Nuclear Operating Company
South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

October 28, 2020
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STI: 35081345
10 CFR 50.55a

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

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498 and STN 50-499
Inservice Testing Program Description for the Fourth Ten-Year Interval

Pursuant to 10 CFR 50.55a(f), STP Nuclear Operating Company submits the South Texas Project (STP) Inservice Testing (IST) program for the fourth ten-year interval, applicable to testing of American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 pumps and valves.

10 CFR 50.55a(f) requires that tests conducted during successive 120-month intervals comply with the requirements of the latest edition and addenda of the ASME Operations and Maintenance Code of Nuclear Power Plants (OM Code) that is endorsed by the U.S. Nuclear Regulatory Commission (NRC) 18 months prior to the start of the interval. This IST program has been developed in accordance with the requirements of the 2012 Edition of the OM Code. STP Units 1 and 2 will also comply with the conditions and modification of requirements stated in 10 CFR 50.55a(b)(3).

The IST program complies with ASME OM Code requirements, requiring no NRC approval for implementation, and is provided for information only.

There are no commitments in this letter.

If there are any questions regarding this matter, please contact N. Boehmisch at (361) 972-8172 or me at (361) 972-7806.

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nb
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Attachment: Inservice Testing Program Unit 1 and 2 Pump and Valve Inservice Test Plan Fourth Ten-Year Interval

South Texas Project Electric Generating Station
P.O. Box 289
Wadsworth, TX 77483

Revision 18
September 25, 2020
STI: 35064288
19-291-174

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

INSERVICE TESTING PROGRAM
UNIT 1 AND 2 PUMP AND VALVE INSERVICE TEST PLAN
FOURTH TEN-YEAR INTERVAL

SOUTH TEXAS PROJECT
UNITS 1 AND 2

DOCKET NOS. STN 50-498, STN 50-499
FACILITY OPERATING LICENSE NOS. NPF-76/80

COMMERCIAL OPERATING DATES
Unit 1: 8/25/1988
Unit 2: 6/19/1989

FOURTH TEN-YEAR INTERVAL DATES
9/25/2020 THROUGH 9/24/2030

Prepared by:	James Heil IST Program Coordinator	08/31/2020 Date
Reviewed by:	Clayton Bonnot Testing/Programs Supervisor	09/03/2020 Date
Approved by:	Eric Stephens Strategic Engineering Manager	09/21/2020 Date

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1.0 INTRODUCTION

Title 10, Part 50.55a of the Code of Federal Regulations and the South Texas Project Technical Specification 4.0.5 invoke, by reference, the requirement for inservice testing (IST) of pumps and valves per Operations and Maintenance Code for Nuclear Power Plants (OM Code). Part 50.55a establishes the requirements that each nuclear power plant must develop and implement an inservice inspection and testing program. Specifically, 10 CFR 50.55a, paragraph (f) states that all Code class pumps and valves shall be designed and provided with access to enable the performance of inservice testing. Inservice tests are used to verify operational readiness of pumps and valves whose function is required for safety. The tests conducted during successive 120-month intervals must comply with the requirements of the latest edition and addenda of the Code that is endorsed by the NRC 18 months prior to the start of the interval.

To ensure compliance with the latest edition and addenda of the Code it is necessary to revise the IST Program implemented at STP. Commercial operation for Unit 1 began in August 1988. STP has elected to upgrade both units simultaneously. STP was granted an extension to the beginning of the second 10-year test interval for the express purpose of adopting a risk-informed IST Plan. The second 10-year update was implemented by December 1, 2001 (See ST-AE-NOC-000358 dated 3/15/99). The IST Exemption allowance was implemented upon NRC approval. The NRC approved the Exemption via SER dated 08/03/01 (ML012040470). By taking the maximum extensions allowed by the Code (IWA-2430, 1983 Edition) and subsequently aligning Unit 2, the third 10-year interval commenced on September 25th, 2010.

The fourth 10-year interval started 9/25/2020. The edition and addenda of the Code for the IST Program for the fourth 10-year interval is the 2012 Edition of the OM Code, Code for Operation and Maintenance of Nuclear Power Plants.

The Pump and Valve Program consists of three parts; the Program Plan, Program Bases Document and Program Implementing Procedures.

1.1 Program Plan

Since the period of time that the requirement for inservice testing was first incorporated into the Code of Federal Regulations, the NRC, ASME, and the nuclear industry have provided additional interpretations to the Code requirements. These interpretations have been documented through various mechanisms such as Code cases, generic letters, program review meetings, site inspections, and others. It is the intent of the Program Plan to:

- Establish a set criteria and philosophy for determining the Program Scope, and
- Evaluate each of the plant systems and related components in a consistent manner to identify which components should be included in the testing program and to identify the extent of testing required for each component.

1.2 Bases Document

The IST Bases Document provides a method and location for recording the results of evaluations conducted to determine if a pump or valve within a Class 1, 2, or 3 boundary should be included in or excluded from the IST Program. Additionally, it documents the basis for inclusion or exclusion of that component. The Bases Document should provide sufficient information about the above evaluations to ensure it will not be necessary to re-evaluate the same components at a later date.

A change in plant configuration or code requirements may require that the component be evaluated for impact on its status within the IST Program.

The scope of the IST Bases Document is a direct reflection of the IST Program Plan. It should include those components that are required to perform a specific function in shutting down a reactor to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident.

Refer to the Program Bases Document for a complete description of the scope and content of the Bases Document.

1.3 Implementing Procedures

Program inservice tests required by the Code are implemented using the Surveillance Test Program or the Preventive Maintenance Program. As a result of the performed tests, any identified corrective actions and subsequent retests are made per the requirements of the effective OM Code, Technical Specifications, and the Section XI Repair and Replacement Program. The Condition Reporting (CR) process at South Texas Project provides a method to document material deficiencies and engineering evaluations required to comply with the ASME Code. Work orders initiated by the CR process will be used to implement corrective maintenance on valves and pumps identified for Inservice Testing and will allow for recording and tracking component history.

2.0 SCOPE

The scope of the IST Program includes those pumps that are provided with an emergency power source. It also includes those pumps and valves that are required to perform a specific function in shutting down a reactor to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident and pressure relief devices that protect systems or portions of systems that perform one or more of these three functions. In addition to the above OM Code requirements, guidance established in NUREG 1482, Rev.3 was also used, as a reference for determining which components should be included in the IST Program.

NUREG-1482, Rev.3, Table 2.1, provides a list of systems that are typically included in IST Programs but provides little guidance on the criteria for determining which components are safety-related. The IST Program scope should not be limited solely to those components required to mitigate the consequences of the postulated design basis accidents defined in Chapter 15, Accident Analysis, of the UFSAR. Although the required IST Program scope has not been precisely delineated, the NRC has stated their position that the sole criteria for component selection should not be limited to design basis accidents. These accidents are the worst-case scenarios which do not define all the component response requirements necessary to prevent core damage and protect the health and safety of the public.

This program was developed to encompass system safety requirements defined in 10 CFR 50 as well as component functions required in response to the abnormal operational transients and accidents defined in the UFSAR. The program is not limited to the postulated accidents of Chapter 15. The UFSAR, Technical Specifications, and related design basis documents are the primary references used to determine which components are required to perform specific functions related to the spectrum of postulated accidents. Although several other plant source documents identify various components that may be important to plant safety or are to be operated in conjunction with recovery from an accident, unless specific credit is taken or implied for a pump or valve, the component need not be included in the IST Program.

As part of the changes associated with the implementation of the 2012 Edition of the OM Code, the NRC imposed conditions associated with the approval of the 2012 Edition, as well as revisions to existing sections that have affected the STP IST Plan. The NRC has revised the Code of Federal Regulations, 10 CFR 50.55a(f)(4), (f)(4)(i), and (f)(4)(ii) which previously required systems and components which are classified as ASME Code Class 1, 2 and 3 to meet the requirements set forth in the edition and addenda of ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) incorporated by reference in 10 CFR 50.55a(a)(1)(iv)(C). In the proposed rule, the NRC included references to the OM Code in:

50.55a(f)(3)(iii)(A), Class 1 Pumps and Valves: First Provision

50.55a(f)(3)(iii)(B), Class 1 Pumps and Valves: Second Provision

50.55a(f)(3)(iv)(A), Class 2 and 3 Pumps and Valves: First Provision

50.55a(f)(3)(iv)(B): Class 2 and 3 Pumps and Valves: Second Provision

Revision aligned the regulatory language with the current ASME OM Code used for IST programs. Because 10 CFR 50.55a(f)(3)(iii) and (iv) specifically reference Class 1, 2, or 3 pumps and valves, the proposed changes to these paragraphs referencing the OM Code are unnecessary and have not been adopted in this final rule. The use of an augmented IST program is acceptable. The NRC has removed references to ISI Class 1, 2 and 3 from Rulemaking regarding the scope of OM and now safety functions have to be addressed regardless of Code Class. The Fourth 10 Year IST Interval will implement the 2012 Edition of the OM Code and the 10 CFR 50.55a Conditions issued in August of 2018 for the use of this Edition of the OM Code. This document will outline those requirements and how they will affect the IST Program at South Texas Project.

2.1 Pump Exclusions

OM Code Subsection ISTB excludes the following from the IST Program:

- Pump drivers, except where the pump and the driver form an integral unit and the pump bearings are in the driver, and
- Pumps that are supplied with emergency power solely for operating convenience.
- Skid-mounted pumps that are tested as part of the major component and are justified by the Owner to be adequately tested.

STP also allows exemptions using UFSAR Chapter 13.7, Risk-Informed Special Treatment Requirements. (ML012040470).

2.2 Valve Exemptions

OM Code Subsection ISTC exempts the following from the IST Program:

- Valves used only for:
  - operating convenience (such as vents, drains, instrument and test valves),
  - system control (such as pressure regulating valves),
  - system or component maintenance, and
  - skid-mounted valves that are tested as part of the major component and are justified by the Owner to be adequately tested.
- External control and protection systems responsible for sensing plant conditions and providing signals for valve operation

STP also allows exemptions using UFSAR Chapter 13.7, Risk-Informed Special Treatment Requirements. (ML012040470).

2.3 Safe Shutdown Condition

In NUREG-1482, Rev.3, the NRC recognizes that some plants are licensed for a safe shutdown condition of hot standby or hot shutdown rather than cold shutdown. In some instances, the equipment needed to achieve cold shutdown may not be classified as safety related or subject to a Quality Assurance Program. The NRC has acknowledged that the scope may be limited to those components credited to achieve the safe shutdown condition in the plant safety analyses. If the plant was not licensed to cold shutdown, then the program should identify that the plant is not designed to the safe shutdown condition of cold shutdown and may limit the inclusion of components accordingly. The South Texas Project is licensed on the basis that a safe shutdown is the hot standby condition.

UFSAR Section 5.4 demonstrates that STP has the capability to achieve cold shutdown using only safety grade equipment. However, this capability and the equipment functions to bring the plant to cold shutdown are considered to be outside the scope of the IST program. Additionally, while the specific components needed to bring the plant to cold shutdown have been designed and installed as ASME equipment with applicable quality assurance requirements, only those which have an accident mitigation function have been included in the present IST program.

2.4 Special Treatment Exemption for IST Program (ML012040470)

STP has been granted an exemption from Inservice Testing Requirements of the ASME OM Code for GQA low risk and non-risk significant components. Once these pumps and valves were removed from the regulatory IST program, reasonable confidence must be maintained that these components will continue to satisfy their design functional requirements when demanded. A reference to the reasonable confidence evaluation has been included in the IST Bases Document for each applicable pump or valve. Additions to the IST Scope, based on changes in the risk significance ranking, will be controlled by the Comprehensive Risk Management and Inservice Testing Program procedure at STP. Scope additions will be added to the IST Program in a timely manner and testing requirements will commence from the time the component is added to the program.

3.0 METHOD OF EVALUATING COMPONENTS

The UFSAR, Technical Specifications, and the system design basis documents were reviewed to determine which systems include components that encompass system safety requirements defined in 10 CFR 50 as well as component functions required in response to the abnormal operational transients and accidents defined in the UFSAR. This review was not limited to the postulated accidents of Chapter 15.

Each system was reviewed in the following manner:

3.1 The Piping & Instrument Diagram (P&ID) for each system was reviewed to identify the system pumps and valves that perform a specific function in shutting down a reactor to the safe shutdown condition, maintaining the safe shutdown condition, or in mitigating the consequences of an accident.

3.2 Each component was reviewed against the ASME OM Code, IST exempted criteria and UFSAR Chapter 13.7, Risk-Informed Special Treatment Requirements. (ML012040470).

3.3 If exempted, the Bases Document was reviewed to ensure that the component was included in the exclusion list and that the basis for exclusion was correct.

3.4 If not exempted, the UFSAR and the applicable system DBD were reviewed to determine the safety function performed by the component in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition, or in mitigating the consequences of an accident. The following information was then verified to be correct in the IST Program Plan and Bases Document:

a. Component specific data such as valve category, code class, valve type, P&ID coordinates, etc.

b. Safety function performed by the component and its bases,

c. Code required tests to assess the operational readiness of the component to ensure it can perform its intended function,

d. Applicable cold shutdown justifications, refueling outage justifications, or relief requests, and

e. References used to develop the above items.

4.0 INSERVICE TESTING OF PUMPS

The IST Pump List identifies each pump to be tested in accordance with the requirements of the OM Code. The IST Pump List, Attachments 1 and 2 to the Program Plan, is provided in a table format and contains the following specific information about each pump:

- Pump name and TPNS number
- ASME Code class
- Pump Group (A, or B)
- P&ID grid coordinates
- Inservice tests required (A, B, or Comprehensive)
- Inservice test parameters
- Test interval
- Applicable relief requests
- Applicable remarks

All pumps operate at greater than or equal to 600 RPM (GE600) and operate at fixed speed except for the variable speed turbine driven auxiliary feedwater pumps.

Pump test parameters will be abbreviated as follows:

N	Speed
dP	Differential Pressure
P	Discharge Pressure
Q	Flow Rate
V	Vibration

Pump test types will be abbreviated as follows:

A	Quarterly Group A Test. If quarterly full flow testing is possible, then the Group A test may be performed per Code Case OMN-18 and Relief Request PRR-01.
B	Quarterly Group B Test
CPT	Biennial Comprehensive Pump Test
App-V	Appendix V Pump Test

4.1 Pump Reference Values

Pump reference values shall be:

- Determined from the results of pre-service tests or from the results of the first inservice test following maintenance that could affect the pump reference values.
- Established only when the pump is known to be operating acceptably.
- Established at a point(s) of operation (reference point) readily duplicated during subsequent tests.
- Established in a region(s) of relatively stable pump flow.
- Established within ±20% of design flow when performing a Comprehensive test OR Group A test, in lieu of a Comprehensive test per the guidelines provided in Code Case OMN-18 and relief request PRR-01.

When a reference value or set of values may have been affected by repair, replacement, or routine servicing of a pump, a new reference value or set of values are determined or the previous value reconfirmed by an Inservice test run before declaring the pump operable. Deviations between the previous and new set of reference values are evaluated and verification that the new values represent acceptable pump operation are placed in the record of tests.

If it is necessary or desirable, for some reason other than the above paragraph, to establish an additional set of reference values, an Inservice test is run at the conditions of an existing set of reference values and the results analyzed. If operation is acceptable, an additional set of reference values may be determined from the preservice test curve established for the pump. A test is run to verify the new reference values before their implementation. The reasons for establishing a new set of reference values is justified and documented in the record of tests.

4.2 Inservice Tests

Inservice tests shall be conducted with the pump operating at a specified reference point. The test parameters for the associated test shall be determined and recorded and all deviations from the reference values shall be compared to the established ranges and corrective action taken as required.

4.3 Pump Relief Requests

Relief from the requirements of the OM Code shall be requested where full compliance with the Code will not be achieved. Relief requests are submitted to the NRC for approval pursuant to the requirements of 10 CFR 50.55a. Guidelines for preparation of relief requests are provided in NEI White Paper, Entitled “Standard Format for Requests from Commercial Reactor Licensees Pursuant to 10 CFR 50.55a”, Rev. 1, dated June 2004. These guidelines are available as ADAMS Accession # ML070100400.

Relief is requested in accordance with:

- 10 CFR 50.55a(f)(6)(i), Impractical IST Requirements: Granting of relief
- 10 CFR 50.55a(h)(3)(z), Alternatives to codes and standards requirements
- 10 CFR 50.55a(h)(3)(z)(1), Acceptable level of quality and safety or
- 10 CFR 50.55a(h)(3)(z)(2), Hardship without a compensating increase in quality and safety
- 10 CFR 50.55a(f)(5)(iii), Inservice Testing Impracticality Notification

The following information should be provided in the request for relief:

- ASME Code Component(s) Affected,
- Component Function,
- Applicable Code Edition and Addenda
- Applicable Code Requirement,
- Reason for Request
- Proposed Alternative and Basis for Use,
- Duration of Proposed Alternative, and
- Precedents

Relief requests are to be numbered as follows:

- PRR-xx, where PRR is the acronym for pump relief request and xx is the sequential number.

Attachment 5 contains the relief requests applicable to the IST Pump List.

Relief Request PRR-02, Code Case OMN-16 Revision 2, "Use of a Pump Curve for Testing" was withdrawn on May 7, 2020 following issuance of Regulatory Guide 1.192, 'Operation and Maintenance Code Case Acceptability, ASME OM Code' Revision 3 on April 15, 2020, which approved used of the Code Case without conditions. (Ref. 19-291-17)

5.0 INSERVICE TESTING OF VALVES

The IST Valve List identifies each valve to be tested in accordance with the requirements of the OM Code. The IST Valve List, Attachments 6 and 7 to the Program Plan, is provided in a table format and contains the following specific information about each valve:

- The P&ID that shows the associated system valves
- Valve ID (TPNS number) for each valve to be tested
- ASME code class for the valve
- P&ID grid coordinates
- IST valve category and designation of its active/passive status
- Valve size
- Type of valve
- Valve actuator
- Valve position during normal plant operation
- Fail-safe position of the valve
- Code required tests
- Applicable cold shutdown justifications, refueling outage justifications, and relief requests
- Procedures that perform the tests

5.1 Valve Categories

Category A - valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their required safety function.

Category B - valves for which seat leakage in the closed position is inconsequential for fulfillment of the required safety function.

Category C - valves that are self-actuating in response to some system characteristic, such as pressure (relief valves) or flow direction (check valves) for fulfillment of the required safety function.

Category D - valves that are actuated by an energy source capable of only one operation, such as rupture disks or explosively actuated valves.

Valves within the scope of the OM Code shall be placed in one or more of the above valve categories. When more than one distinguishing category characteristic is applicable, all requirements of each individual category are applicable, although duplication or repetition of common testing requirements is not necessary.

5.2 Active/Passive Status

Active Valves - valves that are required to change obturator position to accomplish their required safety function.

Passive Valves - valves that maintain obturator position and are not required to change obturator position to accomplish their required safety function.

A valve's status may vary based on the operating/safety function of the valve. Valves that are temporarily removed from service or removed from its safety position for a short period of time, such as manually opening a sample valve to take a sample, while maintaining administrative control over the valve should not be considered active valves. The position of passive valves may be changed without imposing IST requirements on the valve during operating plant modes that do not require a passive valve to be maintained in its safety position. Valves that are routinely repositioned during power operation shall be categorized as an active valve. Valves that are repositioned to create a new valve alignment may require an evaluation to consider the impact on the IST Program prior to alignment to ensure operational readiness. These valves should be evaluated on a case by case basis.

5.3 Reference Values

Valve reference values shall be determined from the results of preservice tests or from the results of the first inservice test. These tests shall be performed under conditions as near as possible to those expected during subsequent inservice testing. Reference values shall be established only when the valve is known to be operating acceptably. If the particular parameter being measured can be significantly influenced by other related conditions, then these conditions shall be analyzed.

When a valve or its control system has been replaced, repaired, or has undergone routine maintenance that could affect the valve's performance, a new reference value shall be determined or the previous value reconfirmed by an inservice test run before it is returned to service or immediately if it is not removed from service. Deviations between the previous and new set of reference values shall be evaluated and verification that the new values represent acceptable operation shall be placed in the record of tests.

If it is necessary or desirable, for some reason other than the above paragraph, to establish an additional set of reference values, an inservice test shall be run at the conditions of an existing set of reference values, or if impractical, at the conditions for which the new reference values are required, and the results analyzed. If operation is acceptable, a second test shall be performed under the new conditions as soon as possible and the results of the second test shall establish the additional reference values. The reasons for establishing an additional set of reference values shall be justified and documented in the record of tests.

5.4 Category A and B Required Tests

5.4.1 Valve Position Verification

Valves with remote position indicators shall be observed locally at least once every 2 years (except where extended for MOVs per Appendix III) to verify that valve operation is accurately indicated. Where possible, this local observation should be supplemented by other indications such as flow or other suitable instrumentation to verify obturator position. Where local observation is not possible, other indications shall be used for verification of valve operation.

10 CFR 50.55a paragraph (b)(3)(xi) Condition states: licensees shall verify that valve operation is accurately indicated by supplementing valve position indicating lights with other indications, such as flow meters or other suitable instrumentation, to provide assurance of proper obturator position – now a requirement for all valves with indicating lights. Obturator tests (OVO and OVC) have been added to the test program to satisfy this NRC Condition imposed on ISTC-3700.

5.4.2 Valve Exercise Test

Active Category A and B valves (with the exception of manual valves and MOVs, except those HSSC MOVs that can be stroked quarterly) shall be full stroke exercised nominally every 3 months during plant operation to the position required to fulfill their safety function. If full-stroke exercising during plant operation is not practical, the valve may be full-stroke exercised during cold shutdown. If it is not practical to full-stroke exercise at cold shutdown, the valve may be full-stroke exercised during refueling outages. Certain valves may be exercised or tested during specific system outage windows called Extended Allowed Outage Times (EAOT). Testing of these valves will be at a refueling cycle frequency which will ensure component operability while minimizing safety system unavailability.

Valves that are full-stroke exercised at cold shutdown shall be exercised at a cold shutdown frequency unless the period of time since the previous full-stroke exercise is less than 3 months.

Valve exercising during cold shutdown shall commence within 48 hours of achieving cold shutdown and continue until all testing is complete or the plant is ready to return to power. For extended outages, testing need not be commenced in 48 hours provided all valves required to be tested during cold shutdown will be tested before plant startup; however, it is not the intent of Subsection ISTC to keep the plant in cold shutdown solely to complete cold shutdown testing. Cold shutdown justifications (CSJ) shall document the basis for deferring the required exercise test to a cold shutdown frequency.

All valve testing required to be performed during a refueling outage shall be completed before returning the plant to operation. Refueling outage justifications (ROJ) shall document the basis for deferring the required exercise test to a refueling outage frequency.

Whenever valve testing is practicable during normal operations but only if train or equipment outage is of sufficient duration that a refueling cycle justification is acceptable, then with the approval of the Nuclear Regulatory Commission testing can be performed during extended allowed outages. Refueling cycle justifications (RCJ) shall document the basis for deferring the required testing to a refueling cycle frequency.

Manual Valves

Manual valves within the IST program scope that perform an active safety function shall be exercised through a complete cycle at least once every 2 years. Exercise testing shall be considered acceptable if valve stem travel exhibits unrestricted movement with no abnormal resistance or binding through one complete cycle. Where practical, process parameters may be utilized to verify obturator movement. However, where process parameters are utilized to verify obturator movement it is not necessary to be performed simultaneous to manual exercising. This testing methodology is consistent with the discussion provided in NUREG-1482, Rev.3, Section 4.4.3. If a valve fails to exhibit the required change of obturator position, the valve shall immediately be declared inoperable.

The use of a valve persuader (cheater) for additional mechanical advantage will not invalidate the test, as it is recognized that larger valves may exhibit increased packing friction and/or increased friction associated with the disk to seat interface. In addition, a valve persuader may be used for personnel safety depending on a valve's service application (e.g. Main Steam).

5.4.3 Stroke Time Measurement

For MOVs governed by Appendix III of the 2012 Edition of the OM Code, only the valves with design requirements associated with the TS listed specified times will be stroke time tested. These times are listed in the UFSAR (Table 16.1-1, Containment Isolation Valves). Other times may come from the UFSAR credited closure or opening of the MOVs. Any closure requirements not shown in UFSAR Table 16.1-1 will be verified during diagnostic testing of the MOV.

For power-operated valves (except MOVs), the full-stroke time shall be measured to at least the nearest second.

The acceptance criteria for the full stroke of power operated valves (except MOVs) will be in accordance with the values specified in the following paragraphs of the OM Code:

- ISTC-5114, Power Operated Relief Valves
- ISTC-5132, Pneumatically Operated Valves
- ISTC-5142, Hydraulically Operated Valves
- ISTC-5152, Solenoid-Operated Valves

10 CFR 50.55a (b)(3)(ii)(D) adds a Condition stating “When applying Paragraph III–3600, "MOV Exercising Requirements," of Appendix III to the ASME OM Code, licensees shall verify that the stroke time of MOVs specified in plant technical specifications satisfies the assumptions in the plant's safety analyses”, consequently, the TS will dictate the stroke time frequency. Additionally, CS and RFO justifications will no longer be required, unless a High Risk Significant MOV cannot be stroked quarterly.

Motor Operated Valve Testing requirements have been removed from ISTC and all MOV testing is performed in accordance with Appendix III. Quarterly stroke time testing has been eliminated, refer to Appendix III.

The limiting values of full stroke times of each power operated valve will be determined by multiplying the acceptance criteria percent allowable change by a factor of two. The limiting values of full stroke times shall in no case exceed any design basis stroke time value.

Rapid acting valves are valves with stroke times of two seconds or less and are exempted from the comparison to a reference value requirement of the OM Code. Stroke times for rapid acting valves are compared to the stroke time acceptance criteria and limiting value of two seconds.

STPEGS has adopted the use of Mandatory Appendix III for Active MOVs previously in the OMN-1 program. For MOVs within the Appendix III program, stroke times and position indication will also fall under the requirement of Appendix III and 10 CFR 50.55a(b)(3)(ii)(D). Testing frequencies for the diagnostic tests, indicated as App3 in Attachments 6 and 7, are specified in 0PSP11-ZE-0006, ‘MOV IST Margin and Test Frequency Determination’.

5.4.4 Fail-Safe Test

Active and passive Category A and B valves with fail-safe actuators shall be tested by observing the operation of the actuator upon loss of valve actuating power at least every 3 months during plant operation. At STP valves with fail- safe actuators are designed such that remote valve operation during the exercise test removes actuator power from the valve. This method of testing valves with fail-safe actuators is consistent with the requirements of the OM Code.

5.4.5 Seat Leakage Rate Test

Active and passive Category A valves shall be seat leakage tested per the requirements of ISTC-3600 of the OM Code. Valve closure prior to seat leakage testing shall be by using the valve operator with no additional closing force applied. Valves that are identified in the UFSAR as containment isolation valves (CIV) and are subject to 10CFR50 Appendix J Type C Leakage Tests shall be listed as Category A valves and included in the IST Program. Valves that are identified in Technical Specifications as pressure isolation valves (PIV) shall be listed as Category A valves and included in the IST Program.

Pressure Isolation Valves

These valves provide a boundary/interface between high pressure and low-pressure systems and shall be seat leakage tested at least once every 2 years. The seat leakage rate for PIVs shall be per the Reactor Coolant System leakage limits specified in the plant Technical Specifications.

Containment Isolation Valves

Category A CIVs shall be seat leakage tested to verify their leak-tight integrity per the frequency, testing methods and leakage rate requirements of 10CFR50, Appendix J, Option B.

5.5 Category C Required Tests

5.5.1 Check Valve Exercise Test

Active Category C check valves shall be exercised nominally every 3 months during plant operation per the requirements of ISTC-3522 of the OM Code. During operation at power, each check valve shall be exercised or examined in a manner that verifies obturator travel using methods provided in ISTC-5221. Check valves that have a safety function in both the open and close directions shall be exercised by initiating flow and observing that the obturator has traveled to either the full open position or to the position required to perform its intended function(s), and verify that on cessation or reversal of flow, the obturator has traveled to the seat.

Check valves that have a safety function in only the open direction shall be exercised by initiating flow and observing that the obturator has traveled either the full open position or to the position required to perform its intended function(s), and verify closure. Check valves that have a safety function in only the close direction shall be exercised by initiating flow and observing that the obturator has traveled at least the partially open position, and verify that on cessation or reversal of flow, the obturator has traveled to the seat. Observations shall be made by observing a direct indicator (e.g., a position-indicating device) or by other positive means (e.g., changes in system pressure, flow rate, level, temperature, seat leakage, testing, or nonintrusive testing results).

Valves that are full-stroke exercised at cold shutdown shall be exercised at each cold shutdown unless the period of time since the previous full-stroke exercise is less than 3 months. Valve exercising during cold shutdown shall commence within 48 hours of achieving cold shutdown and continue until all testing is complete or the plant is ready to return to power. For extended outages, testing need not be commenced in 48 hours provided all valves required to be tested during cold shutdown will be tested before plant startup; however, it is not the intent of Subsection ISTC to keep the plant in cold shutdown solely to complete cold shutdown testing. Cold shutdown justifications (CSJ) shall document the basis for deferring the required exercise test to a cold shutdown frequency.

All valve testing required to be performed during a refueling outage shall be completed before returning the plant to operation. Refueling outage justifications (ROJ) shall document the basis for deferring the required exercise test to a refueling outage frequency.

Whenever valve testing is practicable during normal operations but only if train or equipment outage is of sufficient duration that a refueling cycle justification is acceptable, then with the approval of the Nuclear Regulatory Commission testing can be performed during extended allowed outages. Refueling cycle justifications (RCJ) shall document the basis for deferring the required testing to a refueling cycle frequency.

5.5.2 Check Valve Exercise Test Using System Flow

A check valve's full-stroke exercise to the open position may be verified by passing the maximum required accident condition flow through the valve. Any flow rate less than this will be considered a partial-stroke exercise; although, partial stroke exercising is no longer a Code requirement for check valves. A valid full-stroke exercise by flow also requires that the flow through the valve be known. Knowledge of only total flow through multiple parallel lines does not provide verification of flow rates through the individual valves and is not a valid full-stroke exercise.

The necessary valve obturator movement shall be demonstrated by exercising the valve and observing that either the obturator travels to the seat upon cessation or reversal of flow or opens to the position required to fulfill its function. Both an open and close exercise test shall be performed.

Full flow testing of a check valve is the preferred method for testing however, it may be impractical to perform for certain valves. It is possible to qualify other positive means and techniques to confirm that the valve is exercised to the position required to perform its safety function. As an alternative to full flow testing, ISTC-5221(c) provides the guidelines for implementing a sample disassembly and examination program. As stated in NUREG-1482, Rev.3, Section 4.1.2, the NRC recognizes a non-intrusive testing program as an acceptable alternative to the full flow exercise testing. However, if the recommended alternative methods are implemented, the method used for testing and implementation must be described in the IST Program document.

5.5.3 Check Valve Exercise Test Using a Non-intrusive Testing Program

Some check valves in the IST Program will be tested using non-intrusive testing techniques as an alternate method of verifying check valve full-stroke open capabilities and operational readiness at less than the accident flow rate. Non- intrusive testing techniques may be used in a sampling plan such that similar valves in the same service condition are grouped for testing purposes. The check valves in the sample program are separated into groups to include valves that are of the same design manufacturer, size, model number, and materials of construction, that have the same service condition, and that have the same valve orientation.

During the initial test of all valves within the group identified per previous paragraph, non-intrusive testing will be used to verify that the system pressures and flow conditions specified in the test procedures cause the valves to fully stroke to the required safety function position. During subsequent testing, if the system conditions are repeatable, each valve will be considered to be fully stroked; Under the sampling program, one valve in the group would be non- intrusively tested and the balance of the group would be flow tested each time testing is required. If problems are found with the sample valve that are determined to affect the operational readiness of the valve, all valves in the group must be tested using non-intrusive techniques during the same test cycle. Any failures require disassembly and inspection of the failed valve and an engineering evaluation for continuing non-intrusive testing.

Some check valves in the IST Program will be tested using non-intrusive testing techniques as an alternate method of verifying check valve closure capabilities and operational readiness. Nonintrusive testing techniques may be used in a sampling plan such that similar valves in the same service condition are grouped for testing purposes.

The check valves in the sample program are separated into groups to include valves that are of the same design manufacturer, size, model number, and materials of construction, that have the same service condition, and that have the same valve orientation. Each valve within the group has to be tested satisfactory before extending the test interval.

5.5.4 Check Valve Exercise Test Using a Disassembly and Inspection Program

Where non-intrusive verification of check valve exercise to the intended safety function (open and/or closed) is not practicable, check valves will require disassembly and inspection during refueling outages or on a refueling cycle frequency to prove operational readiness. The refueling outage justifications are included in the plan, as appropriate, to document the effected valves. To minimize the number of check valves that are disassembled during refueling outages a Check Valve Sample Disassembly and Inspection Program has been implemented. The check valves in the sample program are separated into groups to include valves that are of the same design manufacturer, size, model number, and materials of construction, that have the same service condition, and that have the same valve orientation.

At each disassembly the full-stroke capability of the valve being tested shall be verified by manually exercising the valve disc to the full open and closed position and the internals inspected to verify that the valve is structurally sound with no loose or corroded parts. If the disassembled valve is unable to be full-stroke exercised for any reason an evaluation shall be conducted to determine if the failure is of a generic nature that would affect operational readiness of the other valves in that group. If affected, the remaining valves in the group shall be disassembled, inspected, and manually full-stroke exercised.

5.5.5 Check Valve Condition Monitoring

As an alternative to the check valve testing requirements described above, IST- 5222 of the OM Code allows owners to establish a condition monitoring program. The requirements for a check valve condition monitoring program are described in Mandatory Appendix II of the OM Code. The process controls for the Check Valve Condition Monitoring Program are detailed in plant general procedure 0PGP03-ZE-0016.

5.5.6 Safety and Relief Valve Required Tests

Appendix I of the OM Code establishes different test frequencies and sample number for Class 1, 2, and 3 safety/relief valves. Periodic testing of all pressure relief devices is required. No maintenance, adjustment, disassembly, or other activity that could affect the "as-found" set-pressure or seat tightness data is permitted. When on-line testing is performed to satisfy periodic testing requirements the visual examination may be performed out of sequence.

Class 1 Pressure Relief Valves

A 5-year test interval for periodic testing shall be established. No maximum limit is specified for the number of valves to be tested within each interval. A minimum of 20% of the valves from each valve group shall be tested within any 24-month interval. This 20% shall consist of valves that have not been tested during the current 5-year interval, if they exist. The test interval for any valve shall not exceed 5 years.

For Class 1 Safety Valves, tests before maintenance or set-pressure adjustment, or both, shall be performed for a, b, and c in sequence. The remaining tests shall be performed in sequence after maintenance or set-pressure adjustment.

a. Visual examination

b. Seat tightness determination, if practical

c. Set-pressure determination

d. Determination of operation and electrical characteristics of bellows alarm switch

e. Determination of integrity of the balancing device on balanced valves

f. Determination of operation and electrical characteristics of position indicators

g. Determination of compliance with Owner's seat tightness criteria

Class 2 and 3 Pressure Relief Valves

A 10-year test interval for periodic testing, with the exception of the Main Steam Safety Valves, shall be established. No maximum limit is specified for the number of valves to be tested within any single plant operating cycle. A minimum of 20% of the valves from each valve group shall be tested within any 48-month interval. This 20% shall consist of valves that have not been tested during the current 10-year interval, if they exist. The test interval for any valve shall not exceed 10 years. The Main Steam Safety valves shall be tested per the requirements of Class 1 Pressure Relief valves.

For Class 2 and 3 Main Steam Safety Valves, tests before maintenance or set-pressure adjustment, or both, shall be performed for a, b, and c in sequence. The remaining tests shall be performed in sequence after maintenance or set-pressure adjustment.

a. Visual examination

b. Seat tightness determination, if practical

c. Set-pressure determination

d. Determination of compliance with seat tightness criteria

e. Verification of the integrity of the balancing device on balanced valves

For other Class 2 and 3 Pressure Relief Valves, tests before maintenance shall be performed for a, b, and c in sequence. The remaining tests shall be performed in sequence after maintenance or set-pressure adjustment.

a. Visual examination

b. Seat tightness determination, if practical

c. Set-pressure determination

d. Determination of compliance with seat tightness criteria

e. Verification of the integrity of the balancing device on balanced valves

Requirements for Testing Additional Valves

If the as-found set-pressure exceeds the greater of either the owner's set-pressure acceptance criteria or +/- 3% of the valve nameplate set-pressure, then two additional valves shall be tested from the same valve group. If any additional valve exceeds the above limits, all remaining valves in the group shall be tested. The cause and effect of valves to comply with the set-pressure acceptance criteria or the acceptance criteria for other required tests shall be evaluated. Based upon this evaluation the need for testing in addition to the minimum required tests shall be determined to address any generic concerns which could apply to valves in the same or other valve groups.

Class 2 and 3 Pressure Relief Devices in a Thermal Relief Application

Tests shall be performed on all Class 2 and 3 relief valves used in a thermal relief application every 10 years, unless performance data indicate more frequent testing is necessary. In lieu of tests, the relief devices may be replaced every 10 years, unless performance data indicate more frequent testing is necessary. Percentage of valves requiring tests and scope expansion, subsequent to failure, do not apply. This is allowed per OM Code, Appendix I, Paragraph I-1390.

5.6 Justifications and Relief Requests

5.6.1 Cold Shutdown Justification (CSJ)

The OM Code permits the delay of valve testing that is impractical during power operation to be performed at cold shutdown. Justification for the delay of testing to the cold shutdown frequency shall be documented using a CSJ. Approval by the NRC of the CSJs is not required; however, they will be reviewed by the NRC as an integral part of the plan submittal.

The CSJ shall be formatted to contain the following information:

- Cold shutdown justification number
- System name and designation
- Valve identification number
- Valve category
- Valve function
- Deferred testing requirements
- Justification for deferred testing, and
- Alternate testing

CSJs shall be ordered numerically using the following methodology and sequentially numbered as follows:

- CSJ-xx, where CSJ is the acronym for cold shutdown justification and xx is the sequential number.

Attachment 12 contains the CSJs that are applicable to the IST Valve List.

5.6.2 Refueling Outage Justification (ROJ)

The OM Code permits the delay of valve testing that is impractical during power operation or cold shutdown to be performed at each refueling. Justification for the delay of testing to the refueling frequency shall be documented using a ROJ. Approval by the NRC of the ROJs is not required; however, they will be reviewed by the NRC as an integral part of the plan submittal.

The ROJ are formatted to contain the following information:

- Refueling outage justification number
- System name and designation
- Valve identification number
- Valve category
- Valve function
- Deferred testing requirements
- Justification for deferred testing, and
- Alternate testing

ROJs are ordered numerically using the following methodology and sequentially numbered as follows:

- ROJ-xx, where ROJ is the acronym for refueling outage justification and xx is the sequential number

Attachment 13 contains the ROJs that are applicable to the IST Valve List.

5.6.3 Condition Monitoring Plans

As an alternative to examination and testing of the OM Code, ISTC-5222 allows the implementation of a check valve condition monitoring program. The guidelines provided in Appendix II of the OM Code requires that condition monitoring test plans to document the optimized condition monitoring program activities and the associated intervals be included in plant documentation.

The condition monitoring plans identified in the IST Plan are derived from advisory panel deliberations. These plans describe the testing plan for each IST check valve group that is included in the Check Valve Condition Monitoring Program. The Condition Monitoring Plan shall be formatted to contain the following information:

- Condition Monitoring Plan number
- CM Plan revision
- System designator
- IST Group and Check Valve Group number
- Valves in the IST Group
- Valve function
- Importance remarks
- Condition monitoring discussion including Failure patterns, expected failure modes, and past failure causes
- Condition monitoring testing requirements
- Test frequency description

Condition Monitoring Plans shall be ordered alpha-numerically using the following methodology and sequentially numbered as follows:

- CM-XX00, where CM is the acronym for condition monitoring and XX00 is the IST valve group number. (XX is system and 00 is a numerical sequence number)

Attachment 14 contains the Condition Monitoring Plans that are applicable to the IST Valve List.

5.6.4 Valve Relief Requests

Relief from the requirements of the OM Code shall be requested where full compliance with the code is not practical. Relief Requests are submitted per the requirements of 10CFR50.55a for approval by the NRC. Guidelines for preparation of relief requests are provided in NEI White Paper, entitled "Standard Format for Requests from Commercial Reactor Licensees Pursuant to 10 CFR 50.55a", Rev. 1, dated June 2004. These guidelines are provided in Attachment 1 of NUREG-1482, Rev. 3.

Relief is requested in accordance with:

- 10 CFR 50.55a(f)(6)(i), Impractical IST Requirements: Granting of relief
- 10 CFR 50.55a(h)(3)(z), Alternatives to codes and standards requirements
- 10 CFR 50.55a(h)(3)(z)(1), Acceptable level of quality and safety or
- 10 CFR 50.55a(h)(3)(z)(2), Hardship without a compensating increase in quality and safety

The following information should be provided in the request for relief:

- ASME Code Component(s) Affected
- Component Function
- Applicable Code Edition and Addenda
- Applicable Code Requirement
- Reason for Request
- Proposed Alternative and Basis for Use
- Duration of Proposed Alternative
- Precedents

Relief requests are to be numbered as follows:

- VRR-xx, where VRR is the acronym for valve relief request and xx is the sequential number.

No valve relief requests have been requested for this interval.

5.7 Valve List Symbols

Symbols Used to Designate Valve Type

Symbol	Meaning
3Way	Three Way
A	Angle
B	Butterfly
BL	Ball
CK	Check
D	Diaphragm
GL	Globe
GT	Gate
NDL	Needle
PL	Plug
PRV	Pressure Relief or Safety Valve
SCK	Stop Check

Symbols Used to Designate Actuator Type

Symbol	Meaning
AO	Air Operated
HO	Hydraulic Operated
M	Manually Operated
MO	Motor Operated
MOH	Motor Operated High Risk
MOH-C	Motor Operated High Risk Close Stroke Time
MOL	Motor Operated Low Risk
MOL-C	Motor Operated Low Risk Close Stroke Time
SA	Self-Actuated
SO	Solenoid Operated
LC	Locked Closed
O	Locked Open
NC	Normally Closed
NO	Normally Open
NT	Throttled or Controlling
C	Closed
O	Open
O/C	Open/Closed
FC	Fail Closed
FO	Fail Open
FAI	Fail As-Is

Symbols Used to Designate Test Requirements

Symbol	Meaning
BD-C	Bi-Directional Closed functionality test
BD-O	Bi-Directional Open functionality test
CV-C	Check Valve Closed exercise test
CV-O	Check Valve Open exercise test
DIAG	Diagnostic MOV test
ET-C	Exercise Test Closed (power operated valve)

Symbol	Meaning
ET-O	Exercise Test Open (power operated valve)
FS-C	Fail-Safe Closed test
FS-O	Fail-Safe Open test
LT	Leakage Test (other than Appendix J)
LTJ	Leakage Test Appendix J
OV-C	Obturator Verification Closed test
OV-O	Obturator Verification Open test
RPI	Remote Position Indication test
RV	Relief Valve test
ST-C	Stroke Time Closed test
ST-O	Stroke Time Open test

Test Frequencies

Symbol	Meaning
10Y	10 Years
2Y	2 Years
App3	Appendix III (MOV Program frequency)
AppJ	Appendix J (Option B frequency)
CM	Condition Monitoring (Appendix II frequency)
CS	Cold Shutdown frequency
Q	Quarterly frequency
R	Refueling Outage frequency

Symbols Used to Designate Valve Category

Symbol	Meaning
ML012040470	Risk Informed Special Treatment Requirement
A	Category A
A/C	Category A/C leak test and self-actuating
B	Category B
B/C	Category B/C Power Operated and self-actuating
BOP	Balance of Plant, Non-OM Code component
C	Category C
Exempt	Exempt Components (ISTA-1100/ISTB-1200/ISTC-1200)
Skid	Skid Mounted Components

6.0 PROGRAM IMPLEMENTATION

Program inservice tests required by the Code are implemented using the Surveillance Test Program or the Preventive Maintenance Program. The plant surveillance test program and procedures are used to identify the test method for verifying operational readiness of the component, to identify the frequency of the required tests, to establish plant conditions for performing component tests, and to document the results of component testing. The procedures act as the record of testing required by the OM Code.

The surveillance test procedures implement the requirements of the plant technical specifications. The IST procedures are integral part of the Surveillance Test Program and procedures. At times, testing of a component required by technical specifications will meet the intent of testing required by the IST Program. In this instance no additional testing of the component is required; however, the IST Program Bases Document must identify that the tests required by the plant technical specifications will be used to document the required testing of the IST Program.

6.1 Testing Skid Mounted Components

ISTB-1200(c) and ISTC-1200(b) address the acceptability of verifying the operational readiness of certain components and component subassemblies by means of testing the major component. STP will verify the operational readiness of certain valves and pumps by taking credit for the testing of the major component required by plant technical specifications. When credit is taken for testing of the major component, it will be identified as part of the required testing portion of the IST Program Bases Document. Further discussion pertaining to the testing skid-mounted components and component subassemblies is provided in NUREG-1482, Rev.3, Sections 3.4, Skid-Mounted Components and Component Subassemblies, and 4.1.10, Skid-Mounted Valves and Component Subassemblies.

6.2 Valve Normal Position

The normal position of system valves was determined by identifying the operational status of a system for plant 100% normal power operation. The normal position of the valve was established based on the position required to support plant 100% normal power operation.

6.3 Unit 1 and Unit 2 Designation

The IST Program Plan is written as a combined Unit 1 with Unit 2 document. Any differences between the units will be identified by the specific Unit 1 or Unit 2 designator.

6.4 Corrective Actions

As a result of the performed tests, any identified corrective actions and subsequent retests are made per the requirements of the OM Code, Technical Specifications, the Corrective Action Program, and the IST Repair and Replacement Program.

7.0 PROGRAM CONFIGURATION CONTROL

As a minimum the program will be reviewed and revised as necessary for compliance with the ASME Code in effect as referenced by 10CFR50.55a(f) 18 months prior to the end of the fourth 120-month interval of commercial operation. Additionally, the scope of the program is subject to revision due to changes in system design, changes in design that affect the component safety function, or revisions to the applicable code requirements. In order to accommodate these changes STP reserves the right to submit program revisions that will enhance or improve the program at any time within the effective interval.

8.0 PROGRAM ATTACHMENTS (Note: Revision in the attachments have not been annotated with revision bars. Due to extensive changes made, attachments changes are considered a general revision)

Attachment 1: Unit 1 ISTB Tested Pump List

Attachment 2: Unit 2 ISTB Tested Pump List

Attachment 3: ML012040470 Exempt Pump List

Attachment 4: ISTB Skid Tested Pump List

Attachment 5: Pump Relief Requests

Attachment 6: Unit 1 ISTC Tested Valve List

Attachment 7: Unit 2 ISTC Tested Valve List

Attachment 8: Unit 1 ML012040470 Exempt Valve List

Attachment 9: Unit 2 ML012040470 Exempt Valve List

Attachment 10: Unit 1 ISTC Skid Tested Valve List

Attachment 11: Unit 2 ISTC Skid Tested Valve List

Attachment 12, Cold Shutdown Justifications

Attachment 13: Refueling Outage Justifications

Attachment 14: Condition Monitoring Plans

ATTACHMENT 1: Unit 1 ISTB Tested Pump List

Pump ID	Component Description	Drawing / Coordinate	Group	Class	Pump Type	Test Type	Test Freq	Procedure	Notes
2N121NPA101A	HIGH HEAD SAFETY INJECTION PUMP 1A	5N129F05013#1 / F-4	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0042	
						Q	2Y	0PSP03-SI-0042	
						V	2Y	0PSP03-SI-0042	
						dP	Q	0PSP03-SI-0004	
						Q	Q	0PSP03-SI-0004	
2N121NPA101B	HIGH HEAD SAFETY INJECTION PUMP 1B	5N129F05014#1 / G-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0043	
						Q	2Y	0PSP03-SI-0043	
						V	2Y	0PSP03-SI-0043	
						dP	Q	0PSP03-SI-0005	
						Q	Q	0PSP03-SI-0005	
2N121NPA101C	HIGH HEAD SAFETY INJECTION PUMP 1C	5N129F05015#1 / F-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0044	
						Q	2Y	0PSP03-SI-0044	
						V	2Y	0PSP03-SI-0044	
						dP	Q	0PSP03-SI-0006	
						Q	Q	0PSP03-SI-0006	
2N121NPA102A	LOW HEAD SAFETY INJECTION PUMP 1A	5N129F05013#1 / C-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0039	
						Q	2Y	0PSP03-SI-0039	
2N121NPA102A	LOW HEAD SAFETY INJECTION PUMP 1A	5N129F05013#1 / C-3	B	2	Vertical Line Shaft Centrifugal	V	2Y	0PSP03-SI-0039	PRR-04
						dP	Q	0PSP03-SI-0001	
						Q	Q	0PSP03-SI-0001	
2N121NPA102B	LOW HEAD SAFETY INJECTION PUMP 1B	5N129F05014#1 / D-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0040	
						Q	2Y	0PSP03-SI-0040	
						V	2Y	0PSP03-SI-0040	PRR-04
						dP	Q	0PSP03-SI-0002	
						Q	Q	0PSP03-SI-0002	
2N121NPA102C	LOW HEAD SAFETY INJECTION PUMP 1C	5N129F05015#1 / C-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0041	
						Q	2Y	0PSP03-SI-0041	
						V	2Y	0PSP03-SI-0041	PRR-04
						dP	Q	0PSP03-SI-0003	
						Q	Q	0PSP03-SI-0003	
2R161NPA101A	RESIDUAL HEAT REMOVAL PUMP 1A	5R169F20000#1 / B-6	A	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-RH-0015	
						Q	2Y	0PSP03-RH-0015	
						V	2Y	0PSP03-RH-0015	PRR-04
						dP	6M	0PSP03-RH-0001	PRR-03
2R161NPA101A	RESIDUAL HEAT REMOVAL PUMP 1A	5R169F20000#1 / B-6	A	2	Vertical Line Shaft Centrifugal	Q	6M	0PSP03-RH-0001	PRR-03
						V	6M	0PSP03-RH-0001	PRR-03 / PRR-04
2R161NPA101B	RESIDUAL HEAT REMOVAL PUMP 1B	5R169F20000#1 / E-6	A	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-RH-0016	
						Q	2Y	0PSP03-RH-0016	
						V	2Y	0PSP03-RH-0016	PRR-04
						dP	6M	0PSP03-RH-0002	PRR-03
						Q	6M	0PSP03-RH-0002	PRR-03
						V	6M	0PSP03-RH-0002	PRR-03 / PRR-04
2R161NPA101C	RESIDUAL HEAT REMOVAL PUMP 1C	5R169F20000#1 / G-6	A	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-RH-0017	
						Q	2Y	0PSP03-RH-0017	
						V	2Y	0PSP03-RH-0017	PRR-04
						dP	6M	0PSP03-RH-0003	PRR-03
						Q	6M	0PSP03-RH-0003	PRR-03
						V	6M	0PSP03-RH-0003	PRR-03 / PRR-04
2R171NPA101A	CENTRIFUGAL CHARGING PUMP 1A	5R179F05007#1 / B-5	A	2	Centrifugal	dP	2Y	0PSP03-CV-0021	
						Q	2Y	0PSP03-CV-0021	
						V	2Y	0PSP03-CV-0021	PRR-04
						dP	Q	0PSP03-CV-0019	
						Q	Q	0PSP03-CV-0019	
R171NPA101A	CENTRIFUGAL CHARGING PUMP 1A	5R179F05007#1 / B-5	A	2	Centrifugal	V	Q	0PSP03-CV-0019	PRR-04
2R171NPA101B	CENTRIFUGAL CHARGING PUMP 1B	5R179F05007#1 / D-5	A	2	Centrifugal	dP	2Y	0PSP03-CV-0022	
						Q	2Y	0PSP03-CV-0022	
						V	2Y	0PSP03-CV-0022	PRR-04
						dP	Q	0PSP03-CV-0020	
						Q	Q	0PSP03-CV-0020	
						V	Q	0PSP03-CV-0020	PRR-04
3R201NPA101A	COMPONENT COOLING WATER PUMP 1A	5R209F05017#1 / B-7	A	3	Centrifugal	dP	Q	0PSP03-CC-0001	PRR-01
						Q	Q	0PSP03-CC-0001	PRR-01
						V	Q	0PSP03-CC-0001	PRR-01
3R201NPA101B	COMPONENT COOLING WATER PUMP 1B	5R209F05018#1 / B-7	A	3	Centrifugal	dP	Q	0PSP03-CC-0002	PRR-01
						Q	Q	0PSP03-CC-0002	PRR-01
						V	Q	0PSP03-CC-0002	PRR-01
3R201NPA101C	COMPONENT COOLING WATER PUMP 1C	5R209F05019#1 / B-7	A	3	Centrifugal	dP	Q	0PSP03-CC-0003	PRR-01
						Q	Q	0PSP03-CC-0003	PRR-01
						V	Q	0PSP03-CC-0003	PRR-01
3R211NPA101A	SPENT FUEL COOLING PUMP 1A	5R219F05028#1 / G-3	A	3	Centrifugal	dP	Q	0PSP03-FC-0002	PRR-01
						Q	Q	0PSP03-FC-0002	PRR-01
						V	Q	0PSP03-FC-0002	PRR-01 / PRR-04
3R211NPA101B	SPENT FUEL COOLING PUMP 1B	5R219F05028#1 / D-3	A	3	Centrifugal	dP	Q	0PSP03-FC-0003	PRR-01
						Q	Q	0PSP03-FC-0003	PRR-01
						V	Q	0PSP03-FC-0003	PRR-01 / PRR-04

ATTACHMENT 1: Unit 1 ISTB Tested Pump List

Pump ID	Component Description	Drawing / Coordinate	Group	Class	Pump Type	Test Type	Test Freq	Procedure	Notes
3R281NPA101A	ESSENTIAL COOLING WATER PUMP 1A	5R289F05038#1SH1 / C-3	A	3	Vertical Line Shaft Centrifugal	dP	Q	0PSP03-EW-0017	ISTB- 5000(b)
						Q	Q	0PSP03-EW-0017	ISTB-5000(b)
						V	Q	0PSP03-EW-0017	ISTB- 5000(b)
3R281NPA101B	ESSENTIAL COOLING WATER PUMP 1B	5R289F05038#1SH2 / C-3	A	3	Vertical Line Shaft Centrifugal	dP	Q	0PSP03-EW-0018	ISTB- 5000(b)
3R281NPA101B	ESSENTIAL COOLING WATER PUMP 1B	5R289F05038#1SH2 / C-3	A	3	Vertical Line Shaft Centrifugal	Q	Q	0PSP03-EW-0018	ISTB- 5000(b)
						V	Q	0PSP03-EW-0018	ISTB- 5000(b)
3R281NPA101C	ESSENTIAL COOLING WATER PUMP 1C	5R289F05038#1SH3 / C-3	A	3	Vertical Line Shaft Centrifugal	dP	Q	0PSP03-EW-0019	ISTB- 5000(b)
						Q	Q	0PSP03-EW-0019	ISTB- 5000(b)
						V	Q	0PSP03-EW-0019	ISTB- 5000(b)
3S141MPA01	MOTOR DRIVEN AUX FEEDWATER PUMP NO. 11	5S141F00024#1 / F-7	A	3	Centrifugal	dP	2Y	0PSP03-AF-0001	
						Q	2Y	0PSP03-AF-0001	
						dP	Q	0PSP03-AF-0001	PRR-01
						Q	Q	0PSP03-AF-0001	PRR-01
						V	Q	0PSP03-AF-0001	PRR-01 / PRR-04
3S141MPA02	MOTOR DRIVEN AUX FEEDWATER PUMP NO. 12	5S141F00024#1 / C-7	A	3	Centrifugal	dP	2Y	0PSP03-AF-0002	
						Q	2Y	0PSP03-AF-0002	
						dP	Q	0PSP03-AF-0002	PRR-01
						Q	Q	0PSP03-AF-0002	PRR-01
						V	Q	0PSP03-AF-0002	PRR-01
3S141MPA03 3S141MPA03	MOTOR DRIVEN AUX FEEDWATER PUMP NO. 13	5S141F00024#1 / B-7	A	3	Centrifugal	dP	2Y	0PSP03-AF-0003	
						Q	2Y	0PSP03-AF-0003	
						dP	Q	0PSP03-AF-0003	PRR-01
						Q	Q	0PSP03-AF-0003	PRR-01
						dP	Q	0PSP03-AF-0003	PRR-01
						Q	Q	0PSP03-AF-0003	PRR-01
						V	Q	0PSP03-AF-0003	PRR-01
3S141MPA04	TURBINE DRIVEN AUX FEEDWATER PUMP NO. 14	5S141F00024#1 / G-7	A	3	Centrifugal	dP	2Y	0PSP03-AF-0007	
						Q	2Y	0PSP03-AF-0007	
						dP	Q	0PSP03-AF-0007	PRR-01
						N	Q	0PSP03-AF-0007	PRR-01
						Q	Q	0PSP03-AF-0007	PRR-01
						V	Q	0PSP03-AF-0007	PRR-01 / PRR-04
3V111VPA004	ESSENTIAL CHILL WATER PUMP 11A	5V119V10001#1 / F-7	A	3	Centrifugal	dP	Q	0PSP03-CH-0001	PRR-01
						Q	Q	0PSP03-CH-0001	PRR-01
						V	Q	0PSP03-CH-0001	PRR-01 / PRR-04
3V111VPA005	ESSENTIAL CHILL WATER PUMP 11B	5V119V10001#1 / C-7	A	3	Centrifugal	dP	Q	0PSP03-CH-0002	PRR-01
						Q	Q	0PSP03-CH-0002	PRR-01
						V	Q	0PSP03-CH-0002	PRR-01 / PRR-04
3V111VPA006	ESSENTIAL CHILL WATER PUMP 11C	5V119V10001#1 / A-7	A	3	Centrifugal	dP	Q	0PSP03-CH-0003	PRR-01
						Q	Q	0PSP03-CH-0003	PRR-01
						V	Q	0PSP03-CH-0003	PRR-01 / PRR-04

ATTACHMENT 2: Unit 2 ISTB Tested Pump List

Pump ID	Component Description	Drawing / Coordinate	Group	Class	Pump Type	Test Type	Test Freq.	Procedure	Notes
2N122NPA201A	HIGH HEAD SAFETY INJECTION PUMP 2A	5N129F05013#2 / F-4	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0042	
						Q	2Y	0PSP03-SI-0042	
						V	2Y	0PSP03-SI-0042	
						dP	Q	0PSP03-SI-0004	
						Q	Q	0PSP03-SI-0004	
2N122NPA201B	HIGH HEAD SAFETY INJECTION PUMP 2B	5N129F05014#2 / G-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0043	
						Q	2Y	0PSP03-SI-0043	
						V	2Y	0PSP03-SI-0043	
						dP	Q	0PSP03-SI-0005	
						Q	Q	0PSP03-SI-0005	
2N122NPA201C	HIGH HEAD SAFETY INJECTION PUMP 2C	5N129F05015#2 / F-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0044	
						Q	2Y	0PSP03-SI-0044	
						V	2Y	0PSP03-SI-0044	
						dP	Q	0PSP03-SI-0006	
						Q	Q	0PSP03-SI-0006	
2N122NPA202A	LOW HEAD SAFETY INJECTION PUMP 2A	5N129F05013#2 / C-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0039	
						Q	2Y	0PSP03-SI-0039	
				2	Vertical Line Shaft Centrifugal	V	2Y	0PSP03-SI-0039	PRR-04
						dP	Q	0PSP03-SI-0001	
						Q	Q	0PSP03-SI-0001	
2N122NPA202B	LOW HEAD SAFETY INJECTION PUMP 2B	5N129F05014#2 / D-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0040	
						Q	2Y	0PSP03-SI-0040	
						V	2Y	0PSP03-SI-0040	PRR-04
						dP	Q	0PSP03-SI-0002	
						Q	Q	0PSP03-SI-0002	
2N122NPA202C	LOW HEAD SAFETY INJECTION PUMP 2C	5N129F05015#2 / C-3	B	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-SI-0041	
						Q	2Y	0PSP03-SI-0041	
						V	2Y	0PSP03-SI-0041	PRR-04
						dP	Q	0PSP03-SI-0003	
						Q	Q	0PSP03-SI-0003	
2R162NPA201A	RESIDUAL HEAT REMOVAL PUMP 2A	5R169F20000#2 / B-6	A	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-RH-0015	
						Q	2Y	0PSP03-RH-0015	
						V	2Y	0PSP03-RH-0015	PRR-04
						dP	6M	0PSP03-RH-0001	PRR-03
2R162NPA201A	RESIDUAL HEAT REMOVAL PUMP 2A	5R169F20000#2 / B-6	A	2	Vertical Line Shaft Centrifugal	Q	6M	0PSP03-RH-0001	PRR-03
						V	6M	0PSP03-RH-0001	PRR-03 / PRR-04
2R162NPA201B	RESIDUAL HEAT REMOVAL PUMP 2B	5R169F20000#2 / E-6	A	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-RH-0016	
						Q	2Y	0PSP03-RH-0016	
						V	2Y	0PSP03-RH-0016	PRR-04
						dP	6M	0PSP03-RH-0002	PRR-03
						Q	6M	0PSP03-RH-0002	PRR-03
						V	6M	0PSP03-RH-0002	PRR-03 / PRR-04
2R162NPA201C	RESIDUAL HEAT REMOVAL PUMP 2C	5R169F20000#2 / G-6	A	2	Vertical Line Shaft Centrifugal	dP	2Y	0PSP03-RH-0017	
						Q	2Y	0PSP03-RH-0017	
						V	2Y	0PSP03-RH-0017	PRR-04
						dP	6M	0PSP03-RH-0003	PRR-03
						Q	6M	0PSP03-RH-0003	PRR-03
						V	6M	0PSP03-RH-0003	PRR-03 / PRR-04
2R172NPA201A	CENTRIFUGAL CHARGING PUMP 2A	5R179F05007#2 / B-5	A	2	Centrifugal	dP	2Y	0PSP03-CV-0021	
						Q	2Y	0PSP03-CV-0021	
						V	2Y	0PSP03-CV-0021	PRR-04
						dP	Q	0PSP03-CV-0019	
						Q	Q	0PSP03-CV-0019	
						V	Q	0PSP03-CV-0019	PRR-04
2R172NPA201B	CENTRIFUGAL CHARGING PUMP 2B	5R179F05007#2 / D-5	A	2	Centrifugal	dP	2Y	0PSP03-CV-0022	
						Q	2Y	0PSP03-CV-0022	
						V	2Y	0PSP03-CV-0022	
						dP	Q	0PSP03-CV-0020	
						Q	Q	0PSP03-CV-0020	
						V	Q	0PSP03-CV-0020	
3R202NPA201A	COMPONENT COOLING WATER PUMP 2A	5R209F05017#2 / B-7	A	3	Centrifugal	dP	Q	0PSP03-CC-0001	PRR-01
						Q	Q	0PSP03-CC-0001	PRR-01
						V	Q	0PSP03-CC-0001	PRR-01
3R202NPA201B	COMPONENT COOLING WATER PUMP 2B	5R209F05018#2 / B-7	A	3	Centrifugal	dP	Q	0PSP03-CC-0002	PRR-01
						Q	Q	0PSP03-CC-0002	PRR-01
						V	Q	0PSP03-CC-0002	PRR-01
3R202NPA201C	COMPONENT COOLING WATER PUMP 2C	5R209F05019#2 / B-7	A	3	Centrifugal	dP	Q	0PSP03-CC-0003	PRR-01
						Q	Q	0PSP03-CC-0003	PRR-01
						V	Q	0PSP03-CC-0003	PRR-01
3R212NPA201A	SPENT FUEL COOLING PUMP 2A	5R219F05028#2 / G-3	A	3	Centrifugal	dP	Q	0PSP03-FC-0002	PRR-01
						Q	Q	0PSP03-FC-0002	PRR-01
						V	Q	0PSP03-FC-0002	PRR-01 / PRR-04
3R212NPA201B	SPENT FUEL COOLING PUMP 2B	5R219F05028#2 / D-3	A	3	Centrifugal	dP	Q	0PSP03-FC-0003	PRR-01
						Q	Q	0PSP03-FC-0003	PRR-01
						V	Q	0PSP03-FC-0003	PRR-01 / PRR-04
3R282NPA201A	ESSENTIAL COOLING WATER PUMP 2A	5R289F05038#2SH1 / C-3	A	3	Vertical Line Shaft Centrifugal	dP	Q	0PSP03-EW-0017	ISTB-5000(b)
						dP	Q	0PSP03-EW-0017	
						Q	Q	0PSP03-EW-0017	ISTB-5000(b)
						Q	Q	0PSP03-EW-0017	
						V	Q	0PSP03-EW-0017	ISTB- 5000(b)
						V	Q	0PSP03-EW-0017	PRR-04

ATTACHMENT 2: Unit 2 ISTB Tested Pump List

Pump ID	Component Description	Drawing / Coordinate	Group	Class	Pump Type	Test Type	Test Freq.	Procedure	Notes
3R282NPA201B	ESSENTIAL COOLING WATER PUMP 2B	5R289F05038#2SH2 / C-3	A	3	Vertical Line Shaft Centrifugal	dP	Q	0PSP03-EW-0018	ISTB-5000(b)
						dP	Q	0PSP03-EW-0018	
						Q	Q	0PSP03-EW-0018	ISTB-5000(b)
						Q	Q	0PSP03-EW-0018	
						V	Q	0PSP03-EW-0018	ISTB-5000(b)
						V	Q	0PSP03-EW-0018	PRR-04
3R282NPA201C	ESSENTIAL COOLING WATER PUMP 2C	5R289F05038#2SH3 / C-3	A	3	Vertical Line Shaft Centrifugal	dP	Q	0PSP03-EW-0019	ISTB-5000(b)
						dP	Q	0PSP03-EW-0019	
						Q	Q	0PSP03-EW-0019	ISTB-5000(b)
						Q	Q	0PSP03-EW-0019	
						V	Q	0PSP03-EW-0019	ISTB-5000(b)
						V	Q	0PSP03-EW-0019	PRR-04
3S142MPA01	MOTOR DRIVEN AUX FEEDWATER PUMP NO. 21	5S141F00024#2 / F-7	A	3	Centrifugal	dP	2Y	0PSP03-AF-0001	
						Q	2Y	0PSP03-AF-0001	
						dP	Q	0PSP03-AF-0001	PRR-01
						Q	Q	0PSP03-AF-0001	PRR-01
						V	Q	0PSP03-AF-0001	PRR-01
3S142MPA02	MOTOR DRIVEN AUX FEEDWATER PUMP NO. 22	5S141F00024#2 / C-7	A	3	Centrifugal	dP	2Y	0PSP03-AF-0002	
						Q	2Y	0PSP03-AF-0002	
						dP	Q	0PSP03-AF-0002	PRR-01
						Q	Q	0PSP03-AF-0002	PRR-01
						V	Q	0PSP03-AF-0002	PRR-01 / PRR-04
3S142MPA03	MOTOR DRIVEN AUX FEEDWATER PUMP NO. 23	5S141F00024#2 / B-7	A	3	Centrifugal	dP	2Y	0PSP03-AF-0003	
						Q	2Y	0PSP03-AF-0003	
						dP	Q	0PSP03-AF-0003	PRR-01
						Q	Q	0PSP03-AF-0003	PRR-01
						V	Q	0PSP03-AF-0003	PRR-01 / PRR-04
3S142MPA04	TURBINE DRIVE AUX FEEDWATER PUMP NO. 24	5S141F00024#2 / G-7	A	3	Centrifugal	dP	2Y	0PSP03-AF-0007	
						Q	2Y	0PSP03-AF-0007	
						dP	Q	0PSP03-AF-0007	PRR-01
						N	Q	0PSP03-AF-0007	PRR-01
						Q	Q	0PSP03-AF-0007	PRR-01
						V	Q	0PSP03-AF-0007	PRR-01
3V112VPA004	ESSENTIAL CHILL WATER PUMP 21A	5V119V10001#2 / F-7	A	3	Centrifugal	dP	Q	0PSP03-CH-0001	PRR-01
						Q	Q	0PSP03-CH-0001	PRR-01
						V	Q	0PSP03-CH-0001	PRR-01 / PRR-04
3V112VPA005	ESSENTIAL CHILL WATER PUMP 21B	5V119V10001#2 / C-7	A	3	Centrifugal	dP	Q	0PSP03-CH-0002	PRR-01
						Q	Q	0PSP03-CH-0002	PRR-01
						V	Q	0PSP03-CH-0002	PRR-01 / PRR-04
3V112VPA006	ESSENTIAL CHILL WATER PUMP 21C	5V119V10001#2 / A-7	A	3	Centrifugal	dP	Q	0PSP03-CH-0003	PRR-01
						Q	Q	0PSP03-CH-0003	PRR-01
						V	Q	0PSP03-CH-0003	PRR-01 / PRR-04

Attachment 3: ML012040470 Exempt Pump List

Pump ID/TPNS	Component Description	Drawing / Coordinates	Group	Class
2N101NPA101A	CONTAINMENT SPRAY PUMP 1A	5N109F05037#1 / G-3	ML012040470	2
2N101NPA101B	CONTAINMENT SPRAY PUMP 1B	5N109F05037#1 / D-3	ML012040470	2
2N101NPA101C	CONTAINMENT SPRAY PUMP 1C	5N109F05037#1 / B-3	ML012040470	2
3R171NPA103A	BORIC ACID TRANSFER PUMP 1A	5R179F05009#1 / D-4	ML012040470	3
3R171NPA103B	BORIC ACID TRANSFER PUMP 1B	5R179F05009#1 / C-4	ML012040470	3
3R281NPA102A	ECW SCREEN WASH BOOSTER PUMP 1A	5R289F05039#1 / D-7	ML012040470	3
3R281NPA102B	ECW SCREEN WASH BOOSTER PUMP 1B	5R289F05039#1 / D-4	ML012040470	3
3R281NPA102C	ECW SCREEN WASH BOOSTER PUMP 1C	5R289F05039#1 / D-2	ML012040470	3
2N102NPA201A	CONTAINMENT SPRAY PUMP 2A	5N109F05037#2 / G-3	ML012040470	2
2N102NPA201B	CONTAINMENT SPRAY PUMP 2B	5N109F05037#2 / D-3	ML012040470	2
2N102NPA201C	CONTAINMENT SPRAY PUMP 2C	5N109F05037#2 / B-3	ML012040470	2
3R172NPA203A	BORIC ACID TRANSFER PUMP 2A	5R179F05009#2 / D-4	ML012040470	3
3R172NPA203B	BORIC ACID TRANSFER PUMP 2B	5R179F05009#2 / C-4	ML012040470	3
3R282NPA202A	ECW SCREEN WASH BOOSTER PUMP 2A	5R289F05039#2 / D-7	ML012040470	3
3R282NPA202B	ECW SCREEN WASH BOOSTER PUMP 2B	5R289F05039#2 / D-4	ML012040470	3
3R282NPA202C	ECW SCREEN WASH BOOSTER PUMP 2C	5R289F05039#2 / D-2	ML012040470	3

Attachment 4: ISTB Skid Tested Pump List

Pump ID/TPNS	Component Description	Drawing / Coordinates	Group	Class
3Q151MAB0134	DIESEL #11 STANDBY JACKET WATER PUMP	5Q159F22540#1 / E-7	Skid	3
3Q151MAB0234	DIESEL #12 STANDBY JACKET WATER PUMP	5Q159F22540#1 / E-4	Skid	3
3Q151MAB0334	DIESEL #13 STANDBY JACKET WATER PUMP	5Q159F22540#1 / E-2	Skid	3
3Q151MPC0134	DIESEL #11 STDBY LUBE OIL PUMP	5Q159F22542#1 / E-7	Skid	3
3Q151MPC0234	DIESEL #12 STDBY LUBE OIL PUMP	5Q159F22542#1 / E-5	Skid	3
3Q151MPC0334	DIESEL #13 STDBY LUBE OIL PUMP	5Q159F22542#1 / E-2	Skid	3
3Q151MPU0134	DIESEL #11 LUBE OIL CIRCULATING PUMP	5Q159F22542#1 / E-7	Skid	3
3Q151MPU0234	DIESEL #12 LUBE OIL CIRCULATING PUMP	5Q159F22542#1 / E-5	Skid	3
3Q151MPU0334	DIESEL #13 LUBE OIL CIRCULATING PUMP	5Q159F22542#1 / E-2	Skid	3
3Q151MPX0134	DIESEL #11 STANDBY JACKET WATER CIRCULATING PUMP	5Q159F22540#1 / D-7	Skid	3
3Q151MPX0234	DIESEL #12 STANDBY JACKET WATER CIRCULATING PUMP	5Q159F22540#1 / D-4	Skid	3
3Q151MPX0334	DIESEL #13 STANDBY JACKET WATER CIRCULATING PUMP	5Q159F22540#1 / D-2	Skid	3
3Q152MAB0134	DIESEL #21 STANDBY JACKET WATER PUMP	5Q159F22540#2 / E-7	Skid	3
3Q152MAB0234	DIESEL #22 STANDBY JACKET WATER PUMP	5Q159F22540#2 / E-4	Skid	3
3Q152MAB0334	DIESEL #23 STANDBY JACKET WATER PUMP	5Q159F22540#2 / E-2	Skid	3
3Q152MPC0134	DIESEL #21 STDBY LUBE OIL PUMP	5Q159F22542#2 / E-7	Skid	3
3Q152MPC0234	DIESEL #22 STDBY LUBE OIL PUMP	5Q159F22542#2 / E-5	Skid	3
3Q152MPC0334	DIESEL #23 STDBY LUBE OIL PUMP	5Q159F22542#2 / E-2	Skid	3
3Q152MPU0134	DIESEL #21 LUBE OIL CIRCULATING PUMP	5Q159F22542#2 / E-7	Skid	3
3Q152MPU0234	DIESEL #22 LUBE OIL CIRCULATING PUMP	5Q159F22542#2 / E-5	Skid	3
3Q152MPU0334	DIESEL #23 LUBE OIL CIRCULATING PUMP	5Q159F22542#2 / E-2	Skid	3
3Q152MPX0134	DIESEL #21 STANDBY JACKET WATER CIRCULATING PUMP	5Q159F22540#2 / D-7	Skid	3
3Q152MPX0234	DIESEL #22 STANDBY JACKET WATER CIRCULATING PUMP	5Q159F22540#2 / D-4	Skid	3
3Q152MPX0334	DIESEL #23 STANDBY JACKET WATER CIRCULATING PUMP	5Q159F22540#2 / D-2	Skid	3

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

PUMP RELIEF REQUEST PRR-01

Use of Code Case OMN-18

Proposed Alternative in Accordance with 10CFR50.55a(a)(z)(1) on the basis that the proposed alternative provides an acceptable level of quality and safety

Reference 3 approved the use of this Alternative

1. **ASME Code Component(s) Affected**

Pump	Description	Comprehensive Pump Test (CPT) Flow Rate (Gallons per Minute)	ASME Code Class
3S141(2)MPA01	Auxiliary Feedwater Pump 11/21	545	3
3S141(2)MPA02	Auxiliary Feedwater Pump 12/22	545	3
3S141(2)MPA03	Auxiliary Feedwater Pump 13/23	545	3
3S141(2)MPA04	Auxiliary Feedwater Pump 14/24	545	3
3R201(2)NPA1(2)01A	Component Cooling Water Pump 1A/2A	12500	3
3R201(2)NPA1(2)01B	Component Cooling Water Pump 1B/2B	12500	3
3R201(2)NPA1(2)01C	Component Cooling Water Pump 1C/2C	12500	3
3V111(2)VPA004	Essential Chilled Water Pump 11A/21A	885	3
3V111(2)VPA005	Essential Chilled Water Pump 11B/21B	885	3
3V111(2)VPA006	Essential Chilled Water Pump 11C/21C	885	3
3R211(2)NPA(2)01A	Spent Fuel Pool Cooling Pump 1A/2A	2550	3
3R211(2)NPA(2)01B	Spent Fuel Pool Cooling Pump 1B/2B	2550	3

Function: The above pumps are required to perform a specific function in shutting down the reactor to a safe shutdown, maintaining a safe shutdown condition or in mitigating the consequences of an accident.

2. **Applicable Code Edition and Addenda**

   American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) 2012 Edition.

3. **Applicable Code Requirement**

   ISTB-3400, "Frequency of Inservice Tests", states that an inservice test shall be run on each pump as specified in Table ISTB-3400-1.

   Table ISTB-3400-1 requires Group A and Group B tests to be performed quarterly and a comprehensive test to be performed biennially.

4. **Reason for Request**

   The ASME Code committees have approved Code Case OMN-18, 'Alternative Testing Requirements for Pumps Tested Quarterly within ± 20% of Design Flow'. This Code Case has been approved for use in Regulatory Guide 1.192, Operation and Maintenance Code Case Acceptability, ASME OM Code, Revision 2, March 2017.

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

This Code Case allows the Owner to not perform the Comprehensive test with the associated acceptance criteria, if the quarterly test is performed at ± 20% of design flow and the instrumentation meets the accuracy requirements of Table ISTB-3500-1 for the comprehensive and preservice tests.

ASME OM Code, Subsection ISTB, paragraph ISTB-3300(e)(1) states that reference values shall be established at the comprehensive pump test flow rate for the comprehensive test. Paragraph ISTB-3300(e)(2) states that reference values shall be established at the comprehensive pump test flow rate for the Group A and Group B tests, if practicable. If not practicable, the reference point flow rate shall be established at the highest practical flow rate. For the PRR-01 pumps listed in section 1, the Reference Value to be used is the comprehensive pump test flow rate.

Further, ISTB allows the Owner to categorize the pumps in their program. As such, an Owner could categorize a pump that otherwise meets the requirements of Group B, as a Group A pump, and test according to the provision of Code Case OMN-18. However, in doing so additional data (vibration and flow or differential pressure) are obtained quarterly, rather than once every two years.

Guidelines set forth in Code Case OMN-18 Rev 1, "Use of a Pump Curve for Testing," will be followed. This Code Case has been approved for use per RG 1.192 Revision 2 for the ASME OM Code, 2012 Edition, however the associated Code Case applicability statement included in that edition reflects 1994 and subsequent editions and addenda through the 2006 Addenda.

The upper end values of the Group A Test Acceptable Ranges for flow and differential pressure (or, discharge pressure) must be 1.06Qr and 1.06ΔPr (or 1.06Pr), respectively, as applicable to the pump type. The high values of the Required Action Ranges for flow and differential pressure (or discharge pressure) must be >1.06Qr and >1.06ΔPr (or 1.06Pr), respectively, as applicable to the pump type. This Condition is listed in Table 2 of RG 1.192, and will be included in the test procedures at STPEGS.

Code applicability for Code Case OMN-18 lists OMc-1994 Addenda, and subsequent Editions and Addenda through the 2006 Addenda. STPEGS is implementing the 2012 Edition of the OM Code.

5. Proposed Alternative and Basis for Use

STPEGS proposed to employ the provisions of Code Case OMN-18 and perform a quarterly Group A test in lieu of performing a biennial comprehensive test and apply the acceptance criteria associated with the Group A test. As an alternative to utilizing the acceptance criteria associated with the Group A test, STPEGS will specify the acceptance criteria associated with the upper limit as 1.06% in lieu of the 1.10% allowed by Table ISTB-5121-1. This alternative testing is applicable to only those pumps with full flow testing capability. This alternative testing is also in compliance with the NRC Condition in Table 2 of RG 1.192, Revision 2, March 2017. The pressure instrumentation used during the tests shall have an accuracy of at least 0.5%.

Using the provisions of this relief request as an alternative to the requirements of ISTB-3400 provides a reasonable alternative to the ASME OM Code requirements. Based on this determination, the proposed alternative provides an acceptable level of quality and safety. The 2012 Edition of the OM Code, ISTB-5000(b) allows for substitution of a comprehensive test for a Group A test.

Conclusion:

In summary, South Texas Project proposed to test the pumps listed in this request by implementing the requirements of ASME OM Code Case OMN-18, as per the NRC Condition listed in RG 1.192, Revision 2, Table 2, in lieu of ISTB-3400 and Table ISTB-3400-1.

Using the provisions of this request would provide adequate detection of component degradation and would continue to provide reasonable assurance of the operational readiness of affected components. Therefore, compliance with the requirements of ASME OM Code Case OMN-18 would result in an acceptable level of quality and safety pursuant to 10 CFR 50.55a(z)(1).

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

6. Duration of Proposed Alternative

The proposed alternative will be implemented from the end of the Third Interval (September 25, 2020) until the end of the Fourth Interval (September 24, 2030).

7. Precedent

NRC Safety Evaluation of Relief Requests for Second 10-Year Interval of the IST Program for South Texas Project (STP), Units Nos. 1 and 2 (TAC. Nos. MB2136 and MB2137). May 2, 2003. Previously approved as PRR-01.

8. References

1. ASME OM Code-2012, Code Case OMN-18, 'Alternative Testing Requirements for Pumps Tested Quarterly within ± 20% of Design Flow'
2. ML16321A337, Regulatory Guide 1.192, 'Operation and Maintenance Code Case Acceptability, ASME OM Code, Revision 2, March 2017
3. ML20199M162 South Texas Project, Units 1 And 2 – Proposed Alternatives PRR-01, PRR-02, PRR-03, and PRR-04 To the Requirements of The ASME OM Code (EPIDS L-2020-LLR-0007 TO L-2020-LLR-0010), dated July 21, 2020

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

PUMP RELIEF REQUEST PRR-03

Alternative to ISTB-3400-1 Frequency

Proposed Alternative in Accordance with 10CFR50.55a(a)(3)(i) on the basis that the proposed alternative provides an acceptable level of quality and safety

Reference 5 approved the use of this Alternative.

1. ASME Code Component(s) Affected

2R161(2)NPA1(2)01A, Residual Heat Removal Pump A (Class 2)

2R161(2)NPA1(2)01B, Residual Heat Removal Pump B (Class 2)

2R161(2)NPA1(2)01C, Residual Heat Removal Pump C (Class 2)

Function: Circulate 3000 gpm of Reactor Coolant System (RCS) flow from the hot legs to the cold legs for the final phase of a reactor cooldown following a small break loss of coolant accident (SBLOCA), steam generator tube rupture (SGTR), main steam line break (MSLB), or feedwater line break (FWLB) accident condition.

2. Applicable Code Edition and Addenda

American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) 2012 Edition.

3. Applicable Code Requirement

Table ISTB-3400-1 requires a Group A inservice test to be run on each pump every three months.

4. Reason for Request

STPNOC received relief to perform the ISTB-3400-1 quarterly test on a six-month frequency in its first three IST intervals and requests to be granted the same relief in the fourth IST interval. Test performance requires containment entry by operators to run the RHR pumps and obtain test data. More frequent performance results in the unnecessary acquisition of radiation dose and equipment wear.

5. Proposed Alternative and Basis for Use

A Group A IST will be run on each RHR pump nominally every six months during normal plant operation. This test frequency will be maintained during plant shutdown periods if it can reasonably be accomplished per the requirements of ISTB-5121. A Comprehensive test per ISTB-5123 may be performed in lieu of a Group A test.

STPNOC has three residual heat removal (RHR) trains used only for long-term cooldown events following safety injection (SI) system operation. The RHR system does not serve the low-head SI function as required at other nuclear plants and is therefore not critical to the immediate accident mitigation function. The initial relief request for a six-month test interval was approved February 17, 1994 (Reference 2). This approved analysis confirmed performance of testing on a six-month interval resulted in negligible change in core damage frequency. The review of this analysis confirmed that the alternative testing frequency for IST requirements will provide an essentially equivalent level of safety for the RHR pumps and system.

The RHR system, including the RHR pumps, continues to be used as designed with no change in function or performance. The pumps have performed well in the third interval with no test results entering the alert or unacceptable bands. The risk metrics for the RHR pumps remain consistent with the values used in the original risk analysis. Therefore, the basis of the change in relation to the acceptance of minimal change in plant risk.

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

Since the proposed change in the RHR pumps surveillance interval represents a negligible change in core damage frequency, the alternative testing frequency for the IST requirements will provide an essentially equivalent level of safety for these pumps.

Conclusion:

STPNOC proposed to test the RHR pumps by performing a Group A test on a six-month frequency. Given the negligible change in core damage frequency determined in Reference 2, this proposed change provides an acceptable level of quality and safety pursuant to 10 CFR 50.55a(z)(1).

6. Duration of Proposed Alternative

The proposed alternative will be implemented from the end of the Third Interval (September 25, 2020) through the end of the Fourth Interval (September 24, 2030).

7. Precedent

NRC Safety Evaluation for South Texas Project Technical Specification Amendments 59 and 47 and related relief requests. In this Safety Evaluation, the NRC granted relief from the IWP-3400(a) RHR pump testing requirements, allowing a testing frequency extension for these pumps from three to six months (Reference 2).

NRC Safety Evaluation of Relief Requests for Second 10-Year Interval of the IST Program for South Texas Project (STP), Units Nos. 1 and 2 (TAC. Nos. MB2136 and MB2137). May 2, 2003. Previously approved as PRR-01. (Reference 3)

NRC approval of STP Relief Request PRR-03 for extension of the third 10-year IST interval for the RHR pumps (Reference 4).

8. References

1. ASME OM-2012, 'Operation and Maintenance of Nuclear Power Plants'
2. Letter from S.C. Black, NRC, to W.T. Cottle, Houston Lighting & Power, Issuance of Amendment Nos. NPF-76 and NPF-80 and Related Relief Requests – South Texas Project, Units 1 and 2 (TAC Nos. M76048 and M76049), February 17, 1994, ML02130134
3. NRC Safety Evaluation of Relief Requests for Second 10-Year Interval of the IST Program for South Texas Project (STP), Units Nos. 1 and 2 (TAC. Nos. MB2136 and MB2137). May 2, 2003. Previously approved as PRR-01.
4. Letter from M.T. Markley, NRC, to E.D. Halpin, STPNOC, South Texas Project, Units 1 and 2 – Relief Request Nos. VRR-01, PRR-01, PRR-02, and PRR-03 for the Third 10-Year Inservice Testing Program Interval (TAC Nos. ME3515, ME3516, ME3517, ME3518, ME3519, ME3520, ME3521, and ME3522), September 2, 2010, ML102150077
5. ML20199M162 South Texas Project, Units 1 And 2 – Proposed Alternatives PRR-01, PRR-02, PRR-03, and PRR-04 To The Requirements Of The ASME OM Code (EPIDS L-2020-LLR-0007 TO L-2020-LLR-0010), dated July 21, 2020

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

PUMP RELIEF REQUEST PRR-04

Use of Code Case OMN-22

Proposed Alternative in Accordance with 10CFR50.55a(a)(3)(i) on the basis that the proposed alternative provides an acceptable level of quality and safety

Reference 1 approved the use of this Alternative.

1. ASME Code Component(s) Affected

All pumps in the IST Program with vibration reference values of <0.05 inches per second (ips). See Table 1 for the initial list of pumps relief is being requested for.

Function:

The Table 1 pumps are required to perform a specific function in shutting down the reactor to a safe shutdown, maintaining a safe shutdown condition or in mitigating the consequences of an accident.

2. Applicable Code Edition and Addenda

American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) 2012 Edition.

3. Applicable Code Requirement

ISTB-3300(a), 'Reference Values' initial reference values shall be determined from the results of testing meeting the requirements to ISTB-3100, Preservice Testing, or from the results of the first inservice test.

Table ISTB-5121-1, 'Centrifugal Pump Test Acceptance Criteria' Alert Range and Required Action Range.

Table ISTB-5221-1, 'Vertical Line Shaft Centrifugal Pump Test Acceptance Criteria' Alert Range and Required Action Range.

Table ISTB-5321-1, 'Positive Displacement Pump (Except Reciprocating) Test Acceptance Criteria' Alert Range and Required Action Range.

Table ISTB-5321-2, 'Reciprocating Positive Displacement Pump Test Acceptance Criteria' Alert Range and Required Action Range.

4. Reason for Request

The ASME Code committees have approved Code Case OMN-22, 'Smooth Running Pumps'. This Code Case has not been approved for use in Regulatory Guide 1.192, Operation and Maintenance Code Case Acceptability, ASME OM Code, Revision 2, March 2017. This Code Case has been approved by ASME and is scheduled to be published with the 2020 Edition of the OM Code.

This Code Case allows tor alternative requirements for use with smooth running pumps in lieu of the applicable Code reference value paragraph in Subsections ISTB in the ASME OM Code and the applicable pump test acceptance criteria tables in the ASME OM Code. For the OM Code-2012, no allowance is made for smooth running pumps and by applying the ≤ 2.5Vr, the pump may fail before reaching the alert range if the normal vibration level is 0.050 in/sec or lower. Smooth running pumps have a much lower reference value for stable operation and the ranges for acceptable range and higher levels listed in the Alert Range do not allow for adequate vibration monitoring techniques to be applied to smooth running pumps.

Guidelines set forth in Code Case OMN-22, "Smooth Running Pumps' allow for a very low baseline vibration value with a pump vibration velocity of ≤ 0.050 in/sec when establishing the vibration reference value, which allows for trending of the pump vibration on a much lower scale than what is currently allowed. ASME OM Code Case OMN-22, 'Smooth Running Pumps' has not been approved by the NRC and a relief request is required for use of this Code Case.

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

5. Proposed Alternative and Basis for Use

STPEGS proposed to utilize the provisions of Code Case OMN-22, 'Smooth Running Pumps'. For those pumps with very low vibration values, the following vibration velocity criteria shall be applied to any vibration test points qualifying for the use of the 'minimum reference' value:

Acceptable Range:	≤ 0.125 in/sec
Alert Range:	> 0.125 in/sec to 0.300 in/sec
Required Action Range:	> 0.300 in/sec

Supplemental Monitoring

Pumps that will use the "minimum reference" value for one or more vibration points shall be included in the Owner's Predictive Maintenance (PdM) program. The PdM program shall apply predictive monitoring techniques and perform vibration analysis beyond the trending of vibration levels specified in the ASME OM Code to provide early identification of pump performance issues. The Owner shall determine which PdM Supplemental Monitoring activities will be utilized on the pump.

At a minimum, the Owner shall perform spectral analysis of measured vibration of the applicable pumps. The Owner shall document the conclusion of the PdM performance analysis on the pump test record prior to the subsequent test with a conclusion of acceptable, degrading but acceptable, or unacceptable. Corrective action shall be initiated when an unacceptable trend in performance is identified

Corrective Action

If a measured pump vibration parameter falls within the alert range or the required action range specified above, then the Owner shall follow the required actions within the edition/addenda of the applicable Code (for example, ISTB-6200 or ISTF-6200 for the 2015 Edition of the ASME OM Code). The alert and required action ranges are established in accordance with this Code Case rather than the referenced pump tables.

If a PdM Supplemental Monitoring activity identifies a parameter outside the normal operating range or identifies a trend toward an unacceptable degraded state, action shall be taken to (1) identify and document the condition in the corrective action program established in accordance with the Owner's Quality Assurance Program, (2) increase monitoring to establish the rate of change of the monitored parameter, (3) review component-specific information to identify the degradation cause, (4) develop a plan to remove the pump from service to perform maintenance prior to significant performance degradation, and (5) address potential common cause issues applicable to other pumps based on the results of the analysis of the specific pump performance.

Using the provisions of this relief request as an alternative to the requirements of ISTB-3300 provides a reasonable alternative to the ASME OM Code requirements. Based on the determination and the proposed alternative provides an acceptable level of quality and safety. The 2012 Edition of the OM Code, has not been revised to include this allowance. A similar allowance was part of the IWP test requirements under Section XI, but were not included in the tables when OM Part 10 was created as part of the OM Code.

Conclusion:

In summary, South Texas Project proposed to test the pumps listed in this request by implementing the requirements of ASME OM Code Case OMN-22 and requires NRC approval to implement this change since Code Case OMN-22 is not listed in Regulatory Guide 1.192.

Using the provisions of this request will provide adequate detection of component degradation and, would continue to provide reasonable assurance of the operational readiness of affected STPEGS components. Therefore, compliance with the requirements of ASME OM Code Case OMN-22 would result in an acceptable level of quality and safety pursuant to 10 CFR 50.55a(z)(1).

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

6. Duration of Proposed Alternative

The proposed alternative will be implemented from the end of the Third Interval (September 25, 2020) until the end of the Fourth Interval (September 24, 2030).

7. Precedent

ML18290A602, Millstone 2 P-02 and Millstone 3 P-03, Smooth Running Pumps, for pumps with measured reference value below 0.05 ips, approved by NRC, November 2018.

ML17219A123, James A. Fitzpatrick, PRR-02, RHRSW pumps apply minimum value for Vr of 0.05 ips, with 0.125 ips and 0.300 ips as Alert and Required Action Ranges, submitted August 3, 2017

8. References

1. ML20199M162 South Texas Project, Units 1 And 2 – Proposed Alternatives PRR-01, PRR-02, PRR-03, and PRR-04 to the Requirements of the ASME OM Code (EPIDS L-2020-LLR-0007 TO L-2020-LLR-0010), dated July 21, 2020
2. ASME OM Code-2012, Code Case OMN-22, 'Smooth Running Pumps'

Table 1: Initial scope of PRR-04*

Pump Description	TPNS	ASME Class
CENTRIFUGAL CHARGING PUMP 1A	2R171NPA101A	2
CENTRIFUGAL CHARGING PUMP 1B	2R171NPA101B	2
CENTRIFUGAL CHARGING PUMP 2A	2R172NPA201A	2
ESSENTIAL CHILL WATER PUMP 11A	3V111VPA004	3
ESSENTIAL CHILL WATER PUMP 11B	3V111VPA005	3
ESSENTIAL CHILL WATER PUMP 11C	3V111VPA006	3
ESSENTIAL CHILL WATER PUMP 21A	3V112VPA004	3
ESSENTIAL CHILL WATER PUMP 21B	3V112VPA005	3
ESSENTIAL CHILL WATER PUMP 21C	3V112VPA006	3
ESSENTIAL COOLING WATER PUMP 1A	3R281NPA101A	3
ESSENTIAL COOLING WATER PUMP 1B	3R281NPA101B	3
ESSENTIAL COOLING WATER PUMP 1C	3R281NPA101C	3
ESSENTIAL COOLING WATER PUMP 2A	3R282NPA201A	3
ESSENTIAL COOLING WATER PUMP 2B	3R282NPA201B	3
ESSENTIAL COOLING WATER PUMP 2C	3R282NPA201C	3
LOW HEAD SAFETY INJECTION PUMP 1A	2N121NPA102A	2
LOW HEAD SAFETY INJECTION PUMP 1B	2N121NPA102B	2
LOW HEAD SAFETY INJECTION PUMP 1C	2N121NPA102C	2
LOW HEAD SAFETY INJECTION PUMP 2A	2N122NPA202A	2
LOW HEAD SAFETY INJECTION PUMP 2B	2N122NPA202B	2
LOW HEAD SAFETY INJECTION PUMP 2C	2N122NPA202C	2
MOTOR DRIVEN AUX FEEDWATER PUMP NO. 11	3S141MPA01	3
MOTOR DRIVEN AUX FEEDWATER PUMP NO. 22	3S142MPA02	3
MOTOR DRIVEN AUX FEEDWATER PUMP NO. 23	3S142MPA03	3
TURBINE DRIVEN AUX FEEDWATER PUMP NO. 14	3S141MPA04	3
RESIDUAL HEAT REMOVAL PUMP 1A	2R161NPA101A	2

ATTACHMENT 5: Unit 1 and 2 Pump Relief Requests

Pump Description	TPNS	ASME Class
RESIDUAL HEAT REMOVAL PUMP 1B	2R161NPA101B	2
RESIDUAL HEAT REMOVAL PUMP 1C	2R161NPA101C	2
RESIDUAL HEAT REMOVAL PUMP 2A	2R162NPA201A	2
RESIDUAL HEAT REMOVAL PUMP 2B	2R162NPA201B	2
RESIDUAL HEAT REMOVAL PUMP 2C	2R162NPA201C	2
SPENT FUEL COOLING PUMP 1A	3R211NPA101A	3
SPENT FUEL COOLING PUMP 1B	3R211NPA101B	3
SPENT FUEL COOLING PUMP 2A	3R212NPA201A	3
SPENT FUEL COOLING PUMP 2B	3R212NPA201B	3

* Scope may change based on future reference values tests. *****

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
1N121XSI0007A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE TO LOOP 1A COLD LEG CHECK VALVE	5N129F05013#1 / E-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0007B	HI HEAD SAFETY INJECTION PUMP 1B DISCHARGE TO LOOP 1B COLD LEG CHECK VALVE	5N129F05014#1 / F-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0007C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE TO LOOP 1C COLD LEG CHECK VALVE	5N129F05015#1 / E-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0009A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE TO LOOP 1A HOT LEG CHECK VALVE	5N129F05013#1 / F-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0009B	HI HEAD SAFETY INJECTION PUMP 1B DISCHARGE TO LOOP 1B HOT LEG CHECK VALVE	5N129F05014#1 / G-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0009C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE TO LOOP 1C HOT LEG CHECK VALVE	5N129F05015#1 / F-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0010A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE TO LOOP 1A HOT LEG CHECK VALVE	5N129F05013#1 / F-8	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0010B	HI HEAD SAFETY INJECTION PUMP 1B DISCHARGE TO LOOP 1B HOT LEG CHECK VALVE	5N129F05014#1 / G-8	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0010C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE TO LOOP 1C HOT LEG CHECK VALVE	5N129F05015#1 / F-8	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N121XSI0038A	SAFETY INJECTION TRAIN A TO LOOP 1A COLD LEG INJECTION CHECK VALVE	5N129F05016#1 / F-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N121XSI0038B	SAFETY INJECTION TRAIN B TO LOOP 1B COLD LEG INJECTION CHECK VALVE	5N129F05016#1 / D-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N121XSI0038C	SAFETY INJECTION TRAIN C PUMPS TO LOOP 1C COLD LEG INJECTION CHECK VALVE	5N129F05016#1 / B-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N121XSI0046A	SAFETY INJECTION ACCUMULATOR 1A OUTLET CHECK VALVE	5N129F05016#1 / F-6	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N121XSI0046B	SAFETY INJECTION ACCUMULATOR 1B OUTLET CHECK VALVE	5N129F05016#1 / D-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N121XSI0046C	SAFETY INJECTION ACCUMULATOR 1C OUTLET CHECK VALVE	5N129F05016#1 / B-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1R141XRC0001A	PRESSURIZER PORV PCV-0655A ISOLATION VALVE	5R149F05003#1 / E-7	B	Active	1	3	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
1R141XRC0001A	PRESSURIZER PORV PCV-0655A ISOLATION VALVE	5R149F05003#1 / E-7	B	Active	1	3	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-RC-0009	
												ET-O	Q	0PSP03-RC-0009	
1R141XRC0001B	PRESSURIZER PORV PCV-0656A ISOLATION VALVE	5R149F05003#1 / E-8	B	Active	1	3	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RC-0009	
												ET-O	Q	0PSP03-RC-0009	
1R161XRH0020A	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 1A HOT LEG CHECK VALVE	5R169F20000#1 / C-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1R161XRH0020B	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 1B HOT LEG CHECK VALVE	5R169F20000#1 / E-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1R161XRH0020C	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 1C HOT LEG CHECK VALVE	5R169F20000#1 / H-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1R161XRH0032A	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 1A COLD LEG CHECK VALVE	5R169F20000#1 / B-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-RH-0007	
1R161XRH0032B	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 1B COLD LEG CHECK VALVE	5R169F20000#1 / D-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-RH-0007	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
1R161XRH0032C	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 1C COLD LEG CHECK VALVE	5R169F20000#1 / G-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-RH-0007	
1R161XRH0060A	RHR PUMP 1A SUCTION FROM LOOP 1A HOT LEG ISOLATION MOV	5R169F20000#1 / B-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R161XRH0060B	RHR PUMP 1B SUCTION FROM LOOP 1B HOT LEG ISOLATION MOV	5R169F20000#1 / D-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
1R161XRH0060B	RHR PUMP 1B SUCTION FROM LOOP 1B HOT LEG ISOLATION MOV	5R169F20000#1 / D-8	A	Active	1	12	GT	MOH	C	O/C	FAI	ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R161XRH0060C	RHR PUMP 1C SUCTION FROM LOOP 1C HOT LEG ISOLATION VALVE	5R169F20000#1 / G-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R161XRH0061A	RHR PUMP 1A SUCTION MOV	5R169F20000#1 / B-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R161XRH0061B	RHR PUMP 1B SUCTION MOV	5R169F20000#1 / D-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R161XRH0061C	RHR PUMP 1C SUCTION MOV	5R169F20000#1 / G-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R171TCV0009	CVCS AUXILIARY SPRAY CHECK VALVE	5R179F05005#1 / F-8	C	Active	1	2	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R171TCV0036A	RCP 1A SEAL #1 INJECTION FIRST CHECK VALVE	5R179F05005#1 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R171TCV0036B	RCP 1B SEAL #1 INJECTION FIRST CHECK VALVE	5R179F05005#1 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R171TCV0036C	RCP 1C SEAL #1 INJECTION FIRST CHECK VALVE	5R179F05005#1 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R171TCV0036D	RCP 1D SEAL #1 INJECTION FIRST CHECK VALVE	5R179F05005#1 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R171TCV0037A	RCP 1A SEAL #1 INJECTION SECOND CHECK VALVE	5R179F05005#1 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R171TCV0037B	RCP 1B SEAL #1 INJECTION SECOND CHECK VALVE	5R179F05005#1 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R171TCV0037C	RCP 1C SEAL #1 INJECTION SECOND CHECK VALVE	5R179F05005#1 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R171TCV0037D	RCP 1D SEAL #1 INJECTION SECOND CHECK VALVE	5R179F05005#1 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R171TCV0082	CVCS EXCESS LETDOWN HX INLET MOV	5R179F05005#1 / F-5	B	Active	1	2	D	MOL	O/C	C	FAI	ET-C	2Y	0PSP03-CV-0012	
												ET-O	2Y	0PSP03-CV-0012	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
1R171TCV0083	CVCS EXCESS LETDOWN LOOP 1D ISOLATION MOV	5R179F05005#1 / F-5	B	Active	1	2	D	MOL	O/C	C	FAI	ET-C	2Y	0PSP03-CV-0012	
1R171TCV0083	CVCS EXCESS LETDOWN LOOP 1D ISOLATION MOV	5R179F05005#1 / F-5	B	Active	1	2	D	MOL	O/C	C	FAI	ET-O	2Y	0PSP03-CV-0012	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
1R171XCV0001	CVCS NORMAL CHARGING TO RCS LOOP 1A COLD LEG FIRST CHECK VALVE	5R179F05005#1 / G-8	C	Active	1	4	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R171XCV0002	CVCS NORMAL CHARGING TO RCS LOOP 1A COLD LEG SECOND CHECK VALVE	5R179F05005#1 / G-8	C	Active	1	4	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R171XCV0004	CVCS ALTERNATE CHARGING TO RCS LOOP 1C COLD LEG FIRST CHECK VALVE	5R179F05005#1 / F-8	C	Active	1	4	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R171XCV0005	CVCS ALTERNATE CHARGING TO RCS LOOP 1C COLD LEG SECOND CHECK VALVE	5R179F05005#1 / F-8	C	Active	1	4	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R171XCV0465	CVCS LETDOWN ISOLATION MOV	5R179F05005#1 / G-8	B	Active	1	4	GT	MOH	O	C	FAI	DIAG	App3	0PSP11-ZE-0006	
1R171XCV0465	CVCS LETDOWN ISOLATION MOV	5R179F05005#1 / G-8	B	Active	1	4	GT	MOH	O	C	FAI	OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
												ET-O	CS	0PSP03-CV-0011	CSJ-01
1R171XCV0468	CVCS LETDOWN ISOLATION MOV	5R179F05005#1 / G-7	B	Active	1	4	GT	MOH	O	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
												ET-O	CS	0PSP03-CV-0011	CSJ-01
2N121TSI0011A	HI HEAD SAFETY INJECTION PUMP 1A MINIFLOW FIRST ISOLATION MOV	5N129F05013#1 / F-4	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N121TSI0011B	HI HEAD SAFETY INJECTION PUMP 1B MINIFLOW FIRST ISOLATION MOV	5N129F05014#1 / H-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121TSI0011C	HI HEAD SAFETY INJECTION PUMP 1C MINIFLOW FIRST ISOLATION MOV	5N129F05015#1 / G-4	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
2N121TSI0011C	HI HEAD SAFETY INJECTION PUMP 1C MINIFLOW FIRST ISOLATION MOV	5N129F05015#1 / G-4	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121TSI0012A	HI HEAD SAFETY INJECTION PUMP 1A MINIFLOW SECOND ISOLATION MOV	5N129F05013#1 / F-4	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N121TSI0012B	HI HEAD SAFETY INJECTION PUMP 1B MINIFLOW SECOND ISOLATION MOV	5N129F05014#1 / H-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
2N121TSI0012B	HI HEAD SAFETY INJECTION PUMP 1B MINIFLOW SECOND ISOLATION MOV	5N129F05014#1 / H-3	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121TSI0012C	HI HEAD SAFETY INJECTION PUMP 1C MINIFLOW SECOND ISOLATION MOV	5N129F05015#1 / G-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121TSI0013A	LO HEAD SAFETY INJECTION PUMP 1A MINIFLOW SECOND ISOLATION MOV	5N129F05013#1 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
2N121TSI0013A	LO HEAD SAFETY INJECTION PUMP 1A MINIFLOW SECOND ISOLATION MOV	5N129F05013#1 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N121TSI0013B	LO HEAD SAFETY INJECTION PUMP 1B MINIFLOW SECOND ISOLATION MOV	5N129F05014#1 / E-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121TSI0013C	LO HEAD SAFETY INJECTION PUMP 1C MINIFLOW SECOND ISOLATION MOV	5N129F05015#1 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position			Test Req	Freq	Procedure	Notes
									Normal	Safe	Fail				
2N121TSI0013C	LO HEAD SAFETY INJECTION PUMP 1C MINIFLOW SECOND ISOLATION MOV	5N129F05015#1 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121TSI0014A	LO HEAD SAFETY INJECTION PUMP 1A MINIFLOW FIRST ISOLATION MOV	5N129F05013#1 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N121TSI0014B	LO HEAD SAFETY INJECTION PUMP 1B MINIFLOW FIRST ISOLATION MOV	5N129F05014#1 / E-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
2N121TSI0014B	LO HEAD SAFETY INJECTION PUMP 1B MINIFLOW FIRST ISOLATION MOV	5N129F05014#1 / E-3	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121TSI0014C	LO HEAD SAFETY INJECTION PUMP 1C MINIFLOW FIRST ISOLATION MOV	5N129F05015#1 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121XSI0001A	REFUELING WATER STORAGE TANK SI PUMPS TRAIN A SUCTION ISOLATION MOV	5N129F05013#1 / G-3	B	Active	2	16	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0001A	REFUELING WATER STORAGE TANK SI PUMPS TRAIN A SUCTION ISOLATION MOV	5N129F05013#1 / G-3	B	Active	2	16	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121XSI0001B	REFUELING WATER STORAGE TANK SI PUMPS TRAIN B SUCTION ISOLATION MOV	5N129F05014#1 / H-2	B	Active	2	16	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121XSI0001C	REFUELING WATER STORAGE TANK SI PUMPS TRAIN C SUCTION ISOLATION MOV	5N129F05015#1 / H-2	B	Active	2	16	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0001C	REFUELING WATER STORAGE TANK SI PUMPS TRAIN C SUCTION ISOLATION MOV	5N129F05015#1 / H-2	B	Active	2	16	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121XSI0002A	REFUELING WATER STORAGE TANK SI PUMPS TRAIN A SUCTION CHECK VALVE	5N129F05013#1 / G-3	C	Active	2	16	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0030	
2N121XSI0002B	REFUELING WATER STORAGE TANK SI PUMPS TRAIN B SUCTION CHECK VALVE	5N129F05014#1 / H-2	C	Active	2	16	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0030	
2N121XSI0002C	REFUELING WATER STORAGE TANK SI PUMPS TRAIN C SUCTION CHECK VALVE	5N129F05015#1 / H-2	C	Active	2	16	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0030	
2N121XSI0004A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE MOV (ORC)	5N129F05013#1 / F-5	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0004A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE MOV (ORC)	5N129F05013#1 / F-5	B	Active	2	6	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N121XSI0004B	HI HEAD SAFETY INJECTION PUMP 1B DISCHARGE MOV (ORC)	5N129F05014#1 / G-4	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121XSI0004C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE MOV (ORC)	5N129F05015#1 / F-5	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0004C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE MOV (ORC)	5N129F05015#1 / F-5	B	Active	2	6	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121XSI0005A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE CHECK VALVE (IRC)	5N129F05013#1 / F-6	C	Active	2	6	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	
2N121XSI0005B	HI HEAD SAFETY INJECTION PUMP 1B DISCHARGE CHECK VALVE (IRC)	5N129F05014#1 / G-4	C	Active	2	6	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	
2N121XSI0005C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE CHECK VALVE (IRC)	5N129F05015#1 / F-5	C	Active	2	6	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2N121XSI0006A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE TO LOOP 1A COLD LEG ISOLATION MOV	5N129F05013#1 / E-7	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0006A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE TO LOOP 1A COLD LEG ISOLATION MOV	5N129F05013#1 / E-7	B	Active	2	6	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121XSI0006B	HI HEAD SAFETY INJECTION PUMP 1B DISCHARGE TO LOOP 1B COLD LEG ISOLATION MOV	5N129F05014#1 / F-7	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121XSI0006C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE TO LOOP 1C COLD LEG ISOLATION MOV	5N129F05015#1 / E-7	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0006C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE TO LOOP 1C COLD LEG ISOLATION MOV	5N129F05015#1 / E-7	B	Active	2	6	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121XSI0008A	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE TO LOOP 1 HOT LEG ISOLATION MOV	5N129F05013#1 / F-7	B	Active	2	6	GT	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121XSI0008B	HI HEAD SAFETY INJECTION PUMP 1B DISCHARGE TO LOOP 1B HOT LEG ISOLATION MOV	5N129F05014#1 / G-7	B	Active	2	6	GT	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0008B	HI HEAD SAFETY INJECTION PUMP 1B DISCHARGE TO LOOP 1B HOT LEG ISOLATION MOV	5N129F05014#1 / G-7	B	Active	2	6	GT	MOH	C	O/C	FAI	ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121XSI0008C	HI HEAD SAFETY INJECTION PUMP 1C DISCHARGE TO LOOP 1C HOT LEG ISOLATION MOV	5N129F05015#1 / F-7	B	Active	2	6	GT	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121XSI0016A	CONTAINMENT EMERGENCY SUMP 1A TO SI TRAIN A PUMPS SUCTION ORC ISOLATION MOV	5N129F05013#1 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	LT	2Y	0PSP11-SI-0001	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
2N121XSI0016A	CONTAINMENT EMERGENCY SUMP 1A TO SI TRAIN A PUMPS SUCTION ORC ISOLATION MOV	5N129F05013#1 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N121XSI0016B	CONTAINMENT EMERGENCY SUMP 1B TO SI TRAIN B PUMPS SUCTION ORC ISOLATION MOV	5N129F05014#1 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	LT	2Y	0PSP11-SI-0002	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N121XSI0016C	CONTAINMENT EMERGENCY SUMP 1C TO SI TRAIN C PUMPS SUCTION ORC ISOLATION MOV	5N129F05015#1 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	LT	2Y	0PSP11-SI-0003	
												DIAG	App3	0PSP11-ZE-0006	
2N121XSI0016C	CONTAINMENT EMERGENCY SUMP 1C TO SI TRAIN C PUMPS SUCTION ORC ISOLATION MOV	5N129F05015#1 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121XSI0018A	LO HEAD SAFETY INJECTION PUMP 1A DISCHARGE MOV (ORC)	5N129F05013#1 / C-4	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N121XSI0018B	LO HEAD SAFETY INJECTION PUMP 1B DISCHARGE MOV (ORC)	5N129F05014#1 / D-4	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
2N121XSI0018B	LO HEAD SAFETY INJECTION PUMP 1B DISCHARGE MOV (ORC)	5N129F05014#1 / D-4	B	Active	2	8	GT	MOH	O	O/C	FAI	OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2N121XSI0018C	LO HEAD SAFETY INJECTION PUMP 1C DISCHARGE MOV (ORC)	5N129F05015#1 / D-4	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N121XSI0030A	LO HEAD SAFETY INJECTION PUMP 1A DISCHARGE CHECK VALVE (IRC)	5N129F05013#1 / D-5	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
2N121XSI0030A	LO HEAD SAFETY INJECTION PUMP 1A DISCHARGE CHECK VALVE (IRC)	5N129F05013#1 / D-5	C	Active	2	8	CK	SA	C	O/C	N/A	CV-O	CM	0PSP03-SI-0021	
2N121XSI0030B	LO HEAD SAFETY INJECTION PUMP 1B DISCHARGE CHECK VALVE (IRC)	5N129F05014#1 / D-4	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	
2N121XSI0030C	LO HEAD SAFETY INJECTION PUMP 1C DISCHARGE CHECK VALVE (IRC)	5N129F05015#1 / D-4	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	
2N121XSI0039A	SAFETY INJECTION ACCUMULATOR 1A OUTLET MOV	5N129F05016#1 / F-5	B	Active	2	12	GT	MOL	O	O/C	FAI	ET-C	2Y	0PSP03-SI-0028	
												ET-O	2Y	0PSP03-SI-0028	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0039B	SAFETY INJECTION ACCUMULATOR 1B OUTLET MOV	5N129F05016#1 / D-5	B	Active	2	12	GT	MOL	O	O/C	FAI	ET-C	2Y	0PSP03-SI-0028	
												ET-O	2Y	0PSP03-SI-0028	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N121XSI0039C	SAFETY INJECTION ACCUMULATOR 1C OUTLET MOV	5N129F05016#1 / B-5	B	Active	2	12	GT	MOL	O	O/C	FAI	ET-C	2Y	0PSP03-SI-0028	
												ET-O	2Y	0PSP03-SI-0028	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2Q271TFP0756	REACTOR CONTAINMENT BUILDING FIRE PROTECTION HEADER ISOLATION MOV	5Q279F05047#1 / E-8	A	Active	2	6	GT	MOL-C	C	C	FAI	ET-C	2Y	0PSP03-FP-0001	
												ET-O	2Y	0PSP03-FP-0001	
												ST-C	2Y	0PSP03-FP-0001	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
Q271TFP0756	REACTOR CONTAINMENT BUILDING FIRE PROTECTION HEADER ISOLATION MOV	5Q279F05047#1 / E-8	A	Active	2	6	GT	MOL-C	C	C	FAI	RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-FP-0001	
2Q271TFP0943	REACTOR CONTAINMENT BUILDING FIRE PROTECTION HEADER CONTAINMENT ISOL CHECK VALVE	5Q279F05047#1 / E-8	A/C	Active	2	6	CK	SA	C	C	N/A	LTJ	AppJ	0PSP11-FP-0001	
												BD-O	CM	0PSP11-FP-0001	
												CV-C	CM	0PSP11-FP-0001	
2R161XRH0019A	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 1A HOT LEG ISOLATION MOV	5R169F20000#1 / C-3	B	Active	2	8	GT	MOH	LC	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R161XRH0019B	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 1B HOT LEG ISOLATION MOV	5R169F20000#1 / E-3	B	Active	2	8	GT	MOH	LC	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R161XRH0019C	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 1C HOT LEG ISOLATION MOV	5R169F20000#1 / H-3	B	Active	2	8	GT	MOH	LC	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R161XRH0031A	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 1A COLD LEG ISOLATION MOV	5R169F20000#1 / B-3	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R161XRH0031B	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 1B COLD LEG ISOLATION MOV	5R169F20000#1 / D-3	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position			Test Req	Freq	Procedure	Notes
									Normal	Safe	Fail				
2R161XRH0031C	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 1C COLD LEG ISOLATION MOV	5R169F20000#1 / G-3	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R161XRH0063B	RHR LOOP 1B RETURN TO RWST IRC ISOLATION VALVE	5R169F20000#1 / D-6	A	Passive	2	8	GT	M	LC	C	N/A	LTJ	AppJ	0PSP11-RH-0002	
2R161XRH0063C	RHR LOOP 1C RETURN TO RWST IRC ISOLATION VALVE	5R169F20000#1 / F-6	A	Passive	2	8	GT	M	LC	C	N/A	LTJ	AppJ	0PSP11-RH-0003	
2R161XRH0064B	RHR LOOP 1B RETURN TO RWST ORC ISOLATION VALVE	5R169F20000#1 / D-5	A	Passive	2	8	GT	M	LC	C	N/A	LTJ	AppJ	0PSP11-RH-0002	
2R161XRH0064C	RHR LOOP 1C RETURN TO RWST ORC ISOLATION VALVE	5R169F20000#1 / F-5	A	Passive	2	8	GT	M	LC	C	N/A	LTJ	AppJ	0PSP11-RH-0003	
2R161XRH0065A	RHR PUMP 1A DISCHARGE CHECK VALVE	5R169F20000#1 / B-6	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0001	
2R161XRH0065B	RHR PUMP 1B DISCHARGE CHECK VALVE	5R169F20000#1 / D-6	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0002	
2R161XRH0065C	RHR PUMP 1C DISCHARGE CHECK VALVE	5R169F20000#1 / G-6	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0003	
2R161XRH0066A	RHR LOOP 1A DISCHARGE TO CVCS LETDOWN ISOLATION MOV	5R169F20000#1 / A-4	B	Passive	2	4	GT	MO	C	C	FAI	OV-C	2Y	0PSP11-ZE-0006	
												OV-O	2Y	0PSP11-ZE-0006	
												RPI	2Y	0PSP11-ZE-0006	
2R161XRH0066B	RHR LOOP 1B DISCHARGE TO CVCS LETDOWN ISOLATION MOV	5R169F20000#1 / D-2	B	Passive	2	4	GT	MO	C	C	FAI	OV-C	2Y	0PSP11-ZE-0006	
												OV-O	2Y	0PSP11-ZE-0006	
												RPI	2Y	0PSP11-ZE-0006	
2R161XRH0067A	RHR PUMP 1A MINIFLOW MOV	5R169F20000#1 / A-6	B	Active	2	4	GT	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-RH-0009	
												ET-O	2Y	0PSP03-RH-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R161XRH0067B	RHR PUMP 1B MINIFLOW MOV	5R169F20000#1 / D-6	B	Active	2	4	GT	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-RH-0009	
												ET-O	2Y	0PSP03-RH-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
2R161XRH0067B	RHR PUMP 1B MINIFLOW MOV	5R169F20000#1 / D-6	B	Active	2	4	GT	MOL	C	O/C	FAI	RPI	App3	0PSP11-ZE-0006	
2R161XRH0067C	RHR PUMP 1C MINIFLOW MOV	5R169F20000#1 / F-6	B	Active	2	4	GT	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-RH-0009	
												ET-O	2Y	0PSP03-RH-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R161XRH0068A	RHR PUMP 1A MINIFLOW CHECK VALVE	5R169F20000#1 / A-6	C	Active	2	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0001	
2R161XRH0068B	RHR PUMP 1B MINIFLOW CHECK VALVE	5R169F20000#1 / D-6	C	Active	2	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0002	
2R161XRH0068C	RHR PUMP 1C MINIFLOW CHECK VALVE	5R169F20000#1 / F-6	C	Active	2	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0003	
2R171TCV0033A	RCP 1A SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / C-8	B	Active	2	2	D	MOL - C	O	O/C	FAI	ET-C	2Y	0PSP03-CV-0011	
												ET-O	2Y	0PSP03-CV-0011	
												ST-C	2Y	0PSP03-CV-0011	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R171TCV0033B	RCP 1B SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / C-8	B	Active	2	2	D	MOL-C	O	O/C	FAI	ET-C	2Y	0PSP03-CV-0011	
												ET-O	2Y	0PSP03-CV-0011	
												ST-C	2Y	0PSP03-CV-0011	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R171TCV0033C	RCP 1C SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / C-8	B	Active	2	2	D	MOL - C	O	O/C	FAI	ET-C	2Y	0PSP03-CV-0011	
												ET-O	2Y	0PSP03-CV-0011	
												ST-C	2Y	0PSP03-CV-0011	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R171TCV0033D	RCP 1D SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / C-8	B	Active	2	2	D	MOL-C	O	O/C	FAI	ET-C	2Y	0PSP03-CV-0011	
												ET-O	2Y	0PSP03-CV-0011	
												ST-C	2Y	0PSP03-CV-0011	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2R171TCV0033D	RCP 1D SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / C-8	B	Active	2	2	D	MOL-C	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R171TCV0034A	RCP 1A SEAL #1 INJECTION IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#1 / C-8	C	Active	2	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R171TCV0034B	RCP 1B SEAL #1 INJECTION IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#1 / C-8	C	Active	2	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R171TCV0034C	RCP 1C SEAL #1 INJECTION IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#1 / C-8	C	Active	2	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R171TCV0034D	RCP 1D SEAL #1 INJECTION IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#1 / C-8	C	Active	2	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R171TCV0243	POSITIVE DISPLACEMENT PUMP DISCHARGE CHECK VALVE	5R179F05007#1 / B-6	C	Active	2	2	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2R171XCV0003	CVCS NORMAL CHARGING TO RCS LOOP 1A COLD LEG MOV	5R179F05005#1 / G-7	B	Active	2	4	GT	MOH	O/C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	R	0PSP03-CV-0011	ROJ-03
												ET-O	R	0PSP03-CV-0011	ROJ-03
2R171XCV0006	CVCS ALTERNATE CHARGING TO RCS LOOP 1C COLD LEG MOV	5R179F05005#1 / F-7	B	Active	2	4	GT	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	R	0PSP03-CV-0011	ROJ-03
												ET-O	R	0PSP03-CV-0011	ROJ-03
2R171XCV0025	CVCS CHARGING ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / G-3	B	Active	2	4	GT	MOH-C	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
2R171XCV0025	CVCS CHARGING ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / G-3	B	Active	2	4	GT	MOH-C	O	O/C	FAI	ET-O	CS	0PSP03-CV-0011	CSJ-01
												ST-C	CS	0PSP03-CV-0011	CSJ-01
2R171XCV0026	CVCS CHARGING IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#1 / G-3	C	Active	2	4	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R171XCV0112B	CVCS VOLUME CONTROL TANK OUTLET MOV	5R179F05007#1 / E-4	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-02
												ET-O	CS	0PSP03-CV-0011	CSJ-02
2R171XCV0113A	CVCS VOLUME CONTROL TANK OUTLET MOV	5R179F05007#1 / E-4	B	Active	2	6	GT	MOH	O/C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-02
												ET-O	CS	0PSP03-CV-0011	CSJ-02
2R171XCV0212	CVCS VOLUME CONTROL TANK OUTLET CHECK VALVE	5R179F05007#1 / E-4	C	Active	2	6	CK	SA	O	O	N/A	BD-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP11-ZE-0001	
2R171XCV0670	CVCS CHARGING HEADER CHECK VALVE	5R179F05007#1 / D-6	C	Active	2	4	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R201TCC0013	RHR TRAIN A CCW SUPPLY IRC CHECK VALVE	5R209F05017#1 / E-2	A/C	Active	2	16	CK	SA	C	O/C	N/A	LTJ	AppJ	0PSP11-CC-0007	
												CV-C	CM	0PSP11-CC-0007	
												CV-O	CM	0PSP03-CC-0001	
2R201TCC0123	RHR TRAIN B CCW SUPPLY IRC CHECK VALVE	5R209F05018#1 / E-2	A/C	Active	2	16	CK	SA	C	O/C	N/A	LTJ	AppJ	0PSP11-CC-0009	
												CV-C	CM	0PSP11-CC-0009	
												CV-O	CM	0PSP03-CC-0002	
2R201TCC0183	RHR TRAIN C CCW SUPPLY IRC CHECK VALVE	5R209F05019#1 / E-2	A/C	Active	2	16	CK	SA	C	O/C	N/A	LTJ	AppJ	0PSP11-CC-0011	
												CV-C	CM	0PSP11-CC-0011	
												CV-O	CM	0PSP03-CC-0003	
2S101TMS0021	S/G 1A MAIN STEAM OUTLET PORV ISOLATION VALVE	5S109F00016#1 / H-6	B	Active	2	8	GT	M	O	C	N/A	ET-C	2Y	0PSP03-MS-0001	
												ET-O	2Y	0PSP03-MS-0001	
2S101TMS0038	S/G 1B MAIN STEAM OUTLET PORV ISOLATION VALVE	5S109F00016#1 / F-6	B	Active	2	8	GT	M	O	C	N/A	ET-C	2Y	0PSP03-MS-0001	
												ET-O	2Y	0PSP03-MS-0001	
2S101TMS0055	S/G 1C MAIN STEAM OUTLET PORV ISOLATION VALVE	5S109F00016#1 / E-6	B	Active	2	8	GT	M	O	C	N/A	ET-C	2Y	0PSP03-MS-0001	
												ET-O	2Y	0PSP03-MS-0001	
2S101TMS0072	S/G 1D MAIN STEAM OUTLET PORV ISOLATION VALVE	5S109F00016#1 / C-6	B	Active	2	8	GT	M	O	C	N/A	ET-C	2Y	0PSP03-MS-0001	
												ET-O	2Y	0PSP03-MS-0001	
2S131TAF0308	SG 1D PREHTR BYPASS LINE CHECK VLV	5S139F00063#1 / F-2	C	Active	2	4	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S131TAF0309	SG 1A PREHTR BYPASS LINE CHECK VLV	5S139F00063#1 / F-8	C	Active	2	4	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2S131TAF0310	SG 1B PREHTR BYPASS LINE CHECK VLV	5S139F00063#1 / F-6	C	Active	2	4	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S131TAF0311	SG 1C PREHTR BYPASS LINE CHECK VLV	5S139F00063#1 / F-4	C	Active	2	4	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S131TFW0062	STEAM GENERATOR 1A FEEDWATER INLET CHECK VALVE	5S139F00063#1 / H-8	C	Active	2	18	CK	SA	O	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S131TFW0066	STEAM GENERATOR 1B FEEDWATER INLET CHECK VALVE	5S139F00063#1 / H-6	C	Active	2	18	CK	SA	O	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S131TFW0067	STEAM GENERATOR 1C FEEDWATER INLET CHECK VALVE	5S139F00063#1 / H-4	C	Active	2	18	CK	SA	O	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S131TFW0249	STEAM GENERATOR 1D FEEDWATER INLET CHECK VALVE	5S139F00063#1 / H-2	C	Active	2	18	CK	SA	O	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S141TAF0019	(OCIV) AFW TO SG 1D OCIV (AF- MOV-0019)	5S141F00024#1 / G-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0011	
												OV-O	App3	0PSP03-AF-0011	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0007	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
2S141TAF0048	(OCIV) AFW TO SG 1A OCIV (AF- MOV-0048)	5S141F00024#1 / F-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0011	
												OV-O	App3	0PSP03-AF-0011	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
2S141TAF0065	(OCIV) AFW TO SG 1B OCIV (AF- MOV-0065)	5S141F00024#1 / D-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0011	
												OV-O	App3	0PSP03-AF-0011	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
2S141TAF0085	STEAM GENERATOR 1C ORC AFW ISOLATION MOV	5S141F00024#1 / B-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0011	
												OV-O	App3	0PSP03-AF-0011	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
												ET-C	Q	0PSP03-AF-0010	
2S141TAF0085	STEAM GENERATOR 1C ORC AFW ISOLATION MOV	5S141F00024#1 / B-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	ET-O	Q	0PSP03-AF-0010	
2S141TAF0119	(ICIV IMB) AFW TO SG 1A CHECK VLV	5S141F00024#1 / F-1	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S141TAF0120	(ICIV IMB) AFW TO SG 1B CHECK VLV	5S141F00024#1 / D-1	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S141TAF0121	(ICIV IMB) AFW TO SG 1C CHECK VLV	5S141F00024#1 / C-1	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S141TAF0122	(ICIV IMB) AFW TO SG 1D CHECK VLV	5S141F00024#1 / H-1	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S141TMS0143	TERRY TURBINE MAIN STEAM SUPPLY ORC ISOLATION MOV	5S141F00024#1 / H-8	B/C	Active	2	4	SCK	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0007	
												OV-O	App3	0PSP03-AF-0007	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP03-AF-0007	
												CV-O	CM	0PSP03-AF-0007	
												ET-C	Q	0PSP03-AF-0007	
												ET-O	Q	0PSP03-AF-0007	
2V141THC0003	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE SUPPLY (IRC) ISOLATION DAMPER	5V149V00019#1 / F-3	A	Active	2	18	B	MOH-C	O/C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP03-HC-0003	
												ET-C	Q	0PSP03-HC-0003	
												ET-O	Q	0PSP03-HC-0003	
												ST-C	Q	0PSP03-HC-0003	
2V141THC0005	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE EXHAUST (IRC) ISOLATION DAMPER	5V149V00019#1 / B-7	A	Active	2	18	B	MOH - C	O/C	C	FAI	DIAG	App3	0PSP11-ZE-0006	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2V141THC0005	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE EXHAUST (IRC) ISOLATION DAMPER	5V149V00019#1 / B-7	A	Active	2	18	B	MOH - C	O/C	C	FAI	OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-HC-0004	
												ET-C	Q	0PSP03-HC-0003	
												ET-O	Q	0PSP03-HC-0003	
												ST-C	Q	0PSP03-HC-0003	
2V141ZHC0007	REACTOR CONTAINMENT BUILDING NORMAL PURGE SUPPLY (ORC) ISOLATION DAMPER	5V149V00018#1 / G-3	A	Active	2	48	B	MOH-C	C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
2V141ZHC0007	REACTOR CONTAINMENT BUILDING NORMAL PURGE SUPPLY (ORC) ISOLATION DAMPER	5V149V00018#1 / G-3	A	Active	2	48	B	MOH-C	C	C	FAI	OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-HC-0002	
												ET-C	CS	0PSP03-HC-0004	CSJ-07
												ET-O	CS	0PSP03-HC-0004	CSJ-07
												ST-C	CS	0PSP03-HC-0004	CSJ-07
2V141ZHC0008	REACTOR CONTAINMENT BUILDING NORMAL PURGE SUPPLY (IRC) ISOLATION DAMPER	5V149V00018#1 / G-2	A	Active	2	48	B	MOH - C	C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
2V141ZHC0008	REACTOR CONTAINMENT BUILDING NORMAL PURGE SUPPLY (IRC) ISOLATION DAMPER	5V149V00018#1 / G-2	A	Active	2	48	B	MOH - C	C	C	FAI	RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-HC-0002	
												ET-C	CS	0PSP03-HC-0004	CSJ-07
												ET-O	CS	0PSP03-HC-0004	CSJ-07
												ST-C	CS	0PSP03-HC-0004	CSJ-07
2V141ZHC0009	REACTOR CONTAINMENT BUILDING NORMAL PURGE EXHAUST (IRC) ISOLATION DAMPER	5V149V00018#1 / B-7	A	Active	2	48	B	MOH-C	C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2V141ZHC0009	REACTOR CONTAINMENT BUILDING NORMAL PURGE EXHAUST (IRC) ISOLATION DAMPER	5V149V00018#1 / B-7	A	Active	2	48	B	MOH-C	C	C	FAI	LTJ	AppJ	0PSP11-HC-0002	
												ET-C	CS	0PSP03-HC-0004	CSJ-07
												ET-O	CS	0PSP03-HC-0004	CSJ-07
												ST-C	CS	0PSP03-HC-0004	CSJ-07
2V141ZHC0010	REACTOR CONTAINMENT BUILDING NORMAL PURGE EXHAUST (ORC) ISOLATION DAMPER	5V149V00018#1 / B-6	A	Active	2	48	B	MOH - C	C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-HC-0001	
2V141ZHC0010	REACTOR CONTAINMENT BUILDING NORMAL PURGE EXHAUST (ORC) ISOLATION DAMPER	5V149V00018#1 / B-6	A	Active	2	48	B	MOH - C	C	C	FAI	ET-C	CS	0PSP03-HC-0004	CSJ-07
												ET-O	CS	0PSP03-HC-0004	CSJ-07
												ST-C	CS	0PSP03-HC-0004	CSJ-07
3Q151XSD0003A	STARTING AIR RECEIVER #11 INLET CHECK VALVE	5Q159F22546#1 / E-7	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0027	
												CV-C	CM	0PSP03-DG-0027	
3Q151XSD0003B	STARTING AIR RECEIVER #13 INLET CHECK VALVE	5Q159F22546#1 / E-5	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0028	
												CV-C	CM	0PSP03-DG-0028	
3Q151XSD0003C	STARTING AIR RECEIVER #15 INLET CHECK VALVE	5Q159F22546#1 / E-2	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0029	
												CV-C	CM	0PSP03-DG-0029	
3Q151XSD0004A	STARTING AIR RECEIVER #12 INLET CHECK VALVE	5Q159F22546#1 / E-7	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0027	
												CV-C	CM	0PSP03-DG-0027	
3Q151XSD0004B	STARTING AIR RECEIVER #14 INLET CHECK VALVE	5Q159F22546#1 / E-4	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0028	
												CV-C	CM	0PSP03-DG-0028	
3Q151XSD0004C	STARTING AIR RECEIVER #16 INLET CHECK VALVE	5Q159F22546#1 / E-1	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0029	
3Q151XSD0004C	STARTING AIR RECEIVER #16 INLET CHECK VALVE	5Q159F22546#1 / E-1	C	Active	3	1	CK	SA	O/C	C	N/A	CV-C	CM	0PSP03-DG-0029	
3R201TCC0051	CCW PUMP 1A COMMON SUCTION HEADER CHECK VALVE	5R209F05020#1 / C-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0001	
3R201TCC0052	CCW PUMP 1A COMMON SUCTION HEADER ISOLATION MOV	5R209F05020#1 / C-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0007	
												ET-O	2Y	0PSP03-CC-0007	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0131	CCW PUMP 1B COMMON HEADER SUCTION CHECK VALVE	5R209F05020#1 / C-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0002	
3R201TCC0132	CCW PUMP 1B COMMON HEADER SUCTION ISOLATION MOV	5R209F05020#1 / C-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0008	
												ET-O	2Y	0PSP03-CC-0008	
3R201TCC0132	CCW PUMP 1B COMMON HEADER SUCTION ISOLATION MOV	5R209F05020#1 / C-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0191	CCW PUMP 1C COMMON SUCTION HEADER CHECK VALVE	5R209F05020#1 / B-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0003	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
3R201TCC0192	CCW PUMP 1C COMMON SUCTION HEADER ISOLATION MOV	5R209F05020#1 / B-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0009	
												ET-O	2Y	0PSP03-CC-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0311	CCW TRAIN C COMMON HEADER SUPPLY CHECK VALVE	5R209F05020#1 / E-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
3R201TCC0311	CCW TRAIN C COMMON HEADER SUPPLY CHECK VALVE	5R209F05020#1 / E-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-O	CM	0PSP03-CC-0003	
3R201TCC0312	CCW TRAIN C COMMON HEADER SUPPLY MOV	5R209F05020#1 / E-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0009	
												ET-O	2Y	0PSP03-CC-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0313	CCW TRAIN B COMMON HEADER SUPPLY CHECK VALVE	5R209F05020#1 / E-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0002	
3R201TCC0314	CCW TRAIN B COMMON HEADER SUPPLY MOV	5R209F05020#1 / E-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0008	
												ET-O	2Y	0PSP03-CC-0008	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0315	CCW TRAIN A COMMON SUPPLY HEADER CHECK VALVE	5R209F05020#1 / F-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0001	
3R201TCC0316	CCW TRAIN A COMMON SUPPLY HEADER MOV	5R209F05020#1 / F-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0007	
												ET-O	2Y	0PSP03-CC-0007	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0642	CCW HEAT EXCHANGER 1A BYPASS MOV	5R209F05017#1 / A-6	B	Active	3	16	B	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-CC-0007	
												ET-O	2Y	0PSP03-CC-0007	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0643	CCW HEAT EXCHANGER 1A OUTLET MOV	5R209F05017#1 / B-5	B	Active	3	24	B	MOL	O	O	FAI	ET-C	2Y	0PSP03-CC-0007	
												ET-O	2Y	0PSP03-CC-0007	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
3R201TCC0643	CCW HEAT EXCHANGER 1A OUTLET MOV	5R209F05017#1 / B-5	B	Active	3	24	B	MOL	O	O	FAI	RPI	App3	0PSP11-ZE-0006	
3R201TCC0644	CCW HEAT EXCHANGER 1B BYPASS MOV	5R209F05018#1 / A-6	B	Active	3	16	B	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-CC-0008	
												ET-O	2Y	0PSP03-CC-0008	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0645	CCW HEAT EXCHANGER 1B OUTLET MOV	5R209F05018#1 / B-5	B	Active	3	24	B	MOL	O	O	FAI	ET-C	2Y	0PSP03-CC-0008	
												ET-O	2Y	0PSP03-CC-0008	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0646	CCW HEAT EXCHANGER 1C BYPASS MOV	5R209F05019#1 / A-6	B	Active	3	16	B	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-CC-0009	
												ET-O	2Y	0PSP03-CC-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
3R201TCC0646	CCW HEAT EXCHANGER 1C BYPASS MOV	5R209F05019#1 / A-6	B	Active	3	16	B	MOL	C	O/C	FAI	OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R201TCC0647	CCW HEAT EXCHANGER 1C OUTLET MOV	5R209F05019#1 / B-5	B	Active	3	24	B	MOL	O	O	FAI	ET-C	2Y	0PSP03-CC-0009	
												ET-O	2Y	0PSP03-CC-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R281TEW0006	ECW PUMP 1A DISCHARGE CHECK VALVE	5R289F05038SH1#1 / C-3	C	Active	3	30	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-EW-0017	
3R281TEW0042	ECW PUMP 1B DISCHARGE CHECK VALVE	5R289F05038SH2#1 / C -3	C	Active	3	30	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-EW-0018	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position			Test Req	Freq	Procedure	Notes
									Normal	Safe	Fail				
3R281TEW0079	ECW PUMP 1C DISCHARGE CHECK VALVE	5R289F05038SH3#1 / C-3	C	Active	3	30	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-EW-0019	
3R281TEW0121	ECW PUMP 1A DISCHARGE MOV	5R289F05038SH1#1 / C -2	B	Active	3	30	B	MOH	O/C	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
3R281TEW0121	ECW PUMP 1A DISCHARGE MOV	5R289F05038SH1#1 / C -2	B	Active	3	30	B	MOH	O/C	O	FAI	RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-EW-0017	
												ET-O	Q	0PSP03-EW-0017	
3R281TEW0137	ECW PUMP 1B DISCHARGE MOV	5R289F05038SH2#1 / C-2	B	Active	3	30	B	MOH	O/C	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-EW-0018	
												ET-O	Q	0PSP03-EW-0018	
3R281TEW0151	ECW PUMP 1C DISCHARGE MOV	5R289F05038SH3#1 / C -2	B	Active	3	30	B	MOH	O/C	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-EW-0019	
												ET-O	Q	0PSP03-EW-0019	
3S141TAF0011	AFW TRAIN D AUTO RECIRC VLV	5S141F00024#1 / H-5	C	Active	3	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0007	
3S141TAF0036	AFW TRAIN A AUTO RECIRC VLV	5S141F00024#1 / F-6	C	Active	3	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
3S141TAF0036	AFW TRAIN A AUTO RECIRC VLV	5S141F00024#1 / F-6	C	Active	3	4	CK	SA	C	O/C	N/A	CV-O	CM	0PSP03-AF-0001	
3S141TAF0058	AFW TRAIN B AUTO RECIRC VLV	5S141F00024#1 / D-6	C	Active	3	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
3S141TAF0091	AFW TRAIN C AUTO RECIRC VLV	5S141F00024#1 / B-6	C	Active	3	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0003	
3S141XMS0514	MAIN STEAM TO TERRY TURBINE THROTTLE MOV	5S141F00024#2 / F-6	B	Active	2	4	GL	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0007	
												OV-O	App3	0PSP03-AF-0007	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0007	
												ET-O	Q	0PSP03-AF-0007	
3S141ZAF7523	AF-MOV-7523 (AFW TRAIN C DISCH MOV)	5S141F00024#1 / B-4	B	Active	3	4	GL	MOH	O	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0003	
												OV-O	App3	0PSP03-AF-0003	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
3S141ZAF7524	AF-MOV-7524 (AFW TRAIN B DISCH MOV)	5S141F00024#1 / D-4	B	Active	3	4	GL	MOH	O	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0002	
3S141ZAF7524	AF-MOV-7524 (AFW TRAIN B DISCH MOV)	5S141F00024#1 / D-4	B	Active	3	4	GL	MOH	O	O	FAI	OV-O	App3	0PSP03-AF-0002	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
3S141ZAF7525	AF-MOV-7525 (AFW TRAIN A DISCH MOV)	5S141F00024#1 / F-4	B	Active	3	4	GL	MOH	O	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0001	
												OV-O	App3	0PSP03-AF-0001	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
3S141ZAF7526	AF-MOV-7526 (AFW TRAIN D DISCH MOV)	5S141F00024#1 / H-3	B	Active	3	4	GL	MOH	O	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0007	
												OV-O	App3	0PSP03-AF-0007	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
A1AFFV7517	A AFW CROSSOVER VALVE (AF-FV -7517)	5S141F00024#1 / F-5	B	Active	3	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-AF-0010	
A1AFFV7517	A AFW CROSSOVER VALVE (AF-FV -7517)	5S141F00024#1 / F-5	B	Active	3	4	GL	AO	C	C	C	OV-O	2Y	0PSP03-AF-0010	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-AF-0010	
												FS-C	Q	0PSP03-AF-0010	
												ST-C	Q	0PSP03-AF-0010	
A1CCFV4531	RHR HEAT EXCHANGER 1A CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05017#1 / G-2	B	Active	3	16	B	AO	C	O	O	OV-C	2Y	0PSP03-CC-0007	
												OV-O	2Y	0PSP03-CC-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CC-0007	
												FS-O	Q	0PSP03-CC-0007	
												ST-O	Q	0PSP03-CC-0007	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
A1CHTV9477A	TRAIN A ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 11A OUTLET TEMPERATURE CONTROL VALVE	3V119V10002#1 / C-6	B	Active	3	4	B	AO	NT	O	O	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CH-0007	
												FS-O	Q	0PSP03-CH-0007	
												ST-O	Q	0PSP03-CH-0007	
A1CHTV9477B	TRAIN A ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 11A BYPASS TEMPERATURE VALVE	3V119V10002#1 / C-6	B	Active	3	4	B	AO	NT	C	C	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-CH-0007	
												FS-C	Q	0PSP03-CH-0007	
												ST-C	Q	0PSP03-CH-0007	
A1CVFCV0205	CVCS CHARGING DISCHARGE HEADER FLOW CONTROL VALVE	5R179F05007#1 / E-7	B	Active	2	4	GL	AO	NT	O	O	OV-C	2Y	0PSP03-CV-0010	
A1CVFCV0205	CVCS CHARGING DISCHARGE HEADER FLOW CONTROL VALVE	5R179F05007#1 / E-7	B	Active	2	4	GL	AO	NT	O	O	OV-O	2Y	0PSP03-CV-0010	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
												FS-O	CS	0PSP03-CV-0011	CSJ-01
												ST-C	CS	0PSP03-CV-0011	CSJ-01
A1FWFV7141	STEAM GENERATOR 1A ORC FEEDWATER ISOLATION VALVE	5S139F00063#1 / G-8	B	Active	2	18	GT	HO	O	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-05
												FS-C	CS	0PSP03-FW-0002	CSJ-05
												ST-C	CS	0PSP03-FW-0002	CSJ-05
A1FWFV7142	STEAM GENERATOR 1B ORC FEEDWATER ISOLATION VALVE	5S139F00063#1 / G-6	B	Active	2	18	GT	HO	O	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-05
												FS-C	CS	0PSP03-FW-0002	CSJ-05
												ST-C	CS	0PSP03-FW-0002	CSJ-05
A1FWFV7143	STEAM GENERATOR 1C ORC FEEDWATER ISOLATION VALVE	5S139F00063#1 / G-4	B	Active	2	18	GT	HO	O	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-05
												FS-C	CS	0PSP03-FW-0002	CSJ-05
												ST-C	CS	0PSP03-FW-0002	CSJ-05
A1FWFV7144	STEAM GENERATOR 1D ORC FEEDWATER ISOLATION VALVE	5S139F00063#1 / G-2	B	Active	2	18	GT	HO	O	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-05
												FS-C	CS	0PSP03-FW-0002	CSJ-05
												ST-C	CS	0PSP03-FW-0002	CSJ-05
A1FWFV7147A	STEAM GENERATOR 1B FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#1 / G-5	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
A1FWFV7147A	STEAM GENERATOR 1B FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#1 / G-5	B	Active	2	3	GL	AO	C	C	C	ET-C	CS	0PSP03-FW-0002	CSJ-14
												FS-C	CS	0PSP03-FW-0002	CSJ-14
												ST-C	CS	0PSP03-FW-0002	CSJ-14
A1FWFV7148A	STEAM GENERATOR 1A FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#1 / G-7	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-14
												FS-C	CS	0PSP03-FW-0002	CSJ-14
												ST-C	CS	0PSP03-FW-0002	CSJ-14
A1FWFV7189	STEAM GENERATOR 1A PREHEATER ORC BYPASS VALVE	5S139F00063#1 / E-8	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-06
A1FWFV7189	STEAM GENERATOR 1A PREHEATER ORC BYPASS VALVE	5S139F00063#1 / E-8	B	Active	2	3	GL	AO	C	C	C	FS-C	CS	0PSP03-FW-0002	CSJ-06
												ST-C	CS	0PSP03-FW-0002	CSJ-06
A1FWFV7190	STEAM GENERATOR 1B PREHEATER ORC BYPASS VALVE	5S139F00063#1 / E-6	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-06
												FS-C	CS	0PSP03-FW-0002	CSJ-06
												ST-C	CS	0PSP03-FW-0002	CSJ-06
A1FWFV7191	STEAM GENERATOR 1C PREHEATER ORC BYPASS VALVE	5S139F00063#1 / E-4	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-06
												FS-C	CS	0PSP03-FW-0002	CSJ-06
												ST-C	CS	0PSP03-FW-0002	CSJ-06
A1FWFV7192	STEAM GENERATOR 1D PREHEATER ORC BYPASS VALVE	5S139F00063#1 / E-2	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
A1FWFV7192	STEAM GENERATOR 1D PREHEATER ORC BYPASS VALVE	5S139F00063#1 / E-2	B	Active	2	3	GL	AO	C	C	C	ET-C	CS	0PSP03-FW-0002	CSJ-06
												FS-C	CS	0PSP03-FW-0002	CSJ-06
												ST-C	CS	0PSP03-FW-0002	CSJ-06
A1HCFV9776	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE SUPPLY ISOLATION VALVE OPERATOR	5V149V00019#1 / F-4	A	Active	2	18	B	AO	O/C	C	C	OV-C	2Y	0PSP11-HC-0003	
												OV-O	2Y	0PSP03-HC-0003	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-HC-0003	
												ET-C	Q	0PSP03-HC-0003	
												FS-C	Q	0PSP03-HC-0003	
												ST-C	Q	0PSP03-HC-0003	
A1HCFV9777	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE EXHAUST ISOLATION VALVE OPERATOR	5V149V00019#1 / B-6	A	Active	2	18	B	AO	O/C	C	C	OV-C	2Y	0PSP11-HC-0004	
												OV-O	2Y	0PSP03-HC-0004	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-HC-0004	
												ET-C	Q	0PSP03-HC-0003	
												FS-C	Q	0PSP03-HC-0003	
												ST-C	Q	0PSP03-HC-0003	
A1MSFSV7414	STEAM GENERATOR 1A MAIN STEAM ORC ISOLATION VALVE	5S109F00016#1 / G-4	B	Active	2	30	GT	AO	O	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-MS-0002	CSJ-08
A1MSFSV7414	STEAM GENERATOR 1A MAIN STEAM ORC ISOLATION VALVE	5S109F00016#1 / G-4	B	Active	2	30	GT	AO	O	C	C	FS-C	CS	0PSP03-MS-0002	CSJ-08
												ST-C	CS	0PSP03-MS-0002	CSJ-08
A1MSFSV7424	STEAM GENERATOR 1B MAIN STEAM ORC ISOLATION VALVE	5S109F00016#1 / F-4	B	Active	2	30	GT	AO	O	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-MS-0002	CSJ-08
												FS-C	CS	0PSP03-MS-0002	CSJ-08
												ST-C	CS	0PSP03-MS-0002	CSJ-08
A1MSFSV7434	STEAM GENERATOR 1C MAIN STEAM ORC ISOLATION VALVE	5S109F00016#1 / D-4	B	Active	2	30	GT	AO	O	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-MS-0002	CSJ-08
												FS-C	CS	0PSP03-MS-0002	CSJ-08
												ST-C	CS	0PSP03-MS-0002	CSJ-08
A1MSFSV7444	STEAM GENERATOR 1D MAIN STEAM ORC ISOLATION VALVE	5S109F00016#1 / C-4	B	Active	2	30	GT	AO	O	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0002	
A1MSFSV7444	STEAM GENERATOR 1D MAIN STEAM ORC ISOLATION VALVE	5S109F00016#1 / C-4	B	Active	2	30	GT	AO	O	C	C	ET-C	CS	0PSP03-MS-0002	CSJ-08
												FS-C	CS	0PSP03-MS-0002	CSJ-08
												ST-C	CS	0PSP03-MS-0002	CSJ-08
A1MSFV7412	SG 1A MN STM ISOLATION BYPASS VALVE	5S109F00016#1 / G-4	B	Active	2	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	CS	0PSP03-MS-0002	CSJ-09
												FS-C	CS	0PSP03-MS-0002	CSJ-09
												ST-C	CS	0PSP03-MS-0002	CSJ-09
A1MSFV7422	SG 1B MN STM ISOLATION BYPASS VALVE	5S109F00016#1 / F-4	B	Active	2	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	CS	0PSP03-MS-0002	CSJ-09
												FS-C	CS	0PSP03-MS-0002	CSJ-09
												ST-C	CS	0PSP03-MS-0002	CSJ-09
A1MSFV7432	SG 1C MN STM ISOLATION BYPASS VALVE	5S109F00016#1 / D-4	B	Active	2	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	CS	0PSP03-MS-0002	CSJ-09
												FS-C	CS	0PSP03-MS-0002	CSJ-09
												ST-C	CS	0PSP03-MS-0002	CSJ-09
A1MSFV7442	SG 1D MN STM ISOLATION BYPASS VALVE	5S109F00016#1 / C-4	B	Active	2	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	CS	0PSP03-MS-0002	CSJ-09
												FS-C	CS	0PSP03-MS-0002	CSJ-09
												ST-C	CS	0PSP03-MS-0002	CSJ-09
A1MSPV7411	S/G 1A MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#1 / H-6	B	Active	2	8	GL	HO	C	O/C	C	OV-C	2Y	0PSP03-MS-0001	
												OV-O	2Y	0PSP03-MS-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	R	0PSP03-MS-0001	ISTC-3510
												ET-O	R	0PSP03-MS-0001	ISTC-3510
A1MSPV7411	S/G 1A MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#1 / H-6	B	Active	2	8	GL	HO	C	O/C	C	FS-C	R	0PSP03-MS-0001	ISTC-3510
												ST-C	R	0PSP03-MS-0001	ISTC-3510
												ST-O	R	0PSP03-MS-0001	ISTC-3510

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
A1RCHCV0601	(IRC) RX VESSEL HEAD VENT THROTTLE VALVE	5R149F05001#1 / E-2	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04
A1RCHV3657A	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#1 / E-4	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
A1RCHV3657A	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#1 / E-4	B	Active	2	1	GL	SO	C	O/C	C	FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04
A1RCHV3658A	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#1 / E-3	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04
A1RCPCV0655A	PRESSURIZER POWER OPERATED RELIEF VLV	5R149F05003#1 / D-8	B	Active	1	6	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0010	
												OV-O	2Y	0PSP03-RC-0010	
												RPI	2Y	0PSP03-RC-0010	
												ET-C	Q	0PSP03-RC-0010	
												ET-O	Q	0PSP03-RC-0010	
												FS-C	Q	0PSP03-RC-0010	
A1RCPCV0655A	PRESSURIZER POWER OPERATED RELIEF VLV	5R149F05003#1 / D-8	B	Active	1	6	GL	SO	C	O/C	C	ST-C	Q	0PSP03-RC-0010	
												ST-O	Q	0PSP03-RC-0010	
A1RHFCV0851	RHR HEAT EXCHANGER 1A BYPASS VALVE	5R169F20000#1 / C-5	B	Active	2	8	B	AO	C	C	C	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-RH-0007	CSJ-11
												FS-C	CS	0PSP03-RH-0007	CSJ-11
A1RHHCV0864	RHR HEAT EXCHANGER 1A OUTLET VALVE	5R169F20000#1 / B-4	B	Active	2	8	B	AO	O	O	O	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-O	CS	0PSP03-RH-0007	CSJ-11
												FS-O	CS	0PSP03-RH-0007	CSJ-11
A1SBFV4150	STEAM GENERATOR 1D BLOWDOWN ORC ISOLATION VALVE	5S209F20001#1 / C-5	B	Active	2	4	GT	AO	O	C	C	OV-C	2Y	0PSP03-SB-0001	
												OV-O	2Y	0PSP03-SB-0001	
												RPI	2Y	0PSP03-ZG-0001	
A1SBFV4150	STEAM GENERATOR 1D BLOWDOWN ORC ISOLATION VALVE	5S209F20001#1 / C-5	B	Active	2	4	GT	AO	O	C	C	ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
												ST-C	Q	0PSP03-SB-0001	
A1SBFV4153	STEAM GENERATOR 1A BLOWDOWN ORC ISOLATION VALVE	5S209F20001#1 / F-5	B	Active	2	4	GT	AO	O	C	C	OV-C	2Y	0PSP03-SB-0001	
												OV-O	2Y	0PSP03-SB-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
												ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
												ST-C	Q	0PSP03-SB-0001	
A1XCFV1025	PERSONNEL AIRLOCK REACTOR DOOR SEAL AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#1 / G-4	A	Active	2	0.5	GL	SO	O	O/C	C	OV-C	2Y	0PSP11-XC-0010	
												OV-O	2Y	0PSP11-XC-0010	
												RPI	2Y	0PSP03-ZG-0001	
A1XCFV1025	PERSONNEL AIRLOCK REACTOR DOOR SEAL AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#1 / G-4	A	Active	2	0.5	GL	SO	O	O/C	C	LTJ	AppJ	0PSP11-XC-0010	
												ET-C	Q	0PSP03-XC-0003	
												ET-O	Q	0PSP03-XC-0003	
												FS-C	Q	0PSP03-XC-0003	
												ST-C	Q	0PSP03-XC-0003	
												ST-O	Q	0PSP03-XC-0003	
A1XCFV1026	PERSONNEL AIRLOCK OUTER DOOR SEAL AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#1 / F-4	A	Active	2	0.5	GL	SO	O	O/C	C	OV-C	2Y	0PSP11-XC-0011	
												OV-O	2Y	0PSP11-XC-0011	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-XC-0011	
												ET-C	Q	0PSP03-XC-0003	
												ET-O	Q	0PSP03-XC-0003	
A1XCFV1026	PERSONNEL AIRLOCK OUTER DOOR SEAL AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#1 / F-4	A	Active	2	0.5	GL	SO	O	O/C	C	FS-C	Q	0PSP03-XC-0003	
												ST-C	Q	0PSP03-XC-0003	
												ST-O	Q	0PSP03-XC-0003	

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
A1XCFV1027	PERSONNEL AIRLOCK OUTER DOOR SEAL TEST AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#1 / C-4	A	Active	2	0.5	GL	SO	O	O/C	C	OV-C	2Y	0PSP11-XC-0012	
												OV-O	2Y	0PSP11-XC-0012	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-XC-0012	
												ET-C	Q	0PSP03-XC-0003	
												ET-O	Q	0PSP03-XC-0003	
												FS-C	Q	0PSP03-XC-0003	
A1XCFV1027	PERSONNEL AIRLOCK OUTER DOOR SEAL TEST AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#1 / C-4	A	Active	2	0.5	GL	SO	O	O/C	C	ST-C	Q	0PSP03-XC-0003	
												ST-O	Q	0PSP03-XC-0003	
A1XCFV1028	PERSONNEL AIRLOCK REACTOR DOOR SEAL TEST AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#1 / C-4	A	Active	2	0.5	GL	SO	O	O/C	C	OV-C	2Y	0PSP11-XC-0013	
												OV-O	2Y	0PSP11-XC-0013	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-XC-0013	
												ET-C	Q	0PSP03-XC-0003	
												ET-O	Q	0PSP03-XC-0003	
												FS-C	Q	0PSP03-XC-0003	
A1XCFV1028	PERSONNEL AIRLOCK REACTOR DOOR SEAL TEST AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#1 / C-4	A	Active	2	0.5	GL	SO	O	O/C	C	ST-C	Q	0PSP03-XC-0003	
												ST-O	Q	0PSP03-XC-0003	
B1AFFV7516	B AFW CROSSOVER VALVE (AF-FV-7516)	5S141F00024#1 / D-5	B	Active	3	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-AF-0010	
												OV-O	2Y	0PSP03-AF-0010	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-AF-0010	
												FS-C	Q	0PSP03-AF-0010	
												ST-C	Q	0PSP03-AF-0010	
B1CCFV4548	RHR HEAT EXCHANGER 1B CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05018#1 / G-2	B	Active	3	16	B	AO	C	O	O	OV-C	2Y	0PSP03-CC-0008	
												OV-O	2Y	0PSP03-CC-0008	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CC-0008	
												FS-O	Q	0PSP03-CC-0008	
B1CCFV4548	RHR HEAT EXCHANGER 1B CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05018#1 / G-2	B	Active	3	16	B	AO	C	O	O	ST-O	Q	0PSP03-CC-0008	
B1CHTV9487A	TRAIN B ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 11B OUTLET TEMPERATURE CONTROL VALVE	3V119V10002#1 / C-4	B	Active	3	4	B	AO	NT	O	O	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CH-0007	
												FS-O	Q	0PSP03-CH-0007	
												ST-O	Q	0PSP03-CH-0007	
B1CHTV9487B	TRAIN B ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 11B BYPASS TEMPERATURE CONTROL VALVE	3V119V10002#1 / C-4	B	Active	3	4	B	AO	NT	C	C	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
B1CHTV9487B	TRAIN B ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 11B BYPASS TEMPERATURE CONTROL VALVE	3V119V10002#1 / C-4	B	Active	3	4	B	AO	NT	C	C	RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-CH-0007	
												FS-C	Q	0PSP03-CH-0007	
												ST-C	Q	0PSP03-CH-0007	
B1FWFV7145A	STEAM GENERATOR 1D FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#1 / G-1	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-14
												FS-C	CS	0PSP03-FW-0002	CSJ-14
												ST-C	CS	0PSP03-FW-0002	CSJ-14
B1FWFV7146A	STEAM GENERATOR 1C FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#1 / G-3	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-14
												FS-C	CS	0PSP03-FW-0002	CSJ-14
												ST-C	CS	0PSP03-FW-0002	CSJ-14
B1MSPV7421	S/G 1B MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#1 / F-6	B	Active	2	8	GL	HO	C	O/C	C	OV-C	2Y	0PSP03-MS-0001	
												OV-O	2Y	0PSP03-MS-0001	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-MS-0001	ISTC-3510
												ET-O	R	0PSP03-MS-0001	ISTC-3510
												FS-C	R	0PSP03-MS-0001	ISTC-3510
												ST-C	R	0PSP03-MS-0001	ISTC-3510
												ST-O	R	0PSP03-MS-0001	ISTC-3510
B1RCHCV0602	REACTOR VESSEL HEAD VENT THROTTLE VALVE	5R149F05001#1 / D-2	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
B1RCHV3657B	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#1 / E-4	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
B1RCHV3657B	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#1 / E-4	B	Active	2	1	GL	SO	C	O/C	C	ST-O	R	0PSP03-RC-0011	ROJ-04
B1RCHV3658B	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#1 / E-3	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04
B1RCPCV0656A	PRESSURIZER POWER OPERATED RELIEF VLV	5R149F05003#1 / E-8	B	Active	1	6	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0010	
												OV-O	2Y	0PSP03-RC-0010	
												RPI	2Y	0PSP03-RC-0010	
												ET-C	Q	0PSP03-RC-0010	
												ET-O	Q	0PSP03-RC-0010	
												FS-C	Q	0PSP03-RC-0010	
												ST-C	Q	0PSP03-RC-0010	
												ST-O	Q	0PSP03-RC-0010	
B1RHFCV0852	RHR HEAT EXCHANGER 1B BYPASS VALVE	5R169F20000#1 / E-5	B	Active	2	8	B	AO	C	C	C	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-RH-0007	CSJ-11
												FS-C	CS	0PSP03-RH-0007	CSJ-11
B1RHHCV0865	RHR HEAT EXCHANGER 1B OUTLET VALVE	5R169F20000#1 / D-4	B	Active	2	8	B	AO	O	O	O	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-O	CS	0PSP03-RH-0007	CSJ-11
												FS-O	CS	0PSP03-RH-0007	CSJ-11
B1SBFV4152	STEAM GENERATOR 1B BLOWDOWN ORC ISOLATION VALVE	5S209F20001#1 / F-2	B	Active	2	4	GT	AO	O	C	C	OV-C	2Y	0PSP03-SB-0001	
												OV-O	2Y	0PSP03-SB-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
B1SBFV4152	STEAM GENERATOR 1B BLOWDOWN ORC ISOLATION VALVE	5S209F20001#1 / F-2	B	Active	2	4	GT	AO	O	C	C	ST-C	Q	0PSP03-SB-0001	
C1AFFV7515	C AFW CROSSOVER VALVE (AF-FV -7515)	5S141F00024#1 / B-5	B	Active	3	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-AF-0010	
												OV-O	2Y	0PSP03-AF-0010	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-AF-0010	
												FS-C	Q	0PSP03-AF-0010	
												ST-C	Q	0PSP03-AF-0010	
C1CCFV4565	RHR HEAT EXCHANGER 1C CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05019#1 / G-2	B	Active	3	16	B	AO	C	O	O	OV-C	2Y	0PSP03-CC-0009	
												OV-O	2Y	0PSP03-CC-0009	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CC-0009	
												FS-O	Q	0PSP03-CC-0009	
												ST-O	Q	0PSP03-CC-0009	
C1CHTV9497A	TRAIN C ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 11C OUTLET TEMPERATURE CONTROL VALVE	3V119V10002#1 / C-1	B	Active	3	4	B	AO	NT	O	O	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CH-0007	
												FS-O	Q	0PSP03-CH-0007	
												ST-O	Q	0PSP03-CH-0007	
C1CHTV9497B	TRAIN C ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 11C BYPASS TEMPERATURE CONTROL VALVE	3V119V10002#1 / C-1	B	Active	3	4	B	AO	NT	C	C	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-CH-0007	
												FS-C	Q	0PSP03-CH-0007	
												ST-C	Q	0PSP03-CH-0007	
C1CVFV0011	CVCS LETDOWN ORIFICE HEADER ISOLATION VALVE	5R179F05005#1 / G-6	B	Active	2	4	GL	AO	O	C	C	OV-C	2Y	0PSP03-CV-0011	
												OV-O	2Y	0PSP03-CV-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
												FS-C	CS	0PSP03-CV-0011	CSJ-01
												ST-C	CS	0PSP03-CV-0011	CSJ-01
C1MSPV7431	S/G 1C MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#1 / E-6	B	Active	2	8	GL	HO	C	O/C	C	OV-C	2Y	0PSP03-MS-0001	
												OV-O	2Y	0PSP03-MS-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	R	0PSP03-MS-0001	ISTC-3510

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
C1MSPV7431	S/G 1C MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#1 / E-6	B	Active	2	8	GL	HO	C	O/C	C	ET-O	R	0PSP03-MS-0001	ISTC-3510
												FS-C	R	0PSP03-MS-0001	ISTC-3510
												ST-C	R	0PSP03-MS-0001	ISTC-3510
												ST-O	R	0PSP03-MS-0001	ISTC-3510
C1RHFCV0853	RHR HEAT EXCHANGER 1C BYPASS VALVE	5R169F20000#1 / H-5	B	Active	2	8	B	AO	C	C	C	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-RH-0007	CSJ-11
												FS-C	CS	0PSP03-RH-0007	CSJ-11
C1RHHCV0866	RHR HEAT EXCHANGER 1C OUTLET VALVE	5R169F20000#1 / G-4	B	Active	2	8	B	AO	O	O	O	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-O	CS	0PSP03-RH-0007	CSJ-11
												FS-O	CS	0PSP03-RH-0007	CSJ-11
C1SBFV4151	STEAM GENERATOR 1C BLOWDOWN ORC ISOLATION VALVE	5S209F20001#1 / C-2	B	Active	2	4	GT	AO	O	C	C	OV-C	2Y	0PSP03-SB-0001	
C1SBFV4151	STEAM GENERATOR 1C BLOWDOWN ORC ISOLATION VALVE	5S209F20001#1 / C-2	B	Active	2	4	GT	AO	O	C	C	OV-O	2Y	0PSP03-SB-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
												ST-C	Q	0PSP03-SB-0001	
D1AFFV7518	D AFW CROSSOVER VALVE (AF- FV-7518)	5S141F00024#1 / G-4	B	Active	3	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-AF-0010	
												OV-O	2Y	0PSP03-AF-0010	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-AF-0010	
												FS-C	Q	0PSP03-AF-0010	
												ST-C	Q	0PSP03-AF-0010	
D1MSPV7441	S/G 1D MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#1 / C-6	B	Active	2	8	GL	HO	C	O/C	C	OV-C	2Y	0PSP03-MS-0001	
												OV-O	2Y	0PSP03-MS-0001	
												RPI	2Y	0PSP03-ZG-0001	
D1MSPV7441	S/G 1D MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#1 / C-6	B	Active	2	8	GL	HO	C	O/C	C	ET-C	R	0PSP03-MS-0001	ISTC-3510
												ET-O	R	0PSP03-MS-0001	ISTC-3510
												FS-C	R	0PSP03-MS-0001	ISTC-3510
												ST-C	R	0PSP03-MS-0001	ISTC-3510
												ST-O	R	0PSP03-MS-0001	ISTC-3510
N1CCFV4620	RCP 1A THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / B-6	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N1CCFV4621	RCP 1A THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / B-6	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N1CCFV4626	RCP 1B THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / B-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N1CCFV4627	RCP 1B THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / B-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
N1CCFV4627	RCP 1B THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / B-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-O	R	0PSP11-CC-0016	ROJ-02
N1CCFV4632	RCP 1C THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / E-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N1CCFV4633	RCP 1C THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / E-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N1CCFV4638	RCP 1D THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / E-6	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N1CCFV4639	RCP 1D THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#1 / E-6	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N1CVLV3119	CVCS AUXILIARY SPRAY LEVEL CONTROL VALVE	5R179F05005#1 / F-7	B	Active	1	2	GL	AO	C	O/C	C	OV-C	2Y	0PSP03-CV-0011	
												OV-O	2Y	0PSP03-CV-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-CV-0011	CSJ-03
N1CVLV3119	CVCS AUXILIARY SPRAY LEVEL CONTROL VALVE	5R179F05005#1 / F-7	B	Active	1	2	GL	AO	C	O/C	C	ET-O	CS	0PSP03-CV-0011	CSJ-03
												FS-C	CS	0PSP03-CV-0011	CSJ-03
												ST-C	CS	0PSP03-CV-0011	CSJ-03
												ST-O	CS	0PSP03-CV-0011	CSJ-03
N1MSPSV7410	S/G 1A MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7410A	S/G 1A MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7410B	S/G 1A MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7410C	S/G 1A MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7410D	S/G 1A MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7420	S/G 1B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7420A	S/G 1B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs

ATTACHMENT 6: Unit 1 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position			Test Req	Freq	Procedure	Notes
									Normal	Safe	Fail				
N1MSPSV7420B	S/G 1B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7420C	S/G 1B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7420D	S/G 1B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7430	S/G 1C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7430A	S/G 1C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7430B	S/G 1C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7430C	S/G 1C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7430D	S/G 1C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7440	S/G 1D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7440A	S/G 1D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7440B	S/G 1D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7440C	S/G 1D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1MSPSV7440D	S/G 1D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#1 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N1RCPSV3450	PRESSURIZER SAFETY RELIEF VALVE	5R149F05003#1 / F-7	C	Active	1	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-RC-0013	
N1RCPSV3451	PRESSURIZER SAFETY RELIEF VALVE	5R149F05003#1 / F-6	C	Active	1	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-RC-0013	
N1RCPSV3452	PRESSURIZER SAFETY RELIEF VALVE	5R149F05003#1 / F-4	C	Active	1	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-RC-0013	
N1RHPSV3851	RHR PUMP 1A DISCHARGE RELIEF VALVE	5R169F20000#1 / C-6	C	Active	2	3	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N1RHPSV3852	RHR PUMP 1B DISCHARGE RELIEF VALVE	5R169F20000#1 / E-6	C	Active	2	3	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N1RHPSV3853	RHR PUMP 1C DISCHARGE RELIEF VALVE	5R169F20000#1 / H-6	C	Active	2	3	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N1SDPSV5432	STARTING AIR RECEIVER #12 RELIEF VALVE	5Q159F22546#1 / F-7	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N1SDPSV5433	STARTING AIR RECEIVER #11 RELIEF VALVE	5Q159F22546#1 / F-8	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N1SDPSV5532	STARTING AIR RECEIVER #14 RELIEF VALVE	5Q159F22546#1 / F-4	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N1SDPSV5533	STARTING AIR RECEIVER #13 RELIEF VALVE	5Q159F22546#1 / F-5	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N1SDPSV5632	STARTING AIR RECEIVER #16 RELIEF VALVE	5Q159F22546#1 / F-1	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N1SDPSV5633	STARTING AIR RECEIVER #15 RELIEF VALVE	5Q159F22546#1 / F-2	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
1N122XSI0007A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE TO LOOP 2A COLD LEG CHECK VALVE	5N129F05013#2 / E-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0007B	HI HEAD SAFETY INJECTION PUMP 2B DISCHARGE TO LOOP 2B COLD LEG CHECK VALVE	5N129F05014#2 / F-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0007C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE TO LOOP 2C COLD LEG CHECK VALVE	5N129F05015#2 / E-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0009A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE TO LOOP 2A HOT LEG CHECK VALVE	5N129F05013#2 / F-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0009B	HI HEAD SAFETY INJECTION PUMP 2B DISCHARGE TO LOOP 2B HOT LEG CHECK VALVE	5N129F05014#2 / G-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0009C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE TO LOOP 2C HOT LEG CHECK VALVE	5N129F05015#2 / F-7	A/C	Active	1	6	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0010A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE TO LOOP 2A HOT LEG CHECK VALVE	5N129F05013#2 / F-8	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0010B	HI HEAD SAFETY INJECTION PUMP 2B DISCHARGE TO LOOP 2B HOT LEG CHECK VALVE	5N129F05014#2 / G-8	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0010C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE TO LOOP 2C HOT LEG CHECK VALVE	5N129F05015#2 / F-8	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1N122XSI0038A	SAFETY INJECTION TRAIN A TO LOOP 2A COLD LEG INJECTION CHECK VALVE	5N129F05016#2 / F-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N122XSI0038B	SAFETY INJECTION TRAIN B TO LOOP 2B COLD LEG INJECTION CHECK VALVE	5N129F05016#2 / D-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N122XSI0038C	SAFETY INJECTION TRAIN C PUMPS TO LOOP 2C COLD LEG INJECTION CHECK VALVE	5N129F05016#2 / B-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N122XSI0046A	SAFETY INJECTION ACCUMULATOR 2A OUTLET CHECK VALVE	5N129F05016#2 / F-6	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N122XSI0046B	SAFETY INJECTION ACCUMULATOR 2B OUTLET CHECK VALVE	5N129F05016#2 / D-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1N122XSI0046C	SAFETY INJECTION ACCUMULATOR 2C OUTLET CHECK VALVE	5N129F05016#2 / B-7	A/C	Active	1	12	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0029	
1R142XRC0001A	PRESSURIZER PORV PCV-0655A ISOLATION VALVE	5R149F05003#2 / E-7	B	Active	1	3	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP03-ZG-0001	
1R142XRC0001A	PRESSURIZER PORV PCV-0655A ISOLATION VALVE	5R149F05003#2 / E-7	B	Active	1	3	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-RC-0009	
												ET-O	Q	0PSP03-RC-0009	
R142XRC0001B	PRESSURIZER PORV PCV-0656A ISOLATION VALVE	5R149F05003#2 / E-8	B	Active	1	3	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RC-0009	
												ET-O	Q	0PSP03-RC-0009	
1R162XRH0020A	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 2A HOT LEG CHECK VALVE	5R169F20000#2 / C-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1R162XRH0020B	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 2 HOT LEG CHECK VALVE	5R169F20000#2 / E-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1R162XRH0020C	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 2C HOT LEG CHECK VALVE	5R169F20000#2 / H-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-SI-0021	
1R162XRH0032A	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 2A COLD LEG CHECK VALVE	5R169F20000#2 / B-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-RH-0007	
1R162XRH0032B	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 2B COLD LEG CHECK VALVE	5R169F20000#2 / D-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-RH-0007	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
1R162XRH0032C	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 2C COLD LEG CHECK VALVE	5R169F20000#2 / G-2	A/C	Active	1	8	CK	SA	C	O/C	N/A	LT	2Y	0PSP03-SI-0023	
												CV-C	CM	0PSP03-SI-0023	
												CV-O	CM	0PSP03-RH-0007	
1R162XRH0060A	RHR PUMP 2A SUCTION FROM LOOP 2A HOT LEG ISOLATION MOV	5R169F20000#2 / B-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R162XRH0060B	RHR PUMP 2B SUCTION FROM LOOP 2B HOT LEG ISOLATION MOV	5R169F20000#2 / D-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R162XRH0060C	RHR PUMP 2C SUCTION FROM LOOP 2C HOT LEG ISOLATION VALVE	5R169F20000#2 / G-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R162XRH0061A	RHR PUMP 2A SUCTION MOV	5R169F20000#2 / B-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R162XRH0061B	RHR PUMP 2B SUCTION MOV	5R169F20000#2 / D-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R162XRH0061C	RHR PUMP 2C SUCTION MOV	5R169F20000#2 / G-8	A	Active	1	12	GT	MOH	C	O/C	FAI	LT	2Y	0PSP03-RH-0010	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-RH-0007	CSJ-10
												ET-O	CS	0PSP03-RH-0007	CSJ-10
1R172TCV0009	CVCS AUXILIARY SPRAY CHECK VALVE	5R179F05005#2 / F-8	C	Active	1	2	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R172TCV0036A	RCP 2A SEAL #1 INJECTION FIRST CHECK VALVE	5R179F05005#2 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R172TCV0036B	RCP 2B SEAL #1 INJECTION FIRST CHECK VALVE	5R179F05005#2 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R172TCV0036C	RCP 2C SEAL #1 INJECTION FIRST CHECK VALVE	5R179F05005#2 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R172TCV0036D	RCP 2D SEAL #1 INJECTION FIRST CHECK VALVE	5R179F05005#2 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R172TCV0037A	RCP 2A SEAL #1 INJECTION SECOND CHECK VALVE	5R179F05005#2 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R172TCV0037B	RCP 2B SEAL #1 INJECTION SECOND CHECK VALVE	5R179F05005#2 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R172TCV0037C	RCP 2C SEAL #1 INJECTION SECOND CHECK VALVE	5R179F05005#2 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R172TCV0037D	RCP 2D SEAL #1 INJECTION SECOND CHECK VALVE	5R179F05005#2 / C-7	C	Active	1	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
1R172TCV0082	CVCS EXCESS LETDOWN HX INLET MOV	5R179F05005#2 / F-5	B	Active	1	2	D	MOL	O/C	C	FAI	ET-C	2Y	0PSP03-CV-0012	
												ET-O	2Y	0PSP03-CV-0012	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
1R172TCV0083	CVCS EXCESS LETDOWN LOOP 2D ISOLATION MOV	5R179F05005#2 / F-5	B	Active	1	2	D	MOL	O/C	C	FAI	ET-C	2Y	0PSP03-CV-0012	
												ET-O	2Y	0PSP03-CV-0012	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
1R172XCV0001	CVCS NORMAL CHARGING TO RCS LOOP 2A COLD LEG FIRST CHECK VALVE	5R179F05005#2 / G-8	C	Active	1	4	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R172XCV0002	CVCS NORMAL CHARGING TO RCS LOOP 2A COLD LEG SECOND CHECK VALVE	5R179F05005#2 / G-8	C	Active	1	4	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R172XCV0004	CVCS ALTERNATE CHARGING TO RCS LOOP 2C COLD LEG FIRST CHECK VALVE	5R179F05005#2 / F-8	C	Active	1	4	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R172XCV0005	CVCS ALTERNATE CHARGING TO RCS LOOP 2C COLD LEG SECOND CHECK VALVE	5R179F05005#2 / F-8	C	Active	1	4	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0011	
1R172XCV0465	CVCS LETDOWN ISOLATION MOV	5R179F05005#2 / G-8	B	Active	1	4	GT	MOH	O	C	FAI	DIAG	App3	0PSP11-ZE-0006	
1R172XCV0465	CVCS LETDOWN ISOLATION MOV	5R179F05005#2 / G-8	B	Active	1	4	GT	MOH	O	C	FAI	OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
												ET-O	CS	0PSP03-CV-0011	CSJ-01
1R172XCV0468	CVCS LETDOWN ISOLATION MOV	5R179F05005#2 / G-7	B	Active	1	4	GT	MOH	O	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
												ET-O	CS	0PSP03-CV-0011	CSJ-01
2N122TSI0011A	HI HEAD SAFETY INJECTION PUMP 2A MINIFLOW FIRST ISOLATION MOV	5N129F05013#2 / F-4	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
2N122TSI0011A	HI HEAD SAFETY INJECTION PUMP 2A MINIFLOW FIRST ISOLATION MOV	5N129F05013#2 / F-4	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122TSI0011B	HI HEAD SAFETY INJECTION PUMP 2B MINIFLOW FIRST ISOLATION MOV	5N129F05014#2 / H-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122TSI0011C	HI HEAD SAFETY INJECTION PUMP 2C MINIFLOW FIRST ISOLATION MOV	5N129F05015#2 / G-4	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
2N122TSI0011C	HI HEAD SAFETY INJECTION PUMP 2C MINIFLOW FIRST ISOLATION MOV	5N129F05015#2 / G-4	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122TSI0012A	HI HEAD SAFETY INJECTION PUMP 2A MINIFLOW SECOND ISOLATION MOV	5N129F05013#2 / F-4	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122TSI0012B	HI HEAD SAFETY INJECTION PUMP 2B MINIFLOW SECOND ISOLATION MOV	5N129F05014#2 / H-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
2N122TSI0012B	HI HEAD SAFETY INJECTION PUMP 2B MINIFLOW SECOND ISOLATION MOV	5N129F05014#2 / H-3	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122TSI0012C	HI HEAD SAFETY INJECTION PUMP 2C MINIFLOW SECOND ISOLATION MOV	5N129F05015#2 / G-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122TSI0013A	LO HEAD SAFETY INJECTION PUMP 2A MINIFLOW SECOND ISOLATION MOV	5N129F05013#2 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122TSI0013B	LO HEAD SAFETY INJECTION PUMP 2B MINIFLOW SECOND ISOLATION MOV	5N129F05014#2 / E-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122TSI0013C	LO HEAD SAFETY INJECTION PUMP 2C MINIFLOW SECOND ISOLATION MOV	5N129F05015#2 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2N122TSI0013C	LO HEAD SAFETY INJECTION PUMP 2C MINIFLOW SECOND ISOLATION MOV	5N129F05015#2 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122TSI0014A	LO HEAD SAFETY INJECTION PUMP 2A MINIFLOW FIRST ISOLATION MOV	5N129F05013#2 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122TSI0014B	LO HEAD SAFETY INJECTION PUMP 2B MINIFLOW FIRST ISOLATION MOV	5N129F05014#2 / E-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
2N122TSI0014B	LO HEAD SAFETY INJECTION PUMP 2B MINIFLOW FIRST ISOLATION MOV	5N129F05014#2 / E-3	B	Active	2	2	D	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122TSI0014C	LO HEAD SAFETY INJECTION PUMP 2C MINIFLOW FIRST ISOLATION MOV	5N129F05015#2 / D-3	B	Active	2	2	D	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122XSI0001A	REFUELING WATER STORAGE TANK SI PUMPS TRAIN A SUCTION ISOLATION MOV	5N129F05013#2 / G-3	B	Active	2	16	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N122XSI0001A	REFUELING WATER STORAGE TANK SI PUMPS TRAIN A SUCTION ISOLATION MOV	5N129F05013#2 / G-3	B	Active	2	16	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122XSI0001B	REFUELING WATER STORAGE TANK SI PUMPS TRAIN B SUCTION ISOLATION MOV	5N129F05014#2 / H-2	B	Active	2	16	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122XSI0001C	REFUELING WATER STORAGE TANK SI PUMPS TRAIN C SUCTION ISOLATION MOV	5N129F05015#2 / H-2	B	Active	2	16	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N122XSI0001C	REFUELING WATER STORAGE TANK SI PUMPS TRAIN C SUCTION ISOLATION MOV	5N129F05015#2 / H-2	B	Active	2	16	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122XSI0002A	REFUELING WATER STORAGE TANK SI PUMPS TRAIN A SUCTION CHECK VALVE	5N129F05013#2 / G-3	C	Active	2	16	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0030	
2N122XSI0002B	REFUELING WATER STORAGE TANK SI PUMPS TRAIN B SUCTION CHECK VALVE	5N129F05014#2 / H-2	C	Active	2	16	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0030	
2N122XSI0002C	REFUELING WATER STORAGE TANK SI PUMPS TRAIN C SUCTION CHECK VALVE	5N129F05015#2 / H-2	C	Active	2	16	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0030	
2N122XSI0004A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE MOV (ORC)	5N129F05013#2 / F-5	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N122XSI0004A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE MOV (ORC)	5N129F05013#2 / F-5	B	Active	2	6	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122XSI0004B	HI HEAD SAFETY INJECTION PUMP 2B DISCHARGE MOV (ORC)	5N129F05014#2 / G-4	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122XSI0004C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE MOV (ORC)	5N129F05015#2 / F-5	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N122XSI0004C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE MOV (ORC)	5N129F05015#2 / F-5	B	Active	2	6	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122XSI0005A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE CHECK VALVE (IRC)	5N129F05013#2 / F-6	C	Active	2	6	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	
2N122XSI0005B	HI HEAD SAFETY INJECTION PUMP 2B DISCHARGE CHECK VALVE (IRC)	5N129F05014#2 / G-4	C	Active	2	6	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	
2N122XSI0005C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE CHECK VALVE (IRC)	5N129F05015#2 / F-5	C	Active	2	6	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2N122XSI0006A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE TO LOOP 2A COLD LEG ISOLATION MOV	5N129F05013#2 / E-7	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
N122XSI0006A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE TO LOOP 2A COLD LEG ISOLATION MOV	5N129F05013#2 / E-7	B	Active	2	6	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122XSI0006B	HI HEAD SAFETY INJECTION PUMP 2B DISCHARGE TO LOOP 2B COLD LEG ISOLATION MOV	5N129F05014#2 / F-7	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122XSI0006C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE TO LOOP 2C COLD LEG ISOLATION MOV	5N129F05015#2 / E-7	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N122XSI0006C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE TO LOOP 2C COLD LEG ISOLATION MOV	5N129F05015#2 / E-7	B	Active	2	6	GT	MOH	O	O/C	FAI	ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122XSI0008A	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE TO LOOP 2A HOT LEG ISOLATION MOV	5N129F05013#2 / F-7	B	Active	2	6	GT	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122XSI0008B	HI HEAD SAFETY INJECTION PUMP 2B DISCHARGE TO LOOP 2B HOT LEG ISOLATION MOV	5N129F05014#2 / G-7	B	Active	2	6	GT	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N122XSI0008B	HI HEAD SAFETY INJECTION PUMP 2B DISCHARGE TO LOOP 2B HOT LEG ISOLATION MOV	5N129F05014#2 / G-7	B	Active	2	6	GT	MOH	C	O/C	FAI	ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122XSI0008C	HI HEAD SAFETY INJECTION PUMP 2C DISCHARGE TO LOOP 2C HOT LEG ISOLATION MOV	5N129F05015#2 / F-7	B	Active	2	6	GT	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122XSI0016A	CONTAINMENT EMERGENCY SUMP 2A TO SI TRAIN A PUMPS SUCTION ORC ISOLATION MOV	5N129F05013#2 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	LT	2Y	0PSP11-SI-0001	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
2N122XSI0016A	CONTAINMENT EMERGENCY SUMP 2A TO SI TRAIN A PUMPS SUCTION ORC ISOLATION MOV	5N129F05013#2 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122XSI0016B	CONTAINMENT EMERGENCY SUMP 2B TO SI TRAIN B PUMPS SUCTION ORC ISOLATION MOV	5N129F05014#2 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	LT	2Y	0PSP11-SI-0002	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	
2N122XSI0016C	CONTAINMENT EMERGENCY SUMP 2C TO SI TRAIN C PUMPS SUCTION ORC ISOLATION MOV	5N129F05015#2 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	LT	2Y	0PSP11-SI-0003	
												DIAG	App3	0PSP11-ZE-0006	
2N122XSI0016C	CONTAINMENT EMERGENCY SUMP 2C TO SI TRAIN C PUMPS SUCTION ORC ISOLATION MOV	5N129F05015#2 / B-4	B	Active	2	16	GT	MOH	C	O/C	FAI	OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0001	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122XSI0018A	LO HEAD SAFETY INJECTION PUMP 2A DISCHARGE MOV (ORC)	5N129F05013#2 / C-4	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0020	
												ET-O	Q	0PSP03-SI-0020	
2N122XSI0018B	LO HEAD SAFETY INJECTION PUMP 2B DISCHARGE MOV (ORC)	5N129F05014#2 / D-4	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
2N122XSI0018B	LO HEAD SAFETY INJECTION PUMP 2B DISCHARGE MOV (ORC)	5N129F05014#2 / D-4	B	Active	2	8	GT	MOH	O	O/C	FAI	OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0024	
												ET-O	Q	0PSP03-SI-0024	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2N122XSI0018C	LO HEAD SAFETY INJECTION PUMP 2C DISCHARGE MOV (ORC)	5N129F05015#2 / D-4	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-SI-0025	
												ET-O	Q	0PSP03-SI-0025	
2N122XSI0030A	LO HEAD SAFETY INJECTION PUMP 2A DISCHARGE CHECK VALVE (IRC)	5N129F05013#2 / D-5	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
2N122XSI0030A	LO HEAD SAFETY INJECTION PUMP 2A DISCHARGE CHECK VALVE (IRC)	5N129F05013#2 / D-5	C	Active	2	8	CK	SA	C	O/C	N/A	CV-O	CM	0PSP03-SI-0021	
2N122XSI0030B	LO HEAD SAFETY INJECTION PUMP 2B DISCHARGE CHECK VALVE (IRC)	5N129F05014#2 / D-4	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	
2N122XSI0030C	LO HEAD SAFETY INJECTION PUMP 2C DISCHARGE CHECK VALVE (IRC)	5N129F05015#2 / D-4	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-SI-0021	
2N122XSI0039A	SAFETY INJECTION ACCUMULATOR 2A OUTLET MOV	5N129F05016#2 / F-5	B	Active	2	12	GT	MOL	O	O/C	FAI	ET-C	2Y	0PSP03-SI-0028	
												ET-O	2Y	0PSP03-SI-0028	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N122XSI0039B	SAFETY INJECTION ACCUMULATOR 2B OUTLET MOV	5N129F05016#2 / D-5	B	Active	2	12	GT	MOL	O	O/C	FAI	ET-C	2Y	0PSP03-SI-0028	
												ET-O	2Y	0PSP03-SI-0028	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
2N122XSI0039B	SAFETY INJECTION ACCUMULATOR 2B OUTLET MOV	5N129F05016#2 / D-5	B	Active	2	12	GT	MOL	O	O/C	FAI	OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2N122XSI0039C	SAFETY INJECTION ACCUMULATOR 2C OUTLET MOV	5N129F05016#2 / B-5	B	Active	2	12	GT	MOL	O	O/C	FAI	ET-C	2Y	0PSP03-SI-0028	
												ET-O	2Y	0PSP03-SI-0028	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2Q272TFP0756	REACTOR CONTAINMENT BUILDING FIRE PROTECTION HEADER ISOLATION MOV REACTOR CONTAINMENT BUILDING FIRE PROTECTION HEADER ISOLATION MOV	5Q279F05047#2 / E-8	A	Active	2	6	GT	MOL-C	C	C	FAI	ET-C	2Y	0PSP03-FP-0001	
												ET-O	2Y	0PSP03-FP-0001	
												ST-C	2Y	0PSP03-FP-0001	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-FP-0001	
2Q272TFP0943	REACTOR CONTAINMENT BUILDING FIRE PROTECTION HEADER CONTAINMENT ISOL CHECK VALVE	5Q279F05047#2 / E-8	A/C	Active	2	6	CK	SA	C	C	N/A	LTJ	AppJ	0PSP11-FP-0001	
												BD-O	CM	0PSP11-FP-0001	
												CV-C	CM	0PSP11-FP-0001	
2R162XRH0019A	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 2A HOT LEG ISOLATION MOV	5R169F20000#2 / C-3	B	Active	2	8	GT	MOH	LC	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R162XRH0019B	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 2B HOT LEG ISOLATION MOV	5R169F20000#2 / E-3	B	Active	2	8	GT	MOH	LC	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R162XRH0019C	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 2C HOT LEG ISOLATION MOV	5R169F20000#2 / H-3	B	Active	2	8	GT	MOH	LC	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R162XRH0031A	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 2A COLD LEG ISOLATION MOV	5R169F20000#2 / B-3	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R162XRH0031B	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 2B COLD LEG ISOLATION MOV	5R169F20000#2 / D-3	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2R162XRH0031C	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 2C COLD LEG ISOLATION MOV	5R169F20000#2 / G-3	B	Active	2	8	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-RH-0009	
												ET-O	Q	0PSP03-RH-0009	
2R162XRH0063B	RHR LOOP 2B RETURN TO RWST IRC ISOLATION VALVE	5R169F20000#2 / D-6	A	Passive	2	8	GT	M	LC	C	N/A	LTJ	AppJ	0PSP11-RH-0002	
2R162XRH0063C	RHR LOOP 2C RETURN TO RWST IRC ISOLATION VALVE	5R169F20000#2 / F-6	A	Passive	2	8	GT	M	LC	C	N/A	LTJ	AppJ	0PSP11-RH-0003	
2R162XRH0064B	RHR LOOP 2B RETURN TO RWST ORC ISOLATION VALVE	5R169F20000#2 / D-5	A	Passive	2	8	GT	M	LC	C	N/A	LTJ	AppJ	0PSP11-RH-0002	
2R162XRH0064C	RHR LOOP 2C RETURN TO RWST ORC ISOLATION VALVE	5R169F20000#2 / F-5	A	Passive	2	8	GT	M	LC	C	N/A	LTJ	AppJ	0PSP11-RH-0003	
2R162XRH0065A	RHR PUMP 2A DISCHARGE CHECK VALVE	5R169F20000#2 / B-6	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0001	
2R162XRH0065B	RHR PUMP 2B DISCHARGE CHECK VALVE	5R169F20000#2 / D-6	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0002	
2R162XRH0065C	RHR PUMP 2C DISCHARGE CHECK VALVE	5R169F20000#2 / G-6	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0003	
2R162XRH0066A	RHR LOOP 2A DISCHARGE TO CVCS LETDOWN ISOLATION MOV	5R169F20000#2 / A-4	B	Passive	2	4	GT	MO	C	C	FAI	OV-C	2Y	0PSP11-ZE-0006	
												OV-O	2Y	0PSP11-ZE-0006	
												RPI	2Y	0PSP11-ZE-0006	
2R162XRH0066B	RHR LOOP 2B DISCHARGE TO CVCS LETDOWN ISOLATION MOV	5R169F20000#2 / D-2	B	Passive	2	4	GT	MO	C	C	FAI	OV-C	2Y	0PSP11-ZE-0006	
												OV-O	2Y	0PSP11-ZE-0006	
												RPI	2Y	0PSP11-ZE-0006	
2R162XRH0067A	RHR PUMP 2A MINIFLOW MOV	5R169F20000#2 / A-6	B	Active	2	4	GT	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-RH-0009	
												ET-O	2Y	0PSP03-RH-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R162XRH0067B	RHR PUMP 2B MINIFLOW MOV	5R169F20000#2 / D-6	B	Active	2	4	GT	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-RH-0009	
												ET-O	2Y	0PSP03-RH-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
2R162XRH0067B	RHR PUMP 2B MINIFLOW MOV	5R169F20000#2 / D-6	B	Active	2	4	GT	MOL	C	O/C	FAI	RPI	App3	0PSP11-ZE-0006	
2R162XRH0067C	RHR PUMP 2C MINIFLOW MOV	5R169F20000#2 / F-6	B	Active	2	4	GT	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-RH-0009	
												ET-O	2Y	0PSP03-RH-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R162XRH0068A	RHR PUMP 2A MINIFLOW CHECK VALVE	5R169F20000#2 / A-6	C	Active	2	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0001	
2R162XRH0068B	RHR PUMP 2B MINIFLOW CHECK VALVE	5R169F20000#2 / D-6	C	Active	2	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0002	
2R162XRH0068C	RHR PUMP 2C MINIFLOW CHECK VALVE	5R169F20000#2 / F-6	C	Active	2	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-RH-0003	
2R172TCV0033A	RCP 2A SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / C-8	B	Active	2	2	D	MOL-C	O	O/C	FAI	ET-C	2Y	0PSP03-CV-0011	
												ET-O	2Y	0PSP03-CV-0011	
												ST-C	2Y	0PSP03-CV-0011	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R172TCV0033B	RCP 2B SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / C-8	B	Active	2	2	D	MOL-C	O	O/C	FAI	ET-C	2Y	0PSP03-CV-0011	
												ET-O	2Y	0PSP03-CV-0011	
												ST-C	2Y	0PSP03-CV-0011	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R172TCV0033C	RCP 2C SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / C-8	B	Active	2	2	D	MOL-C	O	O/C	FAI	ET-C	2Y	0PSP03-CV-0011	
												ET-O	2Y	0PSP03-CV-0011	
												ST-C	2Y	0PSP03-CV-0011	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R172TCV0033D	RCP 2D SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / C-8	B	Active	2	2	D	MOL-C	O	O/C	FAI	ET-C	2Y	0PSP03-CV-0011	
												ET-O	2Y	0PSP03-CV-0011	
												ST-C	2Y	0PSP03-CV-0011	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2R172TCV0033D	RCP 2D SEAL #1 INJECTION ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / C-8	B	Active	2	2	D	MOL-C	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2R172TCV0034A	RCP 2A SEAL #1 INJECTION IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#2 / C-8	C	Active	2	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R172TCV0034B	RCP 2B SEAL #1 INJECTION IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#2 / C-8	C	Active	2	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R172TCV0034C	RCP 2C SEAL #1 INJECTION IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#2 / C-8	C	Active	2	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R172TCV0034D	RCP 2D SEAL #1 INJECTION IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#2 / C-8	C	Active	2	2	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R172TCV0243	POSITIVE DISPLACEMENT PUMP DISCHARGE CHECK VALVE	5R179F05007#2 / B-6	C	Active	2	2	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2R172XCV0003	CVCS NORMAL CHARGING TO RCS LOOP 2A COLD LEG MOV	5R179F05005#2 / G-7	B	Active	2	4	GT	MOH	O/C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	R	0PSP03-CV-0011	ROJ-03
												ET-O	R	0PSP03-CV-0011	ROJ-03
2R172XCV0006	CVCS ALTERNATE CHARGING TO RCS LOOP 2C COLD LEG MOV	5R179F05005#2 / F-7	B	Active	2	4	GT	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	R	0PSP03-CV-0011	ROJ-03
												ET-O	R	0PSP03-CV-0011	ROJ-03
2R172XCV0025	CVCS CHARGING ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / G-3	B	Active	2	4	GT	MOH - C	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
2R172XCV0025	CVCS CHARGING ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / G-3	B	Active	2	4	GT	MOH - C	O	O/C	FAI	ET-O	CS	0PSP03-CV-0011	CSJ-01
												ST-C	CS	0PSP03-CV-0011	CSJ-01
2R172XCV0026	CVCS CHARGING IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05005#2 / G-3	C	Active	2	4	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R172XCV0112B	CVCS VOLUME CONTROL TANK OUTLET MOV	5R179F05007#2 / E-4	B	Active	2	6	GT	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-02
												ET-O	CS	0PSP03-CV-0011	CSJ-02
2R172XCV0113A	CVCS VOLUME CONTROL TANK OUTLET MOV	5R179F05007#2 / E-4	B	Active	2	6	GT	MOH	O/C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	CS	0PSP03-CV-0011	CSJ-02
												ET-O	CS	0PSP03-CV-0011	CSJ-02
2R172XCV0212	CVCS VOLUME CONTROL TANK OUTLET CHECK VALVE	5R179F05007#2 / E-4	C	Active	2	6	CK	SA	O	O	N/A	BD-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP11-ZE-0001	
2R172XCV0670	CVCS CHARGING HEADER CHECK VALVE	5R179F05007#2 / D-6	C	Active	2	4	CK	SA	O	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CV-0012	
2R202TCC0013	RHR TRAIN A CCW SUPPLY IRC CHECK VALVE	5R209F05017#2 / E-2	A/C	Active	2	16	CK	SA	C	O/C	N/A	LTJ	AppJ	0PSP11-CC-0007	
												CV-C	CM	0PSP11-CC-0007	
												CV-O	CM	0PSP03-CC-0001	
2R202TCC0123	RHR TRAIN B CCW SUPPLY IRC CHECK VALVE	5R209F05018#2 / E-2	A/C	Active	2	16	CK	SA	C	O/C	N/A	LTJ	AppJ	0PSP11-CC-0009	
												CV-C	CM	0PSP11-CC-0009	
												CV-O	CM	0PSP03-CC-0002	
2R202TCC0183	RHR TRAIN C CCW SUPPLY IRC CHECK VALVE	5R209F05019#2 / E-2	A/C	Active	2	16	CK	SA	C	O/C	N/A	LTJ	AppJ	0PSP11-CC-0011	
												CV-C	CM	0PSP11-CC-0011	
												CV-O	CM	0PSP03-CC-0003	
2S102TMS0021	S/G 2A MAIN STEAM OUTLET PORV ISOLATION VALVE	5S109F00016#2 / H-6	B	Active	2	8	GT	M	O	C	N/A	ET-C	2Y	0PSP03-MS-0001	
												ET-O	2Y	0PSP03-MS-0001	
2S102TMS0038	S/G 2B MAIN STEAM OUTLET PORV ISOLATION VALVE	5S109F00016#2 / F-6	B	Active	2	8	GT	M	O	C	N/A	ET-C	2Y	0PSP03-MS-0001	
												ET-O	2Y	0PSP03-MS-0001	
2S102TMS0055	S/G 2C MAIN STEAM OUTLET PORV ISOLATION VALVE	5S109F00016#2 / E-6	B	Active	2	8	GT	M	O	C	N/A	ET-C	2Y	0PSP03-MS-0001	
												ET-O	2Y	0PSP03-MS-0001	
2S102TMS0072	S/G 2D MAIN STEAM OUTLET PORV ISOLATION VALVE	5S109F00016#2 / C-6	B	Active	2	8	GT	M	O	C	N/A	ET-C	2Y	0PSP03-MS-0001	
												ET-O	2Y	0PSP03-MS-0001	
2S132TAF0308	SG 2D PREHEATER BYPASS LINE CHECK VALVE	5S139F00063#2 / F-2	C	Active	2	4	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S132TAF0309	SG 2A PREHEATER BYPASS LINE CHECK VALVE	5S139F00063#2 / F-8	C	Active	2	4	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S132TAF0310	SG 2B PREHTR BYPASS LINE CHECK VLV	5S139F00063#2 / F-6	C	Active	2	4	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2S132TAF0311	SG 2C PREHTR BYPASS LINE CHECK VLV	5S139F00063#2 / F-4	C	Active	2	4	CK	SA	C	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S132TFW0062	STEAM GENERATOR 2A FEEDWATER INLET CHECK VALVE	5S139F00063#2 / H-8	C	Active	2	18	CK	SA	O	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S132TFW0066	STEAM GENERATOR 2B FEEDWATER INLET CHECK VALVE	5S139F00063#2 / H-6	C	Active	2	18	CK	SA	O	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S132TFW0067	STEAM GENERATOR 2C FEEDWATER INLET CHECK VALVE	5S139F00063#2 / H-4	C	Active	2	18	CK	SA	O	C	N/A	BD-O	CM	0PSP11-ZE-0001	
2S132TFW0067	STEAM GENERATOR 2C FEEDWATER INLET CHECK VALVE	5S139F00063#2 / H-4	C	Active	2	18	CK	SA	O	C	N/A	CV-C	CM	0PSP11-ZE-0001	
2S132TFW0249	STEAM GENERATOR 2D FEEDWATER INLET CHECK VALVE	5S139F00063#2 / H-2	C	Active	2	18	CK	SA	O	C	N/A	BD-O	CM	0PSP11-ZE-0001	
												CV-C	CM	0PSP11-ZE-0001	
2S142TAF0019	(OCIV) SG 2D AFW SUPPLY LINE ISOLATION MOV	5S142F00024#1 / G-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0011	
												OV-O	App3	0PSP03-AF-0011	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0007	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
2S142TAF0048	(OCIV) SG 2A AFW SUPPLY LINE ISOLATION MOV	5S142F00024#1 / F-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0011	
												OV-O	App3	0PSP03-AF-0011	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S142TAF0048	(OCIV) SG 2A AFW SUPPLY LINE ISOLATION MOV	5S142F00024#1 / F-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
2S142TAF0065	(OCIV) SG 2B AFW SUPPLY LINE ISOLATION MOV	5S142F00024#1 / D-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0011	
												OV-O	App3	0PSP03-AF-0011	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
2S142TAF0085	STEAM GENERATOR 2C ORC AFW ISOLATION MOV	5S142F00024#1 / B-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0011	
												OV-O	App3	0PSP03-AF-0011	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
												ET-C	Q	0PSP03-AF-0010	
2S142TAF0085	STEAM GENERATOR 2C ORC AFW ISOLATION MOV	5S142F00024#1 / B-2	B/C	Active	2	4	SCK	MOH	C	O/C	FAI	ET-O	Q	0PSP03-AF-0010	
2S142TAF0119	(IMB) 2A AFW LINE CHECK VALVE AT SG 2A	5S142F00024#1 / F-1	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S142TAF0120	(IMB) 2B AFW LINE CHECK VALVE AT SG 2B	5S142F00024#1 / D-1	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S142TAF0121	(IMB) 2C AFW LINE CHECK VALVE AT SG 2C	5S142F00024#1 / C-1	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S142TAF0122	(IMB) 2D AFW LINE CHECK VALVE AT SG 2D	5S142F00024#1 / H-1	C	Active	2	8	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
2S142TMS0143	TERRY TURBINE MAIN STEAM SUPPLY ORC ISOLATION MOV	5S142F00024#1 / H-8	B/C	Active	2	4	SCK	MOH	O	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0007	
												OV-O	App3	0PSP03-AF-0007	
												RPI	App3	0PSP11-ZE-0006	
												CV-C	CM	0PSP03-AF-0007	
												CV-O	CM	0PSP03-AF-0007	
												ET-C	Q	0PSP03-AF-0007	
												ET-O	Q	0PSP03-AF-0007	
2V142THC0003	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE SUPPLY (IRC) ISOLATION DAMPER	5V149V00019#2 / F-3	A	Active	2	18	B	MOH - C	O/C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP03-HC-0003	
												ET-C	Q	0PSP03-HC-0003	
												ET-O	Q	0PSP03-HC-0003	
												ST-C	Q	0PSP03-HC-0003	
2V142THC0005	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE EXHAUST (IRC) ISOLATION DAMPER	5V149V00019#2 / B-7	A	Active	2	18	B	MOH - C	O/C	C	FAI	DIAG	App3	0PSP11-ZE-0006	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
2V142THC0005	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE EXHAUST (IRC) ISOLATION DAMPER	5V149V00019#2 / B-7	A	Active	2	18	B	MOH - C	O/C	C	FAI	OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-HC-0004	
												ET-C	Q	0PSP03-HC-0003	
												ET-O	Q	0PSP03-HC-0003	
												ST-C	Q	0PSP03-HC-0003	
2V142ZHC0007	REACTOR CONTAINMENT BUILDING NORMAL PURGE SUPPLY (ORC) ISOLATION DAMPER	5V149V00018#2 / G-3	A	Active	2	48	B	MOH - C	C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
2V142ZHC0007	REACTOR CONTAINMENT BUILDING NORMAL PURGE SUPPLY (ORC) ISOLATION DAMPER	5V149V00018#2 / G-3	A	Active	2	48	B	MOH - C	C	C	FAI	OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-HC-0002	
												ET-C	CS	0PSP03-HC-0004	CSJ-07
												ET-O	CS	0PSP03-HC-0004	CSJ-07
												ST-C	CS	0PSP03-HC-0004	CSJ-07
2V142ZHC0008	REACTOR CONTAINMENT BUILDING NORMAL PURGE SUPPLY (IRC) ISOLATION DAMPER	5V149V00018#2 / G-2	A	Active	2	48	B	MOH - C	C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
2V142ZHC0008	REACTOR CONTAINMENT BUILDING NORMAL PURGE SUPPLY (IRC) ISOLATION DAMPER	5V149V00018#2 / G-2	A	Active	2	48	B	MOH - C	C	C	FAI	RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-HC-0002	
												ET-C	CS	0PSP03-HC-0004	CSJ-07
												ET-O	CS	0PSP03-HC-0004	CSJ-07
												ST-C	CS	0PSP03-HC-0004	CSJ-07
2V142ZHC0009	REACTOR CONTAINMENT BUILDING NORMAL PURGE EXHAUST (IRC) ISOLATION DAMPER	5V149V00018#2 / B-7	A	Active	2	48	B	MOH - C	C	C	FAI	DIAG	App3	0PSP11-HC-0002	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
2V142ZHC0009	REACTOR CONTAINMENT BUILDING NORMAL PURGE EXHAUST (IRC) ISOLATION DAMPER	5V149V00018#2 / B-7	A	Active	2	48	B	MOH - C	C	C	FAI	LTJ	AppJ	0PSP11-HC-0002	
												ET-C	CS	0PSP03-HC-0004	CSJ-07
												ET-O	CS	0PSP03-HC-0004	CSJ-07
												ST-C	CS	0PSP03-HC-0004	CSJ-07
2V142ZHC0010	REACTOR CONTAINMENT BUILDING NORMAL PURGE EXHAUST (ORC) ISOLATION DAMPER	5V149V00018#2 / B-6	A	Active	2	48	B	MOH - C	C	C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												LTJ	AppJ	0PSP11-HC-0002	
2V142ZHC0010	REACTOR CONTAINMENT BUILDING NORMAL PURGE EXHAUST (ORC) ISOLATION DAMPER	5V149V00018#2 / B-6	A	Active	2	48	B	MOH - C	C	C	FAI	ET-C	CS	0PSP03-HC-0004	CSJ-07
												ET-O	CS	0PSP03-HC-0004	CSJ-07
												ST-C	CS	0PSP03-HC-0004	CSJ-07
3Q152XSD0003A	STARTING AIR RECEIVER #21 INLET CHECK VALVE	5Q159F22546#2 / E-7	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0027	
												CV-C	CM	0PSP03-DG-0027	
3Q152XSD0003B	STARTING AIR RECEIVER #23 INLET CHECK VALVE	5Q159F22546#2 / E-5	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0028	
												CV-C	CM	0PSP03-DG-0028	
3Q152XSD0003C	STARTING AIR RECEIVER #25 INLET CHECK VALVE	5Q159F22546#2 / E-2	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0029	
												CV-C	CM	0PSP03-DG-0029	
3Q152XSD0004A	STARTING AIR RECEIVER #22 INLET CHECK VALVE	5Q159F22546#2 / E-7	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0027	
												CV-C	CM	0PSP03-DG-0027	
3Q152XSD0004B	STARTING AIR RECEIVER #24 INLET CHECK VALVE	5Q159F22546#2 / E-4	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0028	
												CV-C	CM	0PSP03-DG-0028	
3Q152XSD0004C	STARTING AIR RECEIVER #26 INLET CHECK VALVE	5Q159F22546#2 / E-1	C	Active	3	1	CK	SA	O/C	C	N/A	BD-O	CM	0PSP03-DG-0029	
												CV-C	CM	0PSP03-DG-0029	
3R202TCC0051	CCW PUMP 2A COMMON SUCTION HEADER CHECK VALVE	5R209F05020#2 / C-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0001	
3R202TCC0052	CCW PUMP 2A COMMON SUCTION HEADER ISOLATION MOV	5R209F05020#2 / C-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0007	
												ET-O	2Y	0PSP03-CC-0007	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0131	CCW PUMP 2B COMMON SUCTION HEADER CHECK VALVE	5R209F05020#2 / C-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0002	
3R202TCC0132	CCW PUMP 2B COMMON SUCTION HEADER ISOLATION MOV	5R209F05020#2 / C-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0008	
												ET-O	2Y	0PSP03-CC-0008	
3R202TCC0132	CCW PUMP 2B COMMON SUCTION HEADER ISOLATION MOV	5R209F05020#2 / C-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0191	CCW PUMP 2C COMMON SUCTION HEADER CHECK VALVE	5R209F05020#2 / B-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0003	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
3R202TCC0192	CCW PUMP 2C COMMON SUCTION HEADER ISOLATION MOV	5R209F05020#2 / B-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0009	
												ET-O	2Y	0PSP03-CC-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0311	CCW TRAIN C COMMON HEADER SUPPLY CHECK VALVE	5R209F05020#2 / E-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
3R202TCC0311	CCW TRAIN C COMMON HEADER SUPPLY CHECK VALVE	5R209F05020#2 / E-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-O	CM	0PSP03-CC-0003	
3R202TCC0312	CCW TRAIN C COMMON HEADER SUPPLY MOV	5R209F05020#2 / E-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0009	
												ET-O	2Y	0PSP03-CC-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0313	CCW TRAIN B COMMON HEADER SUPPLY CHECK VALVE	5R209F05020#2 / E-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0002	
3R202TCC0314	CCW TRAIN B COMMON HEADER SUPPLY MOV	5R209F05020#2 / E-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0008	
												ET-O	2Y	0PSP03-CC-0008	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0315	CCW TRAIN A COMMON HEADER SUPPLY CHECK VALVE	5R209F05020#2 / F-7	C	Active	3	24	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-CC-0001	
3R202TCC0316	CCW TRAIN A COMMON HEADER SUPPLY MOV	5R209F05020#2 / F-7	B	Active	3	24	B	MOL	O/C	O/C	FAI	ET-C	2Y	0PSP03-CC-0007	
												ET-O	2Y	0PSP03-CC-0007	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0642	CCW HEAT EXCHANGER 2A BYPASS MOV	5R209F05017#2 / A-6	B	Active	3	16	B	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-CC-0007	
												ET-O	2Y	0PSP03-CC-0007	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0643	CCW HEAT EXCHANGER 2A OUTLET MOV	5R209F05017#2 / B-5	B	Active	3	24	B	MOL	O	O	FAI	ET-C	2Y	0PSP03-CC-0007	
												ET-O	2Y	0PSP03-CC-0007	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
3R202TCC0643	CCW HEAT EXCHANGER 2A OUTLET MOV	5R209F05017#2 / B-5	B	Active	3	24	B	MOL	O	O	FAI	RPI	App3	0PSP11-ZE-0006	
3R202TCC0644	CCW HEAT EXCHANGER 2B BYPASS MOV	5R209F05018#2 / A-6	B	Active	3	16	B	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-CC-0008	
												ET-O	2Y	0PSP03-CC-0008	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0645	CCW HEAT EXCHANGER 2B OUTLET MOV	5R209F05018#2 / B-5	B	Active	3	24	B	MOL	O	O	FAI	ET-C	2Y	0PSP03-CC-0008	
												ET-O	2Y	0PSP03-CC-0008	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0646	CCW HEAT EXCHANGER 2C BYPASS MOV	5R209F05019#2 / A-6	B	Active	3	16	B	MOL	C	O/C	FAI	ET-C	2Y	0PSP03-CC-0009	
												ET-O	2Y	0PSP03-CC-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
3R202TCC0646	CCW HEAT EXCHANGER 2C BYPASS MOV	5R209F05019#2 / A-6	B	Active	3	16	B	MOL	C	O/C	FAI	OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R202TCC0647	CCW HEAT EXCHANGER 2C OUTLET MOV	5R209F05019#2 / B-5	B	Active	3	24	B	MOL	O	O	FAI	ET-C	2Y	0PSP03-CC-0009	
												ET-O	2Y	0PSP03-CC-0009	
												DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
3R282TEW0006	ECW PUMP 2A DISCHARGE CHECK VALVE	5R289F05038SH 1#2 / C-3	C	Active	3	30	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-EW-0017	
3R282TEW0042	ECW PUMP 2B DISCHARGE CHECK VALVE	5R289F05038SH 2#2 / C-3	C	Active	3	30	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-EW-0018	
3R282TEW0079	ECW PUMP 2C DISCHARGE CHECK VALVE	5R289F05038SH 3#2 / C-3	C	Active	3	30	CK	SA	O/C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-EW-0019	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
3R282TEW0121	ECW PUMP 2A DISCHARGE MOV	5R289F05038SH 1#2 / C-2	B	Active	3	30	B	MOH	O/C	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
3R282TEW0121	ECW PUMP 2A DISCHARGE MOV	5R289F05038SH 1#2 / C-2	B	Active	3	30	B	MOH	O/C	O	FAI	RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-EW-0017	
												ET-O	Q	0PSP03-EW-0017	
3R282TEW0137	ECW PUMP 2B DISCHARGE MOV	5R289F05038SH 2#2 / C-2	B	Active	3	30	B	MOH	O/C	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-EW-0018	
												ET-O	Q	0PSP03-EW-0018	
3R282TEW0151	ECW PUMP 2C DISCHARGE MOV	5R289F05038SH 3#2 / C-2	B	Active	3	30	B	MOH	O/C	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP11-ZE-0006	
												OV-O	App3	0PSP11-ZE-0006	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-EW-0019	
												ET-O	Q	0PSP03-EW-0019	
3S142TAF0011	AFW TRAIN D AUTO RECIRC VLV	5S142F00024#1 / H-5	C	Active	3	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0007	
3S142TAF0036	AFW TRAIN A AUTO RECIRC VLV	5S142F00024#1 / F-6	C	Active	3	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
3S142TAF0036	AFW TRAIN A AUTO RECIRC VLV	5S142F00024#1 / F-6	C	Active	3	4	CK	SA	C	O/C	N/A	CV-O	CM	0PSP03-AF-0001	
3S142TAF0058	AFW TRAIN B AUTO RECIRC VLV	5S142F00024#1 / D-6	C	Active	3	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0011	
3S142TAF0091	AFW TRAIN C AUTO RECIRC VLV	5S142F00024#1 / B-6	C	Active	3	4	CK	SA	C	O/C	N/A	CV-C	CM	0PSP11-ZE-0001	
												CV-O	CM	0PSP03-AF-0003	
3S142XMS0514	MAIN STEAM TO TERRY TURBINE THROTTLE MOV	5S142F00024#2 / F-6	B	Active	2	4	GL	MOH	C	O/C	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0007	
												OV-O	App3	0PSP03-AF-0007	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0007	
												ET-O	Q	0PSP03-AF-0007	
3S142ZAF7523	AF-MOV-7523 (AFW TRAIN C DISCH MOV)	5S142F00024#1 / B-4	B	Active	3	4	GL	MOH	O	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0003	
												OV-O	App3	0PSP03-AF-0003	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
3S142ZAF7524	AF-MOV-7524 (AFW TRAIN B DISCH MOV)	5S142F00024#1 / D-4	B	Active	3	4	GL	MOH	O	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0002	
3S142ZAF7524	AF-MOV-7524 (AFW TRAIN B DISCH MOV)	5S142F00024#1 / D-4	B	Active	3	4	GL	MOH	O	O	FAI	OV-O	App3	0PSP03-AF-0002	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
3S142ZAF7525	AF-MOV-7525 (AFW TRAIN A DISCH MOV)	5S142F00024#1 / D-4	B	Active	3	4	GL	MOH	O	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0001	
												OV-O	App3	0PSP03-AF-0001	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
3S142ZAF7526	AF-MOV-7526 (AFW TRAIN D DISCH MOV)	5S142F00024#1 / D-4	B	Active	3	4	GL	MOH	O	O	FAI	DIAG	App3	0PSP11-ZE-0006	
												OV-C	App3	0PSP03-AF-0007	
												OV-O	App3	0PSP03-AF-0007	
												RPI	App3	0PSP11-ZE-0006	
												ET-C	Q	0PSP03-AF-0010	
												ET-O	Q	0PSP03-AF-0010	
A2AFFV7517	A AFW CROSSOVER VALVE (AF-FV -7517)	5S142F00024#1 / F-5	B	Active	3	4	GL	AO	O	C	C	OV-C	2Y	0PSP03-AF-0010	
A2AFFV7517	A AFW CROSSOVER VALVE (AF-FV -7517)	5S142F00024#1 / F-5	B	Active	3	4	GL	AO	O	C	C	OV-O	2Y	0PSP03-AF-0010	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-AF-0010	
												FS-C	Q	0PSP03-AF-0010	
												ST-C	Q	0PSP03-AF-0010	
A2CCFV4531	RHR HEAT EXCHANGER 2A CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05017#2 / G-2	B	Active	3	16	B	AO	C	O	O	OV-C	2Y	0PSP03-CC-0007	
												OV-O	2Y	0PSP03-CC-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CC-0007	
												FS-O	Q	0PSP03-CC-0007	
												ST-O	Q	0PSP03-CC-0007	
A2CHTV9477A	TRAIN A ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21A OUTLET TEMPERATURE CONTROL VALVE	3V119V10002#2 / C-6	B	Active	3	4	B	AO	NT	O	O	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
A2CHTV9477A	TRAIN A ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21A OUTLET TEMPERATURE CONTROL VALVE	3V119V10002#2 / C-6	B	Active	3	4	B	AO	NT	O	O	RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CH-0007	
												FS-O	Q	0PSP03-CH-0007	
												ST-O	Q	0PSP03-CH-0007	
A2CHTV9477B	TRAIN A ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21A BYPASS TEMPERATURE VALVE	3V119V10002#2 / C-6	B	Active	3	4	B	AO	NT	C	C	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-CH-0007	
												FS-C	Q	0PSP03-CH-0007	
												ST-C	Q	0PSP03-CH-0007	
A2CVFCV0205	CVCS CHARGING DISCHARGE HEADER FLOW CONTROL VALVE	5R179F05007#2 / E-7	B	Active	2	4	GL	AO	NT	O	O	OV-C	2Y	0PSP03-CV-0010	
A2CVFCV0205	CVCS CHARGING DISCHARGE HEADER FLOW CONTROL VALVE	5R179F05007#2 / E-7	B	Active	2	4	GL	AO	NT	O	O	OV-O	2Y	0PSP03-CV-0010	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
												FS-O	CS	0PSP03-CV-0011	CSJ-01
												ST-C	CS	0PSP03-CV-0011	CSJ-01
A2FWFV7141	STEAM GENERATOR 2A ORC FEEDWATER ISOLATION VALVE	5S139F00063#2 / G-8	B	Active	2	18	GT	HO	O	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-05
												FS-C	CS	0PSP03-FW-0002	CSJ-05
												ST-C	CS	0PSP03-FW-0002	CSJ-05
A2FWFV7142	STEAM GENERATOR 2B ORC FEEDWATER ISOLATION VALVE	5S139F00063#2 / G-6	B	Active	2	18	GT	HO	O	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-05
												FS-C	CS	0PSP03-FW-0002	CSJ-05
												ST-C	CS	0PSP03-FW-0002	CSJ-05
A2FWFV7143	STEAM GENERATOR 2C ORC FEEDWATER ISOLATION VALVE	5S139F00063#2 / G-4	B	Active	2	18	GT	HO	O	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-05
												FS-C	CS	0PSP03-FW-0002	CSJ-05
												ST-C	CS	0PSP03-FW-0002	CSJ-05
A2FWFV7144	STEAM GENERATOR 2D ORC FEEDWATER ISOLATION VALVE	5S139F00063#2 / G-2	B	Active	2	18	GT	HO	O	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-05
												FS-C	CS	0PSP03-FW-0002	CSJ-05
												ST-C	CS	0PSP03-FW-0002	CSJ-05
A2FWFV7147A	STEAM GENERATOR 2B FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#2 / G-5	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
A2FWFV7147A	STEAM GENERATOR 2B FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#2 / G-5	B	Active	2	3	GL	AO	C	C	C	ET-C	CS	0PSP03-FW-0002	CSJ-14
												FS-C	CS	0PSP03-FW-0002	CSJ-14
												ST-C	CS	0PSP03-FW-0002	CSJ-14
A2FWFV7148A	STEAM GENERATOR 2A FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#2 / G-7	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-14
												FS-C	CS	0PSP03-FW-0002	CSJ-14
												ST-C	CS	0PSP03-FW-0002	CSJ-14
A2FWFV7189	STEAM GENERATOR 2A PREHEATER ORC BYPASS VALVE	5S139F00063#2 / E-8	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-06
A2FWFV7189	STEAM GENERATOR 2A PREHEATER ORC BYPASS VALVE	5S139F00063#2 / E-8	B	Active	2	3	GL	AO	C	C	C	FS-C	CS	0PSP03-FW-0002	CSJ-06
												ST-C	CS	0PSP03-FW-0002	CSJ-06
A2FWFV7190	STEAM GENERATOR 2B PREHEATER ORC BYPASS VALVE	5S139F00063#2 / E-6	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-06
												FS-C	CS	0PSP03-FW-0002	CSJ-06
												ST-C	CS	0PSP03-FW-0002	CSJ-06
A2FWFV7191	STEAM GENERATOR 2C PREHEATER ORC BYPASS VALVE	5S139F00063#2 / E-4	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-06
												FS-C	CS	0PSP03-FW-0002	CSJ-06
												ST-C	CS	0PSP03-FW-0002	CSJ-06
A2FWFV7192	STEAM GENERATOR 2D PREHEATER ORC BYPASS VALVE	5S139F00063#2 / E-2	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
A2FWFV7192	STEAM GENERATOR 2D PREHEATER ORC BYPASS VALVE	5S139F00063#2 / E-2	B	Active	2	3	GL	AO	C	C	C	ET-C	CS	0PSP03-FW-0002	CSJ-06
												FS-C	CS	0PSP03-FW-0002	CSJ-06
												ST-C	CS	0PSP03-FW-0002	CSJ-06

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Safe	Fail	Test Req	Freq	Procedure	Notes
A2HCFV9776	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE SUPPLY ISOLATION VALVE OPERATOR	5V149V00019#2 / F-4	A	Active	2	18	B	AO	O/C	C	C	OV-C	2Y	0PSP11-HC-0003	
												OV-O	2Y	0PSP03-HC-0003	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-HC-0003	
												ET-C	Q	0PSP03-HC-0003	
												FS-C	Q	0PSP03-HC-0003	
												ST-C	Q	0PSP03-HC-0003	
A2HCFV9777	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE EXHAUST ISOLATION VALVE OPERATOR	5V149V00019#2 / B-6	A	Active	2	18	B	AO	O/C	C	C	OV-C	2Y	0PSP11-HC-0004	
												OV-O	2Y	0PSP03-HC-0004	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-HC-0004	
												ET-C	Q	0PSP03-HC-0003	
												FS-C	Q	0PSP03-HC-0003	
												ST-C	Q	0PSP03-HC-0003	
A2MSFSV7414	STEAM GENERATOR 2A MAIN STEAM ORC ISOLATION VALVE	5S109F00016#2 / G-4	B	Active	2	30	GT	AO	O	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-MS-0002	CSJ-08
A2MSFSV7414	STEAM GENERATOR 2A MAIN STEAM ORC ISOLATION VALVE	5S109F00016#2 / G-4	B	Active	2	30	GT	AO	O	C	C	FS-C	CS	0PSP03-MS-0002	CSJ-08
												ST-C	CS	0PSP03-MS-0002	CSJ-08
A2MSFSV7424	STEAM GENERATOR 2B MAIN STEAM ORC ISOLATION VALVE	5S109F00016#2 / F-4	B	Active	2	30	GT	AO	O	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-MS-0002	CSJ-08
												FS-C	CS	0PSP03-MS-0002	CSJ-08
												ST-C	CS	0PSP03-MS-0002	CSJ-08
A2MSFSV7434	STEAM GENERATOR 2C MAIN STEAM ORC ISOLATION VALVE	5S109F00016#2 / D-4	B	Active	2	30	GT	AO	O	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-MS-0002	CSJ-08
												FS-C	CS	0PSP03-MS-0002	CSJ-08
												ST-C	CS	0PSP03-MS-0002	CSJ-08
A2MSFSV7444	STEAM GENERATOR 2D MAIN STEAM ORC ISOLATION VALVE	5S109F00016#2 / C-4	B	Active	2	30	GT	AO	O	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0002	
A2MSFSV7444	STEAM GENERATOR 2D MAIN STEAM ORC ISOLATION VALVE	5S109F00016#2 / C-4	B	Active	2	30	GT	AO	O	C	C	ET-C	CS	0PSP03-MS-0002	CSJ-08
												FS-C	CS	0PSP03-MS-0002	CSJ-08
												ST-C	CS	0PSP03-MS-0002	CSJ-08
A2MSFV7412	SG 2A MN STM ISOLATION BYPASS VALVE	5S109F00016#2 / G-4	B	Active	2	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	CS	0PSP03-MS-0002	CSJ-09
												FS-C	CS	0PSP03-MS-0002	CSJ-09
												ST-C	CS	0PSP03-MS-0002	CSJ-09
A2MSFV7422	SG 2B MN STM ISOLATION BYPASS VALVE	5S109F00016#2 / F-4	B	Active	2	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	CS	0PSP03-MS-0002	CSJ-09
												FS-C	CS	0PSP03-MS-0002	CSJ-09
												ST-C	CS	0PSP03-MS-0002	CSJ-09
A2MSFV7432	SG 2C MN STM ISOLATION BYPASS VALVE	5S109F00016#2 / D-4	B	Active	2	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
A2MSFV7432	SG 2C MN STM ISOLATION BYPASS VALVE	5S109F00016#2 / D-4	B	Active	2	4	GL	AO	C	C	C	RPI	2Y	0PSP03-ZG-0001	
												ET-C	CS	0PSP03-MS-0002	CSJ-09
												FS-C	CS	0PSP03-MS-0002	CSJ-09
												ST-C	CS	0PSP03-MS-0002	CSJ-09
A2MSFV7442	SG 2D MN STM ISOLATION BYPASS VALVE	5S109F00016#2 / C-4	B	Active	2	4	GL	AO	C	C	C	OV-C	2Y	0PSP03-MS-0002	
												OV-O	2Y	0PSP03-MS-0002	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	CS	0PSP03-MS-0002	CSJ-09
												FS-C	CS	0PSP03-MS-0002	CSJ-09
												ST-C	CS	0PSP03-MS-0002	CSJ-09
A2MSPV7411	S/G 2A MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#2 / H-6	B	Active	2	8	GL	HO	C	O/C	C	OV-C	2Y	0PSP03-MS-0001	
												OV-O	2Y	0PSP03-MS-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	R	0PSP03-MS-0001	PORV / ISTC-3510
												ET-O	R	0PSP03-MS-0001	PORV / ISTC-3510
A2MSPV7411	S/G 2A MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#2 / H-6	B	Active	2	8	GL	HO	C	O/C	C	FS-C	R	0PSP03-MS-0001	PORV / ISTC-3510
												ST-C	R	0PSP03-MS-0001	PORV / ISTC-3510
												ST-O	R	0PSP03-MS-0001	PORV / ISTC-3510

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
A2RCHCV0601	REACTOR VESSEL HEAD VENT THROTTLE VALVE	5R149F05001#2 / E-2	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04
A2RCHV3657A	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#2 / E-4	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
A2RCHV3657A	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#2 / E-4	B	Active	2	1	GL	SO	C	O/C	C	FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04
A2RCHV3658A	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#2 / E-3	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04
A2RCPCV0655A	PRESSURIZER POWER OPERATED RELIEF VLV	5R149F05003#2 / D-8	B	Active	1	6	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0010	
												OV-O	2Y	0PSP03-RC-0010	
												RPI	2Y	0PSP03-RC-0010	
												ET-C	Q	0PSP03-RC-0010	
												ET-O	Q	0PSP03-RC-0010	
												FS-C	Q	0PSP03-RC-0010	
A2RCPCV0655A	PRESSURIZER POWER OPERATED RELIEF VLV	5R149F05003#2 / D-8	B	Active	1	6	GL	SO	C	O/C	C	ST-C	Q	0PSP03-RC-0010	
												ST-O	Q	0PSP03-RC-0010	
A2RHFCV0851	RHR HEAT EXCHANGER 2A BYPASS VALVE	5R169F20000#2 / C-5	B	Active	2	8	B	AO	C	C	C	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-RH-0007	CSJ-11
												FS-C	CS	0PSP03-RH-0007	CSJ-11
A2RHHCV0864	RHR HEAT EXCHANGER 2A OUTLET VALVE	5R169F20000#2 / B-4	B	Active	2	8	B	AO	O	O	O	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-O	CS	0PSP03-RH-0007	CSJ-11
												FS-O	CS	0PSP03-RH-0007	CSJ-11
A2SBFV4150	STEAM GENERATOR 2D BLOWDOWN ORC ISOLATION VALVE	5S209F20001#2 / C-5	B	Active	2	4	GT	AO	O	C	C	OV-C	2Y	0PSP03-SB-0001	
												OV-O	2Y	0PSP03-SB-0001	
												RPI	2Y	0PSP03-ZG-0001	
A2SBFV4150	STEAM GENERATOR 2D BLOWDOWN ORC ISOLATION VALVE	5S209F20001#2 / C-5	B	Active	2	4	GT	AO	O	C	C	ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
												ST-C	Q	0PSP03-SB-0001	
A2SBFV4153	STEAM GENERATOR 2A BLOWDOWN ORC ISOLATION VALVE	5S209F20001#2 / F-5	B	Active	2	4	GT	AO	O	C	C	OV-C	2Y	0PSP03-SB-0001	
												OV-O	2Y	0PSP03-SB-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
												ST-C	Q	0PSP03-SB-0001	
A2XCFV1025	PERSONNEL AIRLOCK REACTOR DOOR SEAL AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#2 / G-4	A	Active	2	0.5	GL	SO	O	O/C	C	OV-C	2Y	0PSP11-XC-0010	
												OV-O	2Y	0PSP11-XC-0010	
												RPI	2Y	0PSP03-ZG-0001	
A2XCFV1025	PERSONNEL AIRLOCK REACTOR DOOR SEAL AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#2 / G-4	A	Active	2	0.5	GL	SO	O	O/C	C	LTJ	AppJ	0PSP11-XC-0010	
												ET-C	Q	0PSP03-XC-0003	
												ET-O	Q	0PSP03-XC-0003	
												FS-C	Q	0PSP03-XC-0003	
												ST-C	Q	0PSP03-XC-0003	
												ST-O	Q	0PSP03-XC-0003	
A2XCFV1026	PERSONNEL AIRLOCK OUTER DOOR SEAL AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#2 / F-4	A	Active	2	0.5	GL	SO	O	O/C	C	OV-C	2Y	0PSP11-XC-0011	
												OV-O	2Y	0PSP11-XC-0011	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-XC-0011	
												ET-C	Q	0PSP03-XC-0003	
												ET-O	Q	0PSP03-XC-0003	
A2XCFV1026	PERSONNEL AIRLOCK OUTER DOOR SEAL AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#2 / F-4	A	Active	2	0.5	GL	SO	O	O/C	C	FS-C	Q	0PSP03-XC-0003	
												ST-C	Q	0PSP03-XC-0003	
												ST-O	Q	0PSP03-XC-0003	

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
A2XCFV1027	PERSONNEL AIRLOCK OUTER DOOR SEAL TEST AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#2 / C-4	A	Active	2	0.5	GL	SO	O	O/C	C	OV-C	2Y	0PSP11-XC-0012	
												OV-O	2Y	0PSP11-XC-0012	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-XC-0012	
												ET-C	Q	0PSP03-XC-0003	
												ET-O	Q	0PSP03-XC-0003	
												FS-C	Q	0PSP03-XC-0003	
A2XCFV1027	PERSONNEL AIRLOCK OUTER DOOR SEAL TEST AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#2 / C-4	A	Active	2	0.5	GL	SO	O	O/C	C	ST-C	Q	0PSP03-XC-0003	
												ST-O	Q	0PSP03-XC-0003	
A2XCFV1028	PERSONNEL AIRLOCK REACTOR DOOR SEAL TEST AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#2 / C-4	A	Active	2	0.5	GL	SO	O	O/C	C	OV-C	2Y	0PSP11-XC-0013	
												OV-O	2Y	0PSP11-XC-0013	
												RPI	2Y	0PSP03-ZG-0001	
												LTJ	AppJ	0PSP11-XC-0013	
												ET-C	Q	0PSP03-XC-0003	
												ET-O	Q	0PSP03-XC-0003	
												FS-C	Q	0PSP03-XC-0003	
A2XCFV1028	PERSONNEL AIRLOCK REACTOR DOOR SEAL TEST AIR SUPPLY FLOW CONTROL SOLENOID VALVE	5C269F05060#2 / C-4	A	Active	2	0.5	GL	SO	O	O/C	C	ST-C	Q	0PSP03-XC-0003	
												ST-O	Q	0PSP03-XC-0003	
B2AFFV7516	B AFW CROSSOVER VALVE (AF-FV-7516)	5S142F00024#1 / D-5	B	Active	3	4	GL	AO	O	C	C	OV-C	2Y	0PSP03-AF-0010	
												OV-O	2Y	0PSP03-AF-0010	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-AF-0010	
												FS-C	Q	0PSP03-AF-0010	
												ST-C	Q	0PSP03-AF-0010	
B2CCFV4548	RHR HEAT EXCHANGER 2B CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05018#2 / G-2	B	Active	3	16	B	AO	C	O	O	OV-C	2Y	0PSP03-CC-0008	
												OV-O	2Y	0PSP03-CC-0008	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CC-0008	
												FS-O	Q	0PSP03-CC-0008	
B2CCFV4548	RHR HEAT EXCHANGER 2B CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05018#2 / G-2	B	Active	3	16	B	AO	C	O	O	ST-O	Q	0PSP03-CC-0008	
B2CHTV9487A	TRAIN B ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21B OUTLET TEMPERATURE CONTROL VALVE	3V119V10002#2 / C-4	B	Active	3	4	B	AO	NT	O	O	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CH-0007	
												FS-O	Q	0PSP03-CH-0007	
												ST-O	Q	0PSP03-CH-0007	
B2CHTV9487B	TRAIN B ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21B BYPASS TEMPERATURE CONTROL VALVE	3V119V10002#2 / C-4	B	Active	3	4	B	AO	NT	C	C	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
B2CHTV9487B	TRAIN B ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21B BYPASS TEMPERATURE CONTROL VALVE	3V119V10002#2 / C-4	B	Active	3	4	B	AO	NT	C	C	RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-CH-0007	
												FS-C	Q	0PSP03-CH-0007	
												ST-C	Q	0PSP03-CH-0007	
B2FWFV7145A	STEAM GENERATOR 2D FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#2 / G-1	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-14
												FS-C	CS	0PSP03-FW-0002	CSJ-14
												ST-C	CS	0PSP03-FW-0002	CSJ-14
B2FWFV7146A	STEAM GENERATOR 2C FEEDWATER INLET ORC ISOLATION VALVE BYPASS	5S139F00063#2 / G-3	B	Active	2	3	GL	AO	C	C	C	OV-C	2Y	0PSP03-FW-0002	
												OV-O	2Y	0PSP03-FW-0002	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-FW-0002	CSJ-14
												FS-C	CS	0PSP03-FW-0002	CSJ-14
												ST-C	CS	0PSP03-FW-0002	CSJ-14
B2MSPV7421	S/G 2B MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#2 / F-6	B	Active	2	8	GL	HO	C	O/C	C	OV-C	2Y	0PSP03-MS-0001	
												OV-O	2Y	0PSP03-MS-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	R	0PSP03-MS-0001	ISTC-3510
												ET-O	R	0PSP03-MS-0001	ISTC-3510
												FS-C	R	0PSP03-MS-0001	ISTC-3510
												ST-C	R	0PSP03-MS-0001	ISTC-3510
B2MSPV7421	S/G 2B MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#2 / F-6	B	Active	2	8	GL	HO	C	O/C	C	ST-O	R	0PSP03-MS-0001	ISTC-3510
B2RCHCV0602	REACTOR VESSEL HEAD VENT THROTTLE VALVE	5R149F05001#2 / D-2	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
B2RCHV3657B	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#2 / E-4	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
B2RCHV3657B	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#2 / E-4	B	Active	2	1	GL	SO	C	O/C	C	ST-O	R	0PSP03-RC-0011	ROJ-04
B2RCHV3658B	REACTOR VESSEL HEAD VENT ISOLATION VALVE	5R149F05001#2 / E-3	B	Active	2	1	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0011	
												OV-O	2Y	0PSP03-RC-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	R	0PSP03-RC-0011	ROJ-04
												ET-O	R	0PSP03-RC-0011	ROJ-04
												FS-C	R	0PSP03-RC-0011	ROJ-04
												ST-C	R	0PSP03-RC-0011	ROJ-04
												ST-O	R	0PSP03-RC-0011	ROJ-04
B2RCPCV0656A	PRESSURIZER POWER OPERATED RELIEF VLV	5R149F05003#2 / E-8	B	Active	1	6	GL	SO	C	O/C	C	OV-C	2Y	0PSP03-RC-0010	
												OV-O	2Y	0PSP03-RC-0010	
												RPI	2Y	0PSP03-RC-0010	
												ET-C	Q	0PSP03-RC-0010	
												ET-O	Q	0PSP03-RC-0010	
												FS-C	Q	0PSP03-RC-0010	
												ST-C	Q	0PSP03-RC-0010	
												ST-O	Q	0PSP03-RC-0010	
B2RHFCV0852	RHR HEAT EXCHANGER 2B BYPASS VALVE	5R169F20000#2 / E-5	B	Active	2	8	B	AO	C	C	C	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-RH-0007	CSJ-11
												FS-C	CS	0PSP03-RH-0007	CSJ-11
B2RHHCV0865	RHR HEAT EXCHANGER 2B OUTLET VALVE	5R169F20000#2 / D-4	B	Active	2	8	B	AO	O	O	O	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-O	CS	0PSP03-RH-0007	CSJ-11
												FS-O	CS	0PSP03-RH-0007	CSJ-11
B2SBFV4152	STEAM GENERATOR 2B BLOWDOWN ORC ISOLATION VALVE	5S209F20001#2 / F-2	B	Active	2	4	GT	AO	O	C	C	OV-C	2Y	0PSP03-SB-0001	
												OV-O	2Y	0PSP03-SB-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
B2SBFV4152	STEAM GENERATOR 2B BLOWDOWN ORC ISOLATION VALVE	5S209F20001#2 / F-2	B	Active	2	4	GT	AO	O	C	C	ST-C	Q	0PSP03-SB-0001	
C2AFFV7515	C AFW CROSSOVER VALVE (AF-FV-7515)	5S142F00024#1 / B-5	B	Active	3	4	GL	AO	O	C	C	OV-C	2Y	0PSP03-AF-0010	
												OV-O	2Y	0PSP03-AF-0010	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-AF-0010	
												FS-C	Q	0PSP03-AF-0010	
												ST-C	Q	0PSP03-AF-0010	
C2CCFV4565	RHR HEAT EXCHANGER 2C CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05019#2 / G-2	B	Active	3	16	B	AO	C	O	O	OV-C	2Y	0PSP03-CC-0009	
												OV-O	2Y	0PSP03-CC-0009	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CC-0009	
												FS-O	Q	0PSP03-CC-0009	
												ST-O	Q	0PSP03-CC-0009	
C2CHTV9497A	TRAIN C ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21C OUTLET TEMPERATURE CONTROL VALVE	3V119V10002#2 / C-1	B	Active	3	4	B	AO	NT	O	O	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
												ET-O	Q	0PSP03-CH-0007	
												FS-O	Q	0PSP03-CH-0007	
												ST-O	Q	0PSP03-CH-0007	
C2CHTV9497B	TRAIN C ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21C BYPASS TEMPERATURE CONTROL VALVE	3V119V10002#2 / C-1	B	Active	3	4	B	AO	NT	C	C	OV-C	2Y	0PSP03-CH-0007	
												OV-O	2Y	0PSP03-CH-0007	
												RPI	2Y	0PSP03-ZG-0001	
C2CHTV9497B	TRAIN C ESSENTIAL CHILLED WATER EAB MAIN SUPPLY AHU 21C BYPASS TEMPERATURE CONTROL VALVE	3V119V10002#2 / C-1	B	Active	3	4	B	AO	NT	C	C	ET-C	Q	0PSP03-CH-0007	
												FS-C	Q	0PSP03-CH-0007	
												ST-C	Q	0PSP03-CH-0007	
C2CVFV0011	CVCS LETDOWN ORIFICE HEADER ISOLATION VALVE	5R179F05005#2 / G-6	B	Active	2	4	GL	AO	O	C	C	OV-C	2Y	0PSP03-CV-0011	
												OV-O	2Y	0PSP03-CV-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-CV-0011	CSJ-01
												FS-C	CS	0PSP03-CV-0011	CSJ-01
												ST-C	CS	0PSP03-CV-0011	CSJ-01
C2MSPV7431	S/G 2C MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#2 / E-6	B	Active	2	8	GL	HO	C	O/C	C	OV-C	2Y	0PSP03-MS-0001	
												OV-O	2Y	0PSP03-MS-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	R	0PSP03-MS-0001	ISTC-3510

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
C2MSPV7431	S/G 2C MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#2 / E-6	B	Active	2	8	GL	HO	C	O/C	C	ET-O	R	0PSP03-MS-0001	ISTC-3510
												FS-C	R	0PSP03-MS-0001	ISTC-3510
												ST-C	R	0PSP03-MS-0001	ISTC-3510
												ST-O	R	0PSP03-MS-0001	ISTC-3510
C2RHFCV0853	RHR HEAT EXCHANGER 2C BYPASS VALVE	5R169F20000#2 / H-5	B	Active	2	8	B	AO	C	C	C	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-RH-0007	CSJ-11
												FS-C	CS	0PSP03-RH-0007	CSJ-11
C2RHHCV0866	RHR HEAT EXCHANGER 2C OUTLET VALVE	5R169F20000#2 / G-4	B	Active	2	8	B	AO	O	O	O	OV-C	2Y	0PSP03-RH-0007	
												OV-O	2Y	0PSP03-RH-0007	
												RPI	2Y	0PSP03-ZG-0002	
												ET-O	CS	0PSP03-RH-0007	CSJ-11
												FS-O	CS	0PSP03-RH-0007	CSJ-11
C2SBFV4151	STEAM GENERATOR 2C BLOWDOWN ORC ISOLATION VALVE	5S209F20001#2 / C-2	B	Active	2	4	GT	AO	O	C	C	OV-C	2Y	0PSP03-SB-0001	
C2SBFV4151	STEAM GENERATOR 2C BLOWDOWN ORC ISOLATION VALVE	5S209F20001#2 / C-2	B	Active	2	4	GT	AO	O	C	C	OV-O	2Y	0PSP03-SB-0001	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-SB-0001	
												FS-C	Q	0PSP03-SB-0001	
												ST-C	Q	0PSP03-SB-0001	
D2AFFV7518	D AFW CROSSOVER VALVE (AF-FV-7518)	5S142F00024#1 / G-4	B	Active	3	4	GL	AO	O	C	C	OV-C	2Y	0PSP03-AF-0010	
												OV-O	2Y	0PSP03-AF-0010	
												RPI	2Y	0PSP03-ZG-0001	
												ET-C	Q	0PSP03-AF-0010	
												FS-C	Q	0PSP03-AF-0010	
												ST-C	Q	0PSP03-AF-0010	
D2MSPV7441	S/G 2D MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#2 / C-6	B	Active	2	8	GL	HO	C	O/C	C	OV-C	2Y	0PSP03-MS-0001	
												OV-O	2Y	0PSP03-MS-0001	
												RPI	2Y	0PSP03-ZG-0001	
D2MSPV7441	S/G 2D MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE (ORC)	5S109F00016#2 / C-6	B	Active	2	8	GL	HO	C	O/C	C	ET-C	R	0PSP03-MS-0001	ISTC-3510
												ET-O	R	0PSP03-MS-0001	ISTC-3510
												FS-C	R	0PSP03-MS-0001	ISTC-3510
												ST-C	R	0PSP03-MS-0001	ISTC-3510
												ST-O	R	0PSP03-MS-0001	ISTC-3510
N2CCFV4620	RCP 2A THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / B-6	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N2CCFV4621	RCP 2A THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / B-6	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N2CCFV4626	RCP 2B THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / B-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N2CCFV4627	RCP 2B THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / B-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
N2CCFV4627	RCP 2B THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / B-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-O	R	0PSP11-CC-0016	ROJ-02
N2CCFV4632	RCP 2C THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / E-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N2CCFV4633	RCP 2C THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / E-3	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N2CCFV4638	RCP 2D THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / E-6	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N2CCFV4639	RCP 2D THERMAL BARRIER CCW RETURN FLOW CONTROL VALVE OPERATOR	5R209F05021#2 / E-6	C	Active	3	3	GL	SA	O	O/C	N/A	ET-C	R	0PSP11-CC-0016	ROJ-02
												ET-O	R	0PSP11-CC-0016	ROJ-02
N2CVLV3119	CVCS AUXILIARY SPRAY LEVEL CONTROL VALVE	5R179F05005#2 / F-7	B	Active	2	2	GL	AO	C	O/C	C	OV-C	2Y	0PSP03-CV-0011	
												OV-O	2Y	0PSP03-CV-0011	
												RPI	2Y	0PSP03-ZG-0002	
												ET-C	CS	0PSP03-CV-0011	CSJ-03
N2CVLV3119	CVCS AUXILIARY SPRAY LEVEL CONTROL VALVE	5R179F05005#2 / F-7	B	Active	2	2	GL	AO	C	O/C	C	ET-O	CS	0PSP03-CV-0011	CSJ-03
												FS-C	CS	0PSP03-CV-0011	CSJ-03
												ST-C	CS	0PSP03-CV-0011	CSJ-03
												ST-O	CS	0PSP03-CV-0011	CSJ-03
N2MSPSV7410	STM GENERATOR 2A MAIN STEAM SAFETY VALVE	5S109F00016#2 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7410A	STM GENERATOR 2A MAIN STEAM SAFETY VALVE	5S109F00016#2 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7410B	S/G 2A MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7410C	S/G 2A MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7410D	S/G 2A MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / H-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7420	S/G 2B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7420A	S/G 2B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs

ATTACHMENT 7: Unit 2 ISTC Tested Valve List

Valve ID	Comp Description	Drawing / Coordinate	Cat	Active / Passive	Class	Size	Type	Act	Position Normal	Position Safe	Position Fail	Test Req	Freq	Procedure	Notes
N2MSPSV7420B	S/G 2B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7420C	S/G 2B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7420D	S/G 2B MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / F-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7430	S/G 2C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7430A	S/G 2C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7430B	S/G 2C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7430C	S/G 2C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7430D	S/G 2C MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / E-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7440	S/G 2D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7440A	S/G 2D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7440B	S/G 2D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7440C	S/G 2D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2MSPSV7440D	S/G 2D MAIN STEAM OUTLET ORC SAFETY RELIEF VALVE	5S109F00016#2 / C-6	C	Active	2	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-MS-0001	MSSVs
N2RCPSV3450	PRESSURIZER SAFETY RELIEF VALVE	5R149F05003#2 / F-7	C	Active	1	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-RC-0013	
N2RCPSV3451	PRESSURIZER SAFETY RELIEF VALVE	5R149F05003#2 / F-6	C	Active	1	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-RC-0013	
N2RCPSV3452	PRESSURIZER SAFETY RELIEF VALVE	5R149F05003#2 / F-4	C	Active	1	6	PRV	SA	C	O/C	N/A	RV	5Y	0PSP11-RC-0013	
N2RHPSV3851	RHR PUMP 2A DISCHARGE RELIEF VALVE	5R169F20000#2 / C-6	C	Active	2	3	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N2RHPSV3852	RHR PUMP 2B DISCHARGE RELIEF VALVE	5R169F20000#2 / E-6	C	Active	2	3	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N2RHPSV3853	RHR PUMP 2C DISCHARGE RELIEF VALVE	5R169F20000#2 / H-6	C	Active	2	3	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N2SDPSV5432	STARTING AIR RECEIVER #22 RELIEF VALVE	5Q159F22546#2 / F-7	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N2SDPSV5433	STARTING AIR RECEIVER #21 RELIEF VALVE	5Q159F22546#2 / F-8	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N2SDPSV5532	STARTING AIR RECEIVER #24 RELIEF VALVE	5Q159F22546#2 / F-4	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N2SDPSV5533	STARTING AIR RECEIVER #23 RELIEF VALVE	5Q159F22546#2 / F-5	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N2SDPSV5632	STARTING AIR RECEIVER #26 RELIEF VALVE	5Q159F22546#2 / F-1	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	
N2SDPSV5633	STARTING AIR RECEIVER #25 RELIEF VALVE	5Q159F22546#2 / F-2	C	Active	3	0.75	PRV	SA	C	O/C	N/A	RV	10Y	0PSP11-ZE-0003	

ATTACHMENT 8: Unit 1 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
2N101XCS0001A	CONTAINMENT SPRAY PUMP 1A DISCHARGE MOV (ORC)	5N109F05037#1 / G-6	ML012040470	2
2N101XCS0001B	CONTAINMENT SPRAY PUMP 1B DISCHARGE MOV (ORC)	5N109F05037#1 / E-6	ML012040470	2
2N101XCS0001C	CONTAINMENT SPRAY PUMP 1C DISCHARGE MOV (ORC)	5N109F05037#1 / C-6	ML012040470	2
2N101XCS0002	CONTAINMENT SPRAY PUMP 1A DISCHARGE CHECK VALVE (IRC)	5N109F05037#1 / G-7	ML012040470	2
2N101XCS0004	CONTAINMENT SPRAY HEADER IRC CHECK VALVE	5N109F05037#1 / E-8	ML012040470	2
2N101XCS0005	CONTAINMENT SPRAY HEADER IRC CHECK VALVE	5N109F05037#1 / D-8	ML012040470	2
2N101XCS0006	CONTAINMENT SPRAY PUMP 1C DISCHARGE CHECK VALVE (IRC)	5N109F05037#1 / C-7	ML012040470	2
2N121TSI0058	SAFETY INJECTION ACCUMULATORS IRC NITROGEN SUPPLY CHECK VALVE	5N129F05016#1 / G-2	ML012040470	2
2Q061TED0064	CONTAINMENT NORMAL SUMP SUMP PUMPS 1A & B DISCHARGE (IRC) ISOLATION MOV	5Q069F05030#1 / G-7	ML012040470	2
2Q101TSA0504	RCB SERVICE AIR HEADER ORC ISOLATION VALVE	5Q109F05041#1 / C-4	ML012040470	2
2Q101TSA0505	RCB SERVICE AIR HEADER IRC CHECK VALVE	5Q109F05041#1 / D-4	ML012040470	2
2Q111TIA0541	RCB INSTRUMENT AIR HEADER IRC CHECK VALVE	5Q119F05040#1 / D-4	ML012040470	2
2Q121TBA0004	(OCIV) BREATHING AIR TO RCB	5Q129F05044#1 / G-4	ML012040470	2
2Q121TBA0006	(IRC) BREATHING AIR ICIV CHECK VALVE	5Q129F05044#1 / H-4	ML012040470	2
2R141XRC0046	REACTOR MAKEUP WATER TO PRT IRC INLET CHECK VALVE	5R149F05004#1 / E-4	ML012040470	2
2R161TRH0166	RCP SEAL STANDPIPE 1A SUPPLY CHECK VALVE	5R169F20000#1 / C-5	ML012040470	2
2R161TRH0167	RCP SEAL STANDPIPE 1B SUPPLY CHECK VALVE	5R169F20000#1 / F-5	ML012040470	2
2R161TRH0168	RCP SEAL STANDPIPE 1B SUPPLY CHECK VALVE	5R169F20000#1 / F-5	ML012040470	2
2R161TRH0169	RCP SEAL STANDPIPE 1C SUPPLY CHECK VALVE	5R169F20000#1 / H-5	ML012040470	2
2R161TRH0170	RCP SEAL STANDPIPE 1C SUPPLY CHECK VALVE	5R169F20000#1 / H-5	ML012040470	2
2R161TRH0171	RHR HEAT EXCHANGER 1A STANDPIPE FILL VALVE	5R169F20000#1 / C-5	ML012040470	2
2R161TRH0172	RHR HEAT EXCHANGER 1B STANDPIPE FILL VALVE	5R169F20000#1 / F-5	ML012040470	2
2R161TRH0173	RHR HEAT EXCHANGER 1C STANDPIPE FILL VALVE	5R169F20000#1 / H-5	ML012040470	2
2R161TRH0174	RCP SEAL STANDPIPE 1A SUPPLY CHECK VALVE	5R169F20000#1 / C-5	ML012040470	2
2R171TCV0022	CVCS LETDOWN IRC CONTAINMENT ISOLATION BYPASS CHECK VALVE	5R179F05005#1 / H-3	ML012040470	2
2R171TCV0077	RCP SEAL WATER RETURN IRC CONTAINMENT ISOLATION MOV	5R179F05005#1 / E-3	ML012040470	2
2R171TCV0078	RCP SEAL WATER IRC BYPASS CHECK VALVE	5R179F05005#1 / F-3	ML012040470	2
2R171TCV0079	RCP SEAL WATER RETURN ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / E-3	ML012040470	2
2R171TCV0154	BORON CONCENTRATION MEASUREMENT OUTLET TO VCT FIRST CHECK VALVE	5R179F05006#1 / D-2	ML012040470	2
2R171TCV0155	BORON CONCENTRATION MEASUREMENT OUTLET TO VCT SECOND CHECK VALVE	5R179F05006#1 / D-2	ML012040470	2
2R171TCV0166	CVCS RETURN FROM PRIMARY SAMPLE ISOLATION VALVE	5R179F05007#1 / G-5	ML012040470	2
2R171TCV0182	GAS SUPPLY HEADER TO VCT FIRST CHECK VALVE	5R179F05007#1 / G-7	ML012040470	2
2R171TCV0186	GAS SUPPLY HEADER TO VCT SECOND CHECK VALVE	5R179F05007#1 / F-7	ML012040470	2
2R171TCV0221	CVCS ALT IMMEDIATE BORATION ISOLATION VALVE	5R179F05007#1 / E-4	ML012040470	2
2R171TCV0226	BORIC ACID TANK TO CHARGING PUMP SUCTION BORATION VALVE	5R179F05007#1 / D-4	ML012040470	2
2R171TCV0234A	CENTRIFUGAL CHARGING PUMP 1A RECIRC CHECK VALVE	5R179F05007#1 / D-6	ML012040470	2
2R171TCV0234B	CENTRIFUGAL CHARGING PUMP 1B RECIRC CHECK VALVE	5R179F05007#1 / D-6	ML012040470	2
2R171TCV0677	POST ACCIDENT SAMPLING SYSTEM TO VCT CHECK VALVE	5R179F05007#1 / G-5	ML012040470	2
2R171TCV0707	CENTRIFUGAL CHARGING PUMP 1B DISCHARGE BYPASS CHECK VALVE	5R179F05007#1 / F-6	ML012040470	2
2R171XCV0023	CVCS LETDOWN IRC CONTAINMENT ISOLATION MOV	5R179F05005#1 / H-3	ML012040470	2
2R171XCV0024	CVCS LETDOWN ORC CONTAINMENT ISOLATION MOV	5R179F05005#1 / H-3	ML012040470	2
2R171XCV0112C	CVCS CHARGING PUMPS SUCTION FROM RWST MOV	5R179F05007#1 / C-4	ML012040470	2
2R171XCV0113B	CVCS CHARGING PUMPS SUCTION FROM RWST MOV	5R179F05007#1 / C-4	ML012040470	2
2R171XCV0157	CVCS LOW PRESSURE LETDOWN CONTAINMENT ISOLATION VALVE	5R179F05006#1 / F-2	ML012040470	2
2R171XCV0158	CVCS LOW PRESSURE LETDOWN IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05006#1 / F-2	ML012040470	2
2R171XCV0217	CVCS EMERGENCY BORATION CHECK VALVE	5R179F05007#1 / B-3	ML012040470	2
2R171XCV0218	CVCS EMERGENCY BORATION MOV	5R179F05007#1 / B-3	ML012040470	2
2R171XCV0224	CVCS CHARGING PUMPS SUCTION FROM RWST CHECK VALVE	5R179F05007#1 / B-4	ML012040470	2
2R171XCV0235A	CENTRIFUGAL CHARGING PUMP 1A DISCHARGE CHECK VALVE	5R179F05007#1 / B-6	ML012040470	2
2R171XCV0235B	CENTRIFUGAL CHARGING PUMP 1B DISCHARGE CHECK VALVE	5R179F05007#1 / D-6	ML012040470	2
2R171XCV0639	CVCS ALT IMMEDIATE BORATION CHECK VALVE	5R179F05007#1 / E-4	ML012040470	2
2R171XCV0671	CVCS SEAL INJECTION HEADER CHECK VALVE	5R179F05007#1 / B-6	ML012040470	2
2R171XCV8348	CENTRIFUGAL CHARGING PUMP 1A SEAL WATER SUPPLY MOV	5R179F05007#1 / B-6	ML012040470	2
2R171XCV8377A	CENTRIFUGAL CHARGING PUMP 1A DISCHARGE MOV	5R179F05007#1 / B-6	ML012040470	2
2R171XCV8377B	CENTRIFUGAL CHARGING PUMP 1B DISCHARGE MOV	5R179F05007#1 / D-6	ML012040470	2
2R201TCC0012	RHR TRAIN A CCW SUPPLY ORC ISOLATION MOV	5R209F05017#1 / E-2	ML012040470	2
2R201TCC0049	RHR TRAIN A CCW RETURN HEADER IRC ISOLATION MOV	5R209F05017#1 / G-4	ML012040470	2
2R201TCC0050	RHR TRAIN A CCW RETURN HEADER ORC ISOLATION MOV	5R209F05017#1 / G-4	ML012040470	2
2R201TCC0057	RCFC TRAIN A CCW SUPPLY ORC ISOLATION MOV	5R209F05017#1 / D-2	ML012040470	2
2R201TCC0058	RCFC TRAIN A CHILLED WATER/CCW SUPPLY IRC CHECK VALVE	5R209F05017#1 / D-2	ML012040470	2
2R201TCC0059	RCFC TRAIN A CHILLED WATER SUPPLY ORC ISOLATION MOV	5R209F05017#1 / D-2	ML012040470	2
2R201TCC0068	RCFC TRAIN A CHILLED WATER/CCW RETURN IRC ISOLATION MOV	5R209F05017#1 / C-4	ML012040470	2
2R201TCC0069	RCFC TRAIN A CCW RETURN ORC ISOLATION MOV	5R209F05017#1 / D-4	ML012040470	2
2R201TCC0070	RCFC TRAIN A CHILLED WATER RETURN ORC ISOLATION MOV	5R209F05017#1 / C-4	ML012040470	2
2R201TCC0122	RHR TRAIN B CCW SUPPLY ORC ISOLATION MOV	5R209F05018#1 / F-2	ML012040470	2
2R201TCC0129	RHR TRAIN B CCW RETURN HEADER IRC ISOLATION MOV	5R209F05018#1 / G-4	ML012040470	2
2R201TCC0130	RHR TRAIN B CCW RETURN HEADER ORC ISOLATION MOV	5R209F05018#1 / G-4	ML012040470	2

ATTACHMENT 8: Unit 1 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
2R201TCC0136	RCFC TRAIN B CCW SUPPLY LINE ORC ISOLATION MOV	5R209F05018#1 / D-2	ML012040470	2
2R201TCC0137	RCFC TRAIN B CHILLED WATER SUPPLY LINE ISOLATION MOV	5R209F05018#1 / D-2	ML012040470	2
2R201TCC0138	RCFC TRAIN B CHILLED WATER/CCW SUPPLY IRC CHECK VALVE	5R209F05018#1 / D-2	ML012040470	2
2R201TCC0147	RCFC TRAIN B CHILLED WATER/CCW RETURN LINE IRC ISOLATION MOV	5R209F05018#1 / C-4	ML012040470	2
2R201TCC0148	RCFC TRAIN B CCW RETURN LINE ORC ISOLATION MOV	5R209F05018#1 / D-4	ML012040470	2
2R201TCC0149	RCFC TRAIN B CHILLED WATER RETURN ORC ISOLATION MOV	5R209F05018#1 / C-4	ML012040470	2
2R201TCC0182	RHR TRAIN C CCW SUPPLY ORC ISOLATION MOV	5R209F05019#1 / F-1	ML012040470	2
2R201TCC0189	RHR TRAIN C CCW RETURN IRC ISOLATION MOV	5R209F05019#1 / H-4	ML012040470	2
2R201TCC0190	RHR TRAIN C CCW RETURN ORC ISOLATION MOV	5R209F05019#1 / H-4	ML012040470	2
2R201TCC0197	RCFC TRAIN C CCW SUPPLY ORC ISOLATION MOV	5R209F05019#1 / D-2	ML012040470	2
2R201TCC0198	RCFC TRAIN C CHILLED WATER/CCW SUPPLY IRC CHECK VALVE (CIV)	5R209F05019#1 / D-2	ML012040470	2
2R201TCC0199	RCFC TRAIN C CHILLED WATER SUPPLY ORC ISOLATION MOV	5R209F05019#1 / D-2	ML012040470	2
2R201TCC0208	RCFC TRAIN C CHILLED WATER/CCW RETURN IRC ISOLATION MOV	5R209F05019#1 / D-4	ML012040470	2
2R201TCC0209	RCFC TRAIN C CHILLED WATER RETURN LINE ORC ISOLATION MOV	5R209F05019#1 / C-4	ML012040470	2
2R201TCC0210	RCFC TRAIN C CCW RETURN LINE ORC ISOLATION MOV	5R209F05019#1 / D-4	ML012040470	2
2R201TCC0291	REACTOR COOLANT PUMPS CCW SUPPLY ORC ISOLATION MOV	5R209F05021#1 / H-8	ML012040470	2
2R201TCC0318	RCP AND HEAT EXCHANGERS CCW SUPPLY ORC ISOLATION MOV	5R209F05021#1 / H-8	ML012040470	2
2R201TCC0319	RCP AND HEAT EXCHANGERS CCW SUPPLY IRC CHECK VALVE	5R209F05021#1 / G-8	ML012040470	2
2R201TCC0403	RCP AND HEAT EXCHANGERS CCW RETURN HEADER IRC ISOLATION MOV	5R209F05021#1 / B-1	ML012040470	2
2R201TCC0404	RCP AND HEAT EXCHANGERS CCW RETURN ORC ISOLATION MOV	5R209F05021#1 / H-1	ML012040470	2
2R201TCC0446	RCP AND HEAT EXCHANGERS CCW RETURN HEADER MOV-0542/0403 IRC BYPASS CHECK VALVE	5R209F05021#1 / B-1	ML012040470	2
2R201TCC0542	RCP AND HEAT EXCHANGERS CCW RETURN HEADER BYPASS IRC ISOLATION MOV	5R209F05021#1 / B-1	ML012040470	2
2R211XFC0006C	SFP COOLING PUMPS 1A&B SUCTION FROM ICSA IRC ISOLATION VALVE	5R219F05028#1 / B-5	ML012040470	2
2R211XFC0007C	SFP COOLING PUMPS 1A&B SUCTION FROM ICSA ORC ISOLATION VALVE	5R219F05028#1 / B-4	ML012040470	2
2R211XFC0013E	SFP COOLING & PURIFICATION DISCH TO RX CAVITY OR ICSA ORC ISOLATION VALVE	5R219F05028#1 / B-6	ML012040470	2
2R211XFC0013F	SFP COOLING & PURIFICATION DISCHARGE TO ICSA IRC ISOLATION VALVE	5R219F05028#1 / B-6	ML012040470	2
2R211XFC0050	SFP COOLING & PURIFICATION TO RX CAVITY IRC ISOLATION VALVE	5R219F05028#1 / B-6	ML012040470	2
2R301TWL0312	RCDT HEAT EXCHANGER OUTLET LINE ISOLATION MOV (IRC)	5R309F05022#1 / E-3	ML012040470	2
2R341TRD0008	RCS VACUUM DEGASSING IRC ISOLATION VALVE	5R349F05046#1 / E-7	ML012040470	2
2R341TRD0010	RCS VACUUM DEGASSING ORC ISOLATION VALVE	5R349F05046#1 / E-7	ML012040470	2
2R371TPO0217	RCP OIL RETURN LINE IRC ISOLATION VALVE	5R379F05042#1 / B-4	ML012040470	2
2R371TPO0218	RCP OIL RETURN LINE ORC ISOLATION VALVE	5R379F05042#1 / B-3	ML012040470	2
2S191TDW0501	DEMIN WATER HEADER TO REACTOR CONTAINMENT BUILDING ISOLATION VALVE	5S199F05034#1 / F-3	ML012040470	2
2S191TDW0502	REACTOR CONTAINMENT BUILDING DEMIN WATER SUPPLY HEADER CHECK VALVE	5S199F05034#1 / F-3	ML012040470	2
2S201TSL0002	HIGH PRESSURE SLUDGE LANCING ORC ISOLATION VALVE	5S209F05057#1 / B-5	ML012040470	2
2S201TSL0004	HIGH PRESSURE SLUDGE LANCING IRC ISOLATION VALVE	5S209F05057#1 / B-6	ML012040470	2
2S201TSL0012	LOW PRESSURE SLUDGE LANCING ORC ISOLATION VALVE	5S209F05057#1 / E-5	ML012040470	2
2S201TSL0014	LOW PRESSURE SLUDGE LANCING IRC ISOLATION VALVE	5S209F05057#1 / E-6	ML012040470	2
2S201TSL0027	SLUDGE LANCING CHEMICAL CLEANING WATER RETURN IRC ISOLATION VALVE	5S209F05057#1 / G-6	ML012040470	2
2S201TSL0029	SLUDGE LANCING CHEMICAL CLEANING WATER RETURN ORC ISOLATION VALVE	5S209F05057#1 / F-5	ML012040470	2
2V141TRA0001	RCB EXHAUST RT-8011 SUPPLY IRC ISOLATION MOV	5V149V00017#1 / G-4	ML012040470	2
2V141TRA0003	RCB EXHAUST RT-8011 RETURN IRC ISOLATION MOV	5V149V00017#1 / F-4	ML012040470	2
2V141TRA0004	RCB EXHAUST RT-8011 SUPPLY ORC ISOLATION MOV	5V149V00017#1 / G-4	ML012040470	2
2V141TRA0006	RCB EXHAUST RT-8011 RETURN ORC ISOLATION MOV	5V149V00017#1 / F-3	ML012040470	2
3Q151TDO0129	FUEL OIL STORAGE TANK EMERGENCY FILL CHECK VALVE	5Q159F00045#1 / H-7	ML012040470	3
3Q151TDO0130	FUEL OIL STORAGE TANK EMERGENCY FILL VALVE	5Q159F00045#1 / H-7	ML012040470	3
3Q151TDO0131	FUEL OIL STORAGE TANK EMERGENCY FILL CHECK VALVE	5Q159F00045#1 / H-5	ML012040470	3
3Q151TDO0132	FUEL OIL STORAGE TANK EMERGENCY FILL VALVE	5Q159F00045#1 / H-5	ML012040470	3
3Q151TDO0133	FUEL OIL STORAGE TANK EMERGENCY FILL CHECK VALVE	5Q159F00045#1 / H-2	ML012040470	3
3Q151TDO0134	FUEL OIL STORAGE TANK EMERGENCY FILL VALVE	5Q159F00045#1 / H-2	ML012040470	3
3R171TCV0220	CVCS NORMAL BORATION CHECK VALVE	5R179F05007#1 / D-2	ML012040470	3
3R171TCV0333	BA TANK 1A TO SUCTION OF CHARGING PUMPS ISOLATION VALVE	5R179F05009#1 / D-4	ML012040470	3
3R171TCV0335A	BA BATCHING TANK 1A TO BA TRANSFER PUMP 1A ISOLATION VALVE	5R179F05009#1 / D-4	ML012040470	3
3R171TCV0335B	BA BATCHING TANK 1A TO BA TRANSFER PUMP 1B ISOLATION VALVE	5R179F05009#1 / D-4	ML012040470	3
3R171TCV0346	BORIC ACID TRANSFER PUMP 1B RECIRC CHECK VALVE	5R179F05009#1 / D-5	ML012040470	3
3R171TCV0351	BORIC ACID TRANSFER PUMP 1A RECIRC CHECK VALVE	5R179F05009#1 / E-6	ML012040470	3
3R171TCV0352A	BORIC ACID FILTER BYPASS VALVE	5R179F05009#1 / D-7	ML012040470	3
3R171TCV0352B	BORIC ACID FILTER BYPASS VALVE	5R179F05009#1 / D-6	ML012040470	3
3R171TCV0635	BORIC ACID TANK 1B PURIFIED BORIC ACID FIRST CHECK VALVE	5R179F05009#1 / E-5	ML012040470	3
3R171TCV0636	BORIC ACID TANK 1B PURIFIED BORIC ACID SECOND CHECK VALVE	5R179F05009#1 / E-5	ML012040470	3
3R171TCV0637	BORIC ACID TANK 1A PURIFIED BORIC ACID FIRST CHECK VALVE	5R179F05009#1 / F-5	ML012040470	3
3R171TCV0638	BORIC ACID TANK 1A PURIFIED BORIC ACID SECOND CHECK VALVE	5R179F05009#1 / F-6	ML012040470	3
3R171XCV0204	CVCS REACTOR MAKE-UP WATER CHECK VALVE	5R179F05007#1 / F-2	ML012040470	3
3R171XCV0334	BORIC ACID TANK 1A CHARGING PUMP SUCTION CHECK VALVE	5R179F05009#1 / E-4	ML012040470	3
3R171XCV0338	BORIC ACID TRANSFER PUMP 1A DISCHARGE CHECK VALVE	5R179F05009#1 / D-6	ML012040470	3
3R171XCV0349	BORIC ACID TRANSFER PUMP 1B DISCHARGE CHECK VALVE	5R179F05009#1 / C-6	ML012040470	3
3R201TCC0032	SPENT FUEL POOL HXS CCW SUPPLY HEADER SECOND ISOLATION MOV	5R209F05020#1 / E-6	ML012040470	3

ATTACHMENT 8: Unit 1 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
3R201TCC0231	CCW SURGE TANK 1A REACTOR MAKEUP WATER SUPPLY VALVE	5R209F05017#1 / G-6	ML012040470	3
3R201TCC0235	CCW COMMON SUPPLY HEADER FIRST ISOLATION MOV	5R209F05020#1 / D-7	ML012040470	3
3R201TCC0236	CCW COMMON SUPPLY HEADER SECOND ISOLATION MOV	5R209F05020#1 / D-6	ML012040470	3
3R201TCC0297	RCDT & EXCESS LETDOWN HXS CCW SUPPLY MOV	5R209F05021#1 / G-7	ML012040470	3
3R201TCC0321	RCP 1C THERMAL BARRIER CCW SUPPLY FIRST CHECK VALVE	5R209F05021#1 / E-5	ML012040470	3
3R201TCC0327	RCP 1A THERMAL BARRIER CCW SUPPLY FIRST CHECK VALVE	5R209F05021#1 / B-8	ML012040470	3
3R201TCC0346	RCP 1D THERMAL BARRIER CCW SUPPLY FIRST CHECK VALVE	5R209F05021#1 / E-8	ML012040470	3
3R201TCC0363	RCP 1B THERMAL BARRIER CCW SUPPLY FIRST CHECK VALVE	5R209F05021#1 / B-5	ML012040470	3
3R201TCC0392	RCDT HEAT EXCHANGER 1A CCW SUPPLY MOV	5R209F05021#1 / G-3	ML012040470	3
3R201TCC0393	EXCESS LETDOWN HEAT EXCHANGER 1A CCW SUPPLY MOV	5R209F05021#1 / G-3	ML012040470	3
3R201TCC0402	EXCESS LETDOWN HEAT EXCHANGER 1A CCW RETURN SECOND CHECK VALVE	5R209F05021#1 / C-2	ML012040470	3
3R201TCC0447	SPENT FUEL POOL HXS CCW SUPPLY HEADER FIRST ISOLATION MOV	5R209F05020#1 / E-7	ML012040470	3
3R201TCC0540	RCDT HEAT EXCHANGER 1A CCW RETURN FIRST CHECK VALVE	5R209F05021#1 / D-1	ML012040470	3
3R201TCC0541	RCDT HEAT EXCHANGER 1A CCW RETURN SECOND CHECK VALVE	5R209F05021#1 / D-1	ML012040470	3
3R201TCC0756	RCP 1C THERMAL BARRIER CCW SUPPLY SECOND CHECK VALVE	5R209F05021#1 / E-4	ML012040470	3
3R201TCC0757	RCP 1B THERMAL BARRIER CCW SUPPLY SECOND CHECK VALVE	5R209F05021#1 / B-5	ML012040470	3
3R201TCC0758	RCP 1D THERMAL BARRIER CCW SUPPLY SECOND CHECK VALVE	5R209F05021#1 / E-7	ML012040470	3
3R201TCC0759	RCP 1A THERMAL BARRIER CCW SUPPLY SECOND CHECK VALVE	5R209F05021#1 / B-8	ML012040470	3
3R201TCC0763	EXCESS LETDOWN HEAT EXCHANGER 1A CCW RETURN FIRST CHECK VALVE	5R209F05021#1 / C-2	ML012040470	3
3R201TCC0768	CHARGING PUMP COOLERS CCW TRAIN A SUPPLY ISOLATION MOV	5R209F05020#1 / F-7	ML012040470	3
3R201TCC0770	CHARGING PUMP COOLERS CCW TRAIN B SUPPLY ISOLATION MOV	5R209F05020#1 / G-7	ML012040470	3
3R201TCC0771	CHARGING PUMP COOLERS CCW TRAIN C SUPPLY ISOLATION MOV	5R209F05020#1 / G-7	ML012040470	3
3R201TCC0772	CHARGING PUMP COOLERS CCW TRAIN A RETURN ISOLATION MOV	5R209F05020#1 / B-7	ML012040470	3
3R201TCC0774	CHARGING PUMP COOLERS CCW TRAIN B RETURN ISOLATION MOV	5R209F05020#1 / B-7	ML012040470	3
3R201TCC0775	CHARGING PUMP COOLERS CCW TRAIN C RETURN ISOLATION MOV	5R209F05020#1 / A-7	ML012040470	3
3R271TRM0003	RMW PUMP 1A DISCHARGE CHECK VALVE	5R279F05033#1 / F-5	ML012040470	3
3R271TRM0007	RMWST DEMIN WATER SUPPLY CHECK VALVE	5R279F05033#1 / G-2	ML012040470	3
3R271TRM0010	RMW PUMP 1B DISCHARGE CHECK VALVE	5R279F05033#1 / E-6	ML012040470	3
3R271TRM0013	RMWST BRS & WL SYSTEMS RETURN CHECK VALVE	5R279F05033#1 / G-6	ML012040470	3
3R271TRM0048	REACTOR MAKE-UP WATER TO CCW SURGE TANK CHECK VALVE	5R279F05033#1 / E-8	ML012040470	3
3R271TRM0103	RMW PUMP 1B RECIRC LINE CHECK VALVE	5R279F05033#1 / F-6	ML012040470	3
3R271TRM0104	RMW PUMP 1A RECIRC LINE CHECK VALVE	5R279F05033#1 / F-6	ML012040470	3
3R281TEW0188	ECW PUMP 1A DISCHARGE STRAINER BACKFLUSH THROTTLE VALVE	5R289F05038SH1#1 / C-2	ML012040470	3
3R281TEW0189	ECW PUMP 1B DISCHARGE STRAINER BACKFLUSH THROTTLE VALVE	5R289F05038SH2#1 / C-2	ML012040470	3
3R281TEW0190	ECW PUMP 1C DISCHARGE STRAINER BACKFLUSH THROTTLE VALVE	5R289F05038SH3#1 / C-2	ML012040470	3
3R281TEW0253	ECW SCREEN WASH BOOSTER PUMP 1A DISCHARGE CHECK VALVE	5R289F05039#1 / D-7	ML012040470	3
3R281TEW0254	ECW SCREEN WASH BOOSTER PUMP 1B DISCHARGE CHECK VALVE	5R289F05039#1 / D-5	ML012040470	3
3R281TEW0255	ECW SCREEN WASH BOOSTER PUMP 1C DISCHARGE CHECK VALVE	5R289F05039#1 / D-2	ML012040470	3
3R281TEW0277	ECW PUMP 1A DISCHARGE STRAINER EMERGENCY BACKFLUSH VALVE	5R289F05038SH1#1 / C-2	ML012040470	3
3R281TEW0278	ECW PUMP 1B DISCHARGE STRAINER EMERGENCY BACKFLUSH VALVE	5R289F05038SH2#1 / C-2	ML012040470	3
3R281TEW0279	ECW PUMP 1C DISCHARGE STRAINER EMERGENCY BACKFLUSH VALVE	5R289F05038SH3#1 / C-2	ML012040470	3
3R281TEW0370A	ECW PUMP 1A DISCHARGE VENT LINE CHECK VALVE	5R289F05038SH1#1 / C-3	ML012040470	3
3R281TEW0370B	ECW PUMP 1B DISCHARGE VENT LINE CHECK VALVE	5R289F05038SH2#1 / C-3	ML012040470	3
3R281TEW0370C	ECW PUMP 1C DISCHARGE VENT LINE CHECK VALVE	5R289F05038SH3#1 / C-3	ML012040470	3
3R281TEW0403	ECW PUMP 1A DISCHARGE STRAINER EMERGENCY BACKFLUSH CHECK VALVE	5R289F05038SH1#1 / C-3	ML012040470	3
3R281TEW0404	ECW PUMP 1B DISCHARGE STRAINER EMERGENCY BACKFLUSH CHECK VALVE	5R289F05038SH2#1 / C-3	ML012040470	3
3R281TEW0405	ECW PUMP 1C DISCHARGE STRAINER EMERGENCY BACKFLUSH CHECK VALVE	5R289F05038SH3#1 / C-3	ML012040470	3
3R281TEW1007	DIESEL GENERATOR #11 ECW VACUUM BREAKER CHECK VALVE	5R289F05038SH1#1 / F-1	ML012040470	3
3R281TEW1011	DIESEL GENERATOR #12 ECW VACUUM BREAKER CHECK VALVE	5R289F05038SH2#1 / F-1	ML012040470	3
3R281TEW1015	DIESEL GENERATOR #13 ECW VACUUM BREAKER CHECK VALVE	5R289F05038SH3#1 / F-1	ML012040470	3
3R281TEW1024	CCW HEAT EXCHANGER 1A VACUUM BREAKER CHECK VALVE	5R289F05038SH1#1 / E-7	ML012040470	3
3R281TEW1026	CCW HEAT EXCHANGER 1B VACUUM BREAKER CHECK VALVE	5R289F05038SH2#1 / E-7	ML012040470	3
3R281TEW1028	CCW HEAT EXCHANGER 1C VACUUM BREAKER CHECK VALVE	5R289F05038SH3#1 / E-7	ML012040470	3
A1CCFV0864	RCFC TRAIN C CHILLED WATER RETURN ORC FLOW CONTROL VALVE	5R209F05019#1 / C-4	ML012040470	2
A1CCFV4540	POST ACCIDENT SAMPLING SYSTEM CCW SUPPLY FIRST ISOLATION SOLENOID VALVE	5R209F05020#1 / D-7	ML012040470	3
A1CCFV4656	CHARGING PUMPS CCW SUPPLY HEADER CROSS-TIE FLOW CONTROL VALVE	5R209F05020#1 / G-7	ML012040470	3
A1CCFV4657	CHARGING PUMPS CCW RETURN HEADER CROSS-TIE FLOW CONTROL VALVE	5R209F05020#1 / A-7	ML012040470	3
A1CHTV9476A	TRAIN A ESSENTIAL CHILLED WATER CONTROL ROOM AHU 11A TEMPERATURE CONTROL VALVE	3V119V10002#1 / F-7	ML012040470	3
A1CHTV9476B	TRAIN A ESSENTIAL CHILLED WATER CONTROL ROOM AHU 11A BYPASS TEMPERATURE	3V119V10002#1 / E-7	ML012040470	3
A1CMFV4100	SAMPLE POINT #1 FLOW ISOLATION VALVE	5Z169Z00046#1 / G-6	ML012040470	2
A1CMFV4101	CONTAINMENT HYDROGEN MONITORING TO PAM-I FLOW ISOLATION VALVE	5Z169Z00046#1 / F-4	ML012040470	2
A1CMFV4124	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #3 FLOW ISOLATION VALVE	5Z169Z00046#1 / F-6	ML012040470	2
A1CMFV4125	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #5 FLOW ISOLATION VALVE	5Z169Z00046#1 / F-6	ML012040470	2
A1CMFV4126	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #6 FLOW ISOLATION VALVE	5Z169Z00046#1 / E-6	ML012040470	2
A1CMFV4127	CONTAINMENT HYDROGEN MONITORING SAMPLE RETURN FROM PAM-I FLOW ISOLATION	5Z169Z00046#1 / E-4	ML012040470	2
A1CMFV4128	CONTAINMENT HYDROGEN MONITORING SAMPLE RETURN FROM PAM-I FLOW ISOLATION	5Z169Z00046#1 / E-5	ML012040470	2
A1CMFV4135	CONTAINMENT HYDROGEN MONITORING SAMPLE INLET TO PAM-I FLOW ISOLATION VALVE	5Z169Z00046#1 / F-5	ML012040470	2

ATTACHMENT 8: Unit 1 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
A1CVFV8400A	CONCENTRATED BA POLISHING DEMIN INLET FLOW CONTROL VALVE	5R179F05009#1 / D-8	ML012040470	3
A1CVHCV0206	CENTRIFUGAL CHARGING PUMP 1B DISCHARGE BYPASS FLOW CONTROL VALVE	5R179F05007#1 / D-6	ML012040470	2
A1EDFV7800	CONTAINMENT NORMAL SUMP SUMP PUMP DISCHARGE (ORC) FLOW CONTROL VALVE	5Q069F05030#1 / G-6	ML012040470	2
A1EWFV6914	ECW SCREEN WASH PUMP 1A DISCHARGE VALVE	5R289F05039#1 / D-7	ML012040470	3
A1EWFV6935	ECW RETURN HEADER BLOWDOWN VALVE	5R289F05038SH1#1 / E-5	ML012040470	3
A1RCFV3653	PRESSURIZER RELIEF TANK VENT IRC CONTAINMENT ISOLATION VALVE	5R149F05004#1 / F-4	ML012040470	2
A1SBFV4186	STEAM GENERATOR 1D SAMPLE LINE ORC FLOW CONTROL VALVE	5S209F20001#1 / D-5	ML012040470	2
A1SBFV4189	STEAM GENERATOR 1A SAMPLE LINE ORC FLOW CONTROL VALVE	5S209F20001#1 / H-5	ML012040470	2
A1SIFV3936	RWST OUTLET TO REFUELING WATER PURIF PUMP FIRST ISOLATION VALVE	5N129F05013#1 / F-2	ML012040470	2
A1SIFV3971	SIS CHECK VALVE TEST LINE ORC ISOLATION VALVE	5N129F05016#1 / F-7	ML012040470	2
A1SIFV3983	SAFETY INJECTION ACCUMULATORS ORC NITROGEN SUPPLY VALVE	5N129F05016#1 / G-2	ML012040470	2
A1SIHCV0900	SAFETY INJECTION ACCUMULATOR NITROGEN SUPPLY VENT VALVE	5N129F05016#1 / G-2	ML012040470	2
A1SIPV3928	SAFETY INJECTION ACCUMULATOR 1C NITROGEN SUPPLY VENT VALVE	5N129F05016#1 / C-4	ML012040470	2
A1WLFV4920	REACTOR COOLANT DRAIN TANK VENT TO GASEOUS WASTE PROCESSING IRC ISOLATION	5R309F05022#1 / G-6	ML012040470	2
B1CCFV0862	RCFC TRAIN A CHILLED WATER RETURN ORC FLOW CONTROL VALVE	5R209F05017#1 / B-4	ML012040470	2
B1CCFV4541	POST ACCIDENT SAMPLING SYSTEM CCW SUPPLY SECOND ISOLATION SOLENOID VALVE	5R209F05020#1 / D-8	ML012040470	3
B1CHTV9486A	TRAIN B ESSENTIAL CHILLED WATER CONTROL ROOM AHU 11B OUTLET TEMPERATURE	3V119V10002#1 / F-4	ML012040470	3
B1CHTV9486B	TRAIN B ESSENTIAL CHILLED WATER CONTROL ROOM AHU 11B BYPASS TEMPERATURE VALVE	3V119V10002#1 / E-4	ML012040470	3
B1CVFV8400B	CONCENTRATED BA POLISHING DEMIN INLET FLOW CONTROL VALVE	5R179F05009#1 / C-8	ML012040470	3
B1EWFV6924	ECW SCREEN WASH PUMP 1B DISCHARGE VALVE	5R289F05039#1 / D-5	ML012040470	3
B1EWFV6936	ECW RETURN HEADER BLOWDOWN VALVE	5R289F05038SH2#1 / E-5	ML012040470	3
B1IAFV8565	INSTRUMENT AIR SUPPLY TO REACTOR CONTAINMENT BUILDING ORC ISOLATION VALVE	5Q119F05040#1 / D-4	ML012040470	2
B1PSFV4450	PRESSURIZER VAPOR SAMPLE LINE IRC ISOLATION VALVE	5Z329Z00045#1 / H-8	ML012040470	2
B1PSFV4451	PRESSURIZER LIQUID SAMPLE LINE IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / G-8	ML012040470	2
B1PSFV4456	RCS HOT LEG SAMPLE HEADER ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / F-7	ML012040470	2
B1PSFV4466	SI ACCUMULATORS SAMPLE HEADER ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / B-7	ML012040470	2
B1PSFV4823	RHR SAMPLE HEADER IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / D-8	ML012040470	2
B1RCFV3651	PRESSURIZER RELIEF TANK SPRAY REACTOR MAKEUP WATER SUPPLY CONTAINMENT ISOLATION	5R149F05004#1 / E-2	ML012040470	2
B1RCFV3652	PRESSURIZER RELIEF TANK VENT ORC CONTAINMENT ISOLATION VALVE	5R149F05004#1 / F-4	ML012040470	2
B1RMFV7663	RMW TO CVCS SUPPLY HEADER FLOW CONTROL VALVE	5R279F05033#1 / F-7	ML012040470	3
B1SBFV4188	STEAM GENERATOR 1B SAMPLE LINE ORC FLOW CONTROL VALVE	5S209F20001#1 / H-1	ML012040470	2
B1SIFV3937	RWST OUTLET TO REFUELING WATER PURIF PUMP SECOND ISOLATION VALVE	5N129F05013#1 / F-2	ML012040470	2
B1SIFV3970	SIS CHECK VALVE TEST LINE IRC ISOLATION VALVE	5N129F05016#1 / F-7	ML012040470	2
B1SIHV0899	ACCUMULATOR VENT BACKUP VLV (SI-HCV-0899)	5N129F05016#1 / F-2	ML012040470	2
B1SIPV3930	SAFETY INJECTION ACCUMULATOR 1A NITROGEN SUPPLY VENT VALVE	5N129F05016#1 / G-4	ML012040470	2
B1WLFV4913	RCDT HEAT EXCHANGER OUTLET ISOLATION VALVE (ORC)	5R309F05022#1 / F-3	ML012040470	2
B1WLFV4919	REACTOR COOLANT DRAIN TANK VENT TO GASEOUS WASTE PROCESSING ORC ISOLATION	5R309F05022#1 / G-5	ML012040470	2
C1CCFV0863	RCFC TRAIN B CHILLED WATER RETURN ORC FLOW CONTROL VALVE	5R209F05018#1 / C-4	ML012040470	2
C1CHTV9496A	TRAIN C ESSENTIAL CHILLED WATER CONTROL ROOM AHU 11C OUTLET TEMPERATURE	3V119V10002#1 / F-1	ML012040470	3
C1CHTV9496B	TRAIN C ESSENTIAL CHILLED WATER CONTROL ROOM AHU 11C BYPASS TEMPERATURE	3V119V10002#1 / E-1	ML012040470	3
C1CMFV4103	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #2 FLOW ISOLATION VALVE	5Z169Z00046#1 / E-6	ML012040470	2
C1CMFV4104	CONTAINMENT HYDROGEN MONITORING TO PAM-II FLOW ISOLATION VALVE	5Z169Z00046#1 / D-4	ML012040470	2
C1CMFV4129	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #4 FLOW ISOLATION VALVE	5Z169Z00046#1 / D-6	ML012040470	2
C1CMFV4130	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #7 FLOW ISOLATION VALVE	5Z169Z00046#1 / D-6	ML012040470	2
C1CMFV4131	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #8 FLOW ISOLATION VALVE	5Z169Z00046#1 / C-6	ML012040470	2
C1CMFV4133	CONTAINMENT HYDROGEN MONITORING SAMPLE RETURN FROM PAM-II FLOW ISOLATION	5Z169Z00046#1 / C-4	ML012040470	2
C1CMFV4134	CONTAINMENT HYDROGEN MONITORING SAMPLE RETURN FROM PAM-II FLOW ISOLATION	5Z169Z00046#1 / C-5	ML012040470	2
C1CMFV4136	CONTAINMENT HYDROGEN MONITORING SAMPLE INLET TO PAM-II FLOW ISOLATION VALVE	5Z169Z00046#1 / D-5	ML012040470	2
C1CVHCV0218	CVCS SEAL WATER INJECTION FLOW CONTROL VALVE	5R179F05007#1 / B-7	ML012040470	2
C1EWFV6934	ECW SCREEN WASH PUMP 1C DISCHARGE VALVE	5R289F05039#1 / D-3	ML012040470	3
C1EWFV6937	ECW RETURN HEADER BLOWDOWN VALVE	5R289F05038SH3#1 / E-5	ML012040470	3
C1PSFV4451B	PRESSURIZER LIQUID SAMPLE LINE ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / F-7	ML012040470	2
C1PSFV4452	PRESSURIZER VAPOR SAMPLE LINE ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / G-7	ML012040470	2
C1PSFV4454	RCS HOT LEG 1A SAMPLE LINE IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / F-8	ML012040470	2
C1PSFV4455	RCS HOT LEG 1C SAMPLE LINE IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / E-8	ML012040470	2
C1PSFV4461	RHR SAMPLE HEADER ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / D-7	ML012040470	2
C1PSFV4824	SI ACCUMULATOR SAMPLE HEADER IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#1 / B-8	ML012040470	2
C1RMFV7659	RMW TO CVCS SUPPLY HEADER FLOW CONTROL VALVE	5R279F05033#1 / F-7	ML012040470	3
C1SBFV4187	STEAM GENERATOR 1C SAMPLE LINE ORC FLOW CONTROL VALVE	5S209F20001#1 / D-1	ML012040470	2
C1SIPV3929	SAFETY INJECTION ACCUMULATOR 1B NITROGEN SUPPLY VENT VALVE	5N129F05016#1 / E-4	ML012040470	2
D1AFFV0143	TERRY TURBINE WARM-UP VALVE	5S141F00024#1 / G-8	ML012040470	3
D1CCFV4493	RCP AND HEAT EXCHANGERS CCW RETURN ORC FLOW CONTROL VALVE	5R209F05021#1 / H-1	ML012040470	2
N1CCPSV4492	CCW NNS OUTLET HEADER RELIEF VALVE	5R209F05020#1 / B-7	ML012040470	3
N1CCPSV4511	CCW HX 1A OUTLET RELIEF VALVE	5R209F05017#1 / B-5	ML012040470	3
N1CCPSV4516	CCW HX 1B OUTLET RELIEF VALVE	5R209F05018#1 / B-6	ML012040470	3
N1CCPSV4521	CCW HX 1C OUTLET RELIEF VALVE	5R209F05019#1 / B-6	ML012040470	3
N1CCPSV4532	RHR HX 1A OUTLET RELIEF VALVE	5R209F05017#1 / G-3	ML012040470	3

ATTACHMENT 8: Unit 1 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
N1CCPSV4533	RHR PUMP 1A OUTLET RELIEF VALVE	5R209F05017#1 / G-4	ML012040470	3
N1CCPSV4537	RCFC COOLING COIL 11A OUTLET RELIEF VALVE	5R209F05017#1 / E-4	ML012040470	3
N1CCPSV4539	RCFC COOLING COIL 12A OUTLET RELIEF VALVE	5R209F05017#1 / C-4	ML012040470	3
N1CCPSV4549	RHR HX 1B OUTLET RELIEF VALVE	5R209F05018#1 / G-2	ML012040470	3
N1CCPSV4550	RHR PUMP 1B OUTLET RELIEF VALVE	5R209F05018#1 / G-3	ML012040470	3
N1CCPSV4554	RCFC COOLING COIL 11B OUTLET RELIEF VALVE	5R209F05018#1 / E-4	ML012040470	3
N1CCPSV4556	RCFC COOLING COIL 12B OUTLET RELIEF VALVE	5R209F05018#1 / C-4	ML012040470	3
N1CCPSV4566	RHR HX 1C OUTLET RELIEF VALVE	5R209F05019#1 / G-2	ML012040470	3
N1CCPSV4567	RHR PUMP 1C OUTLET RELIEF VALVE	5R209F05019#1 / G-3	ML012040470	3
N1CCPSV4571	RCFC COOLING COIL 11C OUTLET RELIEF VALVE	5R209F05019#1 / E-4	ML012040470	3
N1CCPSV4573	RCFC COOLING COIL 12C OUTLET RELIEF VALVE	5R209F05019#1 / C-3	ML012040470	3
N1CCPSV4580	CCP 1B LUBE OIL COOLER OUTLET RELIEF VALVE	5R209F05020#1 / G-6	ML012040470	3
N1CCPSV4582	CCP 1A LUBE OIL COOLER OUTLET RELIEF VALVE	5R209F05020#1 / G-4	ML012040470	3
N1CCPSV4584	PDP SUPPLEMENTARY COOLER AHU OUTLET RELIEF VALVE	5R209F05020#1 / G-5	ML012040470	3
N1CCPSV4586	CCP SUPPLEMENTARY COOLER AHU 11A OUTLET RELIEF VALVE	5R209F05020#1 / G-3	ML012040470	3
N1CCPSV4588	CCP SUPPLEMENTARY COOLER AHU 11B OUTLET RELIEF VALVE	5R209F05020#1 / G-5	ML012040470	3
N1CCPSV4613	SEAL WATER HX 1A OUTLET RELIEF VALVE	5R209F05020#1 / E-2	ML012040470	3
N1CCPSV4616	RCP 1A UPPER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#1 / C-6	ML012040470	3
N1CCPSV4618	RCP 1A LOWER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#1 / B-6	ML012040470	3
N1CCPSV4620	RCP 1A THERMAL BARRIER OUTLET RELIEF VALVE	5R209F05021#1 / A-6	ML012040470	3
N1CCPSV4622	RCP 1B UPPER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#1 / C-3	ML012040470	3
N1CCPSV4624	RCP 1B LOWER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#1 / B-3	ML012040470	3
N1CCPSV4626	RCP 1B THERMAL BARRIER OUTLET RELIEF VALVE	5R209F05021#1 / A-3	ML012040470	3
N1CCPSV4628	RCP 1C UPPER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#1 / F-3	ML012040470	3
N1CCPSV4630	RCP 1C LOWER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#1 / E-3	ML012040470	3
N1CCPSV4632	RCP 1C THERMAL BARRIER OUTLET RELIEF VALVE	5R209F05021#1 / D-3	ML012040470	3
N1CCPSV4634	RCP 1D UPPER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#1 / F-6	ML012040470	3
N1CCPSV4636	RCP 1D LOWER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#1 / E-6	ML012040470	3
N1CCPSV4638	RCP 1D THERMAL BARRIER OUTLET RELIEF VALVE	5R209F05021#1 / D-6	ML012040470	3
N1CCPSV4639	RCB CCW RETURN HEADER RELIEF VALVE	5R209F05021#1 / C-2	ML012040470	3
N1CCPSV4645	RCP 1A MOTOR AIR COOLER NO. 1 OUTLET RELIEF VALVE	5R209F05021#1 / D-7	ML012040470	3
N1CCPSV4645A	RCP 1A MOTOR AIR COOLER NO. 2 OUTLET RELIEF VALVE	5R209F05021#1 / C-7	ML012040470	3
N1CCPSV4646	RCP 1B MOTOR AIR COOLER NO. 1 OUTLET RELIEF VALVE	5R209F05021#1 / D-3	ML012040470	3
N1CCPSV4646A	RCP 1B MOTOR AIR COOLER NO. 2 OUTLET RELIEF VALVE	5R209F05021#1 / C-3	ML012040470	3
N1CCPSV4647	RCP 1C MOTOR AIR COOLER NO. 1 OUTLET RELIEF VALVE	5R209F05021#1 / G-3	ML012040470	3
N1CCPSV4647A	RCP 1C MOTOR AIR COOLER NO. 2 OUTLET RELIEF VALVE	5R209F05021#1 / F-3	ML012040470	3
N1CCPSV4648	RCP 1D MOTOR AIR COOLER NO. 1 OUTLET RELIEF VALVE	5R209F05021#1 / G-6	ML012040470	3
N1CCPSV4648A	RCP 1D MOTOR AIR COOLER NO. 2 OUTLET RELIEF VALVE	5R209F05021#1 / F-6	ML012040470	3
N1CHPSV9471	ECHW TRAIN A EXPANSION TANK VTS004	5V119V10001#1 / H-7	ML012040470	3
N1CHPSV9471A	ECHW TRAIN A EXPANSION TANK VTS004 NITROGEN	5V119V10001#1 / H-7	ML012040470	3
N1CHPSV9481	ECHW TRAIN B EXPANSION TANK VTS005	5V119V10001#1 / E-7	ML012040470	3
N1CHPSV9481A	ECHW TRAIN B EXPANSION TANK VTS005 NITROGEN	5V119V10001#1 / E-7	ML012040470	3
N1CHPSV9491	ECHW TRAIN C EXPANSION TANK VTS006	5V119V10001#1 / C-7	ML012040470	3
N1CHPSV9491A	ECHW TRAIN C EXPANSION TANK VTS006 NITROGEN	5V119V10001#1 / C-7	ML012040470	3
N1CHPSV9502	ECHW TRAIN A ESSEN CHLR 12A OUTLET	5V119V10001#1 / G-4	ML012040470	3
N1CHPSV9508	ECHW TRAIN B ESSEN CHLR 12B OUTLET	5V119V10001#1 / E-4	ML012040470	3
N1CHPSV9514	ECHW TRAIN C ESSEN CHLR 12C OUTLET	5V119V10001#1 / B-4	ML012040470	3
N1CVFCV0110A	BORIC ACID TO CVCS BLENDER TEE FLOW CONTROL VALVE	5R179F05007#1 / D-2	ML012040470	2
N1CVFCV0110B	CVCS BLENDED FLOW TO VCT OUTLET FLOW CONTROL VALVE	5R179F05007#1 / F-3	ML012040470	2
N1CVFCV0111A	RX MAKE-UP TO CVCS BLENDING TEE FLOW CONTROL VALVE	5R179F05007#1 / F-2	ML012040470	2
N1CVFCV0111B	CVCS BLENDED FLOW TO VCT FLOW CONTROL VALVE	5R179F05007#1 / F-3	ML012040470	2
N1CVFCV0201	CENTRIFUGAL CHARGING PUMP 1A RECIRC FLOW CONTROL VALVE	5R179F05007#1 / C-6	ML012040470	2
N1CVFCV0202	CENTRIFUGAL CHARGING PUMP 1B RECIRC FLOW CONTROL VALVE	5R179F05007#1 / D-6	ML012040470	2
N1CVPSV3101	CVCS VOLUME CONTROL TANK PRESSURE RELIEF VALVE	5R179F05007#1 / F-4	ML012040470	2
N1CVPSV3376	BTRS LETDOWN CHILLER HX INLET PRESSURE RELIEF VALVE	5R179F05008#1 / F-2	ML012040470	2
N1EWPSV6853	CCW HEAT EXCHANGER TRAIN A PRESSURE RELIEF	5R289F05038SH1#1 / G-7	ML012040470	3
N1EWPSV6855	DG HEAT EXCHANGER TRAIN A PRESSURE RELIEF	5R289F05038SH1#1 / G-2	ML012040470	3
N1EWPSV6856	CCW PUMP SUPP CLR TRAIN A PRESSURE RELIEF	5R289F05038SH1#1 / G-8	ML012040470	3
N1EWPSV6863	CCW HEAT EXCHANGER TRAIN B PRESSURE RELIEF	5R289F05038SH2#1 / G-7	ML012040470	3
N1EWPSV6865	DG HEAT EXCHANGER TRAIN B PRESSURE RELIEF	5R289F05038SH2#1 / G-2	ML012040470	3
N1EWPSV6866	CCW PUMP SUPP CLR TRAIN B PRESSURE RELIEF	5R289F05038SH2#1 / G-8	ML012040470	3
N1EWPSV6873	CCW HEAT EXCHANGER TRAIN C PRESSURE RELIEF	5R289F05038SH3#1 / G-7	ML012040470	3
N1EWPSV6875	DG HEAT EXCHANGER TRAIN C PRESSURE RELIEF	5R289F05038SH3#1 / G-2	ML012040470	3
N1EWPSV6876	CCW PUMP SUPP CLR TRAIN C PRESSURE RELIEF	5R289F05038SH3#1 / G-8	ML012040470	3
N1EWPSV6904	EAB HVAC CHILLER 4 TRAIN A PRESSURE RELIEF	5R289F05038SH1#1 / G-4	ML012040470	3
N1EWPSV6905	EAB HVAC CHILLER 5 TRAIN B PRESSURE RELIEF	5R289F05038SH2#1 / G-4	ML012040470	3
N1EWPSV6906	EAB HVAC CHILLER 6 TRAIN C PRESSURE RELIEF	5R289F05038SH3#1 / G-4	ML012040470	3

ATTACHMENT 8: Unit 1 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
N1FWFCV0551	STEAM GENERATOR 1A FEEDWATER REG VALVE	5S139F00063#1 / D-8	ML012040470	NC
N1FWFCV0552	STEAM GENERATOR 1B FEEDWATER REG VALVE	5S139F00063#1 / D-6	ML012040470	NC
N1FWFCV0553	STEAM GENERATOR 1C FEEDWATER REG VALVE	5S139F00063#1 / D-4	ML012040470	NC
N1FWFCV0554	STEAM GENERATOR 1D FEEDWATER REG VALVE	5S139F00063#1 / D-2	ML012040470	NC
N1FWFV7151	STEAM GENERATOR 1A LOW POWER FEED REG VALVE	5S139F00063#1 / D-7	ML012040470	NC
N1FWFV7152	STEAM GENERATOR 1B LOW POWER FEED REG VALVE	5S139F00063#1 / D-5	ML012040470	NC
N1FWFV7153	STEAM GENERATOR 1C LOW POWER FEED REG VALVE	5S139F00063#1 / D-3	ML012040470	NC
N1FWFV7154	STEAM GENERATOR 1D LOW POWER FEED REG VALVE	5S139F00063#1 / D-1	ML012040470	NC
N1LUPSV5482	LUBE OIL CIRC PUMP DISCHARGE SAFETY VALVE	5Q159F22542#1 / D-7	ML012040470	3
N1LUPSV5582	LUBE OIL CIRC PUMP DISCHARGE SAFETY VALVE	5Q159F22542#1 / D-5	ML012040470	3
N1LUPSV5682	LUBE OIL CIRC PUMP DISCHARGE SAFETY VALVE	5Q159F22542#1 / D-2	ML012040470	3
N1RHPSV3934	LHSI PUMP 1A HOT LEG RECIRC RELIEF VALVE	5R169F20000#1 / C-4	ML012040470	2
N1RHPSV3943	LHSI PUMP 1B HOT LEG RECIRC RELIEF VALVE	5R169F20000#1 / F-4	ML012040470	2
N1RHPSV3944	LHSI PUMP 1C HOT LEG RECIRC RELIEF VALVE	5R169F20000#1 / H-4	ML012040470	2
N1SIFV3950	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 1A COLD LEG SIS TEST ISOLATION VALVE	5R169F20000#1 / B-2	ML012040470	2
N1SIFV3951	TY INJECTION TRAIN A TO LOOP 1A HOT LEG SIS TEST ISOLATION VALVE	5R169F20000#1 / C-2	ML012040470	2
N1SIFV3952	HI HEAD SAFETY INJECTION TRAIN A TO LOOP 1A COLD LEG SIS TEST ISOLATION VALVE	5N129F05013#1 / F-7	ML012040470	2
N1SIFV3953	HI HEAD SAFETY INJECTION TRAIN A TO LOOP 1A HOT LEG SIS TEST ISOLATION VALVE	5N129F05013#1 / G-7	ML012040470	2
N1SIFV3954	SAFETY INJECTION TRAIN A TO LOOP 1A HOT LEG SIS TEST ISOLATION VALVE	5N129F05013#1 / G-8	ML012040470	2
N1SIFV3955	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 1B COLD LEG SIS TEST ISOLATION VALVE	5R169F20000#1 / E-2	ML012040470	2
N1SIFV3956	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 1B HOT LEG SIS TEST ISOLATION VALVE	5R169F20000#1 / F-2	ML012040470	2
N1SIFV3957	HI HEAD SAFETY INJECTION TRAIN B TO LOOP 1B COLD LEG SIS TEST ISOLATION VALVE	5N129F05014#1 / F-7	ML012040470	2
N1SIFV3958	HI HEAD SAFETY INJECTION TRAIN B TO LOOP 1B HOT LEG SIS TEST ISOLATION VALVE	5N129F05014#1 / G-7	ML012040470	2
N1SIFV3959	SAFETY INJECTION TRAIN B TO LOOP 1B HOT LEG SIS TEST ISOLATION VALVE	5N129F05014#1 / G-8	ML012040470	2
N1SIFV3960	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 1C COLD LEG SIS TEST ISOLATION VALVE	5R169F20000#1 / G-2	ML012040470	2
N1SIFV3964	SAFETY INJECTION TRAIN C PUMPS TO LOOP 1C HOT LEG SIS TEST ISOLATION VALVE	5N129F05015#1 / G-7	ML012040470	2
N1SIFV3967	SI ACC 1B OUTLET CK SI-0046B DOWNSTREAM SIS TEST VALVE	5N129F05016#1 / D-7	ML012040470	2
N1SIFV3968	SI ACC 1B OUTLET CK SI-0046B UPSTREAM SIS TEST VALVE	5N129F05016#1 / D-6	ML012040470	2
N1SIFV3969	SI ACC 1A OUTLET CK SI-0046A UPSTREAM SIS TEST VALVE	5N129F05016#1 / G-6	ML012040470	2
N1SIFV3972	SI ACC 1A OUTLET CK SI-0046A DOWNSTREAM SIS TEST VALVE	5N129F05016#1 / G-6	ML012040470	2
N1SIFV3973	SAFETY INJECTION ACCUMULATOR 1A FILL LINE ISOLATION VALVE	5N129F05016#1 / F-4	ML012040470	2
N1SIFV3974	SAFETY INJECTION ACCUMULATOR 1B FILL LINE ISOLATION VALVE	5N129F05016#1 / D-4	ML012040470	2
N1SIFV3975	SAFETY INJECTION ACCUMULATOR 1C FILL LINE ISOLATION VALVE	5N129F05016#1 / B-4	ML012040470	2
N1SIPSV3935	TRAIN A SI PUMP SUCTION HEADER RELIEF VALVE	5N129F05013#1 / C-2	ML012040470	2
N1SIPSV3938	TRAIN A HHSI HOT LEG/COLD LEG RELIEF VALVE	5N129F05013#1 / G-6	ML012040470	2
N1SIPSV3939	TRAIN B SI PUMP SUCTION HEADER RELIEF VALVE	5N129F05014#1 / D-2	ML012040470	2
N1SIPSV3940	TRAIN B HHSI HOT LEG/COLD LEG RELIEF VALVE	5N129F05014#1 / F-6	ML012040470	2
N1SIPSV3941	TRAIN C SI PUMP SUCTION HEADER RELIEF VALVE	5N129F05015#1 / C-2	ML012040470	2
N1SIPSV3942	TRAIN C HHSI HOT LEG/COLD LEG RELIEF VALVE	5N129F05015#1 / F-6	ML012040470	2
N1SIPSV3977	SI ACCUMULATOR TANK 1C RELIEF VALVE	5N129F05016#1 / C-4	ML012040470	2
N1SIPSV3980	SI ACCUMULATOR TANK 1B RELIEF VALVE	5N129F05016#1 / E-4	ML012040470	2
N1SIPSV3981	SI ACCUMULATOR TANK 1A RELIEF VALVE	5N129F05016#1 / G-4	ML012040470	2

ATTACHMENT 9: Unit 2 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
2N102XCS0001A	CONTAINMENT SPRAY PUMP 2A DISCHARGE MOV (ORC)	5N109F05037#2 / G-6	ML012040470	2
2N102XCS0001B	CONTAINMENT SPRAY PUMP 2B DISCHARGE MOV (ORC)	5N109F05037#2 / E-6	ML012040470	2
2N102XCS0001C	CONTAINMENT SPRAY PUMP 2C DISCHARGE MOV (ORC)	5N109F05037#2 / C-6	ML012040470	2
2N102XCS0002	CONTAINMENT SPRAY PUMP 2A DISCHARGE CHECK VALVE (IRC)	5N109F05037#2 / G-7	ML012040470	2
2N102XCS0004	CONTAINMENT SPRAY HEADER IRC CHECK VALVE	5N109F05037#2 / E-8	ML012040470	2
2N102XCS0005	CONTAINMENT SPRAY HEADER IRC CHECK VALVE	5N109F05037#2 / D-8	ML012040470	2
2N102XCS0006	CONTAINMENT SPRAY PUMP 2C DISCHARGE CHECK VALVE (IRC)	5N109F05037#2 / C-7	ML012040470	2
2N122TSI0058	SAFETY INJECTION ACCUMULATORS IRC NITROGEN SUPPLY CHECK VALVE	5N129F05016#2 / G-2	ML012040470	2
2Q062TED0064	CONTAINMENT NORMAL SUMP SUMP PUMPS 2A & B DISCHARGE (IRC) ISOLATION MOV	5Q069F05030#2 / G-7	ML012040470	2
2Q102TSA0504	RCB SERVICE AIR HEADER ORC ISOLATION VALVE	5Q109F05041#2 / C-4	ML012040470	2
2Q102TSA0505	RCB SERVICE AIR HEADER IRC ISOLATION CHECK VALVE	5Q109F05041#2 / D-4	ML012040470	2
2Q112TIA0541	RCB INSTRUMENT AIR HEADER IRC CHECK VALVE	5Q119F05040#2 / D-4	ML012040470	2
2Q122TBA0004	(OCIV) BREATHING AIR TO RCB	5Q129F05044#2 / G-4	ML012040470	2
2Q122TBA0006	(IRC) BREATHING AIR ICIV CHECK VALVE	5Q129F05044#2 / H-4	ML012040470	2
2R142XRC0046	REACTOR MAKEUP WATER TO PRT 2A IRC INLET CHECK VALVE	5R149F05004#2 / E-4	ML012040470	2
2R162TRH0166	RCP SEAL STANDPIPE 2A SUPPLY CHECK VALVE	5R169F20000#2 / C-5	ML012040470	2
2R162TRH0167	RCP SEAL STANDPIPE 2B SUPPLY CHECK VALVE	5R169F20000#2 / F-5	ML012040470	2
2R162TRH0168	RCP SEAL STANDPIPE 2B SUPPLY CHECK VALVE	5R169F20000#2 / F-5	ML012040470	2
2R162TRH0169	RCP SEAL STANDPIPE 2C SUPPLY CHECK VALVE	5R169F20000#2 / H-5	ML012040470	2
2R162TRH0170	RCP SEAL STANDPIPE 2C SUPPLY CHECK VALVE	5R169F20000#2 / H-5	ML012040470	2
2R162TRH0171	RHR HEAT EXCHANGER 2A STANDPIPE FILL VALVE	5R169F20000#2 / C-5	ML012040470	2
2R162TRH0172	RHR HEAT EXCHANGER 2B STANDPIPE FILL VALVE	5R169F20000#2 / F-5	ML012040470	2
2R162TRH0173	RHR HEAT EXCHANGER 2C STANDPIPE FILL VALVE	5R169F20000#2 / H-5	ML012040470	2
2R162TRH0174	RCP SEAL STANDPIPE 2A SUPPLY CHECK VALVE	5R169F20000#2 / C-5	ML012040470	2
2R172TCV0022	CVCS LETDOWN IRC CONTAINMENT ISOLATION BYPASS CHECK VALVE	5R179F05005#2 / H-3	ML012040470	2
2R172TCV0077	RCP SEAL WATER RETURN IRC CONTAINMENT ISOLATION MOV	5R179F05005#2 / E-3	ML012040470	2
2R172TCV0078	RCP SEAL WATER IRC BYPASS CHECK VALVE	5R179F05005#2 / F-3	ML012040470	2
2R172TCV0079	RCP SEAL WATER RETURN ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / E-3	ML012040470	2
2R172TCV0154	BORON CONCENTRATION MEASUREMENT OUTLET TO VCT FIRST CHECK VALVE	5R179F05006#2 / D-2	ML012040470	2
2R172TCV0155	BORON CONCENTRATION MEASUREMENT OUTLET TO VCT SECOND CHECK VALVE	5R179F05006#2 / D-2	ML012040470	2
2R172TCV0166	CVCS RETURN FROM PRIMARY SAMPLE ISOLATION VALVE	5R179F05007#2 / G-5	ML012040470	2
2R172TCV0182	GAS SUPPLY HEADER TO VCT FIRST CHECK VALVE	5R179F05007#2 / G-7	ML012040470	2
2R172TCV0186	GAS SUPPLY HEADER TO VCT SECOND CHECK VALVE	5R179F05007#2 / F-7	ML012040470	2
2R172TCV0221	CVCS ALT IMMEDIATE BORATION ISOLATION VALVE	5R179F05007#2 / E-4	ML012040470	2
2R172TCV0226	BORIC ACID TANK TO CHARGING PUMP SUCTION BORATION VALVE	5R179F05007#2 / D-4	ML012040470	2
2R172TCV0234A	CENTRIFUGAL CHARGING PUMP 2A RECIRC CHECK VALVE	5R179F05007#2 / B-6	ML012040470	2
2R172TCV0234B	CENTRIFUGAL CHARGING PUMP 2B RECIRC CHECK VALVE	5R179F05007#2 / D-6	ML012040470	2
2R172TCV0677	POST ACCIDENT SAMPLING SYSTEM TO VCT CHECK VALVE	5R179F05007#2 / G-5	ML012040470	2
2R172TCV0707	CENTRIFUGAL CHARGING PUMP 2B DISCHARGE BYPASS CHECK VALVE	5R179F05007#2 / F-6	ML012040470	2
2R172XCV0023	CVCS LETDOWN IRC CONTAINMENT ISOLATION MOV	5R179F05005#2 / H-3	ML012040470	2
2R172XCV0024	CVCS LETDOWN ORC CONTAINMENT ISOLATION MOV	5R179F05005#2 / H-3	ML012040470	2
2R172XCV0112C	CVCS CHARGING PUMPS SUCTION FROM RWST MOV	5R179F05007#2 / C-4	ML012040470	2
2R172XCV0113B	CVCS CHARGING PUMPS SUCTION FROM RWST MOV	5R179F05007#2 / C-4	ML012040470	2
2R172XCV0157	CVCS LOW PRESSURE LETDOWN CONTAINMENT ISOLATION VALVE	5R179F05006#2 / F-2	ML012040470	2
2R172XCV0158	CVCS LOW PRESSURE LETDOWN IRC CONTAINMENT ISOLATION CHECK VALVE	5R179F05006#2 / F-2	ML012040470	2
2R172XCV0217	CVCS EMERGENCY BORATION CHECK VALVE	5R179F05007#2 / B-3	ML012040470	2
2R172XCV0218	CVCS EMERGENCY BORATION MOV	5R179F05007#2 / B-3	ML012040470	2
2R172XCV0224	CVCS CHARGING PUMPS SUCTION FROM RWST CHECK VALVE	5R179F05007#2 / B-4	ML012040470	2
2R172XCV0235A	CENTRIFUGAL CHARGING PUMP 2A DISCHARGE CHECK VALVE	5R179F05007#2 / B-6	ML012040470	2
2R172XCV0235B	CENTRIFUGAL CHARGING PUMP 2B DISCHARGE CHECK VALVE	5R179F05007#2 / D-6	ML012040470	2
2R172XCV0639	CVCS ALT IMMEDIATE BORATION CHECK VALVE	5R179F05007#2 / E-4	ML012040470	2
2R172XCV0671	CVCS SEAL INJECTION HEADER CHECK VALVE	5R179F05007#2 / B-6	ML012040470	2
2R172XCV8348	CENTRIFUGAL CHARGING PUMP 2A SEAL WATER SUPPLY MOV	5R179F05007#2 / B-6	ML012040470	2
2R172XCV8377A	CENTRIFUGAL CHARGING PUMP 2A DISCHARGE MOV	5R179F05007#2 / B-6	ML012040470	2
2R172XCV8377B	CENTRIFUGAL CHARGING PUMP 2B DISCHARGE MOV	5R179F05007#2 / D-6	ML012040470	2
2R202TCC0012	RHR TRAIN A CCW SUPPLY ORC ISOLATION MOV	5R209F05017#2 / E-2	ML012040470	2
2R202TCC0049	RHR TRAIN A CCW RETURN HEADER IRC ISOLATION MOV	5R209F05017#2 / G-4	ML012040470	2
2R202TCC0050	RHR TRAIN A CCW RETURN HEADER ORC ISOLATION MOV	5R209F05017#2 / G-4	ML012040470	2
2R202TCC0057	RCFC TRAIN A CCW SUPPLY ORC ISOLATION MOV	5R209F05017#2 / D-2	ML012040470	2
2R202TCC0058	RCFC TRAIN A CHILLED WATER/CCW SUPPLY IRC CHECK VALVE	5R209F05017#2 / D-2	ML012040470	2
2R202TCC0059	RCFC TRAIN A CHILLED WATER SUPPLY ORC ISOLATION MOV	5R209F05017#2 / D-2	ML012040470	2
2R202TCC0068	RCFC TRAIN A CHILLED WATER/CCW RETURN IRC ISOLATION MOV	5R209F05017#2 / C-4	ML012040470	2
2R202TCC0069	RCFC TRAIN A CCW RETURN ORC ISOLATION MOV	5R209F05017#2 / D-4	ML012040470	2
2R202TCC0070	RCFC TRAIN A CHILLED WATER RETURN ORC ISOLATION MOV	5R209F05017#2 / C-4	ML012040470	2
2R202TCC0122	RHR TRAIN B CCW SUPPLY ORC ISOLATION MOV	5R209F05018#2 / E-2	ML012040470	2
2R202TCC0129	RHR TRAIN B CCW RETURN HEADER IRC ISOLATION MOV	5R209F05018#2 / G-4	ML012040470	2
2R202TCC0130	RHR TRAIN B CCW RETURN HEADER ORC ISOLATION MOV	5R209F05018#2 / G-4	ML012040470	2
2R202TCC0136	RCFC TRAIN B CCW SUPPLY LINE ORC ISOLATION MOV	5R209F05018#2 / D-2	ML012040470	2
2R202TCC0137	RCFC TRAIN B CHILLED WATER SUPPLY LINE ORC ISOLATION MOV	5R209F05018#2 / D-2	ML012040470	2
2R202TCC0138	RCFC TRAIN B CHILLED WATER/CCW SUPPLY IRC CHECK VALVE	5R209F05018#2 / D-2	ML012040470	2
2R202TCC0147	RCFC TRAIN B CHILLED WATER/CCW RETURN IRC ISOLATION MOV	5R209F05018#2 / C-4	ML012040470	2
2R202TCC0148	RCFC TRAIN B CCW RETURN LINE ORC ISOLATION MOV	5R209F05018#2 / D-4	ML012040470	2
2R202TCC0149	RCFC TRAIN B CHILLED WATER RETURN ISOLATION MOV	5R209F05018#2 / C-4	ML012040470	2
2R202TCC0182	RHR TRAIN C CCW SUPPLY ORC ISOLATION MOV	5R209F05019#2 / F-1	ML012040470	2
2R202TCC0189	RHR TRAIN C CCW RETURN IRC ISOLATION MOV	5R209F05019#2 / H-4	ML012040470	2
2R202TCC0190	RHR TRAIN C CCW RETURN ORC ISOLATION MOV	5R209F05019#2 / H-4	ML012040470	2
2R202TCC0197	RCFC TRAIN C CCW SUPPLY ORC ISOLATION MOV	5R209F05019#2 / D-2	ML012040470	2
2R202TCC0198	RCFC TRAIN C CHILLED WATER/CCW SUPPLY IRC CHECK VALVE	5R209F05019#2 / D-2	ML012040470	2

ATTACHMENT 9: Unit 2 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
2R202TCC0199	RCFC TRAIN C CHILLED WATER SUPPLY ORC ISOLATION MOV	5R209F05019#2 / D-2	ML012040470	2
2R202TCC0208	RCFC TRAIN C CHILLED WATER/CCW RETURN IRC ISOLATION MOV	5R209F05019#2 / D-4	ML012040470	2
2R202TCC0209	RCFC TRAIN C CHILLED WATER RETURN LINE ORC ISOLATION MOV	5R209F05019#2 / C-4	ML012040470	2
2R202TCC0210	RCFC TRAIN C CCW RETURN LINE ORC ISOLATION MOV	5R209F05019#2 / D-4	ML012040470	2
2R202TCC0291	REACTOR COOLANT PUMPS CCW SUPPLY ORC ISOLATION MOV	5R209F05021#2 / H-8	ML012040470	2
2R202TCC0318	REACTOR COOLANT PUMPS CCW SUPPLY ORC ISOLATION MOV	5R209F05021#2 / H-8	ML012040470	2
2R202TCC0319	REACTOR COOLANT PUMPS CCW SUPPLY IRC CHECK VALVE	5R209F05021#2 / G-8	ML012040470	2
2R202TCC0403	RCP AND HEAT EXCHANGERS CCW RETURN HEADER IRC ISOLATION MOV	5R209F05021#2 / B-1	ML012040470	2
2R202TCC0404	RCP AND HEAT EXCHANGERS CCW RETURN ORC ISOLATION MOV	5R209F05021#2 / H-1	ML012040470	2
2R202TCC0446	RCP AND HEAT EXCHANGERS CCW RETURN HEADER MOV-0542/0403 IRC BYPASS CHECK	5R209F05021#2 / B-1	ML012040470	2
2R202TCC0542	RCP AND HEAT EXCHANGERS CCW RETURN HEADER BYPASS IRC ISOLATION MOV	5R209F05021#2 / B-1	ML012040470	2
2R212XFC0006C	SFP COOLING PUMPS 2A&B SUCTION FROM ICSA IRC ISOLATION VALVE	5R219F05028#2 / B-5	ML012040470	2
2R212XFC0007C	SFP COOLING PUMPS 2A&B SUCTION FROM ICSA ORC ISOLATION VALVE	5R219F05028#2 / B-4	ML012040470	2
2R212XFC0013E	SFP COOLING & PURIFICATION DISCHARGE TO RX CAVITY OR ICSA ORC ISOLATION VALVE	5R219F05028#2 / B-6	ML012040470	2
2R212XFC0013F	SFP COOLING & PURIFICATION DISCHARGE TO ICSA IRC ISOLATION VALVE	5R219F05028#2 / B-6	ML012040470	2
2R212XFC0050	SFP COOLING & PURIFICATION TO RX CAVITY IRC ISOLATION VALVE	5R219F05028#2 / B-6	ML012040470	2
2R302TWL0312	RCDT HEAT EXCHANGER OUTLET LINE ISOLATION MOV (IRC)	5R309F05022#2 / E-3	ML012040470	2
2R342TRD0008	RCS VACUUM DEGASSING IRC ISOLATION VALVE	5R349F05046#1 / E-7	ML012040470	2
2R342TRD0010	RCS VACUUM DEGASSING ORC ISOLATION VALVE	5R349F05046#1 / E-7	ML012040470	2
2R372TPO0217	RCP OIL RETURN LINE IRC ISOLATION VALVE	5R379F05042#2 / B-4	ML012040470	2
2R372TPO0218	RCP OIL RETURN LINE ORC ISOLATION VALVE	5R379F05042#2 / B-3	ML012040470	2
2S192TDW0501	DEMIN WATER HEADER TO REACTOR CONTAINMENT BUILDING ISOLATION VALVE	5S199F05034#2 / F-3	ML012040470	2
2S192TDW0502	REACTOR CONTAINMENT BUILDING DEMIN WATER SUPPLY HEADER CHECK VALVE	5S199F05034#2 / F-3	ML012040470	2
2S202TSL0002	HIGH PRESSURE SLUDGE LANCING ORC ISOLATION VALVE	5S209F05057#2 / B-5	ML012040470	2
2S202TSL0004	HIGH PRESSURE SLUDGE LANCING IRC ISOLATION VALVE	5S209F05057#2 / B-6	ML012040470	2
2S202TSL0012	LOW PRESSURE SLUDGE LANCING ORC ISOLATION VALVE	5S209F05057#2 / D-5	ML012040470	2
2S202TSL0014	LOW PRESSURE SLUDGE LANCING IRC ISOLATION VALVE	5S209F05057#2 / D-6	ML012040470	2
2S202TSL0027	SLUDGE LANCING CHEMICAL CLEANING WATER RETURN IRC ISOLATION VALVE	5S209F05057#2 / F-6	ML012040470	2
2S202TSL0029	SLUDGE LANCING CHEMICAL CLEANING WATER RETURN ORC ISOLATION VALVE	5S209F05057#2 / F-5	ML012040470	2
2V142TRA0001	RCB EXHAUST RT-8011 SUPPLY IRC ISOLATION MOV	5V149V00017#2 / G-4	ML012040470	2
2V142TRA0003	RCB EXHAUST RT-8011 RETURN IRC ISOLATION MOV	5V149V00017#2 / F-4	ML012040470	2
2V142TRA0004	RCB EXHAUST RT-8011 SUPPLY ORC ISOLATION MOV	5V149V00017#2 / G-4	ML012040470	2
2V142TRA0006	RCB EXHAUST RT-8011 RETURN ORC ISOLATION MOV	5V149V00017#2 / F-3	ML012040470	2
3Q152TDO0129	FUEL OIL STORAGE TANK EMERGENCY FILL CHECK VALVE	5Q159F00045#2 / H-7	ML012040470	3
3Q152TDO0130	FUEL OIL STORAGE TANK EMERGENCY FILL VALVE	5Q159F00045#2 / H-7	ML012040470	3
3Q152TDO0131	FUEL OIL STORAGE TANK EMERGENCY FILL CHECK VALVE	5Q159F00045#2 / H-5	ML012040470	3
3Q152TDO0132	FUEL OIL STORAGE TANK EMERGENCY FILL VALVE	5Q159F00045#2 / H-5	ML012040470	3
3Q152TDO0133	FUEL OIL STORAGE TANK EMERGENCY FILL CHECK VALVE	5Q159F00045#2 / H-2	ML012040470	3
3Q152TDO0134	FUEL OIL STORAGE TANK EMERGENCY FILL VALVE	5Q159F00045#2 / H-2	ML012040470	3
3R172TCV0220	CVCS NORMAL BORATION CHECK VALVE	5R179F05007#2 / D-2	ML012040470	3
3R172TCV0333	BA TANK 2A TO SUCTION OF CHARGING PUMPS ISOLATION VALVE	5R179F05009#2 / D-4	ML012040470	3
3R172TCV0335A	BA BATCHING TANK 2A TO BA TRANSFER PUMP 2A ISOLATION VALVE	5R179F05009#2 / D-4	ML012040470	3
3R172TCV0335B	BA BATCHING TANK 2A TO BA TRANSFER PUMP 2B ISOLATION VALVE	5R179F05009#2 / D-4	ML012040470	3
3R172TCV0346	BORIC ACID TRANSFER PUMP 2B RECIRC CHECK VALVE	5R179F05009#2 / D-5	ML012040470	3
3R172TCV0351	BORIC ACID TRANSFER PUMP 2A RECIRC CHECK VALVE	5R179F05009#2 / E-6	ML012040470	3
3R172TCV0352A	BORIC ACID FILTER BYPASS VALVE	5R179F05009#2 / D-7	ML012040470	3
3R172TCV0352B	BORIC ACID FILTER BYPASS VALVE	5R179F05009#2 / D-6	ML012040470	3
3R172TCV0635	BORIC ACID TANK 2B PURIFIED BORIC ACID FIRST CHECK VALVE	5R179F05009#2 / E-5	ML012040470	3
3R172TCV0636	BORIC ACID TANK 2B PURIFIED BORIC ACID SECOND CHECK VALVE	5R179F05009#2 / E-5	ML012040470	3
3R172TCV0637	BORIC ACID TANK 2A PURIFIED BORIC ACID FIRST CHECK VALVE	5R179F05009#2 / F-5	ML012040470	3
3R172TCV0638	BORIC ACID TANK 2A PURIFIED BORIC ACID SECOND CHECK VALVE	5R179F05009#2 / F-6	ML012040470	3
3R172XCV0204	CVCS REACTOR MAKE-UP WATER CHECK VALVE	5R179F05007#2 / F-2	ML012040470	3
3R172XCV0334	BORIC ACID TANK 2A CHARGING PUMP SUCTION CHECK VALVE	5R179F05009#2 / E-4	ML012040470	3
3R172XCV0338	BORIC ACID TRANSFER PUMP 2A DISCHARGE CHECK VALVE	5R179F05009#2 / D-6	ML012040470	3
3R172XCV0349	BORIC ACID TRANSFER PUMP 2B DISCHARGE CHECK VALVE	5R179F05009#2 / C-6	ML012040470	3
3R202TCC0032	SPENT FUEL POOL HXS CCW SUPPLY HEADER SECOND ISOLATION MOV	5R209F05020#2 / E-6	ML012040470	3
3R202TCC0231	CCW SURGE TANK 2A REACTOR MAKEUP WATER SUPPLY VALVE	5R209F05017#2 / G-6	ML012040470	3
3R202TCC0235	CCW COMMON SUPPLY HEADER FIRST ISOLATION MOV	5R209F05020#2 / D-7	ML012040470	3
3R202TCC0236	CCW COMMON SUPPLY HEADER SECOND ISOLATION MOV	5R209F05020#2 / D-6	ML012040470	3
3R202TCC0297	RCDT & EXCESS LETDOWN HXS CCW SUPPLY MOV	5R209F05021#2 / G-7	ML012040470	3
3R202TCC0321	RCP 2C THERMAL BARRIER CCW SUPPLY FIRST CHECK VALVE	5R209F05021#2 / E-5	ML012040470	3
3R202TCC0327	RCP 2A THERMAL BARRIER CCW SUPPLY FIRST CHECK VALVE	5R209F05021#2 / B-8	ML012040470	3
3R202TCC0346	RCP 2D THERMAL BARRIER CCW SUPPLY FIRST CHECK VALVE	5R209F05021#2 / E-8	ML012040470	3
3R202TCC0363	RCP 2B THERMAL BARRIER CCW SUPPLY FIRST CHECK VALVE	5R209F05021#2 / B-5	ML012040470	3
3R202TCC0392	RCDT HEAT EXCHANGER 2A CCW SUPPLY MOV	5R209F05021#2 / G-3	ML012040470	3
3R202TCC0393	EXCESS LETDOWN HEAT EXCHANGER 2A CCW SUPPLY MOV	5R209F05021#2 / G-3	ML012040470	3
3R202TCC0402	EXCESS LETDOWN HEAT EXCHANGER 2A CCW RETURN SECOND CHECK VALVE	5R209F05021#2 / C-2	ML012040470	3

ATTACHMENT 9: Unit 2 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
3R202TCC0447	SPENT FUEL POOL HXS CCW SUPPLY HEADER FIRST ISOLATION MOV	5R209F05020#2 / E-7	ML012040470	3
3R202TCC0540	RCDT HEAT EXCHANGER 2A CCW RETURN FIRST CHECK VALVE	5R209F05021#2 / D-1	ML012040470	3
3R202TCC0541	RCDT HEAT EXCHANGER 2A CCW RETURN SECOND CHECK VALVE	5R209F05021#2 / D-1	ML012040470	3
3R202TCC0756	RCP 2C THERMAL BARRIER CCW SUPPLY SECOND CHECK VALVE	5R209F05021#2 / E-4	ML012040470	3
3R202TCC0757	RCP 2B THERMAL BARRIER CCW SUPPLY SECOND CHECK VALVE	5R209F05021#2 / B-5	ML012040470	3
3R202TCC0758	RCP 2D THERMAL BARRIER CCW SUPPLY SECOND CHECK VALVE	5R209F05021#2 / E-7	ML012040470	3
3R202TCC0759	RCP 2A THERMAL BARRIER CCW SUPPLY SECOND CHECK VALVE	5R209F05021#2 / B-8	ML012040470	3
3R202TCC0763	EXCESS LETDOWN HEAT EXCHANGER 2A CCW RETURN FIRST CHECK VALVE	5R209F05021#2 / C-2	ML012040470	3
3R202TCC0768	CHARGING PUMP COOLERS CCW TRAIN A SUPPLY ISOLATION MOV	5R209F05020#2 / F-7	ML012040470	3
3R202TCC0770	CHARGING PUMP COOLERS CCW TRAIN B SUPPLY ISOLATION MOV	5R209F05020#2 / G-7	ML012040470	3
3R202TCC0771	CHARGING PUMP COOLERS CCW TRAIN C SUPPLY ISOLATION MOV	5R209F05020#2 / G-7	ML012040470	3
3R202TCC0772	CHARGING PUMP COOLERS CCW TRAIN A RETURN ISOLATION MOV	5R209F05020#2 / B-7	ML012040470	3
3R202TCC0774	CHARGING PUMP COOLERS CCW TRAIN B RETURN ISOLATION MOV	5R209F05020#2 / B-7	ML012040470	3
3R202TCC0775	CHARGING PUMP COOLERS CCW TRAIN C RETURN ISOLATION MOV	5R209F05020#2 / A-7	ML012040470	3
3R272TRM0003	RMW PUMP 2A DISCHARGE CHECK VALVE	5R279F05033#2 / F-5	ML012040470	3
3R272TRM0007	RMWST DEMIN WATER SUPPLY CHECK VALVE	5R279F05033#2 / G-2	ML012040470	3
3R272TRM0010	RMW PUMP 2B DISCHARGE CHECK VALVE	5R279F05033#2 / E-6	ML012040470	3
3R272TRM0013	RMWST BRS & WL SYSTEMS RETURN CHECK VALVE	5R279F05033#2 / G-6	ML012040470	3
3R272TRM0048	REACTOR MAKE-UP WATER TO CCW SURGE TANK CHECK VALVE	5R279F05033#2 / E-8	ML012040470	3
3R272TRM0103	RMW PUMP 2B RECIRC LINE CHECK VALVE	5R279F05033#2 / F-6	ML012040470	3
3R272TRM0104	RMW PUMP 2A RECIRC LINE CHECK VALVE	5R279F05033#2 / F-6	ML012040470	3
3R282TEW0188	ECW PUMP 2A DISCHARGE STRAINER BACKFLUSH THROTTLE VALVE	5R289F05038SH1#2 / C-2	ML012040470	3
3R282TEW0189	ECW PUMP 2B DISCHARGE STRAINER BACKFLUSH THROTTLE VALVE	5R289F05038SH2#2 / C-2	ML012040470	3
3R282TEW0190	ECW PUMP 2C DISCHARGE STRAINER BACKFLUSH THROTTLE VALVE	5R289F05038SH3#2 / C-2	ML012040470	3
3R282TEW0253	ECW SCREEN WASH BOOSTER PUMP 2A DISCHARGE CHECK VALVE	5R289F05039#2 / D-7	ML012040470	3
3R282TEW0254	ECW SCREEN WASH BOOSTER PUMP 2B DISCHARGE CHECK VALVE	5R289F05039#2 / D-5	ML012040470	3
3R282TEW0255	ECW SCREEN WASH BOOSTER PUMP 2C DISCHARGE CHECK VALVE	5R289F05039#2 / D-2	ML012040470	3
3R282TEW0277	ECW PUMP 2A DISCHARGE STRAINER EMERGENCY BACKFLUSH VALVE	5R289F05038SH1#2 / C-2	ML012040470	3
3R282TEW0278	ECW PUMP 2B DISCHARGE STRAINER EMERGENCY BACKFLUSH VALVE	5R289F05038SH2#2 / C-2	ML012040470	3
3R282TEW0279	ECW PUMP 2C DISCHARGE STRAINER EMERGENCY BACKFLUSH VALVE	5R289F05038SH3#2 / C-2	ML012040470	3
3R282TEW0370A	ECW PUMP 2A DISCHARGE VENT LINE CHECK VALVE	5R289F05038SH1#2 / C-3	ML012040470	3
3R282TEW0370B	ECW PUMP 2B DISCHARGE VENT LINE CHECK VALVE	5R289F05038SH2#2 / C-3	ML012040470	3
3R282TEW0370C	ECW PUMP 2C DISCHARGE VENT LINE CHECK VALVE	5R289F05038SH3#2 / C-3	ML012040470	3
3R282TEW0403	ECW PUMP 2A DISCHARGE STRAINER EMERGENCY BACKFLUSH CHECK VALVE	5R289F05038SH1#2 / C-3	ML012040470	3
3R282TEW0404	ECW PUMP 2B DISCHARGE STRAINER EMERGENCY BACKFLUSH CHECK VALVE	5R289F05038SH2#2 / C-3	ML012040470	3
3R282TEW0405	ECW PUMP 2C DISCHARGE STRAINER EMERGENCY BACKFLUSH CHECK VALVE	5R289F05038SH3#2 / C-3	ML012040470	3
3R282TEW1007	DIESEL GENERATOR #21 ECW VACUUM BREAKER CHECK VALVE	5R289F05038SH1#2 / F-1	ML012040470	3
3R282TEW1011	DIESEL GENERATOR #22 ECW VACUUM BREAKER CHECK VALVE	5R289F05038SH2#2 / F-1	ML012040470	3
3R282TEW1015	DIESEL GENERATOR #23 ECW VACUUM BREAKER CHECK VALVE	5R289F05038SH3#2 / F-1	ML012040470	3
3R282TEW1024	CCW HEAT EXCHANGER 2A VACUUM BREAKER CHECK VALVE	5R289F05038SH1#2 / E-7	ML012040470	3
3R282TEW1026	CCW HEAT EXCHANGER 2B VACUUM BREAKER CHECK VALVE	5R289F05038SH2#2 / E-7	ML012040470	3
3R282TEW1028	CCW HEAT EXCHANGER 2C VACUUM BREAKER CHECK VALVE	5R289F05038SH3#2 / E-7	ML012040470	3
A2APFV2453	(OCIV) RCB SUMP OUT TO PASS (AP-FV-2453)	5Z549Z47501#2 / G-7	ML012040470	2
A2APFV2454	(OCIV) RHR SAMPLE OUT TO PASS (AP-FV-2454)	5Z549Z47501#2 / F-7	ML012040470	2
A2CCFV0864	RCFC TRAIN C CHILLED WATER RETURN ORC FLOW CONTROL VALVE	5R209F05019#2 / C-4	ML012040470	2
A2CCFV4540	POST ACCIDENT SAMPLING SYSTEM CCW SUPPLY FIRST ISOLATION SOLENOID VALVE	5R209F05020#2 / D-7	ML012040470	3
A2CCFV4656	CHARGING PUMPS CCW SUPPLY HEADER CROSS-TIE FLOW CONTROL VALVE	5R209F05020#2 / G-7	ML012040470	3
A2CCFV4657	CHARGING PUMPS CCW RETURN HEADER CROSS-TIE FLOW CONTROL VALVE	5R209F05020#2 / A-7	ML012040470	3
A2CHTV9476A	TRAIN A ESSENTIAL CHILLED WATER CONTROL ROOM AHU 21A TEMPERATURE CONTROL	3V119V10002#2 / F-7	ML012040470	3
A2CHTV9476B	TRAIN A ESSENTIAL CHILLED WATER CONTROL ROOM AHU 21A OUTLET TEMPERATURE	3V119V10002#2 / E-7	ML012040470	3
A2CMFV4100	SAMPLE POINT #1 FLOW ISOLATION VALVE	5Z169Z00046#2 / G-6	ML012040470	2
A2CMFV4101	CONTAINMENT HYDROGEN MONITORING TO PAM-I FLOW ISOLATION VALVE	5Z169Z00046#2 / F-4	ML012040470	2
A2CMFV4124	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #3 FLOW ISOLATION VALVE	5Z169Z00046#2 / F-6	ML012040470	2
A2CMFV4125	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #5 FLOW ISOLATION VALVE	5Z169Z00046#2 / F-6	ML012040470	2
A2CMFV4126	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #6 FLOW ISOLATION VALVE	5Z169Z00046#2 / E-6	ML012040470	2
A2CMFV4127	CONTAINMENT HYDROGEN MONITORING SAMPLE RETURN FROM PAM-I FLOW ISOLATION	5Z169Z00046#2 / E-4	ML012040470	2
A2CMFV4128	CONTAINMENT HYDROGEN MONITORING SAMPLE RETURN FROM PAM-I FLOW ISOLATION	5Z169Z00046#2 / E-5	ML012040470	2
A2CMFV4135	CONTAINMENT HYDROGEN MONITORING SAMPLE INLET TO PAM-I FLOW ISOLATION VALVE	5Z169Z00046#2 / F-5	ML012040470	2
A2CVFV8400A	CONCENTRATED BA POLISHING DEMIN INLET FLOW CONTROL VALVE	5R179F05009#2 / D-8	ML012040470	2
A2CVHCV0206	CENTRIFUGAL CHARGING PUMP 2B DISCHARGE BYPASS FLOW CONTROL VALVE	5R179F05007#2 / D-6	ML012040470	2
A2EDFV7800	CONTAINMENT NORMAL SUMP SUMP PUMP DISCHARGE (ORC) FLOW CONTROL VALVE	5Q069F05030#2 / G-6	ML012040470	2
A2EWFV6914	ECW SCREEN WASH PUMP 2A DISCHARGE VALVE	5R289F05039#2 / D-7	ML012040470	3
A2EWFV6935	ECW RETURN HEADER BLOWDOWN VALVE	5R289F05038SH1#2 / E-5	ML012040470	3
A2RCFV3653	PRESSURIZER RELIEF TANK VENT IRC CONTAINMENT ISOLATION VALVE	5R149F05004#2 / F-4	ML012040470	2
A2SBFV4186	STEAM GENERATOR 2D SAMPLE LINE ORC FLOW CONTROL VALVE	5S209F20001#2 / D-5	ML012040470	2
A2SBFV4189	STEAM GENERATOR 2A SAMPLE LINE ORC FLOW CONTROL VALVE	5S209F20001#2 / H-5	ML012040470	2
A2SIFV3936	RWST OUTLET TO REFUELING WATER PURIF PUMP FIRST ISOLATION VALVE	5N129F05013#2 / F-2	ML012040470	2

ATTACHMENT 9: Unit 2 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
A2SIFV3971	SIS CHECK VALVE TEST LINE ORC ISOLATION VALVE	5N129F05016#2 / F-7	ML012040470	2
A2SIFV3983	SAFETY INJECTION ACCUMULATORS ORC NITROGEN SUPPLY VALVE	5N129F05016#2 / G-2	ML012040470	2
A2SIHCV0900	(IRC) SI ACCUM VENT HDR BLOCK VLV (SI-HCV-0900)	5N129F05016#2 / G-2	ML012040470	2
A2SIPV3928	SAFETY INJECTION ACCUMULATOR 2C NITROGEN SUPPLY VENT VALVE	5N129F05016#2 / C-4	ML012040470	2
A2WLFV4920	REACTOR COOLANT DRAIN TANK VENT TO GASEOUS WASTE PROCESSING IRC ISOLATION	5R309F05022#2 / G-6	ML012040470	2
B2APFV2455	(OCIV) RCS SAMPLE TO PASS LAB (AP-FV-2455)	5Z549Z47501#2 / E-7	ML012040470	2
B2APFV2455A	(OCIV) RCS SAMPLE TO PASS LAB (AP-FV-2455A)	5Z549Z47501#2 / E-7	ML012040470	2
B2CCFV0862	RCFC TRAIN A CHILLED WATER RETURN ORC FLOW CONTROL VALVE	5R209F05017#2 / B-4	ML012040470	2
B2CCFV4541	POST ACCIDENT SAMPLING SYSTEM CCW SUPPLY SECOND ISOLATION SOLENOID VALVE	5R209F05020#2 / D-8	ML012040470	3
B2CHTV9486A	TRAIN B ESSENTIAL CHILLED WATER CONTROL ROOM AHU 21B OUTLET TEMPERATURE	3V119V10002#2 / F-4	ML012040470	3
B2CHTV9486B	TRAIN B ESSENTIAL CHILLED WATER CONTROL ROOM AHU 21B BYPASS TEMPERATURE	3V119V10002#2 / E-4	ML012040470	3
B2CVFV8400B	CONCENTRATED BA POLISHING DEMIN INLET FLOW CONTROL VALVE	5R179F05009#2 / C-8	ML012040470	3
B2EWFV6924	ECW SCREEN WASH PUMP 2B DISCHARGE VALVE	5R289F05039#2 / D-5	ML012040470	3
B2EWFV6936	ECW RETURN HEADER BLOWDOWN VALVE	5R289F05038SH2#2 / E-5	ML012040470	3
B2IAFV8565	INSTRUMENT AIR SUPPLY TO REACTOR CONTAINMENT BUILDING ORC ISOLATION VALVE	5Q119F05040#2 / D-4	ML012040470	2
B2PSFV4450	PRESSURIZER VAPOR SAMPLE LINE IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / H-8	ML012040470	2
B2PSFV4451	PRESSURIZER LIQUID SAMPLE LINE IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / G-8	ML012040470	2
B2PSFV4456	RCS HOT LEG SAMPLE HEADER ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / F-7	ML012040470	2
B2PSFV4466	SI ACCUMULATORS SAMPLE HEADER ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / B-7	ML012040470	2
B2PSFV4823	RHR SAMPLE HEADER IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / D-8	ML012040470	2
B2RCFV3651	PRESSURIZER RELIEF TANK SPRAY REACTOR MAKEUP WATER SUPPLY CONTAINMENT	5R149F05004#2 / E-2	ML012040470	2
B2RCFV3652	PRESSURIZER RELIEF TANK VENT ORC CONTAINMENT ISOLATION VALVE	5R149F05004#2 / F-4	ML012040470	2
B2RMFV7663	RMW TO CVCS SUPPLY HEADER FLOW CONTROL VALVE	5R279F05033#2 / F-7	ML012040470	3
B2SBFV4188	STEAM GENERATOR 2B SAMPLE LINE ORC FLOW CONTROL VALVE	5S209F20001#2 / H-1	ML012040470	2
B2SIFV3937	RWST OUTLET TO REFUELING WATER PURIF PUMP SECOND ISOLATION VALVE	5N129F05013#2 / F-2	ML012040470	2
B2SIFV3970	SIS CHECK VALVE TEST LINE IRC ISOLATION VALVE	5N129F05016#2 / F-7	ML012040470	2
B2SIHV0899	SAFETY INJECTION ACCUMULATOR 2C NITROGEN SUPPLY VENT VALVE	5N129F05016#2 / F-2	ML012040470	2
B2SIPV3930	SAFETY INJECTION ACCUMULATOR 2A NITROGEN SUPPLY VENT VALVE	5N129F05016#2 / G-4	ML012040470	2
B2WLFV4913	RCDT HEAT EXCHANGER OUTLET ISOLATION VALVE (ORC)	5R309F05022#2 / F-3	ML012040470	2
B2WLFV4919	REACTOR COOLANT DRAIN TANK VENT TO GASEOUS WASTE PROCESSING ORC ISOLATION	5R309F05022#2 / G-5	ML012040470	2
C2APFV2456	CONTAINMENT AIR SAMPLE ORC ISOL VALVE	5Z549Z47501#2 / D-7	ML012040470	2
C2APFV2457	PASS OCIV (RCB AIR RETURN) (AP-FV-2457)	5Z549Z47501#2 / H-2	ML012040470	2
C2APFV2458	PASS OCIV (WCU BACK TO THE PRT) (AP-FV-2458)	5Z549Z47501#2 / C-3	ML012040470	2
C2CCFV0863	RCFC TRAIN B CHILLED WATER RETURN ORC FLOW CONTROL VALVE	5R209F05018#2 / C-4	ML012040470	2
C2CHTV9496A	TRAIN C ESSENTIAL CHILLED WATER CONTROL ROOM AHU 21C OUTLET TEMPERATURE	3V119V10002#2 / F-1	ML012040470	3
C2CHTV9496B	TRAIN C ESSENTIAL CHILLED WATER CONTROL ROOM AHU 21C BYPASS TEMPERATURE	3V119V10002#2 / E-1	ML012040470	3
C2CMFV4103	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #2 FLOW ISOLATION VALVE	5Z169Z00046#2 / E-6	ML012040470	2
C2CMFV4104	CONTAINMENT HYDROGEN MONITORING TO PAM-II FLOW ISOLATION VALVE	5Z169Z00046#2 / D-4	ML012040470	2
C2CMFV4129	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #4 FLOW ISOLATION VALVE	5Z169Z00046#2 / D-6	ML012040470	2
C2CMFV4130	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #7 FLOW ISOLATION VALVE	5Z169Z00046#2 / D-6	ML012040470	2
C2CMFV4131	CONTAINMENT HYDROGEN MONITORING SAMPLE POINT #8 FLOW ISOLATION VALVE	5Z169Z00046#2 / C-6	ML012040470	2
C2CMFV4133	CONTAINMENT HYDROGEN MONITORING SAMPLE RETURN FROM PAM-II FLOW ISOLATION	5Z169Z00046#2 / C-4	ML012040470	2
C2CMFV4134	CONTAINMENT HYDROGEN MONITORING SAMPLE RETURN FROM PAM-II FLOW ISOLATION	5Z169Z00046#2 / C-5	ML012040470	2
C2CMFV4136	CONTAINMENT HYDROGEN MONITORING SAMPLE INLET TO PAM-II FLOW ISOLATION VALVE	5Z169Z00046#2 / D-5	ML012040470	2
C2CVHCV0218	CVCS SEAL WATER INJECTION FLOW CONTROL VALVE	5R179F05007#2 / B-7	ML012040470	2
C2EWFV6934	ECW SCREEN WASH PUMP 2C DISCHARGE VALVE	5R289F05039#2 / D-3	ML012040470	3
C2EWFV6937	ECW RETURN HEADER BLOWDOWN VALVE	5R289F05038SH3#2 / E-5	ML012040470	3
C2PSFV4451B	PRESSURIZER LIQUID SAMPLE LINE ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / F-7	ML012040470	2
C2PSFV4452	PRESSURIZER VAPOR SAMPLE LINE ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / G-7	ML012040470	2
C2PSFV4454	RCS HOT LEG 2A SAMPLE LINE IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / F-8	ML012040470	2
C2PSFV4455	RCS HOT LEG 2C SAMPLE LINE IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / E-8	ML012040470	2
C2PSFV4461	RHR SAMPLE HEADER ORC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / D-7	ML012040470	2
C2PSFV4824	SI ACCUMULATOR SAMPLE HEADER IRC CONTAINMENT ISOLATION VALVE	5Z329Z00045#2 / B-8	ML012040470	2
C2RMFV7659	RMW TO CVCS SUPPLY HEADER FLOW CONTROL VALVE	5R279F05033#2 / F-7	ML012040470	3
C2SBFV4187	STEAM GENERATOR 2C SAMPLE LINE ORC FLOW CONTROL VALVE	5S209F20001#2 / D-1	ML012040470	2
C2SIPV3929	SAFETY INJECTION ACCUMULATOR 2B NITROGEN SUPPLY VENT VALVE	5N129F05016#2 / E-4	ML012040470	2
D2AFFV0143	TERRY TURBINE WARM-UP VALVE	5S142F00024#2 / G-8	ML012040470	3
D2CCFV4493	RCP AND HEAT EXCHANGERS CCW RETURN ORC FLOW CONTROL VALVE	5R209F05021#2 / H-1	ML012040470	2
N2CCPSV4492	CCW NNS OUTLET HEADER RELIEF VALVE	5R209F05020#2 / B-6	ML012040470	3
N2CCPSV4511	CCW HX 2A OUTLET RELIEF VALVE	5R209F05017#2 / B-5	ML012040470	3
N2CCPSV4516	CCW HX 2B OUTLET RELIEF VALVE	5R209F05018#2 / B-6	ML012040470	3
N2CCPSV4521	CCW HX 2C OUTLET RELIEF VALVE	5R209F05019#2 / B-6	ML012040470	3
N2CCPSV4532	RHR HX 2A OUTLET RELIEF VALVE	5R209F05017#2 / G-3	ML012040470	3
N2CCPSV4533	RHR PUMP 2A OUTLET RELIEF VALVE	5R209F05017#2 / G-4	ML012040470	3
N2CCPSV4537	RCFC COOLING COIL 21A OUTLET RELIEF VALVE	5R209F05017#2 / E-4	ML012040470	3
N2CCPSV4539	RCFC COOLING COIL 22A OUTLET RELIEF VALVE	5R209F05017#2 / C-4	ML012040470	3
N2CCPSV4549	RHR HX 2B OUTLET RELIEF VALVE	5R209F05018#2 / G-2	ML012040470	3

ATTACHMENT 9: Unit 2 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
N2CCPSV4550	RHR PUMP 2B OUTLET RELIEF VALVE	5R209F05018#2 / G-3	ML012040470	3
N2CCPSV4554	RCFC COOLING COIL 21B OUTLET RELIEF VALVE	5R209F05018#2 / E-4	ML012040470	3
N2CCPSV4556	RCFC COOLING COIL 22B OUTLET RELIEF VALVE	5R209F05018#2 / C-4	ML012040470	3
N2CCPSV4566	RHR HX 2C OUTLET RELIEF VALVE	5R209F05019#2 / G-2	ML012040470	3
N2CCPSV4567	RHR PUMP 2C OUTLET RELIEF VALVE	5R209F05019#2 / G-3	ML012040470	3
N2CCPSV4571	RCFC COOLING COIL 21C OUTLET RELIEF VALVE	5R209F05019#2 / E-4	ML012040470	3
N2CCPSV4573	RCFC COOLING COIL 22C OUTLET RELIEF VALVE	5R209F05019#2 / C-3	ML012040470	3
N2CCPSV4580	CCP 2B LUBE OIL COOLER OUTLET RELIEF VALVE	5R209F05020#2 / G-6	ML012040470	3
N2CCPSV4582	CCP 2A LUBE OIL COOLER OUTLET RELIEF VALVE	5R209F05020#2 / G-4	ML012040470	3
N2CCPSV4584	PDP SUPPLEMENTARY COOLER AHU OUTLET RELIEF VALVE	5R209F05020#2 / G-5	ML012040470	3
N2CCPSV4586	CCP SUPPLEMENTARY COOLER AHU 21A OUTLET RELIEF VALVE	5R209F05020#2 / G-3	ML012040470	3
N2CCPSV4588	CCP SUPPLEMENTARY COOLER AHU 21B OUTLET RELIEF VALVE	5R209F05020#2 / G-5	ML012040470	3
N2CCPSV4613	SEAL WATER HX 2A OUTLET RELIEF VALVE	5R209F05020#2 / E-2	ML012040470	3
N2CCPSV4616	RCP 2A UPPER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#2 / C-6	ML012040470	3
N2CCPSV4618	RCP 2A LOWER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#2 / B-6	ML012040470	3
N2CCPSV4620	RCP 2A THERMAL BARRIER OUTLET RELIEF VALVE	5R209F05021#2 / A-6	ML012040470	3
N2CCPSV4622	RCP 2B UPPER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#2 / C-3	ML012040470	3
N2CCPSV4624	RCP 2B LOWER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#2 / B-3	ML012040470	3
N2CCPSV4626	RCP 2B THERMAL BARRIER OUTLET RELIEF VALVE	5R209F05021#2 / A-3	ML012040470	3
N2CCPSV4628	RCP 2C UPPER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#2 / F-3	ML012040470	3
N2CCPSV4630	RCP 2C LOWER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#2 / E-3	ML012040470	3
N2CCPSV4632	RCP 2C THERMAL BARRIER OUTLET RELIEF VALVE	5R209F05021#2 / D-3	ML012040470	3
N2CCPSV4634	RCP 2D UPPER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#2 / F-6	ML012040470	3
N2CCPSV4636	RCP 2D LOWER BEARING OIL COOLER OUTLET RELIEF VALVE	5R209F05021#2 / E-6	ML012040470	3
N2CCPSV4638	RCP 2D THERMAL BARRIER OUTLET RELIEF VALVE	5R209F05021#2 / D-6	ML012040470	3
N2CCPSV4639	RCB CCW RETURN HEADER RELIEF VALVE	5R209F05021#2 / C-2	ML012040470	3
N2CCPSV4645	RCP 2) MOTOR AIR COOLER NO. 1 OUTLET RELIEF VALVE	5R209F05021#2 / C-7	ML012040470	3
N2CCPSV4645A	RCP 2A MOTOR AIR COOLER NO. 2 OUTLET RELIEF VALV	5R209F05021#2 / C-7	ML012040470	3
N2CCPSV4646	RCP 2B MOTOR AIR COOLER NO. 1 OUTLET RELIEF VALVE	5R209F05021#2 / D-3	ML012040470	3
N2CCPSV4646A	RCP 2B MOTOR AIR COOLER NO. 2 OUTLET RELIEF VALVE	5R209F05021#2 / C-3	ML012040470	3
N2CCPSV4647	RCP 2C MOTOR AIR COOLER NO. 1 OUTLET RELIEF VALVE	5R209F05021#2 / G-3	ML012040470	3
N2CCPSV4647A	RCP 2C MOTOR AIR COOLER NO. 2 OUTLET RELIEF VALVE	5R209F05021#2 / F-3	ML012040470	3
N2CCPSV4648	RCP 2D MOTOR AIR COOLER NO. 1 OUTLET RELIEF VALVE	5R209F05021#2 / G-6	ML012040470	3
N2CCPSV4648A	RCP 2D MOTOR AIR COOLER NO. 2 OUTLET RELIEF VALVE	5R209F05021#2 / F-6	ML012040470	3
N2CHPSV9471	ECHW TRAIN A EXPANSION TANK VTS004	5V119V10001#2 / H-7	ML012040470	3
N2CHPSV9471A	ECHW TRAIN A EXPANSION TANK VTS004 NITROGEN	5V119V10001#2 / H-7	ML012040470	3
N2CHPSV9481	ECHW TRAIN B EXPANSION TANK VTS005	5V119V10001#2 / E-7	ML012040470	3
N2CHPSV9481A	ECHW TRAIN B EXPANSION TANK VTS005 NITROGEN	5V119V10001#2 / E-7	ML012040470	3
N2CHPSV9491	ECHW TRAIN C EXPANSION TANK VTS006	5V119V10001#2 / C-7	ML012040470	3
N2CHPSV9491A	ECHW TRAIN C EXPANSION TANK VTS006 NITROGEN	5V119V10001#2 / C-7	ML012040470	3
N2CHPSV9502	ECHW TRAIN A ESSEN CHLR 22A OUTLET	5V119V10001#2 / G-4	ML012040470	3
N2CHPSV9508	ECHW TRAIN B ESSEN CHLR 22B OUTLET	5V119V10001#2 / E-4	ML012040470	3
N2CHPSV9514	ECHW TRAIN C ESSEN CHLR 22C OUTLET	5V119V10001#2 / B-4	ML012040470	3
N2CVFCV0110A	BORIC ACID TO CVCS BLENDER TEE FLOW CONTROL VALVE	5R179F05007#2 / D-2	ML012040470	2
N2CVFCV0110B	CVCS BLENDED FLOW TO VCT OUTLET FLOW CONTROL VALVE	5R179F05007#2 / F-3	ML012040470	2
N2CVFCV0111A	RX MAKE-UP TO CVCS BLENDING TEE FLOW CONTROL VALVE	5R179F05007#2 / F-2	ML012040470	2
N2CVFCV0111B	CVCS BLENDED FLOW TO VCT FLOW CONTROL VALVE	5R179F05007#2 / F-3	ML012040470	2
N2CVFCV0201	CENTRIFUGAL CHARGING PUMP 2A RECIRC FLOW CONTROL VALVE	5R179F05007#2 / C-6	ML012040470	2
N2CVFCV0202	CENTRIFUGAL CHARGING PUMP 2B RECIRC FLOW CONTROL VALVE	5R179F05007#2 / D-6	ML012040470	2
N2CVPSV3101	CVCS VOLUME CONTROL TANK PRESSURE RELIEF VALVE	5R179F05007#2 / F-4	ML012040470	2
N2CVPSV3376	BTRS LETDOWN CHILLER HX INLET PRESSURE RELIEF VALVE	5R179F05008#2 / F-2	ML012040470	2
N2EWPSV6853	CCW HEAT EXCHANGER TRAIN A PRESSURE RELIEF	5R289F05038SH1#2 / G-	ML012040470	3
N2EWPSV6855	DG HEAT EXCHANGER TRAIN A PRESSURE RELIEF	5R289F05038SH1#2 / G-	ML012040470	3
N2EWPSV6856	CCW PUMP SUPP CLR TRAIN A PRESSURE RELIEF	5R289F05038SH1#2 / G-	ML012040470	3
N2EWPSV6863	CCW HEAT EXCHANGER TRAIN B PRESSURE RELIEF	5R289F05038SH2#2 / G-	ML012040470	3
N2EWPSV6865	DG HEAT EXCHANGER TRAIN B PRESSURE RELIEF	5R289F05038SH2#2 / G-	ML012040470	3
N2EWPSV6866	CCW PUMP SUPP CLR TRAIN B PRESSURE RELIEF	5R289F05038SH2#2 / G-	ML012040470	3
N2EWPSV6873	CCW HEAT EXCHANGER TRAIN C PRESSURE RELIEF	5R289F05038SH3#2 / G-	ML012040470	3
N2EWPSV6875	DG HEAT EXCHANGER TRAIN C PRESSURE RELIEF	5R289F05038SH3#2 / G-	ML012040470	3
N2EWPSV6876	CCW PUMP SUPP CLR TRAIN C PRESSURE RELIEF	5R289F05038SH3#2 / G-	ML012040470	3
N2EWPSV6904	EAB HVAC CHILLER 4 TRAIN A PRESSURE RELIEF	5R289F05038SH1#2 / G-	ML012040470	3
N2EWPSV6905	EAB HVAC CHILLER 5 TRAIN B PRESSURE RELIEF	5R289F05038SH2#2 / G-	ML012040470	3
N2EWPSV6906	EAB HVAC CHILLER 6 TRAIN C PRESSURE RELIEF	5R289F05038SH3#2 / G-	ML012040470	3
N2FWFCV0551	STEAM GENERATOR 2A FEEDWATER REG VALVE	5S139F00063#2 / D-8	ML012040470	NC
N2FWFCV0552	STEAM GENERATOR 2B FEEDWATER REG VALVE	5S139F00063#2 / D-6	ML012040470	NC
N2FWFCV0553	STEAM GENERATOR 2C FEEDWATER REG VALVE	5S139F00063#2 / D-4	ML012040470	NC
N2FWFCV0554	STEAM GENERATOR 2D FEEDWATER REG VALVE	5S139F00063#2 / D-2	ML012040470	NC

ATTACHMENT 9: Unit 2 ML012040470 Exempt Valve List

Valve ID	Component Description	Drawing / Coordinate	Category	Class
N2FWFV7151	STEAM GENERATOR 2A LOW POWER FEED REG VALVE	5S139F00063#2 / D-7	ML012040470	NC
N2FWFV7152	STEAM GENERATOR 2B LOW POWER FEED REG VALVE	5S139F00063#2 / D-5	ML012040470	NC
N2FWFV7153	STEAM GENERATOR 2C LOW POWER FEED REG VALVE	5S139F00063#2 / D-3	ML012040470	NC
N2FWFV7154	STEAM GENERATOR 2D LOW POWER FEED REG VALVE	5S139F00063#2 / D-1	ML012040470	NC
N2LUPSV5482	LUBE OIL CIRC PUMP DISCHARGE SAFETY VALVE	5Q159F22542#2 / D-7	ML012040470	3
N2LUPSV5582	LUBE OIL CIRC PUMP DISCHARGE SAFETY VALVE	5Q159F22542#2 / D-5	ML012040470	3
N2LUPSV5682	LUBE OIL CIRC PUMP DISCHARGE SAFETY VALVE	5Q159F22542#2 / D-2	ML012040470	3
N2RHPSV3934	LHSI PUMP 2A HOT LEG RECIRC RELIEF VALVE	5R169F20000#2 / C-4	ML012040470	2
N2RHPSV3943	LHSI PUMP 2B HOT LEG RECIRC RELIEF VALVE	5R169F20000#2 / F-4	ML012040470	2
N2RHPSV3944	LHSI PUMP 2C HOT LEG RECIRC RELIEF VALVE	5R169F20000#2 / H-4	ML012040470	2
N2SIFV3950	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 2A COLD LEG SIS TEST ISOLATION VALVE	5R169F20000#2 / C-2	ML012040470	2
N2SIFV3951	LO HEAD SAFETY INJECTION TRAIN A TO LOOP 2A COLD LEG SIS TEST ISOLATION VALVE	5R169F20000#2 / C-2	ML012040470	2
N2SIFV3952	HI HEAD SAFETY INJECTION TRAIN A TO LOOP 2A COLD LEG SIS TEST ISOLATION VALVE	5N129F05013#2 / F-7	ML012040470	2
N2SIFV3953	HI HEAD SAFETY INJ TRN A TO LOOP 2A HOT LEG SIS TEST ISOL VALVE	5N129F05013#2 / G-7	ML012040470	2
N2SIFV3954	SAFETY INJECTION TRAIN A TO LOOP 1A HOT LEG SIS TEST ISOLATION VALVE	5N129F05013#2 / G-8	ML012040470	2
N2SIFV3955	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 2B COLD LEG SIS TEST ISOLATION VALVE	5R169F20000#2 / E-2	ML012040470	2
N2SIFV3956	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 2B HOT LEG SIS TEST ISOLATION VALVE	5R169F20000#2 / F-2	ML012040470	2
N2SIFV3957	HI HEAD SAFETY INJECTION TRAIN B TO LOOP 2B COLD LEG SIS TEST ISOLATION VALVE	5N129F05014#2 / F-7	ML012040470	2
N2SIFV3958	HI HEAD SAFETY INJECTION TRAIN B TO LOOP 2B HOT LEG SIS TEST ISOLATION VALVE	5N129F05014#2 / G-7	ML012040470	2
N2SIFV3959	SAFETY INJECTION TRAIN B TO LOOP 2B HOT LEG SIS TEST ISOLATION VALVE	5N129F05014#2 / H-7	ML012040470	2
N2SIFV3960	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 2C COLD LEG SIS TEST ISOLATION VALVE	5R169F20000#2 / G-2	ML012040470	2
N2SIFV3964	SAFETY INJECTION TRAIN C PUMPS TO LOOP 2C HOT LEG SIS TEST ISOLATION VALVE	5N129F05015#2 / G-7	ML012040470	2
N2SIFV3967	SI ACC 2B OUTLET CK SI-0046B DOWNSTREAM SIS TEST VALVE	5N129F05016#2 / D-7	ML012040470	2
N2SIFV3968	SI ACC 2B OUTLET CK SI-0046B UPSTREAM SIS TEST VALVE	5N129F05016#2 / D-6	ML012040470	2
N2SIFV3969	SI ACC 2A OUTLET CK SI-0046A UPSTREAM SIS TEST VALVE	5N129F05016#2 / G-6	ML012040470	2
N2SIFV3972	SI ACC 2A OUTLET CK SI-0046A DOWNSTREAM SIS TEST VALVE	5N129F05016#2 / G-6	ML012040470	2
N2SIFV3973	SAFETY INJECTION ACCUMULATOR 2A FILL LINE ISOLATION VALVE	5N129F05016#2 / F-4	ML012040470	2
N2SIFV3974	SAFETY INJECTION ACCUMULATOR 2B FILL LINE ISOLATION VALVE	5N129F05016#2 / D-4	ML012040470	2
N2SIFV3975	SAFETY INJECTION ACCUMULATOR 2C FILL LINE ISOLATION VALVE	5N129F05016#2 / B-4	ML012040470	2
N2SIPSV3935	TRAIN A SI PUMP SUCTION HEADER RELIEF VALVE	5N129F05013#2 / C-2	ML012040470	2
N2SIPSV3938	TRAIN A HHSI HOT LEG/COLD LEG RELIEF VALVE	5N129F05013#2 / G-6	ML012040470	2
N2SIPSV3939	TRAIN B SI PUMP SUCTION HEADER RELIEF VALVE	5N129F05014#2 / D-2	ML012040470	2
N2SIPSV3940	TRAIN B HHSI HOT LEG/COLD LEG RELIEF VALVE	5N129F05014#2 / F-6	ML012040470	2
N2SIPSV3941	TRAIN C SI PUMP SUCTION HEADER RELIEF VALVE	5N129F05015#2 / C-2	ML012040470	2
N2SIPSV3942	TRAIN C HHSI HOT LEG/COLD LEG RELIEF VALVE	5N129F05015#2 / F-6	ML012040470	2
N2SIPSV3977	SI ACCUMULATOR TANK 2C RELIEF VALVE	5N129F05016#2 / C-4	ML012040470	2
N2SIPSV3980	SI ACCUMULATOR TANK 2B RELIEF VALVE	5N129F05016#2 / E-4	ML012040470	2
N2SIPSV3981	SI ACCUMULATOR TANK 2A RELIEF VALVE	5N129F05016#2 / G-4	ML012040470	2

ATTACHMENT 10: Unit 1 ISTC Skid Tested Valve List

Valve ID	Component Description	Drawing / Coordinate	Cat	Class
2C261XXC0009	PERSONNEL AIRLOCK OUTER DOOR SEAL AIR SUPPLY TO AIR TANKS CHECK VALVE	5C269F05060#1 / G-5	Skid	2
2C261XXC0010	PERSONNEL AIRLOCK REACTOR DOOR SEAL AIR SUPPLY TO AIR TANKS CHECK VALVE	5C269F05060#1 / G-7	Skid	2
2C261XXC0013	PERSONNEL AIRLOCK OUTER DOOR INNER SEAL AIR TANK INLET CHECK VALVE	5C269F05060#1 / F-6	Skid	2
2C261XXC0014	PERSONNEL AIRLOCK OUTER DOOR OUTER SEAL AIR TANK INLET CHECK VALVE	5C269F05060#1 / F-5	Skid	2
2C261XXC0015	PERSONNEL AIRLOCK REACTOR DOOR INNER SEAL AIR TANK INLET CHECK VALVE	5C269F05060#1 / F-8	Skid	2
2C261XXC0016	PERSONNEL AIRLOCK REACTOR DOOR OUTER SEAL AIR TANK INLET CHECK VALVE	5C269F05060#1 / F-7	Skid	2
2C261XXC0018	EQUALIZING BALL VALVE	5C269F05060#1 / F-5	Skid	2
2C261XXC0019	EQUALIZING BALL VALVE	5C269F05060#1 / F-5	Skid	2
2C261XXC0021	EQUALIZING BALL VALVE	5C269F05060#1 / F-8	Skid	2
2C261XXC0022	EQUALIZING BALL VALVE	5C269F05060#1 / F-8	Skid	2
2C261XXC0024	AIR TANK OUTLET ISOLATION VALVE	5C269F05060#1 / E-5	Skid	2
2C261XXC0025	AIR TANK OUTLET ISOLATION VALVE	5C269F05060#1 / E-6	Skid	2
2C261XXC0026	AIR TANK OUTLET ISOLATION VALVE	5C269F05060#1 / E-7	Skid	2
2C261XXC0027	AIR TANK OUTLET ISOLATION VALVE	5C269F05060#1 / E-8	Skid	2
2C261XXC0048	RCB PERSONNEL AIRLOCK AIR SAFETY VALVE	5C269F05060#1 / C-7	Skid	2
2C261XXC0049	RCB PERSONNEL AIRLOCK AIR SAFETY VALVE	5C269F05060#1 / C-7	Skid	2
2C501XXC0060	EQUALIZING BALL VALVE	5C269F05060#1 / F-5	Skid	2
2C501XXC0061	EQUALIZING BALL VALVE	5C269F05060#1 / F-5	Skid	2
2C501XXC0070	EQUALIZING BALL VALVE	5C269F05060#1 / F-8	Skid	2
2C501XXC0071	EQUALIZING BALL VALVE	5C269F05060#1 / F-8	Skid	2
2R171SCV3008	CCP 1B AUX LUBE OIL PUMP DISCHARGE CHECK VALVE	2R171F05062 / D-7	Skid	NC
2R171SCV3009	MAIN LUBE OIL PUMP SUCTION CHECK VALVE (INTERNAL TO TANK)	2R171F05062 / H-6	Skid	NC
2R171SCV3010	MAIN LUBE OIL PUMP SUCTION CHECK VALVE (INTERNAL TO TANK)	2R171F05062 / D-6	Skid	NC
3Q151SJW3036	STANDBY JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#1 / E7	Skid	3
3Q151SJW3037	STANDBY JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#1 / E4	Skid	3
3Q151SJW3038	STANDBY JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#1 / E1	Skid	3
3Q151SJW3039	ENGINE-DRIVEN JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#1 / D-7	Skid	NC
3Q151SJW3040	ENGINE-DRIVEN JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#1 / D-5	Skid	NC
3Q151SJW3041	ENGINE-DRIVEN JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#1 / D-2	Skid	NC
3Q151SJW3042	JACKET WATER CIRC HEATER OUTLET CHECK VALVE	5Q159F22540#1 / C7	Skid	3
3Q151SJW3043	JACKET WATER CIRC HEATER OUTLET CHECK VALVE	5Q159F22540#1 / C4	Skid	3
3Q151SJW3044	JACKET WATER CIRC HEATER OUTLET CHECK VALVE	5Q159F22540#1 / C2	Skid	3
3Q151SLU3078	ENGINE-DRIVEN LUBE OIL PUMP SUCTION CHECK VALVE	5Q159F22542#1 / E-7	Skid	NC
3Q151SLU3079	ENGINE-DRIVEN LUBE OIL PUMP SUCTION CHECK VALVE	5Q159F22542#1 / E-5	Skid	NC
3Q151SLU3080	ENGINE-DRIVEN LUBE OIL PUMP SUCTION CHECK VALVE	5Q159F22542#1 / E-2	Skid	NC
3Q151SLU3081	STANDBY LUBE OIL PUMP DISCHARGE CHECK VALVE	5Q159F22542#1 / E7	Skid	3
3Q151SLU3082	STANDBY LUBE OIL PUMP DISCHARGE CHECK VALVE	5Q159F22542#1 / E4	Skid	3
3Q151SLU3083	STANDBY LUBE OIL PUMP DISCHARGE CHECK VALVE	5Q159F22542#1 / E2	Skid	3
3Q151SLU3084	LUBE OIL CIRC HEATER OUTLET CHECK VALVE	5Q159F22542#1 / E7	Skid	3
3Q151SLU3085	LUBE OIL CIRC HEATER OUTLET CHECK VALVE	5Q159F22542#1 / E4	Skid	3
3Q151SLU3086	LUBE OIL CIRC HEATER OUTLET CHECK VALVE	5Q159F22542#1 / E2	Skid	3
3Q151SLU3090	TURBO CHARGER LUBE OIL SUPPLY CHECK VALVE	5Q159F22542#1 / G-8	Skid	NC
3Q151SLU3091	TURBO CHARGER LUBE OIL SUPPLY CHECK VALVE	5Q159F22542#1 / G-5	Skid	NC
3Q151SLU3092	TURBO CHARGER LUBE OIL SUPPLY CHECK VALVE	5Q159F22542#1 / G-3	Skid	NC
3Q151TDO0056	FUEL OIL TRANSFER PUMP DISCHARGE TO FOST NORMAL FILL LINE CHECK VALVE	5Q159F00045#1 / F-6	Skid	3
3Q151TDO0062	FUEL OIL TRANSFER PUMP DISCHARGE TO FOST NORMAL FILL LINE CHECK VALVE	5Q159F00045#1 / F-4	Skid	3
3Q151TDO0068	FUEL OIL TRANSFER PUMP DISCHARGE TO FOST NORMAL FILL LINE CHECK VALVE	5Q159F00045#1 / F-1	Skid	3
3Q151TDO0126	COLLECTOR TANK VENT TO FUEL OIL STORAGE TANK CHECK VALVE	5Q159F00045#1 / F6	Skid	3
3Q151TDO0127	COLLECTOR TANK VENT TO FUEL OIL STORAGE TANK CHECK VALVE	5Q159F00045#1 / F4	Skid	3
3Q151TDO0128	COLLECTOR TANK VENT TO FUEL OIL STORAGE TANK CHECK VALVE	5Q159F00045#1 / F1	Skid	3
3R171SCV3007	CCP 1A AUX LUBE OIL PUMP DISCHARGE CHECK VALVE	2R171F05062 / H-7	Skid	NC
N1CVPSV3386	CCP 1A LUBE OIL HEADER PRESSURE RELIEF VALVE	2R171F05062 / H-7	Skid	NC
N1CVPSV3387	CCP 1B LUBE OIL HEADER PRESSURE RELIEF VALVE	2R171F05062 / D-7	Skid	NC
N1SDFV5434	DG #11 LEFT BANK CRANKING AIR VALVE	5Q159F22544#1 / C-7	Skid	NC
N1SDFV5435	DG #11 RIGHT BANK CRANKING AIR VALVE	5Q159F22544#1 / G-7	Skid	NC
N1SDFV5534	DG #12 LEFT BANK CRANKING AIR VALVE	5Q159F22544#1 / C-4	Skid	NC
N1SDFV5535	DG #12 RIGHT BANK CRANKING AIR VALVE	5Q159F22544#1 / G-4	Skid	NC
N1SDFV5634	DG #13 LEFT BANK CRANKING AIR VALVE	5Q159F22544#1 / C-2	Skid	NC
N1SDFV5635	DG #13 RIGHT BANK CRANKING AIR VALVE	5Q159F22544#1 / G-2	Skid	NC

ATTACHMENT 11: Unit 2 ISTC Skid Tested Valve List

Valve ID	Component Description	Drawing / Coordinate	Cat	Class
2C262XXC0009	PERSONNEL AIRLOCK OUTER DOOR SEAL AIR SUPPLY TO AIR TANKS CHECK VALVE	5C269F05060#2 / G-5	Skid	2
2C262XXC0010	PERSONNEL AIRLOCK REACTOR DOOR SEAL AIR SUPPLY TO AIR TANKS CHECK VALVE	5C269F05060#2 / G-7	Skid	2
2C262XXC0013	PERSONNEL AIRLOCK OUTER DOOR INNER SEAL AIR TANK INLET CHECK VALVE	5C269F05060#2 / F-6	Skid	2
2C262XXC0014	PERSONNEL AIRLOCK OUTER DOOR OUTER SEAL AIR TANK INLET CHECK VALVE	5C269F05060#2 / F-5	Skid	2
2C262XXC0015	PERSONNEL AIRLOCK REACTOR DOOR INNER SEAL AIR TANK INLET CHECK VALVE	5C269F05060#2 / F-8	Skid	2
2C262XXC0016	PERSONNEL AIRLOCK REACTOR DOOR OUTER SEAL AIR TANK INLET CHECK VALVE	5C269F05060#2 / F-7	Skid	2
2C262XXC0018	EQUALIZING BALL VALVE	5C269F05060#2 / F-5	Skid	2
2C262XXC0019	EQUALIZING BALL VALVE	5C269F05060#2 / F-5	Skid	2
2C262XXC0021	EQUALIZING BALL VALVE	5C269F05060#2 / F-8	Skid	2
2C262XXC0022	EQUALIZING BALL VALVE	5C269F05060#2 / F-8	Skid	2
2C262XXC0024	AIR TANK OUTLET ISOLATION VALVE	5C269F05060#2 / E-5	Skid	2
2C262XXC0025	AIR TANK OUTLET ISOLATION VALVE	5C269F05060#2 / E-6	Skid	2
2C262XXC0026	AIR TANK OUTLET ISOLATION VALVE	5C269F05060#2 / E-7	Skid	2
2C262XXC0027	AIR TANK OUTLET ISOLATION VALVE	5C269F05060#2 / E-8	Skid	2
2C262XXC0048	RCB PERSONNEL AIRLOCK AIR SAFETY VALVE	5C269F05060#2 / C-7	Skid	2
2C262XXC0049	RCB PERSONNEL AIRLOCK AIR SAFETY VALVE	5C269F05060#2 / C-7	Skid	2
2C502XXC0060	EQUALIZING BALL VALVE	5C269F05060#2 / F-5	Skid	2
2C502XXC0061	EQUALIZING BALL VALVE	5C269F05060#2 / F-5	Skid	2
2C502XXC0070	EQUALIZING BALL VALVE	5C269F05060#2 / F-8	Skid	2
2C502XXC0071	EQUALIZING BALL VALVE	5C269F05060#2 / F-8	Skid	2
2R172SCV3007	CCP 2A AUX LUBE OIL PUMP DISCHARGE CHECK VALVE	5R172F05062 / H-7	Skid	NC
2R172SCV3008	CCP 2B AUX LUBE OIL PUMP DISCHARGE CHECK VALVE	5R172F05062 / D-7	Skid	NC
2R172SCV3009	MAIN LUBE OIL PUMP SUCTION CHECK VALVE (INTERNAL TO TANK)	5R172F05062 / H-6	Skid	NC
2R172SCV3010	MAIN LUBE OIL PUMP SUCTION CHECK VALVE (INTERNAL TO TANK)	5R172F05062 / D-6	Skid	NC
3Q152SJW3036	STANDBY JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#2 / E7	Skid	3
3Q152SJW3037	STANDBY JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#2 / E4	Skid	3
3Q152SJW3038	STANDBY JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#2 / E1	Skid	3
3Q152SJW3039	ENGINE-DRIVEN JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#2 / D-7	Skid	NC
3Q152SJW3040	ENGINE-DRIVEN JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#2 / D-5	Skid	NC
3Q152SJW3041	ENGINE-DRIVEN JACKET WATER PUMP DISCHARGE CHECK VALVE	5Q159F22540#2 / D-2	Skid	NC
3Q152SJW3042	JACKET WATER CIRC HEATER OUTLET CHECK VALVE	5Q159F22540#2 / C7	Skid	3
3Q152SJW3043	JACKET WATER CIRC HEATER OUTLET CHECK VALVE	5Q159F22540#2 / C4	Skid	3
3Q152SJW3044	JACKET WATER CIRC HEATER OUTLET CHECK VALVE	5Q159F22540#2 / C2	Skid	3
3Q152SLU3078	ENGINE-DRIVEN LUBE OIL PUMP SUCTION CHECK VALVE	5Q159F22542#2 / E-7	Skid	NC
3Q152SLU3079	ENGINE-DRIVEN LUBE OIL PUMP SUCTION CHECK VALVE	5Q159F22542#2 / E-5	Skid	NC
3Q152SLU3080	ENGINE-DRIVEN LUBE OIL PUMP SUCTION CHECK VALVE	5Q159F22542#2 / E-2	Skid	NC
3Q152SLU3081	STANDBY LUBE OIL PUMP DISCHARGE CHECK VALVE	5Q159F22542#2 / E7	Skid	3
3Q152SLU3082	STANDBY LUBE OIL PUMP DISCHARGE CHECK VALVE	5Q159F22542#2 / E4	Skid	3
3Q152SLU3083	STANDBY LUBE OIL PUMP DISCHARGE CHECK VALVE	5Q159F22542#2 / E2	Skid	3
3Q152SLU3084	LUBE OIL CIRC HEATER OUTLET CHECK VALVE	5Q159F22542#2 / E7	Skid	3
3Q152SLU3085	LUBE OIL CIRC HEATER OUTLET CHECK VALVE	5Q159F22542#2 / E4	Skid	3
3Q152SLU3086	LUBE OIL CIRC HEATER OUTLET CHECK VALVE	5Q159F22542#2 / E2	Skid	3
3Q152SLU3090	TURBO CHARGER LUBE OIL SUPPLY CHECK VALVE	5Q159F22542#2 / G-8	Skid	NC
3Q152SLU3091	TURBO CHARGER LUBE OIL SUPPLY CHECK VALVE	5Q159F22542#2 / G-5	Skid	NC
3Q152SLU3092	TURBO CHARGER LUBE OIL SUPPLY CHECK VALVE	5Q159F22542#2 / G-3	Skid	NC
3Q152TDO0056	FUEL OIL TRANSFER PUMP DISCHARGE TO FOST NORMAL FILL LINE CHECK VALVE	5Q159F00045#2 / F-6	Skid	3
3Q152TDO0062	FUEL OIL TRANSFER PUMP DISCHARGE TO FOST NORMAL FILL LINE CHECK VALVE	5Q159F00045#2 / F-4	Skid	3
3Q152TDO0068	FUEL OIL TRANSFER PUMP DISCHARGE TO FOST NORMAL FILL LINE CHECK VALVE	5Q159F00045#2 / F-1	Skid	3
3Q152TDO0126	COLLECTOR TANK VENT TO FUEL OIL STORAGE TANK CHECK VALVE	5Q159F00045#2 / F6	Skid	3
3Q152TDO0127	COLLECTOR TANK VENT TO FUEL OIL STORAGE TANK CHECK VALVE	5Q159F00045#2 / F4	Skid	3
3Q152TDO0128	COLLECTOR TANK VENT TO FUEL OIL STORAGE TANK CHECK VALVE	5Q159F00045#2 / F1	Skid	3
N2CVPSV3386	CCP 2A LUBE OIL HEADER PRESSURE RELIEF VALVE	2R172F05062 / H-7	Skid	NC
N2CVPSV3387	CCP 2B LUBE OIL HEADER PRESSURE RELIEF VALVE	5R172F05062 / D-7	Skid	NC
N2SDFV5434	DG #21 LEFT BANK CRANKING AIR VALVE	5Q159F22544#2 / C-7	Skid	NC
N2SDFV5435	DG #21 RIGHT BANK CRANKING AIR VALVE	5Q159F22544#2 / G-7	Skid	NC
N2SDFV5534	DG #22 LEFT BANK CRANKING AIR VALVE	5Q159F22544#2 / C-4	Skid	NC
N2SDFV5535	DG #22 RIGHT BANK CRANKING AIR VALVE	5Q159F22544#2 / G-4	Skid	NC
N2SDFV5634	DG #23 LEFT BANK CRANKING AIR VALVE	5Q159F22544#2 / C-2	Skid	NC
N2SDFV5635	DG #23 RIGHT BANK CRANKING AIR VALVE	5Q159F22544#2 / G-2	Skid	NC

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-01

System: Chemical and Volume Control (CV)

Valve ID	Description	Code Class	Category	Drawing
C1(2)CVFV0011	CVCS Letdown Orifice Header Isolation Valve	2	B	5R179F05005
2R171(2)XCV0025	CVCS Charging ORC Containment Isolation MOV	2	A	5R179F05005
A1(2)CVFCV0205	CVCS Charging Discharge Header Flow Control Valve	2	B	5R179F05007
1R171(2)XCV0465	CVCS Letdown Isolation MOV	1	B	5R179F05005
1R171(2)XCV0468	CVCS Letdown Isolation MOV	1	B	5R179F05005

Valve Function:

C1(2)CVFV0011, 2R171(2)XCV0025 have a closed safety function to isolate the letdown line or charging line in response to a Containment Phase A signal.

2R171(2)XCV0025 is a containment isolation valve and has a closed safety function to maintain containment integrity.

In addition to the above closed safety function, 2R171(2)XCV0025 also has an open safety function to provide a flow path to the RCS for boron and water inventory control once the Phase A signal has been reset.

A1(2)CVFCV0205 has an open safety function to provide a flow path to the RCS for boron and water inventory control.

1R171(2)XCV0465 and 1R171(2)XCV0468 have a closed safety function to isolate the letdown line in response to a pressurizer low level signal to maintain the RCS pressure boundary integrity.

Code Required Tests:

ISTC-3510, “Exercise Test Frequency”, requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke open and closed exercise) of these valves during normal power operation would require a momentary interruption of letdown and charging flow. Failure of any of these components in the closed position or interruptions to the letdown and charging flow has the potential to cause perturbations in RCS pressure and level control and could result in a plant shutdown. Isolation of letdown or charging during normal power operation would result in thermal shock and possible damage to the Regenerative Heat Exchanger and the Letdown Heat Exchanger.

Alternate Testing:

These valves will be tested (full stroke open and closed exercise) at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521(c)

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-02

System: Chemical and Volume Control (CV)

Valve ID	Description	Code Class	Category	Drawing
2R171(2)XCV0112B	CVCS Volume Control Tank Outlet MOV	2	B	5R179F05007
2R171(2)XCV0113A	CVCS Volume Control Tank Outlet MOV	2	B	5R179F05007

Valve Function:

Valves 2R171(2)XCV0112B and 2R171(2)XCV0113A have a closed safety function to switch charging pump suction from the VCT to the RWST in response to a SI signal coincident with an open signal from the RWST isolation valves, MOV-0112C and MOV-0113B.

Code Required Tests:

ISTC-3510, "Exercise Test Frequency", requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke close exercise) of valves 2R171(2)XCV0112B and 2R171(2)XCV0113A during normal power operation would require opening the RWST isolation valves to ensure charging pump suction is not lost. Opening the RWST isolation valves would affect the boron concentration of the RCS and cause an undesirable plant power transient.

Alternate Testing:

Valves 2R171(2)XCV0112B and 2R171(2)XCV0113A will be tested (full stroke close exercise) at each cold shutdown not to exceed once every three months per the requirements ofISTC-3521(c).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-03

System: Chemical and Volume Control (CV)

Valve ID	Description	Code Class	Category	Drawing
N1(2)CVLV3119	CVCS Auxiliary Spray Level Control Valve	1	B	5R179F05005

Valve Function:

This valve has an open safety function to provide auxiliary spray to the pressurizer to stabilize RCS pressure and collapse the pressurizer steam bubble.

Valve N1(2)CVLV3119 also has a passive closed safety function to maintain the RCS pressure boundary integrity.

Code Required Tests:

ISTC-3510, "Exercise Test Frequency", requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke open and close exercise) of these valves during normal power operation would subject the pressurizer auxiliary spray nozzle to cold water and could possibly thermally shock the nozzle. The introduction of the cold spray water into the pressurizer at power would create an undesired transient.

Alternate Testing:

This valve will be tested (full stroke open and close exercise) at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521(c).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-04

System: Chemical and Volume Control (CV)

Valve ID	Description	Code Class	Category	Drawing
2R171(2) XCV0224	CVCS Charging Pumps Suction from RWST Check Valve	2	C	5R179F05007
2R171(2)TCV0707	Centrifugal Charging Pump 1(2)B Discharge Bypass Check Valve	2	C	5R179F05007

Valve Function:

These valves have an open safety function to provide an emergency boration or an emergency alternate boration flow path to the RCS via the suction of the charging pumps.

Code Required Tests:

ISTC-3510, "Exercise Test Frequency", requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months. ISTC-3522(a) requires that each check valve be exercised or examined in a manner that verifies obturator travel to the closed and open position required to fulfill its function.

Basis for Deferral:

The operability testing (full stroke open exercise) of these valves during normal power operation would affect boron concentration in the RCS and cause an undesirable plant power transient and possible plant shutdown.

Alternate Testing:

These valves will be tested (full stroke open exercise) at each cold shutdown not to exceed once every three months per the requirements of ISTC-3522(b).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-05

System: Feedwater (FW)

Valve ID	Description	Code Class	Category	Drawing
A1(2)FWFV7141	Steam Generator 1(2)A ORC Feedwater Isolation Valve	2	B	5S139F00063
A1(2)FWFV7142	Steam Generator 1(2)B ORC Feedwater Isolation Valve	2	B	5S139F00063
A1(2)FWFV7143	Steam Generator 1(2)C ORC Feedwater Isolation Valve	2	B	5S139F00063
A1(2)FWFV7144	Steam Generator 1(2)D ORC Feedwater Isolation Valve	2	B	5S139F00063

Valve Function:

These valves have a closed safety function to stop feedwater flow to their respective steam generator upon receipt of a SG high-high level, low steam line pressure, safety injection initiation signal, a reactor trip in conjunction with low average reactor coolant system temperature, or an excessive cooldown signal.

Code Required Tests:

ISTC-3510, “Exercise Test Frequency”, requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke close exercise) of these valves during normal power operation would require an interruption of feedwater flow to the steam generators. Isolation of feedwater flow during normal power operation would cause an undesirable power transient and could possibly cause a turbine/reactor trip. The partial stroke exercise of these valves is undesirable because of the increased risk of a valve closure and subsequent plant transient. Any possible benefit from performing a partial stroke of these valves at power is outweighed by the increased risk of closing the valves and challenging plant systems. This position is consistent with NUREG-1482, Rev. 3, Section 4.2.6. (ref. CR 02-10007, NOC- NOC-02007695)

Alternate Testing:

These valves will be full-stroke close exercise tested at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521(c).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-06

System: Feedwater (FW)

Valve ID	Description	Code Class	Category	Drawing
A1(2)FWFV7189	Steam Generator 1(2)A Preheater ORC Bypass Valve	2	B	5S139F00063
A1(2)FWFV7190	Steam Generator 1(2)B Preheater ORC Bypass Valve	2	B	5S139F00063
A1(2)FWFV7191	Steam Generator 1(2)C Preheater ORC Bypass Valve	2	B	5S139F00063
A1(2)FWFV7192	Steam Generator 1(2)D Preheater ORC Bypass Valve	2	B	5S139F00063

Valve Function:

These valves have a closed safety function to stop feedwater flow to their respective steam generator upon receipt of a SG high-high level, safety injection initiation signal, or a reactor trip in conjunction with low average reactor coolant system temperature.

Code Required Tests:

ISTC-3510, "Exercise Test Frequency", requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke close exercise) of these valves during normal power operation would require injecting Main Feedwater through the cooler Auxiliary Feedwater lines into the steam generator. Injecting the cooler water existing in the auxiliary feedwater lines followed immediately by the hotter Main Feedwater flow would cause thermal shock and possible damage to the Auxiliary Feedwater nozzles at the steam generator boundary.

Alternate Testing:

These valves will be full-stroke close exercise tested at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521 (c).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-07

System: Reactor Containment Purge (HC)

Valve ID	Description	Code Class	Category	Drawing
2V141(2)ZHC0007	Reactor Containment Building Normal Purge Supply (ORC) Isolation Damper	2	A	5V149V00018
2V141(2)ZHC0008	Reactor Containment Building Normal Purge Supply (IRC) Isolation Damper	2	A	5V149V00018
2V141(2)ZHC0009	Reactor Containment Building Normal Purge Exhaust (IRC) Isolation Damper	2	A	5V149V00018
2V141(2)ZHC0010	Reactor Containment Building Normal Purge Exhaust (ORC) Isolation Damper	2	A	5V149V00018

Valve Function:

These valves have a leak tight, closed safety function to maintain containment integrity in response to a Phase A Containment Isolation signal.

Code Required Tests:

ISTC-3510, "Exercise Test Frequency", requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The 48 inch Containment Purge valves are required by Technical Specifications to be sealed closed during normal power operation.

Alternate Testing:

These valves will be full-stroke close exercise tested at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521(c).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-08

System: Main Steam (MS)

Valve ID	Description	Code Class	Category	Drawing
A1(2)MSFSV7414	Steam Generator 1(2)A Main Steam ORC Isolation Valve	2	B	5S109F00016
A1(2)MSFSV7424	Steam Generator 1(2)B Main Steam ORC Isolation Valve	2	B	5S109F00016
A1(2)MSFSV7434	Steam Generator 1(2)C Main Steam ORC Isolation Valve	2	B	5S109F00016
A1(2)MSFSV7444	Steam Generator 1(2)D Main Steam ORC Isolation Valve	2	B	5S109F00016

Valve Function:

These valves have a closed safety function in response to a low steam line pressure, high negative steam line pressure rate, or a high containment pressure signal to prevent more than one steam generator from blowing down in the event of a main steam line or feedwater line break, prevent containment over-pressurization from reverse flow due to a steam line break inside containment, and provide for isolation of the secondary side of the steam generators in the event of leakage (SGTR) or malfunctions (MSLB or FWLB) and to isolate non safety-related portions of the system.

Code Required Tests:

ISTC-3510, "Exercise Test Frequency", requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke close exercise) of these valves during normal power operation would isolate main steam flow from the steam generators which would result in a severe transient to the steam generator causing a plant trip. The partial stroke test circuitry of these valves is not fault-tolerant and the failure of a single limit switch or solenoid valve could result in the MSIV stroking completely shut. The partial stroke exercise of these valves is undesirable because of the increased risk of a valve closure and subsequent plant transient. Any possible benefit from performing a partial stroke of these valves at power is outweighed by the increased risk of closing the valves and challenging plant systems. This position is consistent with NUREG-1482, Rev. 3, Section 4.2.6.

Alternate Testing:

These valves will be full-stroke close exercised, stroke timed, and their fail-safe actuation verified at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521(c).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-09

System: Main Steam

Valve ID	Description	Code Class	Category	Drawing
A1(2)MSFV7412	SG 1(2)A Main Steam Isolation Bypass Valve	2	B	5S109F00016
A1(2)MSFV7422	SG 1(2)B Main Steam Isolation Bypass Valve	2	B	5S109F00016
A1(2)MSFV7432	SG 1(2)C Main Steam Isolation Bypass Valve	2	B	5S109F00016
A1(2)MSFV7442	SG 1(2)D Main Steam Isolation Bypass Valve	2	B	5S109F00016

Valve Function:

These valves have a close safety function in response to a low steam line pressure, high negative steam line pressure rate or a high containment pressure signal to prevent more than one steam generator from blowing down in the event of a main steam line or feedwater line break, prevent containment over-pressurization from reverse flow due to a steam line break inside containment and provide for isolation of the secondary side of the steam generators in the event of leakage (SGTR) or malfunctions (MSLB or FWLB) and to isolate non safety-related portions of the system.

Code Required Tests:

ISTC-3510, “Exercise Test Frequency”, requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

On-line open exercise testing cycles the main steam open permissive handswitch twice per valve creating risk of MSIV closure in event equipment malfunction or operator error. Valves are each opened twice a minimum of 2 minutes, slightly increasing steam demand and reactor thermal power. MSIBVs are only opened during plant startup for main steam warmup and gland sealing steam and remain in their safety position (closed) the remainder of the cycle. Any benefit from on-line open exercising of these valves is outweighed by the increased risk of MSIV closure and accompanying plant transient. This position is consistent with NUREG-1482, Rev. 3, Section 3.1, ‘Inservice Test Frequencies and Extensions for Valve Testing’. (CREE 19-6619-1)

Alternate Testing:

These valves will be full-stroke exercised, stroke timed closed and their fail-safe actuation verified at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521(f).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-10

System: Residual Heat Removal (RH)

Valve ID	Description	Code Class	Category	Drawing
1R161(2)XRH0060A	RHR Pump 1(2)A Suction From Loop 1A Hot Leg Isolation MOV	1	A	5R169F20000
1R161(2)XRH0060B	RHR Pump 1(2)B Suction From Loop 1B Hot Leg Isolation MOV	1	A	5R169F20000
1R161(2)XRH0060C	RHR Pump 1(2)C Suction From Loop 1C Hot Leg Isolation MOV	1	A	5R169F20000
1R161(2)XRH0061A	RHR Pump 1(2)A Suction MOV	1	A	5R169F20000
1R161(2)XRH0061B	RHR Pump 1(2)B Suction MOV	1	A	5R169F20000
1R161(2)XRH0061C	RHR Pump 1(2)C Suction MOV	1	A	5R169F20000

Valve Function:

These valves have a leak tight, closed safety function to maintain RCS pressure boundary integrity. These valves also have an open safety function to allow a safety grade cold shutdown of the RCS following a SGTR, SBLOCA, MSLB, or FWLB accident condition.

Code Required Tests:

ISTC-3510, “Exercise Test Frequency”, requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke open exercise) of these valves during normal power operation cannot be accomplished since these valves are interlocked with RCS pressure and cannot be opened when RCS pressure is greater than 350 psig.

Alternate Testing:

These valves will be stroke time tested (full stroke open and close exercise) at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521(c).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No.: CSJ-11

System: Residual Heat Removal (RH)

Valve ID	Description	Code Class	Category	Drawing
A1(2)RHHCV0864	RHR Heat Exchanger 1(2)A Outlet Valve	2	B	5R169F20000
B1(2)RHHCV0865	RHR Heat Exchanger 1(2)B Outlet Valve	2	B	5R169F20000
C1(2)RHHCV0866	RHR Heat Exchanger 1(2)C Outlet Valve	2	B	5R169F20000
A1(2)RHFCV0851	RHR Heat Exchanger 1(2)A Bypass Valve	2	B	5R169F20000
B1(2)RHFCV0852	RHR Heat Exchanger 1(2)B Bypass Valve	2	B	5R169F20000
C1(2)RHFCV0853	RHR Heat Exchanger 1(2)C Bypass Valve	2	B	5R169F20000

Valve Function:

Valves A1(2)RHFCV0851, B1(2)RHFCV0852, and C1(2)RHFCV0853 have a closed safety function to ensure flow through the RHR Heat Exchanger during safety injection and long term recirculation.

Valves A1(2)RHHCV0864, B1(2)RHHCV0865, and C1(2)RHHCV0866 have an open safety function to ensure flow through the RHR Heat Exchanger and allow a safety grade cold shutdown of the RCS following a SGTR, SBLOCA, MSLB, or FWLB accident condition.

Code Required Tests:

ISTC-5100, "Power-Operated Valves", All valves shall be tested in accordance with the applicable requirements of section ISTC-3000, and as identified below, except for power-operated control valves that only have a fail-safe safety function. For power-operated control valves that only have a fail-safe safety function, the requirements for valve stroke-time measurement testing, the associated stroke-time test acceptance criteria, and any corrective actions that would result from stroke-time testing need not be met. For these valves, all other applicable requirements of section ISTC-3000, and as identified below, shall be met.

Basis for Deferral:

These valves are normally inaccessible during power operation. The operability testing (fail safe) of these valves during normal power operation will require lifting electrical leads to ensure repeatable results since the valves are normally controlled via a controller and not a hand switch.

Alternate Testing:

Valves A1(2)RHFCV0851, B1(2)RHFCV0852, and C1(2)RHFCV0853 will be tested (fail safe close test) at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521 (c).

Valves A1(2)RHHCV0864, B1(2)RHHCV0865, and C1(2)RHHCV0866 will be tested (fail safe open test) at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521 (c).

ATTACHMENT 12: Cold Shutdown Justifications

Cold Shutdown Justification No: CSJ-14

System: Feedwater (FW)

Valve ID	Description	Code Class	Category	Drawing
B1(2)FWFV7145A	Feedwater Isolation Bypass Valve	2	B	5S139F00063
B1(2)FWFV7146A	Feedwater Isolation Bypass Valve	2	B	5S139F00063
A1(2)FWFV7147A	Feedwater Isolation Bypass Valve	2	B	5S139F00063
A1(2)FWFV7148A	Feedwater Isolation Bypass Valve	2	B	5S139F00063

Valve Function:

These valves have a closed safety function to stop feedwater flow to their respective steam generator upon receipt of feedwater isolation signal from the ESF system resulting from a SG high-high level, safety injection initiation signal or a reactor trip in conjunction with low average reactor coolant system temperature.

Code Required Tests:

ISTC-3510, "Exercise Test Frequency", requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

On-line open exercise testing cycles Feedwater Isolation Valve (FWIV) Permissive hand switches to open 24 individual times (Train A and Train B). Any one of these manipulations, if performed incorrectly or due to an equipment malfunction, risks closing the associated FWIV, necessitating prompt operator action to prevent a reactor trip. FWIBV valves are only opened during plant startup operations and remain in their safety position (closed) the remainder of the cycle. Any benefit from on-line open exercising of these valves is outweighed by the increased risk of FWIV closure and accompanying plant transient. This position is consistent with NUREG-1482, Rev. 3, Section 3.1, 'Inservice Test Frequencies and Extensions for Valve Testing'. (CREE 19-6619-1)

Alternate Testing:

These valves will be full-stroke close exercise tested at each cold shutdown not to exceed once every three months per the requirements of ISTC-3521(f).

ATTACHMENT 13: Refueling Outage Justifications

Refueling Outage Justification No: ROJ-02

System: Component Cooling Water (CC)

Valve ID	Description	Code Class	Category	Drawing
N1(2)CCFV4620	RCP 1A(2A) Thermal Barrier CCW Return Flow Control Valve Operator	3	C	5R209F05021
N1(2)CCFV4621	RCP 1A(2A) Thermal Barrier CCW Return Flow Control Valve Operator	3	C	5R209F05021
N1(2)CCFV4626	RCP 1B(2B) Thermal Barrier CCW Return Flow Control Valve Operator	3	C	5R209F05021
N1(2)CCFV4627	RCP 1B(2B) Thermal Barrier CCW Return Flow Control Valve Operator	3	C	5R209F05021
N1(2)CCFV4632	RCP 1C(2C) Thermal Barrier CCW Return Flow Control Valve Operator	3	C	5R209F05021
N1(2)CCFV4633	RCP 1C(2C) Thermal Barrier CCW Return Flow Control Valve Operator	3	C	5R209F05021
N1(2)CCFV4638	RCP 1D(2D) Thermal Barrier CCW Return Flow Control Valve Operator	3	C	5R209F05021
N1(2)CCFV4639	RCP 1D(2D) Thermal Barrier CCW Return Flow Control Valve Operator	3	C	5R209F05021

Valve Function:

These valves are normally open and remain open to provide a CCW return flow path from the RCP thermal barrier Heat exchanger. These valves have a closed safety function to prevent over-pressurization of the CCW system in the event of a failure of the thermal barrier.

These valves are normally open, cylinder actuated, self-regulated globe valves. The process water is used as the input signal to the actuator. The valves start to close when the pressure of the process water reaches 120 psig. The valves are fully closed, but not seated at 150 psig. The valves shut off at a pressure of over 200 psig.

Code Required Tests:

ISTC-3510, “Exercise Test Frequency”, requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke open and closed exercise) of these valves during normal power operation requires isolating the CCW flow to the RCP thermal barrier heat exchanger. Isolating cooling water flow to the thermal barrier during RCP operation could cause a failure of the thermal barrier and a subsequent leak of the RCS into the CCW system. NUREG 1482, Rev. 3, Section 3.1.1.4, states that testing should be performed when RCPs can be stopped. All RCPs are not stopped unless the Reactor Coolant System is cooled and vented which is during Refueling Outages.

Alternate Testing:

These valves will be tested (full stroke open, fail safe open, close exercised and setpoint tested) at each refueling outage per the requirements of ISTC-3521(e).

ATTACHMENT 13: Refueling Outage Justifications

Refueling Outage Justification No: ROJ-03

System: Chemical and Volume Control (CV)

Valve ID	Description	Code Class	Category	Drawing
2R171(2)XCV0003	CVCS Normal Charging to RCS Loop 1A(2A) Cold Leg MOV	2	B	5R179F05005
2R171(2)XCV0006	CVCS Alternate Charging to RCS Loop 1C(2C) Cold Leg MOV	2	B	5R179F05005

Valve Function:

2R171(2)XCV0003 and 2R171(2)XCV0006 have an open safety function to provide 190 gpm using the RWST or 30 gpm from the BAT for RCS boron and water inventory control for safe shutdown. These valves also have a closed safety function to mitigate a high energy line break.

Code Required Tests:

ISTC-3510, "Exercise Test Frequency", requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The operability testing (full stroke exercise) of power operated valves 2R171(2)XCV0003 and 2R171(2)XCV0006 during normal power operation requires alternating between the normal and alternate charging headers. Alternating charging headers at power would cause thermal shock and possible damage to the charging nozzles at the reactor coolant system boundary.

Alternate Testing:

Valves 2R171(2)XCV0003 and 2R171(2)XCV0006 will be tested (full stroke open and closed exercised) at each refueling outage per the requirements of ISTC-3521(e).

ATTACHMENT 13: Refueling Outage Justifications

Refueling Outage Justification No.: ROJ-04

System: Reactor Coolant (RC)

Valve ID	Description	Code Class	Category	Drawing
A1(2)RCHCV0601	Reactor Vessel Head Vent Throttle Valve	2	B	5R149F05001
B1(2)RCHCV0602	Reactor Vessel Head Vent Throttle Valve	2	B	5R149F05001
A1(2)RCHV3657A	Reactor Vessel Head Vent Isolation Valve	2	B	5R209F05021
B1(2)RCHV3657B	Reactor Vessel Head Vent Isolation Valve	2	B	5R209F05021
A1(2)RCHV3658A	Reactor Vessel Head Vent Isolation Valve	2	B	5R209F05021
B1(2)RCHV3658B	Reactor Vessel Head Vent Isolation Valve	2	B	5R209F05021

Valve Function:

These valves have a closed safety function to preclude a LOCA (Regulatory Guide 1.139 requirements). They also have an open safety function to vent steam and non-condensable gases from the reactor vessel head following a LOCA and to provide a safety grade letdown flow path to the PRT allowing the plant can achieve a safe shutdown condition.

Code Required Tests:

ISTC-3510, “Exercise Test Frequency”, requires that each active Category A, Category B, and Category C check valve be exercised nominally every 3 months.

Basis for Deferral:

The head vent valves (hydraulic assisted, pilot-operated) and head vent block valves are normally closed during power operation. The operability testing (full stroke exercise) of these valves during normal power operation these valves exhibit a characteristic or phenomenon called burping. Burping occurs when the inboard valves are stroked open with the downstream valves closed. The downstream valves provide indications of opening during this phenomenon. This burping characteristic can continue for a period of up to 40 seconds and may over-pressurize the downstream piping.

Restrictions on head vent piping require venting to be performed at RCS pressures of less than 100 psig and less than 200 degrees Fahrenheit. This in turn mandates that the RCPs be secured to prevent seal damage. NUREG 1482, Rev. 3, Section 3.1.1.4, states that testing should be performed when RCPs can be stopped. All RCPs are not stopped unless the Reactor Coolant System is cooled and vented which is during Refueling Outages.

Alternate Testing:

These valves will be full-stroke open and closed exercised, stroke timed, and their fail-safe actuation verified at each refueling outage not to exceed once every three months per the requirements of ISTC-3521(e).

ATTACHMENT 14: Condition Monitoring Plans

CM-AF01	Rev: 1	System:	AF
IST Group: AF01	Check Valve Groups: 1AF03 and 2AF03		
Valves:	2S141TAF0119, 2S141TAF0120, 2S141TAF0121, & 2S141TAF0122 2S142TAF0119, 2S142TAF0120, 2S142TAF0121, & 2S142TAF0122		
IST Functions:	1. Open to allow 500 gpm (per Technical Specification 4.7.1.2.1) of auxiliary feedwater flow to Steam Generator.		
Remarks:	These valves normally allow AFW flow to the SGs or FW to the SGs when utilizing the FW cross-connect during low load operations. The AFWS will be in operation during the normal operating modes of filling the steam generators, startup, shutdown, and hot standby. In addition, the AFWS is used as the normal supply of water to the steam generator during cooldown when the RCS temperature is above 350°F. The Auxiliary Feedwater Storage Tank (AFST) water quality will comply with the chemistry control requirements.		
Condition Monitoring Discussion:	Failure patterns - Brittle fracture of material, and normal wear causing leakage or improper seating. Expected failure modes - Leaking or improper seating. Past failure causes - Debris and wear on the hinge pin roll pin. Valves see very little use and therefore will be subject to minimal wear. Engineering analysis has estimated wear life at over 300 years based on current system design. The SOER 86-03 program has performed several tests on valves in this group using non-intrusive testing (NIT). The NIT includes steady state flow during filling operations for the Steam Generators and a closure test. Performing analysis on the steady state and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured, however, the presence of an increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since flow to the S/Gs will be indicated by the level increase in the S/G associated with the valve being tested. The close impact will be indicated by acoustic signal upon cessation of flow through the valve.		
Testing Requirements:	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increased valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 15-year interval. Refuel interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-AF02	Rev: 1	System:	AF
IST Group: AF02	Check Valve Groups: 1AF02 and 2AF02		
Valves:	2S141TAF0019, 2S141TAF0085, 2S141TAF0048, & 2S141TAF0065 2S142TAF0019, 2S142TAF0085, 2S142TAF0048, & 2S142TAF0065		
IST Functions:	1. Open upon receipt of: A. steam generator low water level, B. low feedwater flow signal from AMSAC, or C. SI initiation signal to allow 500 gpm (per Technical Specification 4.7.1.2.1) flow to Steam Generator. NOTE: The ESF actuation signal allows the stop check valve to function normally through the self-actuating design of the check valve. Operation of the motor operator function is not required for the valve to fulfill its open safety function. 2. Close (remote manual) for Steam Generator isolation in response to SGTR, FWLB, and MSLB.		
Remarks:	Normally closed stop check valve. There are 3 check valves in the line, affording much redundancy for the closing function. There are 4 available flowpaths leading to 4 steam generators. 2 of 4 trains required for immediate response. 1 train is required for long term decay heat removal.		
Condition Monitoring Discussion:	Failure patterns – Leaking Expected failure modes - Leaking, or improper seating Past failure causes -Normal wear These valves are currently being tested in the open direction during system testing at cold shutdown. Closure testing is required to verify bi-directional functionality of these valves. Acoustic testing is an equal test if Computed radiography is not performed.		
Testing Requirements:	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increased valve looseness (rattles and rubs) will determine need to open and inspect the check valves. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Frequency	Non-intrusive testing at 15-year interval. Quarterly interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-AF07	Rev: 1	System:	AF
IST Group: AF07	Check Valve Groups: 1AF01 and 2AF01		
Valves:	3S141TAF0011, 3S141TAF0036, 3S141TAF0058, & 3S141TAF0091 3S142TAF0011, 3S142TAF0036, 3S142TAF0058, & 3S142TAF0091		
IST Functions:	1. Open to allow a minimum flow of 100 - 130 gpm (per Aux Feedwater DBD 4.1.2.1) from the AFW pump in recirculation to the AFST and a flow of 550 - 640 gpm (per Aux Feedwater DBD 4.1.2.2) from the AFW pump to the steam generator.		
Remarks::	There are 4 available flowpaths leading to 4 steam generators. There is high redundancy of flowpaths. 2 of 4 trains required for immediate response. 1 train is required for long term decay heat removal.		
Condition Monitoring Discussion:	Failure patterns – Leaking, stuck open, stuck closed, stuck mid position and binding. Expected failure modes - Stuck open/closed/mid-position or degraded seats (leaking). Past failure causes - Debris, corrosion, improper water chemistry, not seating due to wear (guides and seats), wear in the pilot, and degraded seats. These valves are currently being tested in the open direction during system/pump testing. Closure testing is required to verify bi-directional functionality of these valves. Performing analysis on the steady state and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured, however, the presence of an increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since flow to the S/Gs will be indicated by the level increase in the S/G associated with the valve being tested. The close impact will be indicated by acoustic signal upon cessation of flow through the valve.		
Testing Requirements:	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increased valve looseness (rattles and rubs) will determine need to open and inspect the check valves. As an alternative to the non-intrusive acoustic test, inspection of these valves may be performed using computerized radiography. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Frequency	Non-intrusive testing at 15-year interval. Refuel interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-AF08	Rev: 1	System:	AF
IST Group: AF08	Check Valve Groups: 1MS02 and 2MS02		
Valves:	2S141TMS0143, 2S142TMS0143		
IST Functions	1. Open (normally open) to allow steam flow to the AFW pump turbine trip/throttle valve in the event of a Lo-Lo S/G water level, SI initiation signal, or an AMSAC signal. The open self-actuating portion of this valve is a passive function since it is normally held open by the motor function of the valve and receives a confirmatory open signal from ESF Actuation. 2. Close (remote manual) to prevent a leak path following a SGTR.		
Remarks	Valve is normally open. There are 4 available flowpaths leading to 4 steam generators. 2 of 4 trains required for immediate response. 1 train is required for long term decay heat removal. Pump provides decay heat removal during SBO.		
Condition Monitoring Discussion	Failure patterns – Leaking. Expected failure modes - Leaking, or improper seating. Past failure causes - Normal wear. These valves are currently being tested in the open direction during system/pump testing. Closure testing is required to verify bi-directional functionality of these valves. Performing analysis on the steady state and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured, however, the presence of an increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since flow to the S/Gs will be indicated by the level increase in the S/G associated with the valve being tested. The close impact will be indicated by acoustic signal upon cessation of flow through the valve.		
Testing Requirements	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increased valve looseness (rattles and rubs) will determine need to open and inspect the check valves. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Frequency	Quarterly interval for open verify. Close verify is performed during Appendix II test at 10-year interval.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CC26	Rev: 1	System:	CC
IST Group: CC26	Check Valve Groups: 1CC02 and 2CC02		
Valves	3R201TCC0051, 3R201TCC0131, & 3R201TCC0191 3R201TCC0051, 3R201TCC0131, & 3R201TCC0191		
IST Functions	1. Close on reverse flow to ensure CCW Train separation. 2. Open to provide return flow path from the RCP thermal barrier heat exchangers, bearing lube oil coolers, and motor air coolers to the CCW Train A pump if it is operating for accident conditions per DBD 4.1.4.5.		
Remarks	The closing function of these valves is redundant to the function of upstream MOVs. Check valves are more reliable to close. In the case of flow diversion, there are supply MOVs and supply check valves, so the plant would isolate the supply. In the case of the opening function, there are 3 trains. STP typically runs one train, therefore, the plant only requires one set of valves).		
Condition Monitoring Discussion	Failure patterns – Most of these failures were due to corrosion and debris in the system with dirty water causing leakage. Other failures included wearing of the hinge pin (in most cases normal wear), corrosion or damaged seating, and sticking open. Expected failure modes - Leaking, improper seating, and stuck open. Past failure causes - Debris, corrosion, broken springs & damaged seats. The SOER 86-03 program has performed many tests on valves in this group using non-intrusive testing (NIT). The NIT includes steady state flow during normal system operation and a closure test. Performing analysis on the steady state and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured, however, the increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since flow through the check valve will be indicated by the pump operation. The close impact will be detected by acoustic signal upon cessation of flow through the valve.		
Testing Requirements:	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 12-year interval. Quarterly interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CC27	Rev: 1	System:	CC
IST Group: CC27	Check Valve Groups: 1CC04 and 2CC04		
Valves:	3R201TCC0311, 3R201TCC0313, & 3R201TCC0315 3R202TCC0311, 3R202TCC0313, & 3R202TCC0315		
IST Functions	1. Open to provide CCW flow for CVCS and SFPCCS equipment.		
Remarks	The closing function of these valves is redundant to the function of upstream MOVs. Check valves are more reliable to close. In the case of flow diversion, there are supply MOVs and supply check valves, so the plant would isolate the supply. In the case of the opening function, there are 3 trains. STP typically runs one train therefore, the plant only requires one set of valves).		
Condition Monitoring Discussion	Failure patterns – Most of these failures were due to corrosion and debris in the system with dirty water causing leakage. Other failures included wearing of the hinge pin (in most cases normal wear), corrosion or damaged seating, and sticking open. Expected failure modes - Leaking, improper seating, and stuck open. Past failure causes - Debris, corrosion, broken springs & damaged seats. The SOER 86-03 program has performed several tests on valves in this group using non-intrusive testing (NIT). The NIT includes steady state flow during CCW pump operation and a closure test when pumps are secured. Performing analysis on the steady state and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured however, the presence of an increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since flow through the valve will result from pump operation. The close impact will be detected by acoustic signal upon cessation of flow through the valve.		
Testing Requirements:	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 12-year interval. Quarterly interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CC29	Rev: 0	System:	CC
IST Group: CC29	Check Valve Groups: 1CC01 and 2CC01		
Valves	2R201TCC0013, 2R201TCC0123, 2R201TCC0183 2R202TCC0013, 2R202TCC0123, 2R202TCC0183		
IST Functions	1. Open to provide flow path for CCW through RHR pump 1(2)A seal cooler and RHR 1(2)A heat exchanger (4906 gpm required per DBD Table T-7, Minimum or Maximum Safeguards). 2. Close and leak tight (CAT A) in accordance with UFSAR commitment (Section 6.2.6.3 and Figure 6.2.4-1, Sheet 35) to provide containment integrity.		
Remarks	There are 3 trains of flow paths available, only 1 train is required. CC10 (MOVs in line) are ranked low by GQA. MOVs in line provide redundant closing function.		
Condition Monitoring Discussion	Failure patterns – Failures of this type valves includes worn seats, debris, sticking open, and excessive wear on the seats. Expected failure modes - Leaking, improper seating, and stuck open. Past failure causes - Debris, corrosion, broken springs & damaged seats. Presently, these valves are being tested under the Appendix J local leak rate test (LLRT) program which will provide the first indication that the valve is degrading. Open flow verification can be performed during normal operations. Open flow verification and trending leakage (LLRT) can be used to monitor the condition of these valves and establish the bi-directional functionality. The frequency of the check valve condition monitoring testing can be stepped out to code allowable limits based on trending of the leakage rate during the LLRT. Frequency may be limited by the leakage testing requirements for Appendix J. These valves will be scheduled as independent groups to comply with the Appendix J Program requirements.		
Testing Requirements	CM Testing will take credit for normal operation for an open flow verification and trend leakage data from the LLRT for monitoring the condition of the valve and verification of bi-directional functionality.		
Frequency	Based on good past performance results, test frequency maintained at Appendix J Option B frequency pursuant to NUREG-1482, Rev. 3, Section 4.4.7.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CV06	Rev: 1	System:	CV
IST Group: CV06	Check Valve Groups: 1CV04 and 2CV04		
Valves	1R171TCV0036A, 1R171TCV0036B, 1R171TCV0036C, & 1R171TCV0036D 1R172TCV0036A, 1R172TCV0036B, 1R172TCV0036C, & 1R172TCV0036D 1R171TCV0037A, 1R171TCV0037B, 1R171TCV0037C, & 1R171TCV0037D 1R172TCV0037A, 1R172TCV0037B, 1R172TCV0037C, & 1R172TCV0037D		
IST Functions	1. Open to provide 8 gpm of alternate RCS boration for safe shutdown. 2. Close to maintain the RCS pressure boundary integrity in the event of a seal line rupture.		
Remarks	Valve is normally open (essentially a passive function). Effectively, the valve is tested during the course of normal operation (i.e., there are no hidden failures). The valve closes when flow stops (no automatic signal) during phase A. At phase B, RCPs are not credited (large LOCA scenario). Redundant closing function provided by other check valve in series.		
Condition Monitoring Discussion	Failure patterns – Leaking, debris, wearing out, and misapplied. Expected failure modes - Corrosion and debris in the system with dirty water causing leakage. Other failures included wearing of the hinge pin (in most cases normal wear), corrosion or damaged seating, and sticking open. Past failure causes - Debris, worn internals, manufacture defects, poor design, misapplication, improper maintenance, improper design, and corrosion. The SOER 86-03 program has performed many tests on valves in this group using non-intrusive testing (NIT). The NIT testing includes steady state during flow to the reactor coolant pump seal package. Analysis of the steady state data and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured however, the presence of an increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since flow to the RCP seals is indicated in the Control room. The close impact will be indicated by acoustic signal upon cessation of flow through the valve. Valves will be divided into two four-valve subgroups and scheduled so that both valves in one train are tested together. Subgroup A – CV36s, Subgroup B – CV37s.		
Testing Requirements	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 15-year interval. Quarterly interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CV07	Rev: 1	System:	CV
IST Group: CV07	Check Valve Groups: 1CV03 and 2CV03		
Valves:	2R171TCV0034A, 2R171TCV0034B, 2R171TCV0034C, 2R171TCV0034D 2R172TCV0034A, 2R172TCV0034B, 2R172TCV0034C, 2R172TCV0034D		
IST Functions	1. Close and leak tight (CAT A) to maintain containment integrity and to provide isolation in the event of a seal line rupture. 2. Open to provide 8 gpm of alternate RCS boration for safe shutdown (CVC DBD 3.2.2.1 4).		
Remarks	Close and leak tight (CAT A) to maintain containment integrity and to provide isolation in the event of a seal line rupture. Open to provide alternate RCS boration for safe shutdown. Valve is normally open (essentially a passive function). Effectively, the valve is tested during the course of normal operation (I.e., there are no hidden failures). The valve closes when flow stops (no automatic signal) during phase A. At phase B, RCPs are not credited (large LOCA scenario). Redundant closing function performed by outboard MOV.		
Condition Monitoring Discussion	Failure patterns – Leaking, debris, wearing out, and miss applied. Expected failure modes - Corrosion and debris in the system with dirty water causing leakage. Other failures included wearing of the hinge pin (in most cases normal wear), corrosion or damaged seating, and sticking open. Past failure causes - Debris, worn internals, manufacture defects, poor design, miss-application, improper maintenance, improper design, and corrosion. The SOER 86-03 program has performed many tests on valves in this group using non-intrusive testing (NIT). The NIT testing includes steady state during flow to the reactor coolant pump seal package. Analysis of the steady state data and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured however, the presence of an increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since flow to the RCP seals is indicated in the Control room. The close impact will be indicated by acoustic signal upon cessation of flow through the valve.		
Testing Requirements	Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 15-year interval. Quarterly interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CV10	Rev: 1	System:	CV
IST Group: CV10	Check Valve Groups: 1CV09 and 2CV09		
Valves:	1R171TCV0009, 1R172TCV0009		
IST Functions	1. Remain closed to preserve the integrity of the Reactor Coolant System pressure boundary. 2. Open to supply auxiliary spray to the pressurizer to collapse the steam bubble and cool the pressurizer during the final stages of plant cooldown when the reactor coolant pumps are shutdown and the normal spray is no longer available and to stabilize RCS pressure following SGTR.		
Remarks	Remain closed to preserve the integrity of the Reactor Coolant System pressure boundary. Open to supply auxiliary spray to the pressurizer to collapse the steam bubble and cool the pressurizer during the final stages of plant cooldown when the reactor coolant pumps are shutdown and the normal spray is no longer available or to stabilize RCS pressure following SGTR. Check valve is normally closed and reliable. Upstream AOV provides redundant closing capability.		
Condition Monitoring Discussion	Failure patterns – Leaking, debris, wearing out, and miss applied. Expected failure modes - Corrosion and debris in the system with dirty water causing leakage. Other failures included wearing of the hinge pin (in most cases normal wear), corrosion or damaged seating, and sticking open. Past failure causes - Debris, worn internals, manufacture defects, poor design, miss-application, improper maintenance, improper design, and corrosion. These valves are currently being tested in the open direction during system testing at cold shutdown. Closure testing is required to verify bi-directional functionality of these valves. Computerized radiography provides clear pictures of the valve internals. The condition of the valve can be evaluated without disassembly. The amount of misalignment of the valve disc on the seat as well as actual measurements of valve internals to determine wear rates will result in the early detection of the onset of degradation in these valves. Preventive maintenance can then be scheduled and performed prior to failure. This inspection process can also verify that the valves are in the closed position to satisfy the bi-directional functionality testing requirement.		
Testing Requirements	Perform inspection of these valves using computerized radiography. Flow through the valve during system testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Frequency	Non-intrusive testing (computerized radiography) at 10-year interval. Refuel interval for open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CV37	Rev: 1	System:	CV
IST Group: CV37	Check Valve Groups: 1CV20 and 2CV20		
Valves:	2R171XCV0670, 2R172XCV0670		
IST Functions	1. Open to provide charging RCS boration control flow path from discharge of centrifugal charging pump. A flow rate of 30 gpm is required per Technical Requirements Manual 4.1.2.2 d and 190 gpm if suction is from the RWST per CR 99-1380-3. 2. Close to prevent diversion of flow due to HELB in charging header with flow path established through valve HCV-206.		
Remarks	Open to provide RCS boration control flow path from discharge of centrifugal charging pumps. Close to prevent diversion of flow due to HELB in charging header with flow path established through valve HCV-0206. This valve is normally open. If this valve fails to close in the event of a HELB, the normal charging flowpaths are lost. The primary charging flowpath is isolated on safety injection.		
Condition Monitoring Discussion	Failure patterns – Common failures include erosion and leakage due to seat degradation. Expected failure modes - There are no common failure modes to this valve. Past failure causes - Failure causes include leaking due to erosion and normal wear. These valves are currently being tested in the open direction during normal operation or system testing. Closure testing is required to verify bi-directional functionality of these valves. Computerized radiography provides clear pictures of the valve internals. The condition of the valve can be evaluated without disassembly. The amount of misalignment of the valve disc on the seat as well as actual measurements of valve internals to determine wear rates will result in the early detection of the onset of degradation in these valves. Preventive maintenance can then be scheduled and performed prior to failure. This inspection process can also verify that the valves are in the closed position to satisfy the bi-directional functionality testing requirement. Acoustic testing may be substituted as an equal testing method.		
Testing Requirements:	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves. As an alternative to the non-intrusive acoustic test, inspection of these valves may be performed using computerized radiography. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Frequency	Non-intrusive testing (acoustic) at 9-year interval. Quarterly interval for open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CV38	Rev: 1	System:	CV
IST Group: CV38	Check Valve Groups: 1CV01 and 2CV01, 1CV02 and 2CV02		
Valves	1R171XCV0001, 1R171XCV0002, 1R171XCV0004, 1R171XCV0005 1R172XCV0001, 1R172XCV0002, 1R172XCV0004, 1R172XCV0005		
IST Functions	1. Close to maintain RCS pressure boundary isolation in the event of a Class 2 CVCS line break. 2. Open to provide 30 gpm for RCS boron and water inventory (charging) control for safe shutdown per Technical Specification 4.1.2.2 d. Required flowrate is 190 gpm for RWST as water source per CR 99-1380-3.		
Remarks	Two check valves in series provide redundant closing capability. Check valves are reliable to perform their function. Redundant flowpaths provided by parallel injection lines.		
Condition Monitoring Discussion	Failure patterns – Common failures include erosion and leakage due to seat degradation. Expected failure modes - There are no common failure modes to this valve. Past failure causes - Common failures include erosion and leakage due to seat degradation. The SOER 86-03 program has performed many tests on valves in this group using non-intrusive testing (NIT). The NIT testing includes steady state flow during charging operations. Performing analysis on the steady state and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured, however, the presence of an increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since charging flow is indicated in the Control Room. The close impact will be indicated by acoustic signal upon cessation of flow through the valve. Grouping the valves should be done to allow for train specific testing. CV-1 should be grouped with CV-4 and CV-2 should be grouped with CV-5. Valves will be divided into two two-valve subgroups and scheduled so that both valves in one train are tested together. Subgroup A – CV0001,4; Subgroup B – CV0002,5.		
Testing Requirements	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 12-year interval. Refuel interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 6 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-CV40	Rev: 1	System:	CV
IST Group: CV40	Check Valve Groups: 1CV11 and 2CV11		
Valves:	2R171XCV0026, 2R172XCV0026		
IST Functions	1. Close and leak tight (CAT A) to maintain containment integrity. 2. Open to provide 30 gpm for RCS boron and water inventory (charging) control for safe shutdown per Technical Specification 4.1.2.2 d. Required flowrate is 190 gpm for RWST as water source per CR 99-1380-3.		
Remarks	Upstream MOV performs redundant closing function. Check valve is normally open and highly reliable.		
Condition Monitoring Discussion	Failure patterns – Common failures include erosion and leakage due to seat degradation. Expected failure modes - There are no common failure modes to this valve. Past failure causes - Failure causes include leaking due to erosion and normal wear. Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves. As an alternative to the non-intrusive acoustic test, inspection of these valves may be performed using computerized radiography. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Testing Requirements	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 10-year interval. Quarterly interval for open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM-EW08 Rev: 1		System:	EW
IST Group: EW0	Check Valve Groups: 1EW01 and 2EW01		
Valves:	3R281TEW0006, 3R281TEW0042, & 3R281TEW0079 3R282TEW0006, 3R282TEW0042, & 3R282TEW0079		
IST Functions:	1. Open to allow ECW Pump discharge flow to components cooled by ECW. ECW Pump design flow per DBD is 18,290 gpm per CR 98-19892-3 and CR 99-1380-2.		
Remarks:	Open to allow ECW Pump discharge flow to components cooled by ECW. This system serves as the ultimate heat sink. Two of these valves (in 2 of the trains) are open all of the time. There are 3 independent trains. Any 1 train can provide the necessary cooling.		
Condition Monitoring Discussion:	Failure patterns – Failures of this type valves includes worn seats, debris, sticking open, and excessive wear on the seats. Expected failure modes - Leaking, or improper seating. Past failure causes - Debris, corrosion, broken springs & damaged seats. Currently these valves are verified to perform open safety function during the ECW pump inservice test. Non-intrusive testing is performed periodically to evaluate condition of the valve per the SOER 86-03 reliability program. Based on review of wear rates for the aluminum bronze material in the ECW system, a disassembly and inspection of one valve per refueling outage has been initiated. The inspections of these valves have found that there is wear inside the hinge and where the hinge pin is connected to the valve body. Additionally, there is corrosion on the outside of the hinge from the brackish water and the close proximity of the pump discharge resulting in turbulent flow conditions. These check valves should continue to be monitored closely until these degradation mechanisms are better understood and controlled. By performing a disassembly on one valve in the group every 18 months will provide good baseline information and allow for good preventive maintenance for these valves. NIT (acoustic testing) should be performed on all the valves in the group every 18 months to establish a baseline for each valve following rebuilds. NIT monitoring will ensure that degradation in any of the valves will be identified so that preventive maintenance can be performed before failure.		
Testing Requirements:	The CM Testing will take credit for disassembly for the bi-directional test requirements and for trending the valves condition. In addition, NIT will be performed for making sure that early degradations do not occur.		
Frequency	Open and inspect at 54-month interval. Stagger to perform a disassembly on one valve in the group about every 18 months. Based on testing results, the frequency of the testing can be stepped out farther not to exceed code 12-year limit, one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-FP01	Rev: 0	System:	FP
IST Group: FP01	Check Valve Groups: 1FP01 and 2FP01		
Valves:	2Q271TFP0943, 2Q272TFP0943		
IST Functions:	1. Close and leak tight (CAT A) to maintain containment integrity.		
Remarks	Normally closed. Redundant and diverse closing capability provided by other valve in series.		
Condition Monitoring Discussion	Failure patterns – Leakage or sticking open. Expected failure modes - Leaking, or improper seating. Past failure causes - Debris, corrosion, damaged seats, and worn internals. Presently, these valves are being tested under the Appendix J local leak rate test (LLRT) program which will provide the first indication that the valve is degrading. Open flow verification can be verified by adding steps to the LLRT procedure to exercise the valve to the open position. Open exercising and trending leakage (LLRT) can be used to monitor the condition of these valves and establish the bi-directional functionality. The frequency of the check valve condition monitoring testing can be stepped out to code allowable limits based on trending of the leakage rate during the LLRT. Frequency may be limited by the leakage testing requirements for Appendix J.		
Testing Requirements	CM Testing will trend leakage data from the LLRT for monitoring the condition of the valve. The Appendix J LLRT procedure will also include steps to exercise the valve to the open position to verify bi-directional functionality.		
Frequency	Based on good past performance results, test frequency maintained at Appendix J Option B frequency pursuant to NUREG-1482, Rev. 3, Section 4.4.7.		

ATTACHMENT 14: Condition Monitoring Plans

CM-RH05	Rev: 1	System:	RH
IST Group: RH05	Check Valve Groups: 1RH04 and 2RH04		
Valves	2R161XRH0068A, 2R161XRH0068B, & 2R161XRH0068C 2R162XRH0068A, 2R162XRH0068B, & 2R162XRH0068C		
IST Functions	1. Open to provide minimum flow path during RHR pump start. 2. Open to limit the Component Cooling Water System temperature to less than its maximum value of 1200F for Appendix R FHA. 3. Open to limit the RCS cooldown rate to the maximum allowable value of 1000F/hour for Appendix R FHA.		
Remarks	Open to provide minimum flow path during RHR pump start.		
Condition Monitoring Discussion	Failure patterns – Common failures include erosion and leakage due to seat degradation. Expected failure modes - There are no common failure modes to this valve. Past failure causes - Common failures include erosion and leakage due to seat degradation. These valves are currently being tested in the open direction during system/pump testing. Closure testing is required to verify bi-directional functionality of these valves. Computerized radiography provides clear pictures of the valve internals. The condition of the valve can be evaluated without disassembly. The amount of misalignment of the valve disc on the seat as well as actual measurements of valve internals to determine wear rates will result in the early detection of the onset of degradation in these valves. Preventive maintenance can then be scheduled and performed prior to failure. This inspection process can also verify that the valves are in the closed position to satisfy the bi-directional functionality testing requirement.		
Testing Requirements	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves. As an alternative to the non-intrusive acoustic test, inspection of these valves may be performed using computerized radiography. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Frequency	Non-intrusive testing at 12-year interval. Quarterly interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-RH06	Rev: 1	System:	RH
IST Group: RH06	Check Valve Groups: 1RH03 and 2RH03		
Valves:	2R161XRH0065A, 2R161XRH0065B, & 2R161XRH0065C 2R162XRH0065A, 2R162XRH0065B, & 2R162XRH0065C		
IST Functions:	1. Open to allow a safety grade cold shutdown of the RCS using RHR following a SBLOCA, SGTR, MSLB, or FWLB accident condition. A flow rate of 3,000 gpm is required per paragraph 4A.1.2.1 of the DBD.		
Remarks:	Normally operate two trains of RHR during cooldown. Only one train is required. Valves open to allow flow to occur during RHR cooldown following SBLOCA, MSLB, FWLB, or in event of a fire. Redundancy of function provided by other trains.		
Condition Monitoring Discussion:	Failure patterns – Disc Seat leakage, Corrosion, erosion, seat leakage. Expected failure modes - Leaking or improper seating. Past failure causes - Normal wear, corrosion, debris, or not seating fully at lower pressures. These valves are currently being tested in the open direction during system/pump testing. Closure testing is required to verify bi-directional functionality of these valves. Computerized radiography provides clear pictures of the valve internals. The condition of the valve can be evaluated without disassembly. The amount of misalignment of the valve disc on the seat as well as actual measurements of valve internals to determine wear rates will result in the early detection of the onset of degradation in these valves. Preventive maintenance can then be scheduled and performed prior to failure. This inspection process can also verify that the valves are in the closed position to satisfy the bi-directional functionality testing requirement. Acoustic testing may be substituted as an equal testing method.		
Testing Requirements:	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves. As an alternative to the non-intrusive acoustic test, inspection of these valves may be performed using computerized radiography. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Frequency	Non-intrusive testing at 12-year interval. Quarterly interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-RH07	Rev: 0	System:	RH
IST Group: RH07	Check Valve Groups: 1RH01 and 2RH01		
Valves	1R161XRH0020A, 1R161XRH0020B, & 1R161XRH0020C 1R162XRH0020A, 1R162XRH0020B, & 1R162XRH0020C		
IST Functions	1. Close and leak tight (CAT A) to maintain RCS pressure boundary, GDC 14 (PIV). 2. Open to provide sump recirculation flow to the RCS hot leg from LHSI for hot-leg recirculation.		
Remarks	There are 2 check valves in series to provide redundant ability to maintain RCS pressure boundary. Closing function is backed up by upstream valves. Valves are closed and leak tested prior to startup.		
Condition Monitoring Discussion	Failure patterns – Disc Seat leakage, Corrosion, erosion, seat leakage. Expected failure modes - Leaking or improper seating. Past failure causes - Normal wear, corrosion, debris, or not seating fully at lower pressures. Presently a leakage test is performed on these valves following reach refueling outage in accordance with TS 4.4.6.2.2. This requirement also satisfies the OM Code leakage test requirement. These valves are open during system testing and refueling operations. The condition of these valves can be monitored by trending leakage. Increasing leakage rates provide an early indication of degradation in the valve so that the valve does not seat properly. Verification of flow through the valves during operation or other testing will demonstrate the bi-directional functionality of the valves.		
Testing Requirements	The CM testing will trend leakage data for determining the condition of the valve by continuing to perform the leak (PIV) test per TS 4.4.6.2.2. The open test will be performed by initiating flow through the valve to confirm the bi-directional functionality of these valves.		
Frequency	Refuel interval for both closed leakage test and open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM-RH08	Rev: 0	System:	RH
IST Group: RH08	Check Valve Groups: 1RH02 and 2RH02		
Valves:	1R161XRH0032A, 1R161XRH0032B, & 1R161XRH0032C 1R162XRH0032A, 1R162XRH0032B, & 1R162XRH0032C		
IST Functions:	1. Close and leak tight (CAT A) to maintain RCS pressure boundary, GDC 14 (PIV). 2. Open to allow a safety grade cold shutdown of the RCS using RHR following a SBLOCA, SGTR, MSLB, or FWLB accident condition. 3. Open to provide cold-leg injection during ECCS injection and recirculation phases.		
Remarks::	NONE		
Condition Monitoring Discussion:	Failure patterns – Disc Seat leakage, Corrosion, erosion, seat leakage. Expected failure modes - Leaking or improper seating. Past failure causes - Normal wear, corrosion, debris, or not seating fully at lower pressures. Presently a leakage test is performed on these valves following reach refueling outage in accordance with TS 4.4.6.2.2. This requirement also satisfies the OM Code leakage test requirement. These valves are open during system testing and refueling operations. The condition of these valves can be monitored by trending leakage. Increasing leakage rates provide an early indication of degradation in the valve so that the valve does not seat properly. Verification of flow through the valves during operation or other testing will demonstrate the bi-directional functionality of the valves.		
Testing Requirements:	The CM testing will trend leakage data for determining the condition of the valve by continuing to perform the leak (PIV) test per TS 4.4.6.2.2. The open test will be performed by initiating flow through the valve to confirm the bi-directional functionality of these valves.		
Frequency	Refuel interval for both closed leakage test and open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM-SD01	Rev: 0	System:	SD
IST Group: SD01	Check Valve Groups: 1SD01 and 2SD01		
Valves:	3Q151XSD0003A, 3Q151XSD0003B, & 3Q151XSD0003C 3Q152XSD0003A, 3Q152XSD0003B, & 3Q152XSD0003C		
IST Functions:	1. Close to prevent the rapid depressurization of the air receiver in case of a pipe rupture upstream of the check valve.		
Remarks::	Each diesel has two receivers; either receiver can start the diesel. One of three diesels is required to supply power.		
Condition Monitoring Discussion:	Failure patterns – Debris, corrosion, and rust caused a majority of the failures. Expected failure modes - Leaking, or improper seating. Past failure causes - Debris, worn internals, and misapplication. Currently testing for these valves is verification that the pressure in the air receiver tanks does not decay after the compressor is secured. This test verifies that the check is closed. Recording the rate of pressure decay can provide a means to trend valve degradation such that the valve disc is not aligning to the valve seat. The check valve opens when the compressor is started to fill the receiver tank. These two activities can be performed to verify the bi-directional functionality of these valves.		
Testing Requirements:	The CM Testing will perform open flow verification during compressor starts and trend pressure decay rate data with valve in the closed position to monitor the condition of the check valves. These two activities will verify the bi-directional functionality of these valves.		
Frequency	Pressure decay rate test and flow open verification test performed quarterly. Non-intrusive testing for condition monitoring performed every 364 weeks, 7 years. Based on testing results, the frequency of the testing can be stepped out not to exceed code allowable limit of 12 years.		

ATTACHMENT 14: Condition Monitoring Plans

CM-SD02	Rev: 0	System:	SD
IST Group: SD02	Check Valve Groups: 1SD02 and 2SD02		
Valves:	3Q151XSD0004A, 3Q151XSD0004B, & 3Q151XSD0004C 3Q152XSD0004A, 3Q152XSD0004B, & 3Q152XSD0004C		
IST Functions	1. Close to prevent the rapid depressurization of the air receiver in case of a pipe rupture upstream of the check valve.		
Remarks	Each diesel has two receivers; either receiver can start the diesel. One of three diesels is required to supply power.		
Condition Monitoring Discussion	Failure patterns – Debris, corrosion, and rust caused a majority of the failures. Expected failure modes - Leaking, or improper seating. Past failure causes - Debris, worn internals, and misapplication. Currently testing for these valves is verification that the pressure in the air receiver tanks does not decay after the compressor is secured. This test verifies that the check is closed. Recording the rate of pressure decay can provide a means to trend valve degradation such that the valve disc is not aligning to the valve seat. The check valve opens when the compressor is started to fill the receiver tank. These two activities can be performed to verify the bi-directional functionality of these valves.		
Testing Requirements	The CM Testing will perform open flow verification during compressor starts and trend pressure decay rate data with valve in the closed position to monitor the condition of the check valves. These two activities will verify the bi-directional functionality of these valves.		
Frequency	Pressure decay rate test and flow open verification test performed quarterly. Non-intrusive testing for condition monitoring performed every 364 weeks, 7 years. Based on testing results, the frequency of the testing can be stepped out not to exceed code allowable limit of 12 years.		

ATTACHMENT 14: Condition Monitoring Plans

CM-SI18	Rev: 1	System:	SI
IST Group: SI18	Check Valve Groups: 1SI02 and 2SI02		
Valves	2N121XSI0005A, 2N121XSI0005B, & 2N121XSI0005C 2N122XSI0005A, 2N122XSI0005B, & 2N122XSI0005C		
IST Functions	1. Open to inject borated water from either the RWST or the containment sump to the RCS cold legs during the cold leg injection phase of safety injection. 2. Open to recirculate borated water from the containment sump to the RCS hot legs during the hot leg recirculation phase of safety injection. 3. Close and be leak tight (CAT A) to provide containment integrity.		
Remarks	There are 2 check valves in series to provide redundant ability to strengthen pressure boundary to minimize LERF impacts. Open function is required for feed and bleed in addition to standard LOCA response.		
Condition Monitoring Discussion	Failure patterns – Leakage due to normal wear. Expected failure modes - There are no common failure modes to this valve. Past failure causes - Failure causes include leaking due to normal wear. Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves. As an alternative to the non-intrusive acoustic test, inspection of these valves may be performed using computerized radiography. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Testing Requirements	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality is satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 12-year interval. Refueling interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-SI19	Rev: 0	System:	SI
IST Group: SI19	Check Valve Groups: 1SI03 and 2SI03		
Valves	1N121XSI0007A, 1N121XSI0007B, & 1N121XSI0007C 1N122XSI0007A, 1N122XSI0007B, & 1N122XSI0007C		
IST Functions	1. Open to inject borated water from either the RWST or the containment sump to the RCS cold legs during the cold leg injection phase of safety injection. 2. Close to prevent the diversion of flow from the accumulator or from the LHSI pump in the event that the corresponding HHSI pump is not running. 3. Close and be leak tight (CAT A) to maintain RCS pressure boundary, GDC 14 (PIV).		
Remarks	Close to prevent ISLOCA. There are 2 check valves in series to provide redundant ability to maintain pressure boundary. Open function is required for feed and bleed in addition to standard LOCA response. These valves are closed and leak tested prior to startup.		
Condition Monitoring Discussion	Failure patterns – Leakage due to normal wear. Expected failure modes - There are no common failure modes to this valve. Past failure causes - Failure causes include leaking due to normal wear. Presently a leakage test is performed on these valves following reach refueling outage in accordance with TS 4.4.6.2.2. This requirement also satisfies the OM Code leakage test requirement. These valves are open during system testing and refueling operations. The condition of these valves can be monitored by trending leakage. Increasing leakage rates provide an early indication of degradation in the valve so that the valve does not seat properly. Verification of flow through the valves during operation or other testing will demonstrate the bi-directional functionality of the valves.		
Testing Requirements	The CM testing will trend leakage data for determining the condition of the valve by continuing to perform the leak (PIV) test per TS 4.4.6.2.2. The open test is performed by initiating flow through the valve to confirm the bi-directional functionality of these valves.		
Frequency	Refuel interval for both closed leakage test and open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM-SI20	Rev: 0	System:	SI
IST Group: SI20	Check Valve Groups: 1SI04 and 2SI04		
Valves:	1N121XSI0009A, 1N121XSI0009B, & 1N121XSI0009C 1N122XSI0009A, 1N122XSI0009B, & 1N122XSI0009C		
IST Functions:	1. Open to recirculate borated water from the containment sump to the RCS hot legs during the hot leg recirculation phase of safety injection. 2. Close to prevent the diversion of flow from an LHSI pump in the event that the corresponding HHSI pump is not running during the hot leg recirculation phase. 3. Close and leak tight (CAT A) to maintain RCS pressure boundary, GDC 14 (PIV).		
Remarks	There are 2 check valves in series to provide redundant ability to maintain RCS pressure boundary. Closing function is backed up by upstream valves. Valves are closed and leak tested prior to startup.		
Condition Monitoring Discussion	Failure patterns – Leakage due to normal wear. Expected failure modes - There are no common failure modes to this valve. Past failure causes - Failure causes include leaking due to normal wear. Presently a leakage test is performed on these valves following reach refueling outage in accordance with TS 4.4.6.2.2. This requirement also satisfies the OM Code leakage test requirement. These valves are open during system testing and refueling operations. The condition of these valves can be monitored by trending leakage. Increasing leakage rates provide an early indication of degradation in the valve so that the valve does not seat properly. Verification of flow through the valves during operation or other testing will demonstrate the bi-directional functionality of the valves.		
Testing Requirements	The CM testing will trend leakage data for determining the condition of the valve by continuing to perform the leak (PIV) test per TS 4.4.6.2.2. The open test is performed by initiating flow through the valve to confirm the bi-directional functionality of these valves.		
Frequency	Refuel interval for both closed leakage test and open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM-SI21	Rev: 1	System:	SI
IST Group: SI21	Check Valve Groups: 1SI06 and 2SI06		
Valves:	2N121XSI0030A, 2N121XSI0030B, & 2N121XSI0030C 2N122XSI0030A, 2N122XSI0030B, & 2N122XSI0030C		
IST Functions	1. Open to inject borated water from either the RWST or the containment sump to the RCS cold legs during the cold leg injection phase of safety injection. 2. Open to recirculate borated water from the containment sump to the RCS hot legs during the hot leg recirculation phase of safety injection. 3. Close to prevent backflow from the RHR system during post-accident recovery operations. 4. Close and be leak tight (CAT A) to maintain containment integrity.		
Remarks	Close to prevent ISLOCA. There are 3 check valves in series to provide redundant ability to strengthen pressure boundary. This valve may have LERF impacts.		
Condition Monitoring Discussion	Failure patterns – Disc Seat leakage, Corrosion, erosion, seat leakage. Expected failure modes - Leaking or improper seating. Past failure causes - Normal wear, corrosion, debris, or not seating fully at lower pressures. Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves. As an alternative to the non-intrusive acoustic test, inspection of these valves may be performed using computerized radiography. Flow through the valve during normal operation or system/pump testing will be credited on the same frequency as the inspection. These testing activities will confirm the bi-directional functionality of these valves.		
Testing Requirements	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 12-year interval. Refueling interval for open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM-SI22	Rev: 0	System:	SI
IST Group: SI22	Check Valve Groups: 1SI05 and 2SI05		
Valves:	1N121XSI0010A, 1N121XSI0010B, & 1N121XSI0010C 1N122XSI0010A, 1N122XSI0010B, & 1N122XSI0010C		
IST Functions:	1. Open to recirculate borated water from the containment sump to the RCS hot legs during the hot leg recirculation phase of safety injection. 2. Close to prevent RCS backflow into the low-pressure SI systems. 3. Close and leak tight (CAT A) to maintain RCS pressure boundary, GDC 14 (PIV).		
Remarks::	There are 2 check valves in series to provide redundant ability to maintain RCS pressure boundary. Closing function is backed up by upstream valves. Valves are closed and leak tested prior to startup. Common path for high head and low head injection.		
Condition Monitoring Discussion:	Failure patterns – Disc Seat leakage, Corrosion, erosion, seat leakage. Expected failure modes - Leaking or improper seating. Past failure causes - Normal wear, corrosion, debris, or not seating fully at lower pressures. Presently a leakage test is performed on these valves following reach refueling outage in accordance with TS 4.4.6.2.2. This requirement also satisfies the OM Code leakage test requirement. These valves are open during system testing and refueling operations. The condition of these valves can be monitored by trending leakage. Increasing leakage rates provide an early indication of degradation in the valve so that the valve does not seat properly. Verification of flow through the valves during operation or other testing will demonstrate the bi-directional functionality of the valves.		
Testing Requirements:	The CM testing will trend leakage data for determining the condition of the valve by continuing to perform the leak (PIV) test per 4.4.6.2.2. The open test will be performed by initiating flow through the valve to confirm the bi-directional functionality of these valves.		
Frequency	Refueling interval for both closed leakage test and open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM- SI23	Rev: 0	System:	SI
IST Group: SI23	Check Valve Groups: 1SI07 and 2SI07		
Valves:	1N121XSI0038A, 1N121XSI0038B, & 1N121XSI0038C 1N122XSI0038A, 1N122XSI0038B, & 1N122XSI0038C		
IST Functions:	1. Open when the RCS pressure falls below the accumulator pressure to force borated water into the RCS cold legs. 2. Close to prevent backflow from the RCS into the low-pressure SI system. 3. Close and be leak tight (CAT A) to maintain RCS pressure boundary, GDC 14 (PIV).		
Remarks::	There are 2 check valves in series to provide redundant ability to maintain RCS pressure boundary. Closing function is backed up by upstream valves. Valves are closed and leak tested prior to startup. Common path for accumulator, high head, and low head injection.		
Condition Monitoring Discussion:	Failure patterns – Disc Seat leakage, Corrosion, erosion, seat leakage. Expected failure modes - Leaking or improper seating. Past failure causes - Normal wear, corrosion, debris, or not seating fully at lower pressures. Presently a leakage test is performed on these valves following reach refueling outage in accordance with TS 4.4.6.2.2. This requirement also satisfies the OM Code leakage test requirement. These valves are open during system testing and refueling operations. The condition of these valves can be monitored by trending leakage. Increasing leakage rates provide an early indication of degradation in the valve so that the valve does not seat properly. Verification of flow through the valves during operation or other testing will demonstrate the bi-directional functionality of the valves.		
Testing Requirements:	The CM testing will trend leakage data for determining the condition of the valve by continuing to perform the leak (PIV) test per 4.4.6.2.2. The open test will be performed by initiating flow through the valve to confirm the bi-directional functionality of these valves.		
Frequency	Refueling interval for both closed leakage test and open verify.		

ATTACHMENT 14: Condition Monitoring Plans

CM- SI25	Rev: 1	System:	SI
IST Group: SI25	Check Valve Groups: 1SI01 and 2SI01		
Valves:	2N121XSI0002A, 2N121XSI0002B, & 2N121XSI0002C 2N122XSI0002A, 2N122XSI0002B, & 2N122XSI0002C		
IST Functions	1. Open to provide a source of borated water to the suction of the LHSI, HHSI and CS pumps during the injection mode of accident mitigation. 2. Close to prevent backflow to the RWST when containment sump isolation valves are opened during switchover from the injection phase to the cold leg recirculation mode before SI-MOV001A, B, and C are closed.		
Remarks	Active for both directions. Considered to be the primary isolation. MOV provides the same closing function. If the valve fails to open, the plant loses 1/3 of SI capacity. Procedurally, the plant needs 1 out of 3 trains for success.		
Condition Monitoring Discussion	Failure patterns – Disc Seat leakage, Corrosion, erosion, seat leakage. Expected failure modes - Leaking or improper seating. Past failure causes - Normal wear, corrosion, debris, or not seating fully at lower pressures. Valves see very little use and therefore will be subject to minimal wear. Valves are exercised only during surveillance testing on SI pumps. The SOER 86-03 program has performed many tests on valves in this group using non-intrusive testing (NIT). The NIT testing includes steady state flow during SI pump inservice testing. Analysis on the steady state data and closure can determine the health of the valve. Analysis of the acoustic signals will include a comparison with previous testing results to evaluate a change in the quantity and magnitude of metal to metal impacts (rattles and rubs). Degradation in the valves cannot be quantitatively measured however, the presence of an increase in looseness in the valves will be a leading indicator to allow disassembly and inspection prior to valve failure. The bi-directional functionality of the valves will be shown during the non-intrusive testing since flow through the valve will be indicated by SI pump flow rate. The close impact will be detected by acoustic signal upon cessation of flow through the valve.		
Testing Requirements	Perform open verification during the non-intrusive (acoustic) test at a consistent repeatable steady state flow rate. Analysis of the acoustic signals at the steady state flow condition will be used to monitor the condition of the valves. A closure test will also be performed during the NIT. Bi-directional functionality will be satisfied during the test sequence. Indication of increase valve looseness (rattles and rubs) will determine need to open and inspect the check valves.		
Frequency	Non-intrusive testing at 12-year interval for both close test and open verify. Non-intrusive testing tests shall be performed on one valve in the subgroup at least every 4.5 years per 50.55a(b)(3)(iv), 'Check valves (Appendix II)'.		

ATTACHMENT 14: Condition Monitoring Plans

CM- SI27	Rev: 0	System:	SI
IST Group: SI27	Check Valve Groups: 1SI08 and 2SI08		
Valves	1N121XSI0046A, 1N121XSI0046B, & 1N121XSI0046C 1N122XSI0046A, 1N122XSI0046B, & 1N122XSI0046C		
IST Functions	1. Open when the RCS pressure falls below the accumulator pressure to force borated water into the RCS cold legs. 2. Close to prevent backflow from the RCS into the low-pressure SI system. 3. Close and be leak tight (CAT A) to maintain RCS pressure boundary, GDC 14 (PIV).		
Remarks	There are 2 check valves in series to provide redundant ability to maintain RCS pressure boundary. Valves are closed and leak tested prior to startup.		
Condition Monitoring Discussion	Failure patterns – Disc Seat leakage, Corrosion, erosion, seat leakage. Expected failure modes - Leaking or improper seating. Past failure causes - Normal wear, corrosion, debris, or not seating fully at lower pressures. Presently a leakage test is performed on these valves following reach refueling outage in accordance with TS 4.4.6.2.2. This requirement also satisfies the OM Code leakage test requirement. These valves are open during system testing by releasing water from the accumulator into the reactor cavity during refueling operations. The condition of these valves can be monitored by trending leakage. Increasing leakage rates provide an early indication of degradation in the valve so that the valve does not seat properly. Verification of flow through the valves during refueling operations will demonstrate the bi-directional functionality of the valves.		
Testing Requirements	The CM testing will trend leakage data for determining the condition of the valve by continuing to perform the leak (PIV) test per 4.4.6.2.2. The open test is performed by initiating flow through the valve to confirm the bi-directional functionality of these valves.		
Frequency	Refueling interval for both closed leakage test and open verify tests.		