would negate redundent isolation between charging pump suction and boric acid subsystem. The surveillances 4.1.2.1.a and b, listed in T.S.3.1.2.1, are to check BA temp greater than 65 degrees every 7 days, and a valve line-up and flowpath check every 31 days. There is no mention of a flow verification for the gravity flow path. During the outage, credit is not taken for 1CS-526 flowpath according to OMP-003. OST-1864 is a mode 6 defueled test, so by default it can be nothing less than an 18 month interval test. Supplying an operable CSIP during plant operation with a three inch diameter pipe supply is considered an unnecessary challenge to the component based on the previous items listed. In addition, the boric acid subsystem pressure is not sufficient to open check valve 1CS-525 during normal and cold shutdown operation because normal charging pump suction pressure is greater than boric acid tank head pressure. Additionally, the piping line associated with 1CS-526 is a three inch line. The normal supply line to the suction side of the CSIP is a six inch diameter pipe.

Close verification testing of this check valve will be performed at the same frequency as the stroke close test frequency as allowed by ISTC-3522(a).

Alternate Test

(SO) Stroke open at (RO) refueling outage
(CV) Close verification at (RO) refueling outage
(ref. ISTC-3522(a) and(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-12

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-775	CSIP Supply Check Vlv From The RHR 1B Heat Exchanger	2165-S-1305	J-13	2060	2	C	C	O/C
1CS-776	CSIP Supply Check Vlv From The RHR 1A Heat Exchanger	2165-S-1305	K-13	2060	2	C	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, these simple check valves are located in the supply lines from the RHR heat exchangers to the charging pump suction header and are utilized during the recirculation phase of emergency core cooling.

Forward exercising these check valves quarterly would require starting the associated RHR pump, opening upstream power operated valves 1RH-25 and 1RH-63, and establishing flow through the RHR heat exchangers from the RWST to the charging pump suction header. This is not possible during power operation. This flow path would not only upset the normal charging and letdown flow rates but would also result in severe power fluctuations and plant shutdown due to the injection of the highly borated contents of the RWST into the RCS via the charging pumps. Partial exercising these check valves to the open position would result in the same consequences as full exercising. Also, forward exercising these check valves during cold shutdown is not possible for the following reasons. Temporary jumpers must be installed to simulate closure of loop suction valves 1RH-1 (1RH-39) and 1RH-2 (1RH-40) in order to open RHR/CS cross-connect valve 1RH-25 (1RH-63) and provide flow through the subject check valves. Installation of these jumpers requires one train of RHR to be declared inoperable. While in this alignment, the RCS would have to be vented to keep RHR pump discharge pressure below the design pressure of charging pump suction piping. Per NRC Information Notice 95-35, plant shutdown risk management procedures requires both loops of RHR to be operable in cold shutdown with RCS pressure less than 130 psig.

The system piping containing these valves has no design provisions (such as test connections) to facilitate reverse exercising. The valves do communicate with static pressure from the VCT, however, test connections are not provided for differential pressure measurement between the check valves and the upstream normally closed power operated valves. Reverse flow closure capability is best able to be verified when the charging pumps can be removed from service and an abnormal RHR system alignment can be established.

Stroke close (SC) testing will be performed at the same frequency as allowed by ISTC-3522(a).

Alternate Test

(SO) Stroke open at (RO) refueling outage
(SC) Stroke closed at (RO) refueling outage
(ref. ISTC-3522(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-CS-13

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CS-178	CSIP "1A" Discharge Check Vlv	2165-S-1305	H-7	2060	2	C	O/C	O/C
1CS-192	CSIP "1B" Discharge Check Vlv	2165-S-1305	K-7	2060	2	C	O/C	O/C
1CS-206	CSIP "1C" Discharge Check Vlv	2165-S-1305	J-7	2060	2	C	O/C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open/closed, these charging pump discharge check valves cannot be verified for full flow operability quarterly during normal operation. Normal charging flow is automatically controlled by downstream flow control valve (1CS-231) in response to RCS operating conditions. Injecting full flow into the RCS quarterly during normal operation would require realigning the flow through safety injection lines. This flow would cause an increase in reactor coolant pressure because letdown capacity is less than safety injection capacity. This is considered an ESF actuation which is prohibited by normal operations. Full flow exercising these valves at cold shutdown could result in low-temperature overpressurization of the RCS due to the lack of sufficient expansion volume necessary to establish the design accident flow rate.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

Alternate Test

(SO) Stroke open at (RO) refueling outage
(SC) Stroke closed at (RO) refueling outage
(ref. ISTC-3522(c) and Section 4.1.6 of USNRC NUREG-1482)

Attachment 6.2 - Deferred Test Justifications

DTJ-CT-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CT-102	Containment Sump to CS Pump "B" Iso Vlv (CIV)	2165-S-550	M-7	2070	2	B	C	O/C
1CT-105	Containment Sump to CS Pump "A" Iso Vlv (CIV)	2165-S-550	N-7	2070	2	B	C	O/C

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

These motor operated valves isolate the containment sumps from the containment spray pumps suction and RWST. During normal plant operation, these valves are closed and the containment sumps are maintained dry to prevent seepage of borated water from the sump to the containment liner and causing corrosion.

The physical arrangement of containment spray piping is such that opening the isolation valves under static conditions will allow several gallons of water from the system high points to drain into the containment sumps. There is no method to drain the sumps other than entering containment and using a temporary sump pump to remove the water.

Therefore, full stroke exercising these valves quarterly is not practicable due to the actions required to maintain the containment sumps dry. In addition, partial stroke exercising would result in the same consequences as full stoke exercising.

Alternate Test

STO) Stroke time open at (CS) cold shutdown (STC) Stroke time closed at (CS) cold shutdown (ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-CT-2

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1CT-11	Containment Spray Chemical Addition Iso Vlv	2165-S-550	I-12	2070	3	B	C	O/C
1CT-12	Containment Spray Chemical Addition Iso Vlv	2165-S-550	H-12	2070	3	B	C	O/C
1CT-62	CS Pump "A" Chemical Addition Check Vlv	2165-S-550	H-7	2070	2	C	C	O/C
1CT-65	CS Pump "B" Chemical Addition Check Vlv	2165-S-550	J-7	2070	2	C	C	O/C

Code Test Requirements

Active Category A valves shall be exercised nominally every 3 months per the requirements of ISTC-3510. Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Full exercising valves 1CT-11 and 1CT-12 during normal plant operation would require closing the upstream manual isolation valve to restrict migration of NaOH to the spray system piping. However, there would still be some migration of NaOH. In fact, exercising these valves at the normal frequency would result in 80%-85% increase of NaOH in the Reactor Building Containment Spray System and ultimately in the RCS via the RWST and CVCS. Higher radiation levels in the reactor building due to radio-activated sodium is not conducive to sound ALARA and maintenance practices. Additionally, the valve control circuitry is not provided with partial stroke capability. No drains are available to rid the sodium hydroxide after each quarterly test. Additionally, if drains were available, plant personnel would be exposed to highly caustic fluids after each test which would present significant personnel hazard. Sodium hydroxide causes severe burns if it comes in contact with the skin. Test personnel would be required to don rubber gloves, boots and face shields. Additionally, these valves are in the 89-10 MOV Program which subjects these valves to a more scrutinized test than typical stroke timing as required by ISTC-3510.

In order to stroke close 1CT-62 and 1CT-65, valves 1CT-11 and 1CT-12 are required to be opened and a level change of the NaOH Tank is monitored. This test evolution poses the same issues as discussed above.

AR 92659 was written due to critical path time being lost due to poor refueling water clarity. The ensuing investigation documented that;

1) Sodium Hydroxide in-leakage into the RWST causes a pH increase in the Refueling Cavity. This pH shift is enough to favor formation of a cloudy, iron hydroxide colloidal suspension in the cavity. Potential downstream effects of the sodium hydroxide in-leakage into the RWST during the performance of OST-1118 and 1119, such as causing iron to form a cloudy precipitate in the refueling cavity, was probably not considered significant during the design phase of the test,

2) A second AR, 97-04975 identified that the CSAT Sodium Hydroxide Concentration had fallen out of specification,

3) Performance of RST-206 on 10/20/02 identified that the CSAT Sodium Hydroxide concentration had dropped below the Technical Specification limit of 28% (NCR 74811). The actual results were 27.63 percent Hydroxide. Considering that the CSAT should be a stagnant tank, and that Sodium Hydroxide at 28% is a strong base, which will not degrade with time, dilution by RWST as a result of OST 1118/1119 appears the only logical explanation. A dilution of approximately 70 gallons of RWST water would decrease the concentration in the CSAT about 0.5%. Note that hydroxide additions were made to the CSAT in 2000 and 2002 to bring the tank back to within Technical Specification limits,

4) Refueling water clarity was not sufficient to support the Critical Path of the outage schedule. As a result, the

Attachment 6.2 - Deferred Test Justifications

DTJ-CT-2

station may have incurred economic loss due to additional time spent off line. Additional economic consequence as a result of additional filters required for the Tri-Nuke filtering units occurred,

5) There was also a radiological impact in that the additional use of filters to purify the refueling cavity water caused additional dose to be expended.

Alternate Test

(STO) Stroke time open at (CS) cold shutdown
(STC) Stroke time closed at (CS) cold shutdown
(ref. ISTC-3521(c))
(SC) Stroke close at (CS) cold shutdown
(ref. ISTC-3522(b))

Attachment 6.2 - Deferred Test Justifications

DTJ-DW-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1DW-65	Demin Water Supply to Primary Cont. (CIV)	2165-S-799	H-6	6270	2	A/C	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, this check valve is located inside primary containment serving as an inboard containment isolation valve and is not provided with position indication. The only method available to verify reverse flow closure capability of this check valve is by seat leakage testing. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry in order to verify valve closure. The forward flow test is similar in nature in that a Containment entry is required to connect a hose routed to a drain nearby. Additionally, outside of Containment, a locked close valve is required to be open to facilitate flow through 1DW-65. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

Alternate Test

(SO) Stroke open at (RO) refueling outage and
(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(ref. ISTC-3522(c) and Section 4.1.6 of USNRC NUREG-1482)

Attachment 6.2 - Deferred Test Justifications

DTJ-FP-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1FP-349	Fire Water Sprinkler Supply Check Vlv (CIV)	2165-S-888	L-3	6175	2	A/C	C	O/C
1FP-357	Fire Water Standpipe Supply Check Vlv (CIV)	2165-S-888	L-3	6175	2	A/C	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, these simple check valves are located inside primary containment serving as inboard containment isolation valves and are not provided with position indication. The only method available to verify reverse flow closure capability of these check valves is by seat leakage testing. Additionally, the safety function in the open position is required to protect the penetration against thermal overpressurization. The open position is consistent with the conclusion reached by ESR 96-00537, which for some penetrations creditied inherant design features of specific valves for thermal protection. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry in order to verify valve closure and open position. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

Alternate Test

(SO) Stroke open at (RO) refueling outage and
(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(ref. ISTC-3522(c) and Section 4.1.6 of USNRC NUREG-1482)

Attachment 6.2 - Deferred Test Justifications

DTJ-FW-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1FW-159	Feedwater Line Iso Vlv to S/G "A" (CIV)	2165-S-544	B-6	3050	2	B	O	C
1FW-217	Feedwater Line Iso Vlv to S/G "C" (CIV)	2165-S-544	D-4	3050	2	B	O	C
1FW-277	Feedwater Line Iso Vlv to S/G "B" (CIV)	2165-S-544	E-4	3050	2	B	O	C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, full stroke closed exercising the feedwater isolation valves quarterly during normal operation would result in a loss of normal feedwater flow to the associated Steam Generator except for that provided by the auxiliary feedwater line. Isolation of normal feedwater flow during power operation could potentially cause a severe steam generator level transient which could result in a plant trip, and would initiate an auxiliary feedwater system actuation signal unnecessarily. The feedwater isolation valves are not provided with partial stroke capability.

Alternate Test

(SC) Stroke close at (RO) refueling outage
(ref. ISTC-3522(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-IA-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1IA-819	Instrument Air Supply to Containment Iso Vlv (CIV)	2165-S-801	C-3	6135	2	A	O	C

Code Test Requirements

Active Category A valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, instrument air supplies a number of components inside containment which are dependent upon instrument air to remain operable for support of normal plant operation. Exercising this valve to the closed position quarterly during normal operation would deprive these components of their normal actuating air supply. Since the largest majority of these components have no backup air supply, component realignment or a loss of sensing capability is likely to occur upon interruption of their air supply. Such components include RCP Seal Leak-off AOV(s), Letdown CIV(s), and Blowdown AOV(s), some of which are inboard isolation valves. Loss of operability or mispositioning of these components could result in operating transients and a possible forced plant shutdown. Instrument air is the backup pneumatic source for the RCS PORV accumulator tanks. Operation of the PORV(s) are required for SGTR. Instrument air also provides air to the safety-related accumulators which actuate the Hydrogen Purge Valve, located inside Containment. The control circuitry for this valve is not provided with partial stroke capability.

Alternate Test

(STC) Stroke time closed at (CS) cold shutdown
(FSC) Fail-safe closed at (CS) cold shutdown
(ref. ISTC-3521(b))

Attachment 6.2 - Deferred Test Justifications

DTJ-IA-2

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1IA-220	Instrument Air Supply to Containment Check Vlv (CIV)	2165-S-801	D-12	6135	2	A/C	O	C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, this check valve is located inside primary containment serving as an inboard containment isolation valve and is not provided with position indication. The only method available to verify reverse flow closure capability of this check valve is by seat leakage testing. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry in order to verify valve closure. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

The (OV) open verification test for this check valve will be performed at the same frequency as the (SC) stroke close tets as allowed by ISTC-3522(a).

Alternate Test

(OV) open verification at (RO) refueling outage during Appendix J, Type C, testing
(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(ref. ISTC-3522(a) and (c) and Section 4.1.6 of USNRC NUREG-1482)

Attachment 6.2 - Deferred Test Justifications

DTJ-IA-3

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1IA-786	Instrument Air Supply Check to Accum. Tk. 1A-SA (Series with 1IA-787)	2165-S-1017	G-13	6135	2	C	O/C	C
1IA-787	Instrument Air Supply Check to Accum. Tk. 1A-SA (Series with 1IA-786)	2165-S-1017	G-3	6135	2	C	O/C	C
1IA-788	Instrument Air Supply Check to Accum. Tk. 1B-SB (Series with 1IA-789)	2165-S-1017	H-13	6135	2	C	O/C	C
1IA-789	Instrument Air Supply Check to Accum. Tk. 1B-SB (Series with 1IA-788)	2165-S-1017	H-13	6135	2	C	O/C	C

Code Test Requirements

Verify reverse flow closure capability nominally every 3 months per the requirements of OM-10, Para. 4.3.2.

Basis for Relief

It is impractical to perform a full-stroke closure exercise of the subject check valves during power operation or during cold shutdowns. The 0.75 inch boundary check valves isolate the non-safety related instrument air supply lines to the safety related air accumulators for the containment vacuum relief system outside containment isolation valves 1CB-2 and 1CB-6.

The primary function of the vacuum relief system is to assure the structural integrity of the containment building as a result of an inadvertent actuation of the containment spray system which causes a partial vacuum inside containment. Makeup air from outside of the containment will flow in to containment when 1CB-2 and/or 1CB-6 open when containment pressure (vacuum) reaches a predetermined setpoint (-1.0 in w.g.).

The instrument air system provides air to butterfly valves 1CB-2 (TK 1A-SA) and 1CB-6 (1TK 1B-SB) actuator accumulators. The butterfly valves (1CB-2 and 1CB-6) fail-closed upon loss of instrument air and use the air accumulators for three strokes. Each of the instrument air supply lines to the accumulators contains two simple check valves in series with no intermediate test connections for individual valve closure verification. These valves provide isolation in the event of a failure of the non-safety related instrument air supply. Only one check valve is required in order to meet the safety class interface criteria of ANSI N18.2a-1975 "Revision and Addendum to Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactors" as referenced in the HNP FSAR. It is not practical to verify the full-stroke closure of these valves utilizing non-intrusive diagnostic methods due to their size. These valves will be stroke close tested as series pairs in accordance with ISTC-5223. Pair #1 will consist of valves 1IA-786 & 1IA-787. Pair #2 will consist of valves 1IA-788 and 1IA-789.

(OV) Open verification testing will be performed at the same frequency as the (SC) stroke close test as allowed by ISTC-3522(a).

Alternate Test

(SC) Stroke close at (RO) refueling outage
(OV) Open verification (RO) refueling outage
(ref. ISTC-3522(a) and (c))

Attachment 6.2 - Deferred Test Justifications

DTJ-MS-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1MS-80	Main Steam Iso Vlv (MSIV) for MS Hdr "A" (CIV)	2165-S-542	D-9	3020	2	B	O	C
1MS-82	Main Steam Iso Vlv (MSIV) for MS Hdr "B" (CIV)	2165-S-542	G-9	3020	2	B	O	C
1MS-84	Main Steam Iso Vlv (MSIV) for MS Hdr "C" (CIV)	2165-S-542	J-9	3020	2	B	O	C

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, full stroke closed exercising of these valves during normal operation isolates one line of steam flow to the turbine. Isolation of a main steam header would cause a severe pressure transient in the associated main steam line possibly resulting in a forced plant shutdown. Additionally, closure of an MSIV, at power, could potentially result in challenging the set point of the main steam relief valves causing inadvertent lifting. Reducing power level to perform testing without causing a transient would significantly impact plant operations and power production. These valves are provided with partial stroke capability, however, it is not practicable to full or part-stroke exercise these valves to the closed position during normal plant operation "since even a part-stroke exercise increases the risk of valve closure when the unit is generating power" per NUREG-1482, Section 4.2.4.

Alternate Test

(STC) Stroke time closed at (CS) cold shutdown
(FSC) Fail-safe closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-RC-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1RC-114	PRZ PORV PCV-444B	2165-S-1301	H-1	2050	1	B	C	O/C
1RC-116	PRZ PORV PCV-445B	2165-S-1301	F-1	2050	1	B	C	C
1RC-118	PRZ PORV PCV-445A	2165-S-1301	E-1	2050	1	B	C	O/C

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, the PORVs are controlled by the Pressurizer Overpressure Protection System, which automatically opens two of the three valves at a preset pressure. At power, set pressures are established to limit undesirable opening of the spring-loaded pressurizer safety valves. The PORVs are relied upon during reactor startup and shutdown to protect the RCS from potential low temperature overpressurization transients. In the event of a steam generator tube rupture, the PORVs may be required to open for accident mitigation by providing a means for rapid manual depressurization of the RCS. Due to the high probability for the PORVs to stick in the open position or failure to provide a leak tight barrier when closed, quarterly exercising during power operation is not practical. In accordance with Generic Letter 90-06, and the guidelines provided in NUREG-1482, Section 4.4.1, these valves will be tested on the way to cold shutdown during Modes 3 or 4, prior to LTOPS operation in Mode 5 or 6.

Alternate Test

(STO) Stroke time open at (CS) cold shutdown
(STC) Stroke time closed at (CS) cold shutdown
(FSC) Fail-safe closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-RC-2

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1RC-900	Reactor Vessel Head Vent Vlv	2165-S-1301	A-7	2050	2	B	C	O/C
1RC-901	Reactor Vessel Head Vent Vlv	2165-S-1301	A-7	2050	2	B	C	O/C
1RC-902	Pressurizer Steam Space Vent Vlv	2165-S-1301	C-7	2050	2	B	C	O/C
1RC-903	Pressurizer Steam Space Vent Vlv	2165-S-1301	B-7	2050	2	B	C	O/C
1RC-904	Vent Path to the Containment Atmosphere	2165-S-1301	C-5	2050	2	B	C	O/C
1RC-905	Vent Path to the PRT	2165-S-1301	A-8	2050	2	B	C	O/C

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

These hydraulic assisted pilot operated valves were installed subsequent to the TMI accident, and serve as the RCS high point vent valves. Their intended function is to provide reactor head venting capabilities during a natural circulation cool-down evolution. The valves are routinely used during cold shutdown to provide a path for RCS venting.

Technical Specification 3.4.11 requires that one vent path from the reactor pressure vessel head and one vent path from the pressurizer be operable and closed during operation. Testing of these valves quarterly during power operation, with subsequent failure in the open position, could result in uncontrolled blowdown of RCS inventory to the pressurizer relief tank or containment atmosphere should the downstream block valves inadvertently open or experience excessive leakage. Experience of this condition precipitated NLS-87-247 on 11/23/1987 and susequent License Ammendment NPF-63 #4 to remove the quaterly test requirements from T.S.3.4.11. Further evidence of this condition related disparity is addressed by ASME 81-BVP-39 (April of 1981) "Spurious Opening of Hydraulic Assisted Pilot Operated Valves". The control circuitry associated with these valves is not provided with partial stroke capability.

Alternate Test

(STO) Stroke time open at (CS) cold shutdown
(STC) Stroke time closed at (CS) cold shutdown
(FSC) Fail-safe closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-RC-3

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1RC-164	RMW to PRT Iso Vlv (CIV)	2165-S-1301	D-16	2050	2	A/C	O/C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, this simple check valve is located inside primary containment serving as an inboard containment isolation valve and is not provided with position indication. The only method available to verify reverse flow closure capability of this check valve is by seat leakage testing. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry in order to verify valve closure. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

Alternate Test

(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(ref. ISTC-3522(c) and Section 4.1.6 of USNRC NUREG-1482)
(SO) Stroke open verified (Q) quarterly

Attachment 6.2 - Deferred Test Justifications

DTJ-RC-4

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1RC-174	N2 Inlet Check Vlv to PORV N2/Air Accum. Tank 1A-SA	2165-S-1309	B-9	2050	3	A/C	O/C	C
1RC-176	N2 Inlet Check Vlv to PORV N2/Air Accum. Tank 1C-SB	2165-S-1309	A-9	2050	3	A/C	O/C	C
1SI-444	Instr. Air Inlet Check Vlv to PORV N2/Air Accum. Tank 1A-SA	2165-S-1309	B-6	2050	3	A/C	O/C	C
1SI-446	Instr. Air Inlet Check Vlv to PORV N2/Air Accum. Tank 1C-SB	2165-S-1309	A-6	2050	3	A/C	O/C	C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open/closed, these simple check valves are located in the normal instrument air and nitrogen supply lines to the actuating air accumulators serving the two safety related PORVs, both of which are inside primary containment. The valves are not provided with remote position indication. To verify reverse flow closure capability of these check valves would require isolating and the depressurization of the instrument air and nitrogen supply headers for an extended period of time, and performing an accumulator pressure decay test. This test activity would require containment entry in order to verify valve closure. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment. The reverse closure test is not practical during cold shutdowns since the PORVs are required to be available during cold shutdowns to prevent low temperature overpressurization of the RCS.

(OV) Open verification testing will be performed at the same frequency as (SC) testing as allowed by ISTC-3522(a).

Alternate Test

(SC) Stroke close at (RO) refueling outage
(OV) Open verifcation at (RO) refueling outage
(ref. ISTC-3522(a) and (c))

Attachment 6.2 - Deferred Test Justifications

DTJ-RH-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1RH-1	RCS Loop 1-HL to RHR Pump A-SA Iso Vlv (PIV)	2165-S-1324	L-3	2085	1	Aug	C	O/C
1RH-2	RCS Loop 1-HL to RHR Pump A-SA Iso Vlv (CIV) (PIV)	2165-S-1324	L-4	2085	1	A	C	O/C
1RH-39	RCS Loop 3-HL to RHR Pump B-SB Iso Vlv (PIV)	2165-S-1324	I-3	2085	1	Aug	C	O/C
1RH-40	RCS Loop 3-HL to RHR Pump B-SB Iso Vlv (CIV)(PIV)	2165-S-1324	I-4	2085	1	A	C	O/C

Code Test Requirements

Active Category A valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, these RCS pressure isolation valves are located in the RHR pumps suction supply lines from the RCS hot legs. Exercising these valves quarterly during power operation is not possible due to the presence of interlocks which prevent their opening unless RCS pressure has been reduced to below 363 psig. This design feature prevents inadvertent overpressurization of the associated train of RHR. Defeating these interlocks to facilitate testing, with subsequent seat leakage of the inline valve, could lead to an inter-system LOCA by exposing the low pressure RHR system to the high pressure reactor coolant system. Partial valve exercising is precluded for the same reasons as full stroke exercising.

Alternate Test

(STO) Stroke time open at (CS) cold shutdown
(STC) Stroke time closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-SA-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1SA-82	Service Air to Containment (CIV)	2165-S-800	C-3	6140	2	A/C	C	C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, this check valve is located inside primary containment serving as an inboard containment isolation valve and is not provided with position indication. The only method available to verify reverse flow closure capability of this check valve is by seat leakage testing. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry in order to verify valve closure. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

(OV) Open verification testing will be performed at the same frequency as (SC) testing as allowed by ISTC-3522(a).

Alternate Test

(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(OV) Open verification at (RO) refueling outage during Appendix J, Type C, testing
(ref. ISTC-3522(a) and (c); Section 4.1.6 of USNRC NUREG-1482)

Attachment 6.2 - Deferred Test Justifications

DTJ-SI-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1SI-359	LHSI Trains "A" and "B" to RCS Hot Legs Loops 1 and 2 (CIV) (PIV)	2165-S-1310	B-4	2085	2	A	C	O/C

Code Test Requirements

Active Category A valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, this motor operated valve serves as the second high pressure boundary barrier between the RCS and the low pressure piping of the Residual Heat Removal System. The valve is placed in the open position when switching from the cold leg to hot leg recirculation mode of safety injection. To prevent opening during normal operation the valve is electrically disconnected per Tech. Spec. 4.5.2.8 and administratively maintained closed. Exercising this valve quarterly during normal operation could cause overpressurization of the RHR System piping and result in an inter-system LOCA condition. The control circuitry associated with this valve is not provided with partial stroke capability. Even if possible, partial stroke exercising would result in the same consequences as full exercising.

Alternate Test

(STO) Stroke time open at (CS) cold shutdown
(STC) Stroke time closed at (CS) cold shutdown
(ref. ISTC-3521(c))

Attachment 6.2 - Deferred Test Justifications

DTJ-SI-2

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1SI-182	Accumulator Fill from RWST (CIV)	2165-S-1309	J-16	2090	2	A/C	O/C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open/closed, this check valve is located inside primary containment serving as inboard containment isolation valve for the safety injection (SI) accumulator fill line. It is not provided with position indication. Stroke open verification of this check valve requires feed and bleed of the SI accumulators and monitoring for a level increase or installation of non-intrusive flow instumentation to verify flow.

Testing using the SI accumulator feed and bleed method is not practical during normal operation because it would require unnecessary cycling of equipment to obtain a detectable level increase (ref. NUREG-1482, Section 2.5.4).

NUREG-1482, Section 3.1.1 states, "...Check valves that can be stroked quarterly, but must be monitored by a non-intrusive technique to verify full stroke, may be fullstoke tested during cold shutdowns or refueling outages if another method of verifying full-stroke exists at these plant conditions ...".

Alternate Test

(SO) Stroke open at (CS) cold shutdown
(ref. ISTC-3522(b) and Section 3.1.1 of USNRC NUREG-1482)

Attachment 6.2 - Deferred Test Justifications

DTJ-SI-3

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1SI-107	Alternate High Head SI to Hot Leg (CIV)	2165-S-1308	H-15	2080	2	B	C	O/C
1SI-3	Boron Injection Tank (BIT) Outlet Iso Vlv (CIV)	2165-S-1308	I-2	2080	2	B	C	O/C
1SI-4	Boron Injection Tank (BIT) Outlet Iso Vlv (CIV)	2165-S-1308	I-3	2080	2	B	C	O/C
1SI-52	Alternate High Head SI to Cold Leg (CIV)	2165-S-1308	H-10	2080	2	B	C	O/C
1SI-86	High Head SI to Hot Leg (CIV)	2165-S-1308	H-12	2080	2	B	C	O/C

Code Test Requirements

Active Category B valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally closed, full stroke exercise open of these valves during power operation would result in flow through the injection flow paths into the RCS hot legs when 1SI-86 and 107 are opened, and into the RCS cold legs when 1SI-1, 1SI-2, and 1SI-52 are opened. Aligning this flow path would allow the injection of relatively cold water, which has bypassed the regenerative heat exchanger, into the RCS potentially thermal shocking the injection piping and nozzles which could cause premature failure of these system components. Opening these valves would also allow an increase in charging/injection flow potentially causing reactivity, temperature, pressure, and pressurizer level control transients which could result in a reactor trip. At cold shutdown one charging pump remains in service per T.S. 3.5.3 when RCS temperature is <335 degrees F. Exercising these valves to the open position during cold shutdown would allow substantial increased flow into the RCS when there is marginal expansion volume to accommodate the additional flow for the test period. This increased flow could cause a low temperature overpressure condition in the RCS. The control circuitry associated with this valve is not provided with partial stroke capability. Even if possible, partial stroke exercising would result in the same consequences as full exercising.

Alternate Test

(STO) Stroke time open at (RO) refueling outage (STC) Stroke time closed at (RO) refueling outage (ref. ISTC-3521(e))

Attachment 6.2 - Deferred Test Justifications

DTJ-SI-4

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1SI-182	Accumulator Fill from RWST (CIV)	2165-S-1309	J-16	2090	2	A/C	O/C	O/C
1SI-290	Accumulators & Prz PORV N2 Supply Check Vlv (CIV)	2165-S-1309	B-17	2090	2	A/C	O/C	C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open/closed, these check valves are located inside primary containment serving as inboard containment isolation valves and are not provided with position indication. The only method available to verify reverse flow closure capability of these check valves is by seat leakage testing. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry in order to verify their closure capability. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

Open verification testing of this check valve will be performed at the same frequency as the stroke close test frequency as allowed by ISTC-3522(a).

Alternate Test

(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(OV) Open verification at (RO) refueling outage
(ref. ISTC-3522(a) and (c) and Section 4.1.6 of USNRC NUREG-1482)

Attachment 6.2 - Deferred Test Justifications

DTJ-SI-5

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1SI-320	RHR Pump "A" Suction Supply Check Vlv. from RWST	2165-S-1310	N-12	2085	2	C	C	O/C
1SI-321	RHR Pump "B" Suction Supply Check Vlv. from RWST	2165-S-1310	M-12	2085	2	C	C	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

These valves are normally closed. A proper backseat test involves pressurization of the piping downstream of each check valve by a high capacity external pressure source. Pressurization from the opposite safety train is not possible due to check valves on the pump discharge line upstream of the nearest crossover line. These discharge check valves would potentially mask a non-functional suction check valve. Performing this test during cold shutdown is considered burdensome without a commensurate increase in the level of valve reliability due to the necessity of utilizing temporary test equipment and the extent of the test boundary which could delay plant restart. Additionally, this test activity could impact the ability to maintain the plant at cold shutdown under normal conditions due to the necessity of having one train of RHR operating in the shutdown cooling mode. The only time that a high volume pressurization source to these valves exists, without impacting system operation, is during refueling outages when the refueling cavity is flooded and the plant is lined up on residual heat removal.

At this time the static head from the refueling cavity will exceed that of the RWST thereby providing a reverse differential pressure across 1SI-320 and 1SI-321. Monitoring of RWST level over a specified period of time will provide adequate demonstration of reverse flow closure capability.

Alternate Test

(SC) Stroke closed at (RO) refueling outage (ref. ISTC-3522(c))
(SO) Stroke open is verified (Q) quarterly

Attachment 6.2 - Deferred Test Justifications

DTJ-SW-1

Component	Description	Flow Diagram	Dwg Coord	System	Safety Class	OM Cat.	Normal Position	Safety Position
1SW-233	SW Supply to Containment Fan Coil Units Check Vlv (CIV)	2165-S-547	C-15	4060	2	A/C	O	O/C

Code Test Requirements

Check valves shall be exercised nominally every 3 months per the requirements of ISTC-3510.

Basis for Relief

Normally open, this simple check valve is located inside primary containment serving as an inboard containment isolation valve and is not provided with position indication. The only method available to verify reverse flow closure capability of this check valve is to stop normal service water flow to primary containment and perform a seat leakage test. The test connections utilized to perform seat leakage testing are located inside containment. Therefore, it would require containment entry in order to verify valve closure. Routine containment entry cannot be made quarterly during power operation due to high radiation levels and the potentially harsh environment inside primary containment.

NUREG-1482, Section 4.1.6 states, "... The NRC has determined that the need to setup test equipment is adequate justification to defer backflow testing until a refueling outage...".

Alternate Test

(SC) Stroke close at (RO) refueling outage during Appendix J, Type C, testing
(ref. ISTC-3522(c) and Section 4.1.6 of USNRC NUREG-1482)