

CATAWBA NUCLEAR STATION
ASME OM Code
In-Service Testing Program Document

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DOCUMENT REVISION DESCRIPTION

<u>REVISION NO.</u>	<u>PAGES or SECTION REVISED AND DESCRIPTION</u>
5	<p>Revised per PIP C10-1060. Specific changes include:</p> <ul style="list-style-type: none">• Revised NC PORV Stroke Requirement Position Statement (Enclosure 9.6),• Added new MSIV Stroke Requirement Position Statement (Enclosure 9.7),• Revised Enclosure 9.9, Priority for Cold Shutdown Valve Testing, (1) replacing 1(2)NI009A inadvertently removed via previous revision and (2) adding Special Note 3 for MSIV Cold Shutdown Valves, and• Other minor changes to support clarity and format.
6	<ul style="list-style-type: none">• Added new Enclosure 9.9, Containment Penetration Check Valve Position Statement. Other minor changes for structure and format.
7	<ul style="list-style-type: none">• Added new Step 4.2.9, Thermal Expansion Check Valves (PIP C-11-5991 CA#21). Corrected items identified during the 2012 CNS IST Program Assessment (PIP C-12-09204 CA#5). Other minor changes for structure and format.
8	<ul style="list-style-type: none">• Revised to Update Program to the 4th Interval.

TABLE OF CONTENTS

- 1.0 Program Document**
 - 1.1 Scope of Document**
 - 1.2 References**
 - 1.3 Definitions and Terms**
 - 1.4 Valve Program**
 - 1.4.1 In-Service Testing (IST) Program
 - 1.4.2 Valve Testing Program Exemptions and Position Statements
 - 1.4.3 Check Valve Testing
 - 1.4.4 Relief Valve Testing
 - 1.4.5 Leak Rate Testing
 - 1.4.6 Testing from Remote Locations
 - 1.4.7 Post Maintenance and Modification Testing (Retest)
 - 1.4.8 Fail-Safe Testing of Valves
 - 1.4.9 Skid-Mounted Valves
 - 1.4.10 Valve Test Acceptance Criteria
 - 1.5 Pump Program**
 - 1.5.1 In-Service Testing (IST) Program
 - 1.5.2 Pump testing Program Exemptions and Position Statements
 - 1.5.3 Vibration Monitoring
 - 1.5.4 Testing Required from Remote Locations
 - 1.5.5 Post Maintenance and Modification Testing (Retest)
 - 1.5.6 Skid-Mounted Pumps
 - 1.5.7 Pump Test Acceptance Criteria
 - 1.5.8 Pump Group Classification
 - 1.5.9 Pump Design
 - 1.5.10 Standby Make-up Pumps
 - 1.6 Snubber Program**
 - 1.6.1 Purpose
 - 1.6.2 Scope
 - 1.7 Relief Request**
 - 1.7.1 Implementation of Relief Request
 - 1.7.2 Code Cases
 - 1.8 Justification for Deferrals**
 - 1.8.1 Testing Deferral Justifications
 - 1.9 Appendices**
 - Appendix A: IST Program Responsibilities
 - Appendix B: 10CFR50, Appendix B, Supplemental Program Guidance Document
 - Appendix C: Notification of Program Changes

TABLE OF CONTENTS (continued)

1.10 Enclosures

- Enclosure 10.1: Revising the Program Document
- Enclosure 10.2: Relief Request Template
- Enclosure 10.3: Justification for Deferral
- Enclosure 10.4: System Piping Classification Correlation
- Enclosure 10.5: Valve Stroke Time Data Evaluation Flow Chart
- Enclosure 10.6: NC PORV Stroke Requirement Position Statement
- Enclosure 10.7: MSIV Stroke Requirement Position Statement
- Enclosure 10.8: SA-1 & SA-4 Position Statement
- Enclosure 10.9: Containment Penetration Check Valve Position Statement
- Enclosure 10.10: Priority for Cold Shutdown Valve Testing
- Enclosure 10.11: Position Indication Tests of Manual Actuated Pneumatic Valve Position Statement
- Enclosure 10.12: SG PORV Stroke Requirement Position Statement

2.0 Table of Abbreviations for Pump and Valve Summary Tables

3.0 Pump Inservice Testing Program

4.0 Valve Inservice Testing Program

5.0 Relief Request

6.0 Justification for Deferral

7.0 Supplemental Testing Program i.e. Augment Testing Program

1.1 SCOPE OF DOCUMENT

The purpose of the Catawba Nuclear Station (or hereafter referred to as "licensee" or "CNS") In-Service Testing (IST) Program, as related to this document, is to assess the operational readiness of safety related pumps, valves, and dynamic restraints (snubbers) in accordance with ASME and NRC guidelines. This document discusses the intent of the licensee's testing positions and philosophies with regards to the ASME Operations and Maintenance (OM) Code. It is not the purpose of this document to reiterate the ASME or NRC guidance in their entirety. Additionally, this document outlines the process for additional, changes, and deletions of pumps and valves from, and to, the IST Program.

Technical Specifications require performance testing of pumps, valves, and dynamic restraints in accordance with ASME OM Code. This program document defines how CNS complies with the ASME OM Code and Technical Specification. Failure to meet the requirements of this program is a violation of Technical Specifications and 10CFR 50.55a.

At CNS, the safe shutdown condition is defined as Mode 3, Hot Shutdown (Tech Spec B 3.3.4).

1.1.1 Program Period:

Fourth Ten-Year Interval (120-month period beginning August 19, 2016); Unit(s) 1 and 2 concurrently; and ends on August 19, 2025.

The start of this fourth ten-year interval was delayed by one-year as allowed by ASME OM Code Subsection ISTA-3120(d). This paragraph provides allowance for each inservice test interval to be extended or decreased by as much as one year. Adjustment shall not cause subsequent intervals to be altered by more than one year from the original pattern of intervals. This delay was necessary to complete a review performed by contract services and to implement the recommended changes to the station inservice testing practices. With this delay, the fourth ten-year interval will be shortened by one year, ending on August 19, 2025.

1.1.2 Applicable ASME Code(s) and Addenda:

ASME OM-2004 Edition; including OMb Code-2006 Addenda; and subject to the OM conditions, limitations, and modification in 10CFR50.55 a(b)(3).

When approved by the NRC (ref: Regulatory Guide 1.192, Operating And Maintenance Code Case Acceptability, ASME OM Code), Catawba Nuclear Station will adopt the frequency requirements for extending periods (grace) for inservice testing of pumps and valves specified in ASME OM Code Case OMN-20, Inservice Test Frequency. Currently, the ASME OM Code does not provide for any frequency reductions or extensions of the surveillance periods for pump and valve inservice testing. Code Case OMN-20 identifies a delay period for the inservice test frequencies for pumps and valves which a licensee may voluntarily apply. The NRC has reviewed Code Case OMN-20 and has found it acceptable for use. Catawba has not submitted a relief request for NRC approval to apply Code Case OMN-20. Therefore, Catawba will apply this "grace" period after this allowance is published in Regulatory Guide 1.192.

1.1.3 Program Changes:

The NRC shall be notified of IST Program changes; however, component additions and deletions will be submitted and testing implemented or deleted without prior NRC approval. In the instance where a component has been added to the IST Program, testing and the appropriate procedure changes will take place in a timely manner, but not exceeding one test period, after revising the program source documents unless determined to be impractical. If a hardship is identified, notification will be submitted to the NRC and an interim extension from testing implementation obtained.

The content of this program document is based on recommendations stated in NUREG-1482 (Rev. 2) and is intended for the purpose of maintaining program continuity and documenting additional discussions and positions relative to Code interpretations. Therefore, changes to this program document will not require prior NRC review and/or approval unless the licensee determines a need to do so.

1.2 REFERENCES

The following documents were used as references in the development of this document:

ASME OM Code 2004 (plus addenda)-

Generic Letter 89-10 - Safety-Related Motor-Operated Valve Testing and Surveillance

Generic Letter 96-05 - Periodic Verification of Design-Basis Capability of Safety-Related Power-Operated Valves

Generic Letter 96-06 - Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions

10 CFR 50, Appendix B

10 CFR 50.55a

Technical Specifications

Updated Final Safety Analysis Report (UFSAR)

Nuclear System Directive: 408 Testing

Reg. Guide 1.26

NRC Inspection Procedure 73756

NUREG/CP-0123, Proceedings of the NRC/ASME Symposiums on Pump and Valve Testing

NUREG-1482 (Rev. 2), Guidelines for In-service Testing at Nuclear Power Plants, October 2013

NRC Information Notice 97-90

NRC Information Notice 97-16

1.3 DEFINITIONS and TERMS

AD-EG-CNS-1618, CNS Snubber Program Plan

Generic Letter 89-10 -	the NRC letter providing additional requirements in testing MOVs to design basis conditions.
Generic Letter 96-05 -	the NRC letter requiring periodic verification of the capability of safety-related MOVs to perform their safety functions consistent with the current licensing bases.
Generic Letter 96-06 -	the NRC letter notifying addressees about safety-significant issues that could affect containment integrity and equipment operability during accident conditions.
NUREG-1482 -	the NRC document that gives licensees guidelines and recommendations for developing and implementing programs for the inservice testing of pumps and valves.
ASME OM Code -	the section of ASME Codes and Standards Manual that determines how to perform in-service testing of light water reactor nuclear plant components.
ASME ISTC Code -	the part of ASME OM Codes dealing with the in-service testing of valves.
ASME ISTB Code -	the part of ASME OM Codes dealing with the in-service testing of pumps.
ASME OMN-20	the OM Code Case that established the method for extending the test frequencies (i.e. "grace") for inservice testing of pumps and valves.
Frequencies -	<p>the interval of time between in-service testing of the components. These intervals are defined in CNS Technical Specifications:</p> <ol style="list-style-type: none">1) Quarterly (3 months) - once every 922) Cold Shutdown (CSD) - Average Coolant Temperature (T_{avg}) < 200°F3) Refueling (RF) - Unit at shutdown for the purpose of replacing or rearranging all or a portion of the fuel assemblies or control rods.
IST Component -	components (valves and pumps) that are required to be tested per ASME OM Code. Sections 4.1 and 5.1 of this document define the criteria to be included in the IST Program.

1.3 DEFINITIONS and TERMS (continued)

"App. B Component" -	components (valves and pumps) tested under of 10CFR50, Appendix B. Used interchangeable with the term "Augmented Test Program".
	NOTE: CNS historically included "App. B Component" within the station's "Supplemental Testing Program". For CNS 4th 10yr Interval, this reference was changed to the "Augmented Testing Program".
"App. J Component" -	components leak tested for containment integrity under 10CFR50, Appendix J (including Option B).
Active Component -	a component that must perform a mechanical motion during the course of accomplishing a system safety function.
Passive Component -	a component that does not perform a mechanical motion during the course of accomplishing a system safety function.
Operational Readiness -	the ability of a component to perform its intended function when required.
Seat Tightness Test -	a qualitative test performed to assess a valve's ability to shut off between its disc and seat in accordance with the Owner established seat tightness criteria typically performed on PORVs as required by ISTC-5112.
System Resistance -	the hydraulic resistance to flow in a system.
Trending -	a comparison of current data to previous data obtained under similar conditions for the same equipment.
Set Point -	the value for which relief valves are set to relieve pressure.
Leak Test -	testing of valves to verify seat leakage is limited to a specified maximum.
Stroke-Time -	the time interval from valve actuation to the limit switch indication light at the end of the actuating cycle.
Limiting Stroke Time -	the maximum time allowed for a valve to stroke before becoming immediately inoperable.
Relief Requests -	A request submitted to the NRC requesting relief from the requirements of the Code for testing a particular component or a generic group of components.
Justif. For Deferrals -	A documented explanation of why a valve can only be tested at a cold shutdown or refueling outage frequency as opposed to quarterly.

1.3 DEFINITIONS and TERMS (continued)

- Group A Pump - pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operations.
- Group B Pump - pumps in standby systems that are not operated routinely except for testing.
- Category A Valves - valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their required function(s).
- Category B Valves - valves for which seat leakage in the closed position is inconsequential for fulfillment of the required function(s).
- Category C Valves - 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 function(s).

1.4 VALVE PROGRAM

1.4.1 In-Service Testing (IST) Program

As required by 10CFR50.55a, valves that are classified in accordance of NRC Regulatory Guide 1.26 as Safety Class A, B, or C, which corresponds to ASME Class 1, 2, or 3 respectively, under the scope of ISTA, are included in the CNS IST Program. The following defines the criteria for inclusion of equipment in the IST Program:

- a) All Category A valves that fall within the Duke ISI Class A, B, or C boundaries.
- b) All Category B and C valves that fall within the Duke ISI Class A, B, or C boundaries and 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 the Design basis Accidents (Design Basis Accidents are defined as those described in Chapter 15 of the UFSAR).
- c) Valves in systems specifically required by Technical Specifications to be tested per ASME OM Code.

CNS has some valves that are active in certain non-Design Basis Events, are cold shutdown valves not associated with an UFSAR Chapter 15 event, are significant to plant safety, or are of economic importance that are beyond the scope of 10CFR50.55a. Such valves will be tested in the Augmented (10CFR50 Appendix B) Program. See Appendix B of this document for a discussion of this program.

The scope of the OM Standards and Code has not been expanded to include all safety-related pumps and valves in the IST Program. Until the scope of 10CFR50.55a is changed, the scope of the IST Program will continue to be limited to only those components within the applicable ASME Code Class 1, 2, or 3 systems unless otherwise determined by the licensee (reference NUREG-1482, rev. 2).

1.4.2 Valve Testing Program Exemptions and Position Statements

Valves tested under jurisdiction of this program will be tested per requirements of OM ISTC at the specified frequencies unless it has been determined to be impractical. This section of the program document provides CNS positions on interpretations, guidance, and other options regarding testing alternatives.

1.4.2.1 Category A and A/C valves (containment, pressure isolation, and other applicable valves) will be leak tested in accordance with ISTC-3600.

1.4.2.2 Valves that stroke in less than 2 seconds may be exempted from reference ranges and the maximum limiting stroke time shall be 2 seconds as specified by OM ISTC-5152..

1.4.2 Valve Testing Program Exemptions and Pos. Statements (continued)

1.4.2.3 Stopwatches used to measure stroke times will be calibrated annually.

1.4.2.4 OM ISTA-9230 identifies the minimum documentation requirements for a completed test or examination; which includes the signature of the person or persons responsible for conducting and analyzing the test. The dated initials of the person or persons responsible for conducting and analyzing the test may be used, provided the signature and initials are properly documented together within record of the tests.

1.4.2.5 It is the licensee's position that valve testing will be deferred if the normal Code required test frequency or plant conditions would result in increased personnel risk or damage to plant equipment. Practicality of such deferral shall be determined by the licensee and documented in the "Justification for Deferral" section of the IST Program manual. In such cases, the licensee will not perform any type of destructive testing to determine the period of time at which damage to the equipment or risk to personnel would occur. Exercising valves on a cold shutdown or refueling outage frequency is not a deviation from the Code (reference NUREG-1482, Section 2.4.5).

NOTE: For cold shutdowns less than 48 hours, valve testing does not have to be performed. However, for cold shutdowns expected to exceed 48 hours, valve testing will commence as soon as possible, but no later than 48 hours after reaching cold shutdown. Valve testing will proceed in a normal manner until all testing is complete or the plant is ready to return to power. It is expected that Operations and Outage Scheduling will expend a 'good faith' effort to perform cold shutdown testing during a short outage. A completion of all valve testing is not a prerequisite to return to power. Any testing not completed by the end of one cold shutdown will be performed during subsequent cold shutdowns, starting from the last test performed at the previous cold shutdown.

1.4.2.6 Manual valves that meet the scope requirements of OM ISTC-3500 or are credited in the safety analysis as capable of being repositioned to shut down the plant, to maintain the plant in a safe shutdown condition, or to mitigate the consequences of an accident will be included in the IST Program. Active manual valves will be exercised at a frequency not to exceed 2 years.

1.4.2 Valve Testing Program Exemptions and Position Statements (continued)

- 1.4.2.7 Valves that are not categorized as ISI Class A, B, or C need not be included in the IST Program. However, according to NUREG-1482, Section 2.2, "The intent of 10 CFR 50 Appendix A, GDC-1, and Appendix B, Criterion XI, is that all components, such as pumps and valves, that are necessary for safe operation must be tested to demonstrate that they will perform satisfactorily in service." The licensee may opt to include valves which do not meet these criteria in the IST Program or in the Augmented Test Program. CNS will not submit Relief Requests or Justification for Deferrals for "Non-Code"- Class valves.
- 1.4.2.8 Thermal Relief Valves that meet the scope requirements of ISTA or are credited in the safety analysis for being capable of relieving pressure in Code Class 1, 2 and 3 piping systems by maintaining the plant in a safe shutdown condition, or in mitigating the consequences of an accident will be included in the IST Program. However, testing of such valves will be based on exercising frequencies established by the guidance given in OM Code, Appendix I, section I-1300.
- 1.4.2.9 Thermal Expansion Check Valves: Several containment penetrations have been fitted with normally closed check valves designed to open to pass flow created by thermal expansion of fluid within the penetration (NRC GL 96-06). The quantity of fluid thermal expansion is so small that any opening of the check valve will allow it to pass the required flow to prevent over pressurization of the containment penetration. Open testing will be performed by verifying the ability to pass any amount of flow. Flow will not be quantified.
- NOTE: Thermal Expansion Check Valves are tested in accordance with the station Check Valve Condition Monitoring Program and Enclosure 9.9, Containment Penetration Check Valve Position Statement.
- 1.4.2.10 Containment Purge Valves (VPs), which are passive in the closed direction, will be leak tested per 10 CFR 50, Appendix J but not stroke-timed for IST purposes. Containment Purge valves are "passive" in Modes 1-4. During a postulated fuel handling accident inside the containment, no credit for containment isolation or mixing in the containment is taken. System design assures a safe release path from the containment with the VP system in operation. The radiological consequences of a postulated fuel handling accident are within the exposure guideline values of 10CFR 100.
- 1.4.2.11 Containment Hydrogen Purge Valves (VY), which are passive in the closed direction, will be leak tested per 10 CFR 50, Appendix J but not stroke-timed for IST purposes. These valves are "passive" in Modes 1-4. CNS Technical Specifications requires exercising these valves. However, power is removed and these valves are placed under administrative control as to not permit re-positioning after they have been leak-tested per Appendix J.

1.4.3 Check Valve Testing

Check valves tested under the jurisdiction of this program will be tested per Code requirements at the specified frequencies unless it has been determined to be impractical. This section of the program document is to provide the CNS positions concerning interpretations, guidance, and other options and testing alternatives for check valves.

1.4.3.1 For check valves in series, where one of two valves is credited in the safety analysis, the verification that the pair of valves is capable of closing will be done on the basis of testing one of the check valves.

1.4.3.2 Category A and A/C valves (containment, pressure isolation, and other applicable check valves) will be leak tested in accordance with ISTC-3600.

1.4.3.3 Full stroke testing of check valves will not necessarily constitute the obturator contacting the back-stop. Where possible, sufficient flow will be passed through the valve to verify design basis accident flow. If full flow is not possible, then the licensee will perform correlation testing, partial stroking, or other alternatives as provided by ISTC-5220, Check Valves, and/or ISTC-5222, Condition Monitoring Program. Additionally, the Code allows use of indirect evidence (such as system pressure, flow, temperature, or level) or other positive means to verify flow or pressure requirements. These indirect methods will not be subject to the range and accuracy requirements of ISTC-3800. (Ref. ISTC-3530)

1.4.3.4 Seismic boundary check valves will be included in the program.

1.4.3.5 Check valves included in the Sample Disassembly portion of the IST Program will be disassembled and inspected under the provisions and guidelines given in ISTC-5221.

1.4.3.6 Where applicable to the CNS IST Program, reverse flow testing of check valves will be performed by methods as follows:

- Pump discharge check valves - verified closed by meeting a parallel pump's acceptance criteria while cross-connected;
- Appendix J testing;
- Measure back flow through the valve using an open vent on the backside of the valve or ultrasonic flow measurement techniques;
- Pressure drop across a pump;
- Pump wind-milling (when determined acceptable);
- Observation of external indication on valve stem.

1.4.3 Check Valve Testing (continued)

1.4.3.7 As an alternative to the testing and/or examination requirements of ISTC-3510, ISTC-3520, ISTC-3530, ISTC-3550, and ISTC-5221, the licensee has developed a conditioning monitoring program for check valves. Details of the program may be found in the program document for the Catawba Check Valve Condition Monitoring Program (ref.: ISTC-5222).

1.4.3.8 The licensee recognizes the NRC's acceptance of non-intrusive techniques (N.I.T.) for testing check valves and will randomly apply N.I.T. to the check valve program. Validation that such equipment meets the plant's QA Program is the responsibility of the licensee. Therefore, N.I.T. remains a voluntary option and will be evaluated on an individual application basis.

1.4.4 Relief Valve Testing

Relief valves tested under the jurisdiction of this program will be tested per Code requirements of ASME OM Code Appendix I, unless it has been determined to be impractical. Relief valves shall be considered for inclusion in the program if it performs a specific function or if it provides overpressure protection for portions of systems that perform a specific function in shutting down a reactor or in mitigating the consequences of an accident.

1.4.5 Leak Rate Testing

All category A and A/C valves will be tested per ISTC-3600, except those valves which function in the course of plant operation in a manner that demonstrates functionally adequate seat leak-tightness need not be additionally leakage tested. In such cases, the valve record shall provide the basis for the conclusion that operational observation constitutes satisfactory demonstration.

Category A and A/C containment isolation valves (CIVs) shall be tested per 10CFR50 Appendix J (Option B), which allows testing interval extension beyond the nominal 30 months for those CIVs with acceptable performance. The actual testing interval can be determined from the Leakrate Program.

Where a valve is identified as a containment isolation valve in the Technical Specification or UFSAR and if it is determined to be an "active" valve with respect to this function, it will be exercised to both the open and closed positions.

1.4.6 Testing from Remote Location

ISTC-3700 requires valves with remote position indication to be observed locally at least once every 2 years to verify that the valve operation is accurately indicated. Valves that have remote operating switches and/or power supplies shall also be tested and verified for proper indication from the remote location. Refer to Technical Position (Enclosure 10.11) for additional information.

1.4.7 Post Maintenance and Modification Testing (Retest)

Reference Nuclear System Directive 408 – Testing.

1.4.8 Fail-Safe Testing of Valves

All Fail-Safe valves shall be tested in accordance with ISTC-3560. Valves used only for system control, are typically excluded from testing in the IST Program. However, if a control valve must change position to support a safety-related function and it has a fail-safe position, then it will be included in the program and tested to verify the ability to perform that function with power and/or air removed (or simulated power and/or air removal). Additionally, 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 (ISTC-5100).

1.4.9 Skid-Mounted Valves

As specified in ISTC-1200, skid mounted valves will be excluded from the scope of IST test requirements provided they are adequately tested as part of the 'major' component. The licensee however, may opt to include certain components contained on these skids in the IST program for testing and trending purposes. In such cases, any program changes, exceptions, exemptions, or deferrals will not be submitted to the NRC for prior approval, but simply documented in the program plan. Examples of skid components include FD, VG and LD system valves.

1.4.10 Valve Test Acceptance Criteria

All valve test acceptance criteria (IST-TAC) will be developed in accordance with the provisions specified in ISTC-3300 and ISTC-5100. Where IST-TAC, other than that required by Code, is established for a given valve (e.g., additional N.I.T. diagnostics or GL 96-05 testing), the documentation of that criteria will be at the discretion of the licensee and not required to be part of the test record. IST-TAC should not be confused with the acceptance criteria specified in DBDs, DBD associated TAC Sheets, Technical Specifications, or UFSAR. Such acceptance criteria are the most limiting values and cannot be exceeded. IST-TAC is set to verify operational readiness of the valves and to identify valve degradation before the 'most limiting' acceptance criteria is exceeded. IST-TAC will be evaluated to verify that other acceptance criteria specified (UFSAR, DBD, TS, etc.) will not be exceeded.

Leakage criteria for valves (other than those tested in accordance with 10CFR50 Appendix J, Technical Specification, or system specific criteria), will be determined based on leakage rates specified by the licensee or using the guidance provided in ISTC-3630.

Relief valve IST-TAC will be established per Appendix I, or developed using licensee calculations as permitted by the OM Code.

1.4.10 Valve Test Acceptance Criteria (continued)

1.4.10.1 Valve Stroke-Time Acceptance Criteria:

The following cases present the options available for determining valve operability based on stroke time:

CASE 1: The valve strokes within its acceptable stroke time. The valve is considered operable.

CASE 2: The valve fails to change position on the first try or exceeds the LIMITING VALUE. The valve shall be immediately declared inoperable.

CASE 3: The valve fails to meet the acceptance stroke time, but strokes in less than the LIMITING-VALUE. Per ISTC-5100, the valve shall be immediately stroked again to achieve an acceptable stroke time. Per the Catawba Valve Testing Program:

- a. If the valve successfully strokes on the second stroke, the valve is considered operable. The cause of the initial deviation shall be analyzed and the results documented in the record of test (i.e. WO or Condition Report). A third valve stroke may be performed to demonstrate consistent valve operation.
- b. If the valve does not fall within the acceptable range on the second stroke, then the valve will be analyzed within 96 hours OR declared inoperable (if applicable). An evaluation must be performed to determine the cause of the failed test (deviation). The evaluation may determine that either corrective maintenance must be performed on the valve or the new stroke data is acceptable and new baselines must be established. Such results must be documented in the record of test (i.e. WO or Condition Report).
- c. In the event the initial stroke and the second test results are inconsistent, but the engineering evaluation shows the new stroke-time is acceptable, a third test may be performed to verify consistent behavior.
- d. If a valve fails its stroke time, subsequent testing may be performed to reconfirm the original stroke time reference value and the faulted test may be determined invalid.

1.4.10 Valve Test Acceptance Criteria (continued)

1.4.10.2 Valve Stroke-Time Measurements and Methods:

Valve stroke-times are measured with a stopwatch to the nearest second. The stopwatch is started when the valve is actuated and it is stopped when an indication light is received indicating that the valve has completed its full stroke. OAC measurement using the Response Time Test (RTT) function is also an acceptable means of valve stroke timing.

1.4.10.3 Limiting-Value Stroke-Time Acceptance Criteria:

Limiting-Values for stroke-times will be established in accordance with guidance given in NUREG-1482, Section 4.2.1. It is the position of the licensee that these values will be determined as follows (with the limitations of Tech. Specs. and Safety Analysis limits being the most limiting):

<u>Valve Type</u>	<u>Limiting Value Calculation</u>
MO (> 10secs.)	1.3R (to the nearest 0 or 5 sec.)
MO (\leq 10secs.)	1.5R (to the nearest 0 or 5 sec.)
AO & EH (> 10secs.)	2.0R (to the nearest 0 or 5 sec.)
AO & EH (\leq 10secs.)	2.25R (to the nearest 0 or 5 sec.)

Note: Where 'R' represents the valve reference value at acceptable operation.

MO - Electric Motor Operated Valve

EH - Electric Hydraulic Operated Valves

AO - Pneumatic (air) Operated Valve

1.5 PUMP PROGRAM

1.5.1 In-Service Testing (IST) Program

As required by 10CFR50.55a certain pumps that are classified in accordance of NRC Regulatory Guide 1.26 as ISI Class A, B, or C, which corresponds to ASME Class 1, 2, or 3 respectively, under the scope of ISTA, are included in the IST Program. The following defines the criteria for inclusion of equipment in the IST Program:

- a) Pumps in systems specifically required by Technical Specifications to be tested per ASME OM Code ISTB.
- b) All pumps that fall within the Duke ISI Class A, B, or C boundaries that are required to perform a specific function in shutting down the reactor to a safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of the Design Basis Accidents (Design Basis Accidents are defined as those described in UFSAR Chapter 15).

Certain pumps where the only required function is during non-Design Basis Events will be tested in the Augmented (10CFR50 Appendix B) Program. See Appendix B for a discussion of this program.

1.5.2 Pump Testing Program Exemptions and Position Statements

Pumps tested under the jurisdiction of this program will be tested per Code requirements of ISTB at the specified frequencies unless it has been determined to be impractical. The purpose of this section of the program document is to provide CNS positions on interpretations, guidance, and other options regarding testing alternatives.

- 5.2.1 OM ISTA-9230 identifies the minimum documentation requirements for a completed test or examination; which includes the signature of the person or persons responsible for conducting and analyzing the test. The dated initials of the person or persons responsible for conducting and analyzing the test may be used, provided the signature and initials are properly documented together within record of the tests.
- 5.2.2 Pumps whose only safety function is predicated on plant shutdown and recovery from a fire per commitments made as a result of NFPA-805 (Fire Protection) are not required to be included in the IST Program. The licensee will test these in accordance with NFPA-805 requirements.
- 5.2.3 Pumps that are not provided with an emergency source of power will not be required to meet IST requirements. The licensee however, may elect to include these pumps in the IST Program for testing purpose only.

1.5.3 Vibration Monitoring

Pump vibrations monitored under the jurisdiction of this program will be performed per Code requirements at the specified frequencies unless it has been determined to be impractical or a specific deviation from Code is needed and obtained.

1.5.4 Testing Required from Remote Locations

(Not Applicable to Catawba Nuclear Station)

1.5.5 Post Maintenance and Modification Testing (Retest)

Reference Nuclear System Directive 408 - Testing

1.5.6 Skid-Mounted Pumps

As specified in ISTB-1200, skid mounted pumps will be excluded from the scope of IST Program Plan provided they are adequately tested as part of the 'major' component. The licensee however, may opt to include certain components contained on these skids in the IST Program Plan for testing and trending purposes. In such cases, any program changes, exceptions, exemptions, or deferrals will not be submitted to the NRC for prior approval, but may be documented in the program plan.

1.5.7 Pump Test Acceptance Criteria

All pump test acceptance criteria (IST-TAC) will be developed in accordance with the provisions specified in ISTB. The applicable acceptance criteria will be developed when the pump is known to be performing in a satisfactory manner. Where IST-TAC other than that required by Code is established for a given pump (i.e., pump curves), the documentation of that criteria will be at the discretion of the licensee and may not be part of the test record.

'IST-TAC' may not be the same acceptance criteria specified in DBDs, DBD associated TAC Sheets, Technical Specifications, or any UFSAR. IST-TAC is set to verify operational readiness of the pumps and to identify pump degradation before the 'most limiting' acceptance criteria are exceeded. Pump IST-TAC will be evaluated to verify that other acceptance criteria specified (DBDs, DBD TAC sheets, Tech. Specs., or UFSAR) will not be exceeded.

1.5.8 Pump Group Classification

ASME OM Code requires pumps be defined as Group A or Group B, which in turn defines the test type and frequency. ISTB-2000, Supplement Definitions, provides the characteristic for identifying both group A and B pumps. ISTB-3400, Frequency of Inservice Tests, and ISTB-5120, Inservice Testing, provides the testing requirements for both groups.

<u>Group A</u>	<u>Group B</u>
KC	CA
ND	NI
NV	NS
RN	SMP
YC	

The following sump pumps are tested as part of the IST Program and are subject to Comprehensive Pump test requirements only (no Group B test required, ISTB-3430):

WL - ND & NS Room Pit Sump Pumps
WL - TD CA Pump Pit Sump Pumps
WN - EDG Room Sump Pumps

1.5.9 Pump Design

The ASME OM ISTB Code imposes different requirements depending on the pump design. There three basic designs: centrifugal or CP, positive displacement or PDP, and vertical line shaft or VLS. The VLS pumps at CNS are the Nuclear Service Water pumps and sump pumps. The PDP pumps at CNS are the Standby Make-up Pumps. The remaining pumps are CP pumps. Code Table ISTB-5121-1, 5221-1, and 5321-2 provides the testing parameters and ranges based on pump design.

1.5.10 Standby Make-up Pumps

The standby make-up pumps or SSF pumps are part of the Augmented Testing Program. These are non-safety, non-Code pumps and are therefore not subject to the full extent of Code testing. They are important for mitigation loss of control room events, SBO, etc. (non-Design Basis events) and will be testing accordingly. The extent of testing will be flow and discharge pressure only.

1.5 SNUBBER PROGRAM

1.6.1 Purpose

The intent of the ISTD-Snubber Program is to determine and ensure snubber operational readiness through periodic examinations, testing, and service life monitoring. Title 10CFR50.55a invokes perservice and inservice testing of snubbers per ASME OM Code and establishes the requirements that each nuclear power plant must develop and implement a preservice and inservice examination and testing program for snubbers.

1.6.2 Scope

The Snubber Program includes all snubbers installed at Catawba Nuclear Station Unit 1 and 2. Those snubbers testing in the program are selected and tested in accordance with the ASME OM Code, 2004 Edition of ISTA and ISTD, through the 2006 Addenda.

Ref.: AD-EG-CNS-1618, CNS Snubber Program Plan

1.6 RELIEF REQUEST

The purpose of a Relief Request is to request the NRC grant relief from those requirements of the existing Code that cannot be followed. NRC review and approval of the alternative testing is required. If the testing on the component cannot be performed due to plant configuration, plant safety, equipment limitations, type, or hazards to personnel, relief from the Code will be requested. Submitted relief requests will:

- a) give an alternative method that ensures an acceptable level of quality and safety,
- b) explain the hardship with meeting the Code requirement,
- c) provide a schedule or alternative test frequency (or duration for interim Relief Request).

At the end of each 'Ten Year Interval', all Relief Requests will be reviewed for next interval applicability. Relief Requests will not be written for any non-Code Class components that are included in the IST Program at the licensee's discretion.

1.7.1 Implementing Relief Requests:

When a Relief Request is submitted for those requirements which have been determined to be clearly impractical, the licensee reserves the right to implement the proposed alternative testing while the NRC is reviewing the Relief Request, providing the licensee has assured the alternative does not compromise the level of safety provided by the Code testing requirement. This position is referenced from NUREG-1482, section 2.5.

1.7.2 Code Cases

In accordance with 10CFR50.50a(b), code cases referenced in Regulatory Guide (RG) 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code" may be used without obtaining further review. RG 1.192 provides a list of code cases that are acceptable provided they are used in their entirety, with any supplemental conditions specified in the regulatory guide. In addition, RG 1.192 provides a list of code cases which are "conditionally acceptable", meaning that they are acceptable within the limitations described in RG 1.192.

1.7.2.1 Application of Code Cases

- Code cases to be used during a preservice or inservice test or examination are listed in this IST Program.

When approved by the NRC (ref: Regulatory Guide 1.192, Operating And Maintenance Code Case Acceptability, ASME OM Code), Catawba Nuclear Station will adopt the frequency requirements for extending periods (grace) for inservice testing of pumps and valves specified in ASME OM Code Case OMN-20, Inservice Test Frequency.

- Code cases used in this IST Program are applicable to code of record identified in paragraph 1.2.
- Code cases shall be in effect at the time this IST Program is filed, except as provided below.
- Code cases issued subsequent to filing this IST Program may be proposed for use in amendments to this IST Program.

1.7.2.2 Application of Revised Code Cases

- Superseded code cases approved for use in accordance with paragraph 7.2.1 may continue to be used.

1.7.2.3 Application of Annulled Code Cases

- Code cases approved for use in accordance with paragraph 7.2.1 or 7.2.2 may be used after annulment for the duration of this IST Program Interval Program Plan.

1.8 JUSTIFICATION FOR DEFERRALS:

Justification for Deferrals (JFDs) will be written when a component cannot be tested at the specified frequency. This could be due to an impracticality of testing the component at power or due to plant safety concerns introduced by the testing configuration. The basis for determining the impracticality of testing at power and expanding the component's testing frequency to a Cold Shutdown (CSJ) or Refueling Outage (RFJ) frequency is documented in the Justification for Deferral.

In-Service Testing to be performed at Cold Shutdown shall:

- a) be performed during each cold shutdown when the planned length is of sufficient duration to establish the necessary test conditions and to perform the test, and
- b) be performed as to not impact the timely completion of the shutdown related activities and subsequent return to operation. For outages when the planned length is not of sufficient duration to complete all tests, testing will start within 48 hours and proceed with "good faith" effort after reaching cold shutdown conditions, or
- c) be performed at the next available cold shutdown consistent with the above criteria if an opportunity to test the valve is not available. Completion of the IST is not a prerequisite to return to operation.

Any testing required to be performed during a refueling outage shall be completed prior to plant operation. Components tested during start-up will not delay start-up if the site Technical Specifications allow start-up with the component out of service or inoperable. Retest and corrective actions shall be performed at the first available opportunity.

Deferred Test Justifications are numbered in a "WWW-XX-YY-##" format where:

- WWW = Cold Shutdown Justification (CSJ)
Refueling Outage Justification (ROJ)
- XX = Catawba Nuclear Station (CN)
- YY = System Acronym
- ## = Unique sequential number; e.g., CSJ-CN-NI-2 would be the second cold shutdown justification valves in the Safety Injection (NI) System

1.8.1 Testing Deferral Justifications:

Purpose: The purpose of the testing Justification for Deferral form is to document the reason that a pump or valve can only be tested at cold shutdown or at refueling outage.

Valid reasons could be plant configuration for testing which would jeopardize the safety of plant operation, access to the component which would be against ALARA, access to the component due to the environmental conditions endangering personnel safety, or that plant configuration for testing would require the plant to be in a mode not suitable for power production, or testing renders systems inoperable for extended periods of time. It is not the intent of IST to cause unwarranted plant shutdowns or to unnecessarily challenge other safety systems.

Note: The Justification of Deferral Form is found in Enclosure 10.3.

1.9 APPENDICES

Appendix A: IST PROGRAM Responsibilities

1.0 Site IST Engineer:

The IST Engineer position will be filled by a qualified individual knowledgeable of plant system operation. He/she ensures the site is in compliance by its performance testing and trending methods. The IST Engineer will accomplish this by maintaining consistency among the System Engineers and overall program management.

The IST Engineer may publish an overall summary (as an annual summary), on the current status of the site performance monitoring of the valves and pumps tested under the requirements of the IST or 10CFR50, Appendix B Program.

The IST Engineer will be responsible for:

- notifying Regulatory Compliance of any changes to the Valve and Pump Testing Program described in this document, including changes to the data sheet information,
- updating and maintaining the IST Database,
- ensure all IST-TAC is accurate and not in conflict with other specified TAC,
- coordinating and implementing the program update and renewal per 10CFR50 every 10 years.

2.0 Corporate IST Coordinator:

The Corporate IST Coordinator will be an individual responsible for overall corporate IST Program management. He/she ensures corporate strategies for the IST Program align with industry and regulatory standards. This individual is knowledgeable of each site's IST programs including program administration and will be responsible for ensuring each site is in compliance with the applicable ASME Codes and IST guidelines (ISTA, ISTB, ISTC, NRC Generic Letters, and NUREG-1482, etc.).

The Corporate IST Coordinator is the technical consultant on any Code-related issues that require interpretation or involve Operability determinations (at the discretion of the IST Engineer and site management). The Corporate Coordinator will provide support for internal and external IST Program audits.

The Corporate IST Coordinator will be the Single Point of Contact on any issues that involve site-site interaction and will be responsible for ensuring consistency where practical.

The Corporate IST Coordinator will represent Duke Power's interest for Code development.

Appendix A: IST PROGRAM Responsibilities (Continued)

The Corporate IST Coordinator will be responsible for assisting with review and updating the IST Program per 10CFR50 each 10 year interval. He/she will also assist the sites in preparing, submitting, and reviewing interim revisions to the IST Program. Also, the IST Coordinator will assist the site IST Engineer in developing position statements, Relief Requests, and Justification for Deferrals. He/she will also perform periodic reviews of site Relief Requests and/or Justification for Deferrals for consistency and compliance.

The Corporate IST Coordinator will see that progress addressing technical issues will be made by the IST Working Group (ISTWG). This includes defining appropriate tasks, tracking action items, conducting periodic meetings, interface with the appropriate BEST contacts, and maintaining overall group focus.

3.0 Site Engineering:

Site Engineering is responsible for the components within their systems which are in the program. If the status of a component changes, Site Engineering is responsible for initiating the required changes to the program (see Appendix C).

Site Engineering is responsible for the following:

- ensuring the accuracy of IST dataset information,
- defining test acceptance criteria (TAC),
- ensuring Code testing requirements are met,
- documenting reasons for scope or Code deviation,
- providing technical assistance for developing test procedures,
- notifying the IST Engineer of maintenance that could affect the baseline data for any IST component,
- overall administration of the relief valve testing program (Appendix I),
- administrating the Check Valve Condition Monitoring program,
- provide input when evaluating specific component issues (why failed test, baseline changed, etc.).

4.0 Operations Performance Test Group (OTG) and Operations Shift (OPS):

This group is responsible for the following:

- input data into procedure and IST database,
- performing tests,
- accurately recording and notifying Site Engineering of any testing problems,
- initiating a Condition Report when a test is failed or a problem is encountered,
- documenting test discrepancies on the procedure.

5.0 Operations Procedure Group:

This group is responsible for the following:

- updating and maintaining all IST procedures,
- verifying all technical changes with the IST Engineer.

Appendix B:

10CFR50, Appendix B, Augmented Program Guidance Document

1.0 Scope:

The Appendix B Program establishes the requirements for test programs that monitor plant structures, systems, and components. The Appendix B Program assures testing shall be performed in accordance with approved written test procedures that incorporate the requirements and acceptance limits contained in applicable design documents. This program shall include the following:

- Periodic tests during plant operation of structures, systems, and components
- Trending of test parameters at owner specified frequencies

Test procedures shall include provisions for assuring that all prerequisites and acceptance criteria for the given test have been met. In addition, adequate test instrumentation shall be used and testing performed under suitable environmental conditions (as per 10CFR50, App. B).

Deviations from "guidelines" will be documented in 6.0, "Appendix B Program Positions/Exceptions".

NOTE: CNS historically included "App. B Component" within the station's "Supplemental Testing Program". For CNS 4th 10yr Interval, this reference was changed to the "Augmented Testing Program".

2.0 Pump and Valve Test Selection Criteria:

The pumps and valves in this program shall be limited to those pumps and valves not covered in the scope of the ASME OM Code.

- pumps and valves not included in the IST Program, which are active in certain non-Design Basis Events,
- are cold shutdown valves not associated with a UFSAR Chapter 15 event,
- are significant to plant safety,
- or are of economic importance.

3.0 Program Elements:

Pump and Valve Selection - This task involves identifying all components that fall within the scope of 10CFR50, Appendix B scope.

Testing Support – Develop acceptance criteria, necessary test procedures, and establish the correct frequencies for performing operational tests.

Demonstrate Operability – Perform baseline testing (if applicable) of components to ensure functionality of the component and to obtain data for future surveillance activities.

Appendix B:
10CFR50, Appendix B, Supplemental Program Guidance Document (continued)

Documentation and Trending –

- Establish documentation and trending system for all Appendix B components,
- Establish monitoring system for periodic surveillance testing and performance parameters,
- Establish feedback mechanism to ensure that results and failures influence the frequency and extent of future testing.

4.0 Program Organization and Responsibilities:

Corporate IST Coordinator – This is the individual responsible for the following:

- General direction for program elements,
- Program oversight and liaison,
- Assistance in site program implementation,
- Industry, regulatory, and corporate interface,
- Assist stations in resolving generic issues,
- Provide lead, coordinate and/or interface with other groups to ensure consistent implementation.

Site IST/Engineering Contact – This is the site engineering support responsible for the following:

- Pump and valve selection,
- Categorizing for analysis and testing,
- Resolution of Operability concerns,
- Station modifications which affect components in the Appendix B program,
- Operability testing of components,
- Maintaining Appendix B engineering documents in an auditable format,
- Maintain working procedures, guidelines, and other documents,
- Final review and trending of component test data and acceptance criteria,
- Implement test program changes in response to any corporate and industry direction.

5.0 Definitions

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

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

safety-related: required to mitigate the consequences of an accident, shutdown, or maintain shutdown of the reactor.

component: an item in nuclear power plant such as a vessel, pump, valve, or piping system.

Appendix B:
10CFR50, Appendix B, Supplemental Program Guidance Document (continued)

cold shutdown: (see plant Technical Specifications)

engineering evaluation: an evaluation of indications that exceed allowable acceptance standards to determine if the margins required by the design specifications and construction code are maintained.

exercising (of a valve): the demonstration based on direct or indirect visual or other positive indication that the moving parts function satisfactorily.

full stroke time: that time interval from initiation of the actuation signal to the end of the actuation cycle.

test: a procedure to obtain information (through measurement or observation) to determine the operational readiness of a component or system while under controlled conditions.

hot standby: (see plant Technical Specifications)

operational readiness: the ability of a component or system to perform its intended function when required.

owner: the organization owning or operating a facility where items are installed or used.

normal plant operation conditions: the operating conditions during reactor startup, operation at power, hot standby, and reactor shutdown conditions, as defined by plant technical specifications.

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

reference values: one or more values of test parameters measured or determined when the equipment is known to be operating correctly.

6.0 Appendix B Program Positions/Exceptions

- 6.1 The CNS 10CFR50, Appendix B Program may be administered using the ASME IST Code as guidance for testing and trending.
- 6.2 Relief Requests and Justification for Deferrals will not be submitted for Appendix B components.
- 6.3 Per Catawba's GL 89-04 response, 10 CFR50 Appendix B manual valves are only stroked during a refueling outage. (Ref: NUREG-1482, Section 4.4.3).
- 6.4 Deviations from standard test practices will be allowed only if substantiated in writing per the methods outlined in approved site directives and procedures.

Appendix C: Notification of Program Changes

The System Engineer shall initiate program changes as changes are made to the respective system, DBDs, or active/passive valve calculations. Notification of external customers (e.g. Regulatory Compliance Group) of such changes to the program will occur by issuing the appropriate administrative mechanism (i.e. Condition Report, Minor Modification Request, etc.).

To ensure Code compliance for the CNS Pump and Valve Testing Program, the IST Engineer should be notified of any of the following changes:

- Changing the active/passive status of a component,
- Changing the leakage requirements of the component,
- Changing the piping classification of the component (Duke Class and ISI Class),
- Something changes with how the component may be tested,
- A commitment is made or changed for testing or operation of a component,
- Taking credit for a new function, flow path, etc.,
- A modification to the component is planned which can/will significantly affect the components baseline Test Acceptance Criteria (TAC),
- A modification to a plant system that may add or delete a component.

1.10 ENCLOSURES

Enclosure 10.1 - REVISING THE PROGRAM

1. Process for Revising the IST Program

Plant Engineering Procedure No. 3.14, "Control of Tech Spec Required Program Documents Assigned to MCE Engineering", defines the process to be followed when changes to the IST Program should be made, how changes to the IST Program are made, and when changes should be forwarded for NRC review.

2. Inclusion of Flow Diagrams (reference NUREG-1482, Section 2.4.3)

The staff recommends that flow diagrams be included in the program submittal to assist in finding the pumps and valves included in the program. This information will assist the staff in reviewing relief requests or proposed alternatives. A partial submittal of the program containing relief requests should include applicable drawings to support the relief requests or to supersede previous IST flow diagrams.

IST flow diagrams need not be updated regularly, but if drawings change because of modifications, or if relief requests are affected, the staff recommends drawings be revised and submitted to the NRC in the next periodic submittal of revisions to the IST Program. The staff also recommends licensees include applicable drawings with relief requests that are very detailed and are submitted to supplement the IST Program.

Relief Request Template

Request Number:

ASME Code Component(s) Affected:

Applicable Code Edition and Addenda:

Applicable Code Requirement:

Reason for Request:

Proposed Alternative and Basis for Use:

Duration of Proposed Alternative:

Precedents (Optional):

References (Optional):

Note: There are a number templates available. Template selection should be based on the reason for the request. See NUREG 1482 for additional information and formats.

Enclosure 10.3

Catawba Units 1 and 2

Justification for Deferral

NOTE: This format is applicable to both Cold Shutdown (CSJ) and Refueling Outage (ROJ) Justifications.

Item Number:

Component Number (s):

Flow Diagram (s):

Code Category:

ASME Class:

Function (s):

Test Requirement:

Basis for Deferral:

Test Alternative & Frequency:

Enclosure 10.4

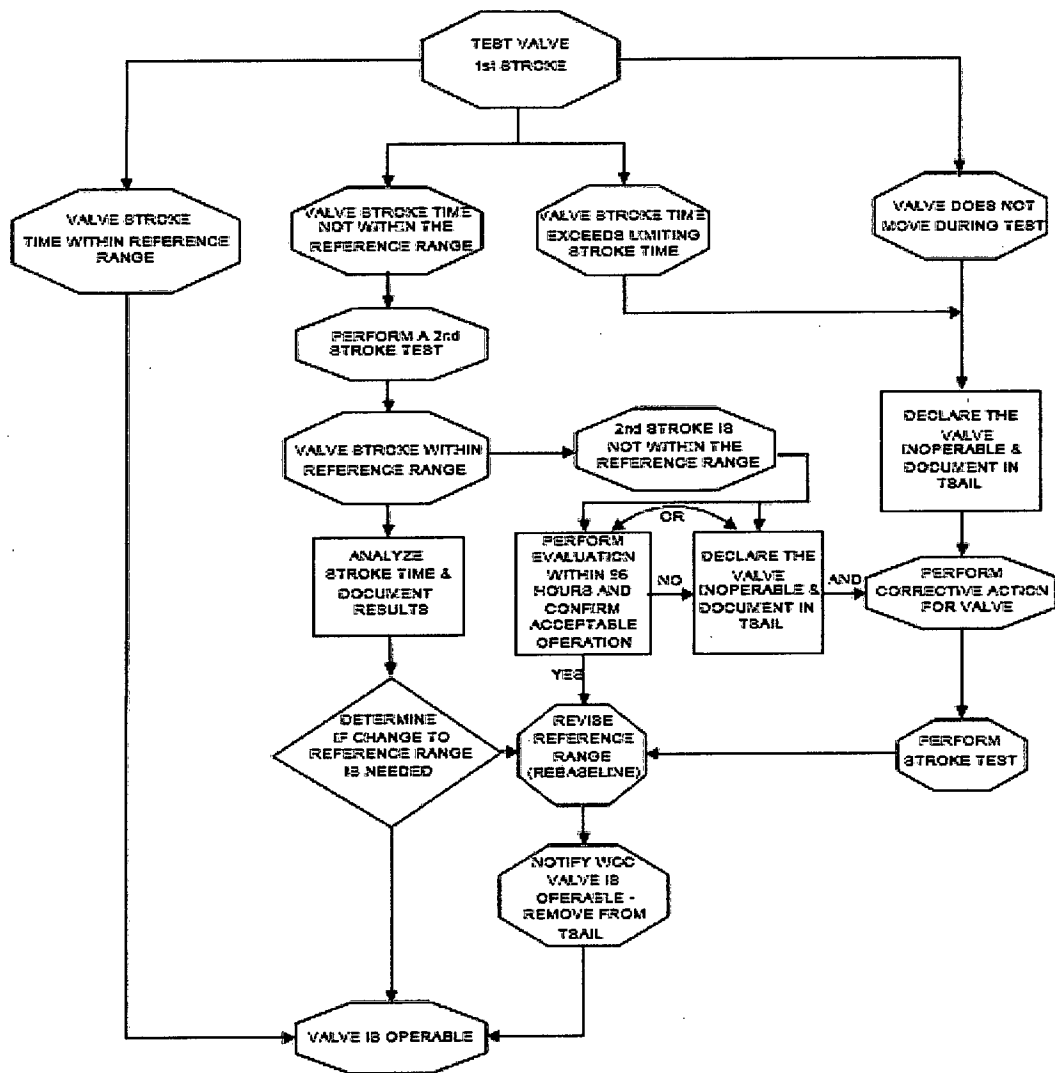
System Piping Classification Correlation

<u>Duke System Piping Classification</u>	<u>(1) Safety Related</u>	<u>NRC Quality Group</u>	<u>Duke QA Condition</u>	<u>ANSI Safety Class</u>	<u>Code Des. Criteria (6)</u>	<u>Seismic Pressure Boundary Integrity</u>	<u>Seismic Category</u>	<u>Normally Contains Radioactive Material</u>
A	YES	A	1	1	Class 1, ASME Sect. III	YES	SC-I	YES
B	YES	B	1	2	Class 2, ASME Sect. III	YES	SC-I	YES
C	YES	C	1	3	Class 3, ASME Sect. III	YES	SC-I	YES
E	NO	D(3)	2(4)	NNS(2)	ANSI B31.1.0	NO	N/A	YES
F	NO	D	4	NNS(2)	ANSI B31.1.0	YES	SC-II(7)	NO
G	NO	-	-(4)	-	ANSI B31.1.0	NO	N/A	NO
H	NO	-	-(4)	-	Duke Power Spec.	NO	N/A	NO
H (HVAC)	YES	-	-(6)	-	Duke Power Spec	YES	SC-I	NO

NOTES:

- (1) Safety Related as used herein is in accordance with 10CFR50 Appendix A General Design Criteria for Nuclear Power Plants and is applicable to function only; i.e., structures, systems, and components required to function such that the facility can be operated without undue risk to the health and safety of the public are safety related.
- (2) NNS = Non-Nuclear Safety
- (3) Class E piping is equivalent to NRC Quality Group D; i.e., the system is designed to normally carry a radioactive fluid; however, is considered NNS as a component failure would not result in a calculated potential exposure in excess of the limits established by 10 CFR PART 20.
- (4) Class E, G, and H piping systems may also be assigned QA Condition 3 and/or 4 to denote additional requirements for fire protection of safety related components and/or seismic structural integrity (except pressure boundary) to preclude adverse interactions with safety related structures, systems and components, respectively; refer to Duke Nuclear Guide 1.29.
- (5) Code and Standards Applicability: Duke Energy establishes an "effective Code date" in accordance with 10CFR50, par. 50.55a for Catawba Nuclear Station. Due to the numerous Codes and Standards references applicable to each station, no attempt is made to specifically identify these references as they are amended, superseded, or substituted. Duke Energy reviews and complies with all or portions of the latest versions of the above Codes and Standards unless materials and/or design commitments have progressed to a stage that it is not practical to make a change. When only portions of addenda to Codes and Standards are utilized, the appropriate engineering review of the entire agenda assures that the overall intent of the Code Standard is still maintained.
- (6) HVAC Duct Systems may be constructed of either sheet metal or piping materials depending upon the design function and requirements. Non-Safety Related HVAC may be assigned QA Condition 4, SC-II Support Restraints to preclude adverse interactions with safety related structures, systems, and components. Refer to Duke Nuclear Guide 1.29.
- (7) Class F for piping systems is used when pressure boundary protection is required. Seismic Category II hangers may be use on Class E, G, or H piping systems when pressure boundary integrity is not required. See Duke Guide 1.29.

Enclosure 10.5
VALVE STROKE TIME DATA EVALUATION FLOW CHART



Enclosure 10.6

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

NC PORV Stroke Requirement Position Statement

Subject: NC PORV Testing

Purpose: The purpose of this letter is clarify testing requirements for the NC PORVS

Position Statement:

The NC PORVs (NC32B, NC34A, and NC36B) are considered cold shutdown valves (TS 5.5.8). These valves are required to be full-stroke exercised, stroke timed in both the closed-to-open and open-to-closed direction "each" time the plant enters cold shutdown, but not more frequently than once every 92 days. This requirement to exercise CANNOT be deferred to a subsequent entry into cold shutdown, which is a practice that may be applied to other valves identified for cold shutdown testing. This exercise test should be an air stroke (tests all 3 PORVs), or a combination of air and nitrogen (air to NC36B and nitrogen to the others) to ensure all three valves are exercised. This exercise test may be performed using manual controls located within the main control room; however, at least once every 18 months, this exercise test should be performed using a jumper to simulate AUTO actuation of the PORVs. This PORV full-stroke exercise, stroke time test can be performed prior to the entry into cold shutdown; thereby, a single PORV exercise could met the requirements of the (1) cold shutdown test, (2) LTOP entry test, and (3) hot stroke test.

The NC PORVs NC32B & NC34A are required to be full-stroke exercised, stroke timed in all cases prior to entering LTOP conditions, except not more frequently than once every 92 days (References 2 - 4). This can be an air or nitrogen stroke for the LTOP valves. This exercise test may be performed using manual controls located within the main control room. This LTOP PORV exercise test can satisfy the requirements of the (1) cold shutdown test, (2) LTOP entry test, and (3) hot stroke test.

The NC PZR PORVs (NC32B, NC34A, NC36B) are required to be full stroke exercised a complete cycle once every 18 months with NC system cold legs > 200°F (TS SR 3.4.11.2). This PORV exercise is performed using manual controls located within the main control room and does not required stroke timing. This "hot stroke" can be accomplished with the air stroke if performed prior to entering LTOP and the temperature conditions are satisfied.

A nitrogen stroke must be performed every 18 months for NC32B and NC34A. This can satisfy the cold shutdown stroke and the LTOP stroke (if performed prior to LTOP) for the applicable PORVs. (TS SR 3.4.11.3)

The NC PORVs (NC32B, NC34A, NC36B) actuators are equipped with springs to assist valve closure; however, there are no situations where this actuator spring function is required to act alone to close these valves during a postulated design basis accident (Reference 7). To ensure equipment reliability, a freedom-of-movement exercise from full-open to full-closed under spring force alone within a reasonable time (60 seconds) will be performed once every 18 months.

Enclosure 10.6 (continued)

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

NC PORV Stroke Requirement Position Statement

If maintenance is performed, a post-maintenance stroke is required. This post-maintenance exercise should be air and nitrogen if NC32B or NC34A had maintenance, or air only for NC36B. In addition, a freedom-of-movement exercise from full-open to full-closed under spring force alone within a reasonable time (60 seconds) will be performed (ref. IP/*A/3121/022).

References:

- (1) NRC SER Letter, Subject "Transmittal of Safety Evaluation Report and Technical Evaluation Report Regarding Pump and Valve Inservice Testing Program – Catawba Nuclear Station Unit 1 and 2", January 8, 1987
- (2) NRC GL 90-06, Subject " Resolution of Generic Issue 70, Power-Operated Relief Valve and Block Valve Reliability, and Generic Issue 94, Additional Low-temperature Overpressure Protection for Light-Water Reactors, Pursuant to 10CFR10.54(f)", June 25, 1990
- (3) Catawba Response to NRC GL 90-06, w/ NRC RAs, December 20, 1990, May 9, 1991, and February 6, 1992.
- (4) NRC SER Letter, Subject " Issuance of Amendment No. 95 to Facility Operating License NPF-35 and Amendment No. 89 to Facility Operating License NPF-52 – Catawba Nuclear Station, Units 1 and 2, April 14, 1992
- (5) NUREG-1482, Guideline for Inservice Testing at Nuclear Power Plants, Revision 1, Published: January 2005
- (6) ASME Code for Operation and Maintenance of Nuclear Power Plants, 2004 Addition through 2006 Addenda
- (7) CNC-1513.07-00-0001, Safety Evaluation of Interim Revision of PT/1/A/4200/032A to Change PORV Fail-Safe Closure, Revision 1

Enclosure 10.7

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

MSIV Stroke Requirement Position Statement

Subject: Main Steam Isolation Valves (MSIVs)

Purpose: The purpose of this letter is clarify testing requirements for the MSIVs

Position Statement:

The MSIV (SM1, SM3, and SM5 SM7) are considered cold shutdown valves (TS 5.5.8). These valves are required to be full-stroke exercised, stroke timed, and fail-safe actuated in the open-to-closed direction during startup after the plant enters cold shutdown.

During startup and prior to entering Mode of Applicability (TS 3.7.2 LCO), MSIV full stroke exercise, stroke time test (i.e., air assist closure, not fail-safe) shall include separate actuation of the independent safety train solenoids (Train A/B). MSIV Train A actuation may be performed using manual controls located within the main control room. MSIV Train B actuation may be performed using a jumper to simulate AUTO actuation (NOTE: MSIV Train B safety solenoid does not have manual controls within the control room). These MSIV exercise tests at COLD conditions ensures valve operational readiness including actuation of the independent safety train solenoid (OM Code, ISTA-2000, Skid-mounted Pumps and Valves). This MSIV "COLD" full stroke exercise, stroke time test shall be included within the list of tests to be performed during unplanned entry into the cold shutdown condition; as such, this MSIV "COLD" exercise test may be deferred to subsequent entries into cold shutdown based on the shutdown duration and the priority of cold shutdown valve testing.

During startup prior to entering Mode 2 (TS SR 3.7.2.1), MSIV full stroke exercise, stroke time, and fail-safe actuation is required. This MSIV exercise test at HOT conditions ensures the MSIV is capable of responding with spring force alone (fail-safe) in the open-to-closed direction within the response time limit specified in the safety analysis. This MSIV exercise test may be performed using manual controls located within the main control room with actuation of the Train A safety solenoid (NOTE: MSIV Train B safety solenoid does not have manual controls within the control room). This MSIV "HOT" full stroke exercise, stroke time, fail safe actuation test shall be performed during startup after "each" time the plant enters the cold shutdown condition, but not more frequently than once every 92 days. This MSIV "HOT" (Train A) exercise test should not be deferred to a subsequent entry into cold shutdown, which is a practice that may be applied to the MSIV "COLD" exercise and other valves identified for cold shutdown testing. This "each cold shutdown" exercise is justified based on the limited margin for MSIV fail-safe actuation and to ensure equipment reliability.

In certain situations (i.e., an extended forced cold shutdown condition OR a refueling outage with limited valve maintenance) where judgment has determined that shutdown activities had no impact on valve performance, the MSIV "COLD" exercise test may be deferred to the "HOT" condition. For these situations, the MSIV "HOT" exercise test shall include independent actuation of each safety train solenoid (Train A/B). The MSIV Train A full stroke exercise, stroke time, fail safe actuation test (i.e., spring force alone for closure) shall be performed using manual controls located within the main control room. The MSIV Train B full stroke exercise, stroke time test (i.e., air assist closure, not fail-safe) may be performed using a jumper to simulate AUTO actuation.

Enclosure 10.7 (continued)

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

MSIV Stroke Requirement Position Statement

If maintenance is performed that potentially affects valve performance, the MSIV "COLD" (Train A/B) full stroke exercise, stroke time test shall be performed to ensure operational readiness prior to entering the Mode of Applicability (TS 3.7.2 LCO). Subsequently, the MSIV "HOT" (Train A) full stroke, stroke time, fail safe actuation test shall be performed to ensure the valve's response meets the response time limit specified in the safety analysis.

References:

- (1) NRC SER Letter, Subject "Transmittal of Safety Evaluation Report and Technical Evaluation Report Regarding Pump and Valve Inservice Testing Program – Catawba Nuclear Station Unit 1 and 2", January 8, 1987
- (2) NUREG-1431, Volume 2, Standard Technical Specifications — Westinghouse Plants: Bases, Revision 3, Published: June 2004
- (3) NUREG-1482, Guideline for Inservice Testing at Nuclear Power Plants, Revision 1, Published: January 2005
- (4) NRC IN 94-44, Main Steam Isolation Valve Failure To Close On Demand Because Of Inadequate Maintenance And Testing [McGuire], June 16, 1994
- (5) ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 2004 Addition through 2006 Addenda
- (6) Various Industry Operation Experience (PIP C10-1060)

Enclosure 10.8

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

SA-1&4 (Gate) AND SA-3&6 (Stop Check) Position Statement

Subject: Periodic Inservice Testing of SA-1 & SA-4 (Gate) and SA-3 & SA-6 (Stop Check) Valves

Purpose: The purpose of this letter is to document Engineering's position for the inservice testing of manual valves SA-1 & SA-4 (Gate) and SA-3 & SA-6 (Stop Check), which are installed in the steam supply line to Auxiliary Feedwater Pump Turbine.

Position Statement:

Valves SA-1 (Main Steam B to CAPT Maintenance Isolation) and SA-4 (Main Steam C to CAPT Maintenance Isolation) are manual gate valves located in the Interior Doghouse immediately downstream of the respective SM piping. SA-1 and SA-4 are currently listed in Catawba Technical Specification, as Containment Isolation Valves. The valves are locked open and capable of local manual operation only. These valves are required to be open to supply steam to the CAPT from the respective SM piping for Engineered Safety Features (ESF) operation of the CAPT. However, CAPT operation can continue with one of these valves closed providing that steam is available from the opposite SM piping.

Valves SA-3 (1B S/G Main Steam to CAPT Stop Check) and SA-6 (1C S/G Main Steam to CAPT Stop Check) are stop check valves with manual handwheels located in the mechanical penetration room (ELE 543), downstream (CAPT side) of valves SA-1 and SA-4 respectively. SA-1 and SA-4 are within the system piping boundary designated as ASME Class II (Duke Class B) and are capable of functioning an alternative means for establishing Containment Isolation. These valves are locked open and capable of local manual operation only. These valves are required to be open to supply steam to the CAPT from the respective SM piping for Engineered Safety Features (ESF) operation of the CAPT. However, CAPT operation can continue with one of these valves closed providing that steam is available from the opposite SM piping.

The following two accident scenarios require the isolation of one steam supply to the CAPT due to current dose assessment limitations and CA System operation requirements:

- 1) Steam Generator Tube Rupture (SGTR)

And

- 2) Main Steam Line Break.

Enclosure 10.8 (continued)

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

SA-1&4 (Gate) AND SA-3&6 (Stop Check) Position Statement

The dose calculations for Main Steam Line Break and SGTR scenarios assume limited release of main steam to the atmosphere. Operator action is taken as directed within current Emergency Operating Procedures (EP's) and/or Abnormal Operating Procedures (AP's) to manually close SA-3 and/or SA-6 as applicable in these scenarios. These valves may be used in the EP's and AP's as opposed to SA-1 and SA-4 due to more assured accessibility as discussed previously - SA-1 and SA-4 are located in the Interior Doghouse and would not be accessible in the event of a high energy line break (i.e. Main Steam Line Break) in this Doghouse. However, SA-1 and SA-4 are the closest isolation valves to containment.

If accessible, SA-1 and SA-4 can also be closed in a shorter time frame than SA-3 and SA-6. During a SGTR, the time required to manually close stop check valves SA-3 and SA-6 may increase due to "dress-out" requirements and increased radiation monitoring prior to entering the area due to contamination and increased dose in the mechanical penetration room. Therefore, if accessible, closing SA-1 and SA-4 would be preferable over SA-3 and SA-6. In each of these accident scenarios, the time required for an Operator to close the applicable valve has been estimated and factored into the Accident Analyses and resultant dose calculations. Calculated off-site doses are within allowable values for these scenarios.

For the SGTR scenario, failure to isolate steam to the CAPT from the S/G with the tube rupture would allow indefinite release of main steam to the atmosphere via the CAPT exhaust, which would consequently exceed the current dose calculations. Assuming no high energy line break in the Interior Doghouse during a SGTR accident, closing SA-1 and SA-4 would be preferable over SA-3 and SA-6. For the Main Steam Line Break scenario, SA-3 or SA-6 (depending on the break scenario) would automatically close (stop check valves) to prevent the diversion of steam from an intact steam line to the faulted piping and then to the atmosphere or into containment (depending on the location of the break) effectively depressurizing a second S/G, rendering the CAPT inoperable due to the loss of all steam supply, and also affecting the operation / flow balance of the Motor Driven CA pumps. The applicable SA line is isolated as a precaution in case of the check valve fails to close and isolate the faulted steam line. Unless the steam line break is located in the Interior Doghouse, closing SA-1 and SA-4 would be preferable over SA-3 and SA-6.

Conclusion:

Based on the scenario, operator response procedures (EP and AP) may provide direction to manually close any one of the four manual valves located in the steam supply line to the auxiliary feedwater pump turbine. Therefore, all four of these manual valves are considered within the scope of periodic inservice testing. SA-1 and SA-4 are gate valves with a manual handwheel that is maintained in the lock open position during normal plant operation. These gate valves are included within the scope of periodic inservice testing in accordance with para. ISTC-3540, Manual Valve, of the ASME OM Code. SA-3 and SA-6 are stop check valves with a manual handwheel that is maintained in the lock open position during normal plant operation. These stop check valves are included within the scope of periodic inservice testing in accordance with para. ISTC-3540, Manual Valve, and Appendix II, Check Valve Condition Monitoring Program, of the ASME OM Code.

Enclosure 10.8 (continued)

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

SA-1&4 (Gate) AND SA-3&6 (Stop Check) Position Statement

References:

- (1) PIP 1-C-90-0008, Expansion of Containment Penetration Boundaries to SA-3 and SA-6
- (2) CNS Containment Integrity Review, Interstation Letter, Dated: January 15, 1996, File No.: CN-208.32
- (3) NRC SER Letter, Subject - CNS - Issuance of Exemption to 10CFR Part 50, Appendix A, General Design Criteria 57 (TAC NOS. M99561 and M99562), Dated: December 29, 1998

Enclosure 10.9

CATAWBA NUCLEAR STATION PROGRAMS ENGINEERING

Containment Penetration Check Valve Position Statement

Subject: Periodic Testing of Containment Penetration Check Valves in accordance with ASME OM Code Appendix II, Check Valve Condition Monitoring, and 10CFR50 Appendix-J, Primary Reactor Containment Leakage Testing.

Purpose: This technical position defines Catawba's practice for establishing and implementing periodic testing of check valves that function as containment isolation valves in meeting the requirements of ASME OM Code Mandatory Appendix II, Check Valve Conditioning Monitoring, and 10CFR50 Appendix-J, Primary Reactor Containment Leakage Testing.

Applicability

Catawba's Check Valve Inservice Testing Program has been developed in accordance with the ASME OM Code, 2004 Edition through 2006 Addenda, Mandatory Appendix II, Check Valve Condition Monitoring. As modified by 10CFR50.55a(b)(3)(iv), this program shall include the following testing requirements and frequencies.

- Valve opening and closing functions must be demonstrated when flow testing or examination methods (non-intrusive, or disassembly and inspection) are used.
- If sufficient information is not available to support optimization of condition monitoring, the initial interval of tests and associated examinations may not exceed two fuel cycles or 3 years, whichever is longer.
- If sufficient information is available to support optimization of condition monitoring, extension of the initial interval of tests and associated examinations may not exceed one fuel cycle per extension with the maximum interval not to exceed 10 years.
- Trending and evaluation of existing data must be used to reduce or extend the time interval between tests.

Catawba's Containment Leak Rate Test Program has been developed in accordance with 10CFR50 Appendix-J, Regulatory Guide 1-163, and NEI 94-01.

- Acceptable performance is demonstrated by a measured leak rate less than the predetermined administrative limit, which is assigned to each valve to provide an indication of potential degradation.
- The initial interval for tests shall be performed at a frequency of at least once per 30 months (one fuel cycle), until completion of initial tests and adequate performance has been demonstrated.

Enclosure 10.9

CATAWBA NUCLEAR STATION PROGRAMS ENGINEERING

Containment Penetration Check Valve Position Statement

- The initial interval of tests may be increased based upon completion of two consecutive periodic as-found Type-C tests where the result of each test is within the allowable administrative limit. After two successful consecutive periodic as-found leak rate tests, the test interval may be extended to 60 months or three fuel cycles (ref.: Regulatory Guide 1-163, Position 2).

Position Statement:

When jointly applied, 10CFR 50 Appendix-J requires an additional test over an initial period of two fuel cycles, and is considered the more conservative test requirement. Specifically, by limiting the initial interval of testing to not exceed 30 months, 10CFR50 Appendix-J requires leak rate testing of check valve during two consecutive refueling outages prior to extending the test interval to once every 3 refueling outages (i.e., 60 months). In contrast, ASME Check Valve Condition Monitoring specifies an initial interval with at least one test in two fuel cycles or 3 years, whichever is longer.

Basically, 10CFR50 Appendix-J requires two tests when ASME Check Valve Condition Monitoring requires only one test during the specified initial period of two fuel cycles.

To comply with the parallel requirements of ASME Check Valve Conditioning Monitoring and 10CFR50 Appendix-J, Catawba will apply the more conservative periodic testing requirements and frequency. Whenever test results for an individual component will support extended interval testing, Catawba will extend the periodic test interval for subsequent refueling outages in accordance with the frequency specified within 10CFR50 Appendix-J (1st, 2nd, 5th, 8th, etc.). Whenever it is determined that test results for an individual component does not support extended interval testing, Catawba will remove that component's periodic test from extended interval until the condition that caused poor performance is evaluated and appropriate corrective action is taken. Once the condition causing the poor performance is corrected and subsequent periodic testing shows acceptable performance, the periodic test for the individual component may be returned to extended interval of testing.

For ASME Check Valve Condition Monitoring (CKCM) and 10CFR50 Appendix-J (AppJ), the table below compares the periodic frequency of extended interval testing whenever a component test results are determined acceptable. Also shown in the table, Catawba will apply the more conservative requirement and extend a component interval of periodic testing consistent with the requirements of 10CFR50 Appendix-J.

Refueling	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
AppJ	Test	Test	--	--	Test	--	--	Test	--
CKCM	--	Test	--	--	Test	--	--	--	Test
Catawba	Test	Test	--	--	Test	--	--	Test	--

Enclosure 10.9 (continued)

CATAWBA NUCLEAR STATION PROGRAMS ENGINEERING

Containment Penetration Check Valve Position Statement

Industry Support of Position

At Millstone, 10CFR50 Appendix-J and ASME Check Valve Conditioning Monitoring periodic testing are considered to be identical testing requirements. When 10CFR50 Appendix-J requires a change in frequency (initial interval testing due to unacceptable leakage or extended interval testing due to good performance), then component periodic testing is adjusted to credit testing at the appropriate 10CFR50 Appendix-J frequency. The ASME Check Valve Condition Monitoring Program specifies that the component's periodic test frequency is determined by 10CFR50 Appendix-J.

Summary:

For check valves that function as containment isolation valve, 10CFR50 Appendix-J specifies the more conservative periodic testing requirements and frequency. Therefore, for these certain check valves and groups of check valves, Catawba will implement the testing requirement and frequency of 10CFR50 Appendix-J in lieu of the requirement of ASME Check Valve Conditioning Monitoring (i.e., Check Valve Condition Monitoring will credit completion of test at the frequency specified by the 10CFR50 Appendix-J Program).

References:

- (1) ASME OM Code, 2004 Edition through 2006 Addenda, Mandatory Appendix II, Check Valve Condition Monitoring
- (2) 10CFR50 Appendix-J, Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors
- (3) NRC Regulatory Guide 1.163 (1995), Performance-Based Containment Leak-Test Program
- (4) NEI 94-01, Revision 0, Industry Guideline for Implementing Performance Based Option of 10CFR50 Appendix J
- (5) (FILE: CN-122.12, CN-257.46) EMAIL: Subject: Coordinating Appendix J and Condition Monitoring CVCM Position Paper.pdf, from Thomas R. Ickes, IST Engineer, Millstone Power Station, Dated: Monday, December 05, 2011 8:17 AM

Enclosure 10.10

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

Priority for Cold Shutdown Valve Testing During Unplanned Entry into Mode 5

The following table provides guidance relative to the order in which cold shutdown testing should occur. The order, or priority, is based on possible system conditions during Mode 5, placing of jumpers and sliding of links, etc. Valves should be tested in the order listed (if possible) so that the valves tested in the unit's preceding cold shutdown will be the last ones tested during the unit's next cold shutdown. Should a valve be unavailable for testing and subsequently passed over during any given forced entry into Mode 5, that valve should be one of the first tested during the unit's cold shutdown outage. Following a refueling outage, the testing sequence re-starts at item one.

	Valve		Valve		Valve		Valve
1	1(2)NC0032B	26	1(2)ND0001B	51	1(2)NV0188A	76	1(2)NV0089A
2	1(2)NC0034A	27	1(2)ND0002A	52	1(2)NV0189B	77	1(2)NV0091B
3	1(2)NC0036B	28	1(2)ND0036B	53	1(2)NV0202B	78	1(2)KC0338B
4	1(2)NI0100B	29	1(2)ND0037A	54	1(2)NV0203A	79	1(2)KC0424B
5	1(2)NI0103A	30	1(2)NI0173A	55	1(2)NV0312A	80	1(2)KC0425A
6	1(2)NI0144A	31	1(2)NI0178B	56	1(2)NV0314B	81	1(2)RN0437B
7	1(2)NI0147B	32	1(2)NV0252A	57	1(2)NV0010A	82	1(2)RN0484A
8	1(2)NI0162A	33	1(2)NV0253B	58	1(2)NV0011A	83	1(2)RN0487B
9	1(2)NI0121A	34	1(2)SM0001	59	1(2)NV0013A	84	1(2)RF0389B
10	1(2)NI0152B	35	1(2)SM0003	60	1(2)VI0077B	85	1(2)RF0447B
11	1(2)NI0332A	36	1(2)SM0005	61	--	86	1(2)BB008A
12	1(2)NI0333B	37	1(2)SM0007	62	--	87	1(2)BB0010B
13	1(2)NI0334B	38	2CA0149	63	--	88	1(2)BB0019A
14	1(2)KC0320A	39	2CA0150	64	1(2)NI0009A	89	1(2)BB0021B
15	1(2)KC0332B	40	2CA0151	65	1(2)NI0010B	90	1(2)BB0056A
16	1(2)KC0333A	41	2CA0152	66	1(2)NI0184B	91	1(2)BB0057B
17	1(2)NC0250A	42	1(2)CF0033	67	1(2)NI0185A	92	1(2)BB0060B
18	1(2)NC0251B	43	1(2)CF0042	68	1(2)CF0028	93	1(2)BB0061B
19	1(2)NC0252B	44	1(2)CF0051	69	1(2)CF0030		
20	1(2)NC0253A	45	1(2)CF0060	70	1(2)CF0037		
21	1(2)NV0015B	46	1(2)NS0038B	71	1(2)CF0039		
22	1(2)NV001A	47	1(2)NS0043A	72	1(2)CF0046		
23	1(2)NV002A	48	1(2)ND0028A	73	1(2)CF0048		
24	1(2)ND0032A	49	1(2)NI0136B	74	1(2)CF0055		
25	1(2)ND0065B	50	1(2)NI0183B	75	1(2)CF0057		

Enclosure 10.10 (continued)

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

Priority for Cold Shutdown Valve Testing During Unplanned Entry into Mode 5

Special Notes:

- (1) Valves 1(2)KC0338B, 1(2)KC0424B, 1(2)KC0425A, 1(2)RN0437B, 1(2)RN0484A, 1(2)RN0487B, 1(2)NV0089A and 1(2)NV0091B are considered Cold Shutdown valves. However, exercising these valves while the reactor coolant pumps are in operation could result in pump damage. OM ISTC-3521 allows the test interval for these valves to be extended to refueling outages when the tests cannot be practically performed during power operations or cold shutdown outages (reference NUREG 1482, section 3.1.1.4).
- (2) The PZR PORVs 1(2)NC0032B, 1(2)NC0034A, 1(2)NC0036B) are considered Cold Shutdown and are stroked EACH time the Unit enters Cold Shutdown. See Enclosure 9.6 in the IST Program Document for further guidance for testing valves 1(2)NC0032B, 1(2)NC0034A, and 1(2)NC0036B.

The MSIVs 1(2)SM1, 1(2)SM3, 1(2)SM5, and 1(2) SM7) are considered Cold Shutdown Valves and are stroked during startup (Mode 3) following EACH time the Unit enters Cold Shutdown. See Enclosure 9.7 in the IST Program Document for further guidance for testing valves 1(2)SM1, 1(2)SM3, 1(2)SM5, and 1(2)SM7.

Enclosure 10.11

CATAWBA NUCLEAR STATION PROGRAMS ENGINEERING

Position Indication Testing of Manual Actuated Pneumatic Valve Position Statement

Subject: Position Indication Testing of Manual Actuated Pneumatic Valve (i.e. Position Indication on Instrument Panels in the Auxiliary Building)

Purpose: This technical position is to establish the station position for exempting certain Manual Actuated Pneumatic Valve from the requirements of Position Indication Testing (ISTC-3700). These valve's position indication is provided on instrument panels in the general area of the auxiliary building conveniently located for safety. These valves are not required to perform a specific function as described in ISTA-1100 (Scope) and are used only for operating convenience such as vent, drain, instrument, and test activities (ISTC-1200 - Exemptions).

Applicability

This technical position is applicable to Manual Actuated Pneumatic Valve with Remote Position Indication on instrument panels in the general area of the auxiliary building conveniently located for safety (i.e. Electrical Reach Rods). This does NOT apply to the valve position indication on the Auxiliary Shutdown Panels or the Control Room Main Control Board.

Position Statement:

The ASME OM Code 2004 Edition through 2006 Addenda section ISTA-1100 identifies that the requirement for preservice and inservice testing is applied to "pumps and valves that are required to perform a specific safety function in (i) shutting down the reactor to the safe shutdown condition, (ii) maintaining the reactor in the safe shutdown condition, or (iii) mitigating the consequences of an accident".

The ASME OM Code 2004 Edition through 2006 Addenda section ISTC-1200 further states:

"The following are excluded from this Subsection, provided that the valves are not required to perform a specific function as described in ISTA-1100:

- a) valves used only for operating convenience such as vent, drain, instrument, test valves
- b) valves used only for system control, such as pressure regulating valves
- c) valves used only for system and component maintenance".

Enclosure 10.11 (continued)

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

Position Indication Tests of Manual Actuated Pneumatic Valve Position Statement

Manual Pneumatic Actuators are installed on certain valves at branch connections on various piping system which are designated nuclear safety related (ASME Class 2 and 3). These manual pneumatic actuators function as electrical reach rods; whereby, valves located in potentially unsafe work areas or highly radioactive areas can be remotely actuated. For these valves, a manual pneumatic solenoid and the valve position indication are located remotely (outside the room) on an instrument panel in the general area of the auxiliary building. These manual pneumatic actuators are a plant design feature that reduces unsafe conditions and radiation exposure (ALARA) to plant personnel whenever these valves need to be operated.

These manual pneumatic actuated valves function as the safety class (Nuclear Safety to Non-Nuclear Safety) pressure boundary for these systems and are maintained in the closed position during normal plant operation. These branch connections include piping connections to other system, which may include the Reactor Makeup Water (NB) System, Floor Drain Header (WL) System, and Nuclear Sampling (NM) System. Each of these connected systems are routinely monitored for increased fluid radiation level that would be an indication of intersystem leakage. Should increase fluid radiation levels be observed, these branch connections would be evaluated to identify the radioactive fluid leak source. This monitoring provides reasonable assurance that the pressure boundary between these connected system is functionally intact with minimal, if any, radioactive fluid leak by.

During normal system operation, these manual pneumatic actuated valves on these branch connections are normally mainlined in the closed position. These valves may be opened on some periodicity to support system operation. This operation may include system makeup, flush, drain, slough, and sample activities. As such, the valves provide a support function (operating convenience) that maintain the system's operating condition, but does not perform a function required for normal system operation. Therefore, these valves may be exempt from the requirements of inservice testing per ISTC-1200 (a).

These manual pneumatic actuated valves are maintained in the closed position during the postulated design basis accident (DBA). Beyond remaining closed to maintain a system pressure boundary, these valves do not required to perform a specific safety function in (i) shutting down the reactor to the safe shutdown condition, (ii) maintaining the reactor in the safe shutdown condition, or (iii) mitigating the consequences of an accident. Therefore, these valves are not required to perform a safety function as described in ISTA-1100.

Enclosure 10.11 (continued)

CATAWBA NUCLEAR STATION MECHANICAL CIVIL ENGINEERING

Position Indication Tests of Manual Actuated Pneumatic Valve Position Statement

Section 4.2.8 of NUREG-1482 Revision 2 refers to the requirements for verifying position indication of passive valves. It states "the licensee is responsible for developing and implementing a method to verify that valve operation is accurately indicated as required by ISTC-3700. The extent of verification necessary for valve operation to satisfy ISTC-3700 will depend on the type of valve, the sophistication of the diagnostic equipment used in testing the valve, possible failure modes of the valve, and the operating history of the valve and similar valve types". It adds "The Code does not require licensees to verify the indication at the remote panels. However, verification at remote panels is a good practice and provides confidence in the remote indication". Based on the overall operation of these valves combined with their overall safety function and their applicability to ISTA-1100, it is concluded that these valves are not subject to the requirements of ISTC-3700.

Summary:

Manual Actuated Pneumatic Valve (as described above) are not required to perform a specific function as described in ISTA-1100 (Scope), are used only for operating convenience as described in ISTC-1200 (Exemptions) and are exempt from the requirements of inservice testing. Likewise, these valve's remote position indication in remote locations of the general areas of the auxiliary building conveniently located for safety (i.e. Electrical Reach Rods) are not subject to inservice testing as described in ISTC-3700 (Position Indication Testing).

Enclosure 10.12

CATAWBA NUCLEAR STATION PROGRAMS ENGINEERING

SG PORV Stroke Requirement Position Statement

Subject: Open Stroke Testing of Steam Generator Power-Operated Relief Valves

Purpose: This technical position is to establish the station position for excluding the open stroke time tests of the Steam Generator Power-Operated Relief Valves (PORVs) from the requirements of PORV Valve Stroke Testing (ISTC-5113).

Applicability

This technical position is applicable to the Catawba Nuclear Stations (CNS) Steam Generator (SG) Power-Operated Relief Valves (PORVs).

The safety functions of the SG PORV are to (Ref.: CNS-1593.SM-00-0001, Rev.36):

1. Contribute to mitigating the consequences of a Steam Generator Tube Rupture (SGTR) accident concurrent with Loss of Offsite Power (LOOP). During this event, the Control Room Operator is expected to determine that a SGTR has occurred and then initiate, within 5 minutes, natural circulation cooldown of the primary system.

Contribute to achieving an average RCS temperature of 350°F (ND system initiation) during design basis events that require a cooldown to cold shutdown conditions such as SGTR, rod ejection, or SBLOCA.

In addition, the SG PORVs are to (non-safety functions):

1. Prevent lifting of the safety valves during mild pressure transients.
2. Assist reseating actuated safety valve(s).
3. Provide a means for plant cooldown when the steam dump system is not operable.

The SG PORVs are not required for overpressure protection. These valves receive a main steam isolation signal to remain closed to prevent uncontrolled steam flow from the steam generators to the environment in the event of a high energy line break in its Doghouse. The pressure boundary defined by the PORVs is Duke Class B. (Ref.: para. 3.1.1.5; CNS-1593.SM-00-0001, Rev.36)

The PORVs can be actuated by either a pneumatic piston operator or local handwheel. The pneumatic operator has two modes of operation. One mode provides nonadjustable automatic pressure control. This mode of operation is nonsafety. The safety grade mode of operation is provided by depressing the "normal" pushbutton on the main control board and allowing valve modulation using a (safety related) potentiometer. The safety grade air supply (nitrogen) is provided by seismically mounted cylinders located in the doghouse. (Ref.: para. 3.1.1.5; CNS-1593.SM-00-0001, Rev.36)

Enclosure 10.12 (continued)

CATAWBA NUCLEAR STATION PROGRAMS ENGINEERING

SG PORV Stroke Requirement Position Statement

Position Statement:

The ASME OM Code 2004 Edition through 2006 Addenda section ISTC-5110 identify the requirement for inservice testing of Power-Operated Relief Valves. Specific to these valves, ISTC-5113 further defines stroke time testing of active valves. Catawba's PORVs are air-operated fail close valves. Design Basis Specification CNS-1593.SM-00-0001 specifies each PORV's ESF Position is closed with a maximum stroke time close of eight (8) seconds as listed in the Safety Analysis Inputs Manual. UFSAR 10.3.2 depicts a maximum stroke close time of 20 seconds or less after receiving a closure signal.

The SM PORV main control room controls are located on 1MC2. These controls perform both safety and nonsafety related functions. The safety related functions of the instrumentation and controls are to:

1. permit modulation of the PORVs from the control room and,
2. to ensure closure of the valves upon receipt of a safety signal.

The nonsafety opening/closure of the SM PORVs in response to steam line pressure is accomplished via pressure switch inputs to non-safety solenoid valves located on instrument air supply lines to the PORV actuator. The safety related nitrogen bottle system is not connected to these solenoids in any manner.

The SM PORV main control room controls consists of a potentiometer located on 1MC2. This is a safety related device that outputs an electrical signal to an electro-pneumatic converter and then on to the valve positioner. This is the safety related instrumentation that permits modulation of the SM PORVs from the main control room. While operating from the main control room, SSPS output relay contacts have been wired to ensure that safety related solenoid valves are de-energized upon receipt of SSPS signal (i.e. failing the SG PORV to the CLOSED position). Upon receipt of this SSPS signal, the SM PORV response is closed with a maximum stroke time close of eight (8) seconds as listed in the Safety Analysis Inputs Manual. (iaw Steam Line Isolation Response Time; MNS & CNS Safety Analysis Inputs Manual, Rev. 6)

The SM PORV nonsafety opening/closure feature along with the inherent design of the safety related potentiometer (turn knob) are the key elements that prevent routine open stroke timing of each SG PORV. Operation of each potentiometer by design results in a slow response (manual cycle to open position) of each SM PORV. This slow response prevents large swings in valve operation thereby allowing the operator to fine tune the position of the PORV during the postulated accident (DBA/SGTR, etc.). Once the SM PORV is manually cycled to the fully open position, the steam line isolation signal is simulated and the valve's stroke time response (open-to-close) is confirmed.

Enclosure 10.12 (continued)

CATAWBA NUCLEAR STATION PROGRAMS ENGINEERING

SG PORV Stroke Requirement Position Statement

WESTINGHOUSE PORV REQUIREMENTS

The SG PORVs shall be capable of modulating full stroke within 20 seconds over an inlet pressure range from the main steam system design pressure to 100 psia in order to adequately reduce steam pressure transients. This 20 second stroke time is for full close to full open. The full open to full close stroke should be consistent with the opening requirements to prevent overcooling of the NC system. This criteria applies to the non-safety related automatic function of the valve.

(Ref.: Section 4-1 of reference 2.5.2.2.1; CNS-1593.SM-00-0001, Rev.36)

Catawba Technical Specifications 3.4.11 and 3.7.4 require each PORV to be manually cycled in accordance with the surveillance control program. These Technical Specifications along with the OM Code ISTC-3700 requirement for Position Verification Testing provide a proper verification of operational readiness. As part of the Position Verification Testing performance, any abnormal or erratic action (ISTC-5113(d)) will be identified locally by the operator during the cycling of the valve to confirm accurate indication.

Summary

The SM PORVs perform both safety and nonsafety related functions. To ensure their operational readiness, the SM PORV safety related functions will be confirmed by inservice tests that includes:

1. Stroke Time and Fail Safe Actuation from the full-open to the full-closed positions, and
2. Remote Manual (CR & Local) Full Stroke Exercising in the full-open and full-closed directions.

SM PORV main control room controls include a safety related potentiometer (turn knob) as the method for remote manual (CR) and full stroke exercising. Via its inherent design, these controls do not provide a consistent means for routine stroke timing from the full-closed to the full-open positions of each SG PORV. The SM PORV automatic response (closed-to-open) is a non-credited safety function for system overpressure protection. Therefore, SM PORV stroke time testing in the closed-to-open direction is not a required inservice test.

Enclosure 10.13

TABLE OF ABBREVIATIONS Pump and Valve Summary Tables

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

Enclosure 10.13 (continued)

TABLE OF ABBREVIATIONS
Pump and Valve Summary Tables

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

Enclosure 10.13 (continued)

TABLE OF ABBREVIATIONS Pump and Valve Summary Tables

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

Enclosure 10.13 (continued)

TABLE OF ABBREVIATIONS
Pump and Valve Summary Tables

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

Enclosure 10.13 (continued)

TABLE OF ABBREVIATIONS
Pump and Valve Summary Tables

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

Pump Summary Listing

Page 1 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
0YCPUCW1	CONTROL ROOM AREA CHILLED WATER PUMP (1CRA-P-1)	CN-1578-02.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP	2Y		
								Q	2Y		
								V	2Y		
								dP	Q		
								Q	Q		
								V	Q		
0YCPUCW2	CONTROL ROOM AREA CHILLED WATER PUMP (2CRA-P-1)	CN-1578-02.02	A	3	Centrifugal, Horizontal	Fixed	GE600	dP	2Y		
								Q	2Y		
								V	2Y		
								dP	Q		
								Q	Q		
								V	Q		

Pump Summary Listing

Page 2 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1CAPUA	1A CA PUMP	CN-1592-01.00	B	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
1CAPUB	1B CA PUMP	CN-1592-01.00	B	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
1CAPUTD	CAPT #1	CN-1592-01.00	B	3	Centrifugal, Horizontal	Var	GE600	dP Q S V dP Q S	2Y 2Y 2Y 2Y Q Q Q		
1KCPUA1	1A1 COMPONENT COOLING PUMP	CN-1573-01.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		

Pump Summary Listing

Page 3 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1KCPUA2	1A2 COMPONENT COOLING PUMP	CN-1573-01.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
1KCPUB1	1B1 COMPONENT COOLING PUMP	CN-1573-01.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
1KCPUB2	1B2 COMPONENT COOLING PUMP	CN-1573-01.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		

Pump Summary Listing
Page 4 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1NDPUA	1A RESIDUAL HEAT REMOVAL PUMP	CN-1561-01.00	A	2	Centrifugal, Vertical	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
1NDPUB	1B RESIDUAL HEAT REMOVAL PUMP	CN-1561-01.01	A	2	Centrifugal, Vertical	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
1NIPUA	1A SAFETY INJECTION PUMP	CN-1562-01.02	B	2	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
1NIPUB	1B SAFETY INJECTION PUMP	CN-1562-01.02	B	2	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		

Pump Summary Listing

Page 5 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1NSPUA	1A NS PUMP	CN-1563-01.00	B	2	Centrifugal, Vertical	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
1NSPUB	1B NS PUMP	CN-1563-01.00	B	2	Centrifugal, Vertical	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
1NVPUACC	1A NV PUMP	CN-1554-01.07	A	2	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
1NVPUBCC	1B NV PUMP	CN-1554-01.07	A	2	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		

Pump Summary Listing
Page 6 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1RNPUA	1A NUCLEAR SERVICE WATER PUMP	CN-1574-01.00	A	3	Vertical Line Shaft	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
1RNPUB	1B NUCLEAR SERVICE WATER PUMP	CN-1574-01.02	A	3	Vertical Line Shaft	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
1WLPUANS	1A ND & NS SUMP PUMP	CN-1565-01.01	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
1WLPUATS	TURBINE DRIVEN AUX FEEDWATER PUMP SUMP PUMP 1A	CN-1565-02.02	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
1WLPUBNS	1B ND & NS SUMP PUMP	CN-1565-01.01	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		

Pump Summary Listing

Page 7 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1WLPUBTS	TURBINE DRIVEN AUX FEEDWATER PUMP SUMP PUMP 1B	CN-1565-02.02	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
1WNPUA1	1A D/G ENG SUMP PUMP 1A1	CN-1609-07.00	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
1WNPUA2	1A D/G ENG SUMP PUMP 1A2	CN-1609-07.00	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
1WNPUB1	1B D/G ENG SUMP PUMP 1B1	CN-1609-07.00	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
1WNPUB2	1B D/G ENG SUMP PUMP 1B2	CN-1609-07.00	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		

Pump Summary Listing
Page 8 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2CAPUA	2A AUX FEEDWATER PUMP	CN-2592-01.00	B	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
2CAPUB	2B AUX FEEDWATER PUMP	CN-2592-01.00	B	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
2CAPUTD	CAPT #2	CN-2592-01.00	B	3	Centrifugal, Horizontal	Var	GE600	dP Q S V dP Q S	2Y 2Y 2Y 2Y Q Q Q		
2KCPUA1	2A1 COMPONENT COOLING WATER PUMP	CN-2573-01.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		

Pump Summary Listing

Page 9 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2KCPUA2	2A2 COMPONENT COOLING WATER PUMP	CN-2573-01.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
2KCPUB1	2B1 COMPONENT COOLING WATER PUMP	CN-2573-01.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
2KCPUB2	2B2 COMPONENT COOLING WATER PUMP	CN-2573-01.00	A	3	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		

Pump Summary Listing

Page 10 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2NDPUA	2A RESIDUAL HEAT REMOVAL PUMP	CN-2561-01.00	A	2	Centrifugal, Vertical	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
2NDPUB	2B RESIDUAL HEAT REMOVAL PUMP	CN-2561-01.01	A	2	Centrifugal, Vertical	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
2NIPUA	2A SAFETY INJECTION PUMP	CN-2562-01.02	B	2	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
2NIPUB	2B SAFETY INJECTION PUMP	CN-2562-01.02	B	2	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		

Pump Summary Listing

Page 11 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2NSPUA	2A CONTAINMENT SPRAY PUMP	CN-2563-01.00	B	2	Centrifugal, Vertical	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
2NSPUB	2B CONTAINMENT SPRAY PUMP	CN-2563-01.00	B	2	Centrifugal, Vertical	Fixed	GE600	dP Q V dP Q	2Y 2Y 2Y Q Q		
2NVPUACC	2A NV PUMP	CN-2554-01.07	A	2	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
2NVPUBCC	2B NV PUMP	CN-2554-01.07	A	2	Centrifugal, Horizontal	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		

Pump Summary Listing

Page 12 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2RNPUA	2A NUCLEAR SERVICE WATER PUMP	CN-1574-01.00	A	3	Vertical Line Shaft	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
2RNPUB	2B NUCLEAR SERVICE WATER PUMP	CN-1574-01.02	A	3	Vertical Line Shaft	Fixed	GE600	dP Q V dP Q V	2Y 2Y 2Y Q Q Q		
2WLPUANS	2A ND & NS SUMP PUMP	CN-1565-01.01	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
2WLPUATS	CAPT #2 SUMP PUMP 2A	CN-2565-02.02	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
2WLPUBNS	2B ND & NS SUMP PUMP	CN-1565-01.01	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		

Pump Summary Listing
Page 13 of 13

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2WLPUBTS	TURBINE DRIVEN AUX FEEDWATER PUMP SUMP PUMP 2B	CN-2565-02.02	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
2WNPUA1	2A D/G ENG SUMP PUMP 2A1	CN-2609-07.00	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
2WNPUA2	2A D/G ENG SUMP PUMP 2A2	CN-2609-07.00	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
2WNPUB1	2B D/G ENG SUMP PUMP 2B1	CN-2609-07.00	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		
2WNPUB2	2B D/G ENG SUMP PUMP 2B2	CN-2609-07.00	B	3	Vertical Line Shaft	Fixed	GE600	dP Q V	2Y 2Y 2Y		

Valve Summary Listing

Page 1 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1BB008A	1D S/G BLOWDOWN INSIDE CONT ISOL	CN-1580-01.00 / K-05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB-01 CSJ-CN-BB-01
1BB010B	S/G 1D BLDWN CONT ISOL OTSD	CN-1580-01.00 / K-07	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB-01 CSJ-CN-BB-01
1BB019A	1B S/G BLOWDOWN INSIDE CONT ISOL	CN-1580-01.00 / C-05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB-01 CSJ-CN-BB-01
1BB021B	S/G 1B BLDWN CONT ISOL OTSD	CN-1580-01.00 / C-07	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB-01 CSJ-CN-BB-01
1BB052	1D S/G BLOWDOWN CONT ISOL PRESS RELIEF CHECK	CN-1580-01.00 / K-05	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1BB053	1A S/G BLOWDOWN CONT ISOL PRESS RELIEF CHECK	CN-1580-01.00 / I- 05	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 2 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1BB054	1C S/G BLOWDOWN CONT ISOL PRESS RELIEF CHECK	CN-1580-01.00 / F- 05	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1BB055	1B S/G BLOWDOWN CONT ISOL PRESS RELIEF CHECK	CN-1580-01.00 / D-05	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1BB056A	S/G 1A BLDWN CONT ISOL INSD	CN-1580-01.00 / H-05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
1BB057B	S/G 1A BLDWN CONT ISOL OTSD	CN-1580-01.00 / H-07	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
1BB060A	1C S/G BLOWDOWN INSIDE CONT ISOL	CN-1580-01.00 / F- 05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
1BB061B	S/G 1C BLDWN CONT ISOL OTSD	CN-1580-01.00 / F- 07	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01

Valve Summary Listing

Page 3 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAI				
1BB147B	S/G 1D BLDWN CONT ISOL BYP	CN-1580-01.00 / K-07	B	ACT	2	4	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1BB148B	S/G 1A BLDWN CONT ISOL BYP	CN-1580-01.00 / H-07	B	ACT	2	4	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1BB149B	S/G 1C BLDWN CONT ISOL BYP	CN-1580-01.00 / E-07	B	ACT	2	4	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1BB150B	S/G 1B BLDWN CONT ISOL BYP	CN-1580-01.00 / C-07	B	ACT	2	4	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1CA008	CAPT #1 SUCTION CHECK	CN-1592-01.00 / D-09	C	ACT	3	10	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CA010	1B CA PUMP SUCTION CHECK	CN-1592-01.00 / D-05	C	ACT	3	6	CK	SA	C	O/C	N/A	CVC CVO	II II		
1CA012	1A CA PUMP SUCTION CHECK	CN-1592-01.00 / D-01	C	ACT	3	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CA015A	CA PUMP 1A SUCT FRM RN ISOL	CN-1592-01.00 / D-02	B	ACT	3	10	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing

Page 4 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CA018B	CA PUMP 1B SUCT FRM RN ISOL	CN-1592-01.00 / D-06	B	ACT	3	6	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1CA020	CAPT #1 MINIFLOW CONTROL	CN-1592-01.00 / I- 11	C	ACT	3	6	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q		
1CA023	CAPT #1 MINIFLOW TO UST DOME CHECK	CN-1592-01.00 / J- 10	C	ACT	3	2.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CA027	1A CA PUMP MINIFLOW CONTROL	CN-1592-01.00 / I- 04	C	ACT	3	4	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q		
1CA028	1A CA PUMP MINIFLOW TO UST DOME CHECK	CN-1592-01.00 / J- 03	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CA032	1B CA PUMP MINIFLOW CONTROL	CN-1592-01.00 / I- 08	C	ACT	3	4	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q		
1CA033	1B CA PUMP MINIFLOW TO UST DOME CHECK	CN-1592-01.00 / J- 07	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CA036	CA PUMP #1 FLOW TO S/G 1D	CN-1592-01.01 / C-12	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1CA037	CA PUMP #1 (TD) DISCH TO 1D S/G CHECK	CN-1592-01.01 / G-12	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 5 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CA038A	CA PMP 1 DISCH TO S/G 1D ISOL	CN-1592-01.01 / H-12	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1CA040	CA PUMP 1B FLOW TO S/G 1D	CN-1592-01.01 / J- 12	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1CA041	1B CA PUMP (MD) DISCH TO 1D S/G CHECK	CN-1592-01.01 / I- 12	C	ACT	2	4	CK	SA	N/A	O/C	N/A	CVC CVO	II II		
1CA042B	CA PMP B DISCH TO S/G 1D ISOL	CN-1592-01.01 / I- 12	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1CA044	CA PUMP 1B FLOW TO S/G 1C	CN-1592-01.01 / J- 09	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1CA045	1B CA PUMP (MD) DISCH TO 1C S/G CHECK	CN-1592-01.01 / I- 09	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 6 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CA046B	CA PMP B DISCH TO S/G 1C ISOL	CN-1592-01.01 / I- 09	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1CA048	CA PUMP #1 FLOW TO S/G 1C	CN-1592-01.01 / C-09	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1CA049	CA PUMP #1 (TD) DISCH TO 1C S/G CHECK	CN-1592-01.01 / G-09	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CA050A	CA PMP 1 DISCH TO S/G 1C ISOL	CN-1592-01.01 / H-09	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1CA052	CA PUMP #1 FLOW TO S/G 1B	CN-1592-01.01 / C-06	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1CA053	CA PUMP #1 (TD) DISCH TO 1B S/G CHECK	CN-1592-01.01 / G-06	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 7 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CA054B	CA PMP 1 DISCH TO S/G 1B ISOL	CN-1592-01.01 / H-06	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1CA056	CA PUMP 1A FLOW TO S/G 1B	CN-1592-01.01 / J- 06	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1CA057	1A CA PUMP (MD) DISCH TO 1B S/G CHECK	CN-1592-01.01 / I- 06	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CA058A	CA PMP A DISCH TO S/G 1B ISOL	CN-1592-01.01 / I- 06	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1CA060	CA PUMP 1A FLOW TO S/G 1A	CN-1592-01.01 / J- 03	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1CA061	1A CA PUMP DISCH TO 1A S/G CHECK	CN-1592-01.01 / I- 03	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 8 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CA062A	CA PMP A DISCH TO S/G 1A ISOL	CN-1592-01.01 / I- 03	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1CA064	CA PUMP #1 FLOW TO S/G 1A	CN-1592-01.01 / C-03	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1CA065	CAPT #1 DISCH TO 1A S/G CHECK	CN-1592-01.01 / G-03	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CA066B	CA PMP 1 DISCH TO S/G 1A ISOL	CN-1592-01.01 / H-03	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1CA085B	CA PUMP #1 SUCT FRM RN HDR B	CN-1592-01.00 / D-07	B	ACT	3	6	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1CA116A	CA PUMP #1 SUCT FRM RN HDR A	CN-1592-01.00 / D-08	B	ACT	3	6	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing
Page 9 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CA149	1A S/G CF BYPASS TO CA NOZZLE	CN-1592-01.01 / I- 01	B	ACT	2	6	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CA150	1B S/G CF BYPASS TO CA NOZZLE	CN-1592-01.01 / I- 05	B	ACT	2	6	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CA151	1C S/G CF BYPASS TO CA NOZZLE	CN-1592-01.01 / I- 08	B	ACT	2	6	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CA152	1D S/G CF BYPASS TO CA NOZZLE	CN-1592-01.01 / I- 11	B	ACT	2	6	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CA173	RC TO CA SUCTION CHECK	CN-1592-01.00 / E-07	C	ACT	3	8	CK	SA	O/C	C	N/A	BDO CVC	II II		
1CA174	RC TO CA SUCTION ISOL	CN-1592-01.00 / E-07	B	PASS	3	8	BF	AO	C	C	O	RPI	2Y		

Valve Summary Listing

Page 10 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CA185	1A S/G CF TEMPERING FLOW TO CA NOZZLE	CN-1592-01.01 / E-01	B	ACT	2	2	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CA186	1B S/G CF TEMPERING FLOW TO CA NOZZLE	CN-1592-01.01 / E-05	B	ACT	2	2	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CA187	1C S/G CF TEMPERING FLOW TO CA NOZZLE	CN-1592-01.01 / E-08	B	ACT	2	2	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CA188	1D S/G CF TEMPERING FLOW TO CA NOZZLE	CN-1592-01.01 / E-11	B	ACT	2	2	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CA255	1A CA PUMP SUCTION RELIEF VALVE	CN-1592-01.00 / E-01	C	ACT	3	.75	RV	SA	C	O/C	N/A	RV	I		
1CA256	1B CA PUMP SUCTION RELIEF VALVE	CN-1592-01.00 / F- 04	C	ACT	3	.75	RV	SA	C	O/C	N/A	RV	I		
1CA257	CAPT #1 SUCTION RELIEF VALVE	CN-1592-01.00 / F- 08	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1CA291	RN TO CA X-OVER TRAIN 1A CHECK	CN-1592-01.00 / D-8	C	ACT	3	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 11 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CA292	RN TO CA X-OVER TRAIN 1B CHECK	CN-1592-01.00 / D-7	C	ACT	3	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1CF028	1A S/G CF CONTROL	CN-1591-01.01 / J- 13	B	ACT	3	16	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 04 CSJ-CN-CF- 04 CSJ-CN-CF- 04
1CF030	1A S/G CF BYPASS CONTROL	CN-1591-01.01 / J- 11	B	ACT	NC	6	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 05 CSJ-CN-CF- 05 CSJ-CN-CF- 05
1CF031	1A S/G FEEDWATER CONTAINMENT ISOL INLET CHECK	CN-1591-01.01 / G-13	C	ACT	2	18	CK	SA	O/C	C	N/A	BDO CVC	II II		
1CF033	1A S/G FEEDWATER CONTAINMENT ISOL	CN-1591-01.01 / F- 13	B	ACT	2	18	GA	HO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 01 CSJ-CN-CF- 01 CSJ-CN-CF- 01
1CF037	1B S/G CF CONTROL	CN-1591-01.01 / J- 09	B	ACT	3	16	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 04 CSJ-CN-CF- 04 CSJ-CN-CF- 04

Valve Summary Listing

Page 12 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CF039	1B S/G CF BYPASS CONTROL	CN-1591-01.01 / J- 11	B	ACT	NC	6	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 05 CSJ-CN-CF- 05 CSJ-CN-CF- 05
1CF040	1B S/G FEEDWATER CONTAINMENT ISOL INLET CHECK	CN-1591-01.01 / G-09	C	ACT	2	18	CK	SA	O/C	C	N/A	BDO CVC	II II		
1CF042	1B S/G FEEDWATER CONTAINMENT ISOL	CN-1591-01.01 / F- 09	B	ACT	2	18	GA	HO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 01 CSJ-CN-CF- 01 CSJ-CN-CF- 01
1CF046	1C S/G CF CONTROL	CN-1591-01.01 / J- 06	B	ACT	3	16	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 04 CSJ-CN-CF- 04 CSJ-CN-CF- 04
1CF048	1C S/G CF BYPASS CONTROL	CN-1591-01.01 / J- 05	B	ACT	NC	6	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 05 CSJ-CN-CF- 05 CSJ-CN-CF- 05
1CF049	1C S/G FEEDWATER CONTAINMENT ISOL INLET CHECK	CN-1591-01.01 / G-06	C	ACT	2	18	CK	SA	O/C	C	N/A	BDO CVC	II II		

Valve Summary Listing

Page 13 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CF051	1C S/G FEEDWATER CONTAINMENT ISOL .	CN-1591-01.01 / F- 06	B	ACT	2	18	GA	HO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 01 CSJ-CN-CF- 01 CSJ-CN-CF- 01
1CF055	1D S/G CF CONTROL	CN-1591-01.01 / J- 03	B	ACT	3	16	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 04 CSJ-CN-CF- 04 CSJ-CN-CF- 04
1CF057	1D S/G CF BYPASS CONTROL	CN-1591-01.01 / J- 04	B	ACT	NC	6	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 05 CSJ-CN-CF- 05 CSJ-CN-CF- 05
1CF058	1D S/G FEEDWATER CONTAINMENT ISOL INLET CHECK	CN-1591-01.01 / G-03	C	ACT	2	18	CK	SA	O/C	C	N/A	BDO CVC	II II		
1CF060	1D S/G FEEDWATER CONTAINMENT ISOL	CN-1591-01.01 / F- 03	B	ACT	2	18	GA	HO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 01 CSJ-CN-CF- 01 CSJ-CN-CF- 01

Valve Summary Listing

Page 14 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CF087	1D S/G CF CONTAINMENT ISOL BYPASS CONTROL	CN-1591-01.01 / F- 02	B	ACT	2	2	GA	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CF088	1C S/G CF CONTAINMENT ISOL BYPASS CONTROL	CN-1591-01.01 / F- 06	B	ACT	2	2	GA	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CF089	1B S/G CF CONTAINMENT ISOL BYPASS CONTROL	CN-1591-01.01 / F- 09	B	ACT	2	2	GA	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1CF090	1A S/G CF CONTAINMENT ISOL BYPASS CONTROL	CN-1591-01.01 / F- 13	B	ACT	2	2	GA	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		

Valve Summary Listing

Page 15 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1FD022	1A D/G ENG FUEL OIL DAY TANK 1A FILL	CN-1609-03.00 / H-12	B	ACT	3	2	SV	SO	C	O	C	RPI FC FSO ST-O	2Y Q Q Q		
1FD023	1A D/G ENG FUEL OIL DAY TANK 1A FILL VALVE BYPASS	CN-1609-03.00 / J- 13	B	ACT	3	2	PL	MA	C	O/C	N/A	FS	2Y		
1FD062	1B D/G ENG FUEL OIL DAY TANK 1B FILL	CN-1609-03.01 / H-12	B	ACT	3	2	SV	SO	C	O	C	RPI FC FSO ST-O	2Y Q Q Q		
1FD063	1B D/G ENG FUEL OIL DAY TANK 1B FILL VALVE BYPASS	CN-1609-03.01 / J- 12	B	ACT	3	2	PL	MA	C	O/C	N/A	FS	2Y		
1FW001A	FW LOOP ISOL	CN-1571-01.00 / J- 13	B	ACT	2	8	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1FW004	FW PUMP RETURN TO REFUELING CAVITY OUTSIDE CONTAINMENT ISOL	CN-1571-01.00 / L- 07	A	PASS	2	6	GA	MA	C	C	N/A	LTJ	J		
1FW005	FW PUMP RETURN TO REFUELING CAVITY CHECK	CN-1571-01.00 / L- 05	A/C	ACT	2	6	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1FW011	REFUELING CAVITY TO FW PUMP INSIDE CONT ISOL	CN-1571-01.00 / J- 04	A	PASS	2	4	PL	MA	C	C	N/A	LTJ	J		

Valve Summary Listing
Page 16 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1FW013	REFUELING CAVITY TO FW PUMP OUTSIDE CONTAINMENT ISOL	CN-1571-01.00 / J- 05	A	PASS	2	4	PL	MA	C	C	N/A	LTJ	J		
1FW027A	ND PUMP 1A SUCT FROM FWST	CN-1571-01.00 / F- 03	B	ACT	2	12	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1FW028	1A ND PUMP SUCTION FROM FWST CHECK	CN-1571-01.00 / F- 02	C	ACT	2	12	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1FW032B	FW LOOP ISOL	CN-1571-01.00 / J- 13	B	ACT	2	8	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1FW033A	FWST RECIRC LOOP ISOL	CN-1571-01.00 / B-11	B	ACT	2	2	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1FW049B	FWST RECIRC LOOP ISOL	CN-1571-01.00 / B-07	B	ACT	2	2	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1FW052	NS/NI TEST LINE TO FWST CHECK	CN-1571-01.00 / E-10	C	ACT	NC	4	CK	SA	O/C	O	N/A	BDC CVO	II II		

Valve Summary Listing

Page 17 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1FW055B	ND PUMP 1B SUCT FROM FWST	CN-1571-01.00 / H-03	B	ACT	2	12	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1FW056	1B ND PUMP SUCTION FROM FWST CHECK	CN-1571-01.00 / H-02	C	ACT	2	12	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1FW096	1A ND PUMP SUCTION HDR PRESSURE CONTROL CHECK	CN-1571-01.00 / E-02	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1FW097	1B ND PUMP SUCTION HDR PRESSURE CONTROL CHECK	CN-1571-01.00 / G-02	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1IACK5340	UPPER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
1IACK5350	LOWER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
1IACK5360	UPPER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		

Valve Summary Listing

Page 18 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
11ACK5370	LOWER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
11ACK5380	UPPER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
11ACK5390	LOWER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
11ASV5080	UPPER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A	ACT	2	0.5	SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
11ASV5160	LOWER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A	ACT	2	0.5	SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		

Valve Summary Listing

Page 19 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1IASV5400	UPPER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A	ACT	2	0.5	SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
1IASV5410	LOWER PERSONNEL AIR LOCK CONTROL	CN-1499-1A.01-01 /	A	ACT	2	0.5	SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
1KC001A	AUX BLDG NON- ESSENTIAL RETURN HEADER ISOL	CN-1573-01.00 / C-06	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1KC002B	AUX BLDG NON- ESSENTIAL RETURN HEADER ISOL	CN-1573-01.00 / C-09	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1KC003A	RX BLDG NON- ESSENTIAL RETURN HEADER ISOL	CN-1573-01.00 / C-06	B	ACT	3	10	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 20 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1KC005	1A1 KC PUMP DISCH CHECK	CN-1573-01.00 / E-04	C	ACT	3	16	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1KC008	1A2 KC PUMP DISCH CHECK	CN-1573-01.00 / E-05	C	ACT	3	16	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1KC011	1B1 KC PUMP DISCH CHECK	CN-1573-01.00 / E-11	C	ACT	3	16	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1KC014	1B2 KC PUMP DISCH CHECK	CN-1573-01.00 / E-12	C	ACT	3	16	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1KC018B	RX BLDG NON- ESSENTIAL RETURN HEADER ISOL	CN-1573-01.00 / C-09	B	ACT	3	10	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1KC047	RX BLDG DRAIN HEADER PRESSURE EQUALIZATION CHECK	CN-1573-01.05 / H-04	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1KC050A	AUX BLDG NON- ESSENTIAL HEADER ISOL	CN-1573-01.00 / K-07	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1KC053B	AUX BLDG NON- ESSENTIAL HEADER ISOL	CN-1573-01.00 / K-08	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 21 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1KC056A	KC TO ND HX 1A SUP ISOL	CN-1573-02.00 / E-03	B	ACT	3	16	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1KC057A	1A ND HX FLOW CONTROL	CN-1573-02.00 / I- 03	B	ACT	3	16	BL	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1KC061	1A ND HX OUTLET RELIEF	CN-1573-02.00 / H-04	C	ACT	3	4	RV	SA	C	O/C	N/A	RV	I		
1KC079	1A ND PUMP MECH SEAL HX RELIEF	CN-1573-02.00 / I- 06	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC081B	KC TO ND HX 1B SUP ISOL	CN-1573-02.01 / E-3	B	ACT	3	16	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1KC082B	1B ND HX FLOW CONTROL	CN-1573-02.01 / J- 03	B	ACT	3	12	BL	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1KC086	1B ND HX OUTLET RELIEF	CN-1573-02.01 / H-06	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC104	1B ND PUMP MECH SEAL HX RELIEF	CN-1573-02.01 / H-06	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC228B	RX BLDG NON- ESSENTIAL HEADER ISOL	CN-1573-01.00 / L- 08	B	ACT	3	8	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 22 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1KC230A	RX BLDG NON- ESSENTIAL HEADER ISOL	CN-1573-01.00 / L- 07	B	ACT	3	8	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1KC279	NC PUMPS RETURN HEADER PRESSURE EQUALIZATION CHECK	CN-1573-01.03 / K-05	A/C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1KC280	NCDT HX COOLING WATER RETURN PRESSURE EQUALIZATION CHECK	CN-1573-01.03 / E-01	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1KC281	NC PUMPS BLOWDOWN HX'S RETURN HEADER RELIEF	CN-1573-01.03 / K-03	C	ACT	2	3	RV	SA	C	O/C	N/A	RV	I		
1KC305B	EXS LETDN HX SUPPLY CONT ISOL	CN-1573-01.03 / D-13	A	ACT	2	4	GA	MO	C	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
1KC313	EXCESS LETDN HX OUTLET R/V TO KC DRN SUMP	CN-1573-01.03 / I- 12	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC315B	EXS LETDN HX RET CONT ISOL	CN-1573-01.03 / L- 13	A	ACT	2	4	GA	MO	C	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		

Valve Summary Listing

Page 23 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1KC320A	NCDT HX COOL SUPPLY CONT ISOL	CN-1573-01.03 / B-10	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC-01 CSJ-CN-KC-01
1KC322	NCDT HX SUP HDR CHECK	CN-1573-01.03 / B-08	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1KC330	NCDT HX OUTLET RELIEF TO KC DRAIN SUMP	CN-1573-01.03 / B-01	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC332B	NCDT HX COOLING RETURN CONT ISOL	CN-1573-01.03 / E-02	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC-01 CSJ-CN-KC-01
1KC333A	NCDT HX COOL RET CONT ISOL	CN-1573-01.03 / G-02	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC-01 CSJ-CN-KC-01
1KC338B	NC PUMPS SUP HDR CONT ISOL	CN-1573-01.03 / D-12	A	ACT	2	8	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC-02 CSJ-CN-KC-02

Valve Summary Listing

Page 24 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1KC340	NC PUMPS SUPPLY HEADER CHECK	CN-1573-01.03 / F- 12	A/C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1KC344	1C NC PUMP THERMAL BARRIER INLET CHECK	CN-1573-01.07 / K-13	C	ACT	2	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
1KC355	NC PUMP 1C MTR LWR BRG CLR R/V TO KC DRN SUMP	CN-1573-01.07 / K-10	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC361	1C NC PUMP MOTOR UPPER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-1573-01.07 / H-08	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC363	1B NC PUMP THERMAL BARRIER INLET CHECK	CN-1573-01.07 / K-06	C	ACT	2	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
1KC374	1B NC PUMP MOTOR LOWER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-1573-01.07 / K-04	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC380	NC PUMP 1B MTR UPR BRG CLR R/V TO KC DRN SUMP	CN-1573-01.07 / H-02	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC386	1A NC PUMP MOTOR UPPER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-1573-01.04 / H-12	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC392	1A NC PUMP MOTOR LOWER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-1573-01.04 / K-10	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC393	1A NC PUMP THERMAL BARRIER INLET CHECK	CN-1573-01.04 / K-09	C	ACT	2	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
1KC404	1D NC PUMP MOTOR UPPER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-1573-01.04 / H-06	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 25 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1KC410	1D NC PUMP MOTOR LOWER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-1573-01.04 / J- 04	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1KC412	1D NC PUMP THERMAL BARRIER INLET CHECK	CN-1573-01.04 / J- 03	C	ACT	2	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
1KC424B	NC PUMPS RETURN HEADER CONT ISOL	CN-1573-01.03 / L- 05	A	ACT	2	8	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC- 02 CSJ-CN-KC- 02
1KC425A	NC PUMPS RET HDR CONT ISOL	CN-1573-01.03 / L- 07	A	ACT	2	8	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC- 02 CSJ-CN-KC- 02
1KC429B	RX BLDG DRAIN HEADER CONT ISOL	CN-1573-01.05 / H-03	A	ACT	2	2	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1KC430A	RX BLDG DRN HDR CONT ISOL	CN-1573-01.05 / J- 03	A	ACT	2	2	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1KC494	1A KC SURGE TANK EMERGENCY RN M/U	CN-1573-01.01 / H-02	B	ACT	3	4	PL	MA	C	O/C	N/A	FS	2Y		

Valve Summary Listing

Page 26 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1KC497	1B KC SURGE TANK EMERGENCY RN M/U	CN-1573-01.01 / H-13	B	ACT	3	4	PL	MA	C	O/C	N/A	FS	2Y		
1KC814	KC DRN HDR RV	CN-1573-01.05 / G-01	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
1KCC37A	1A KC MINIFLOW ISOL	CN-1573-01.00 / C-03	B	ACT	3	6	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1KCC40B	1B KC MINIFLOW ISOL	CN-1573-01.00 / D-10	B	ACT	3	6	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1KCC42	RADIATION MONITOR 1EMF-46A OUTLET CHECK	CN-1573-01.00 / K-01	C	ACT	3	0.75	CK	SA	O/C	C	N/A	BDO CVC	II II		
1KCC43	RADIATION MONITOR 1EMF-46B OUTLET CHECK	CN-1573-01.00 / E-10	C	ACT	3	0.75	CK	SA	O/C	C	N/A	BDO CVC	II II		
1KD006	1A D/G ENG DRIVEN JACKET WATER CIRCULATION PUMP DISCH CHECK	CN-1609-01.00 / J- 10	C	ACT	3	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1KD021	1B D/G ENG DRIVEN JACKET WATER CIRCULATION PUMP DISCH CHECK	CN-1609-01.00 / E-10	C	ACT	3	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 27 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1KF097	1A KF ASSURED FUEL POOL M/U ISOL	CN-1570-01.00 / I- 12	B	ACT	3	4	PL	MA	C	O/C	N/A	FS	2Y		
1KF101B	FWST TO SPENT FUEL POOL	CN-1570-01.00 / H-14	B	ACT	2	4	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1KF103A	FWST TO SPENT FUEL POOL	CN-1570-01.00 / H-12	B	ACT	2	4	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1KF104	1B KF ASSURED FUEL POOL M/U ISOL	CN-1570-01.00 / H-12	B	ACT	3	4	PL	MA	C	O/C	N/A	FS	2Y		
1KF172	FWST OVERFLOW TO SPENT FUEL POOL	CN-1570-01.00 / J- 12	B	ACT	3	3	GA	MA	O	C	N/A	FS	2Y		
1LD017	1A D/G ENG LUBE OIL STRAINER 1A1 CHECK	CN-1609-02.00 / K-5	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
1LD018	1A D/G ENG LUBE OIL STRAINER 1A2 CHECK	CN-1609-02.00 / J- 6	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
1LD047	1B D/G ENG LUBE OIL STRAINER 1B1 CHECK	CN-1609-02.02 / K-5	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
1LD048	1B D/G ENG LUBE OIL STRAINER 1B2 CHECK	CN-1609-02.02 / J- 6	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
1MIMV6470	ILRT ISO VALVE	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
1MIMV6471	ILRT ISOL	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
1MIMV6480	ILRT ISO VALVE	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
1MIMV6481	ILRT ISOL	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		

Valve Summary Listing

Page 28 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	* PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1MIMV6490	ILRT ISO VALVE	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
1MIMV6491	ILRT ISOL	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
1MISV0150	HYDROGEN MONITOR SAMPLE SELECTION TRAIN A	/	A	PASS	NC		SV	SO	C	C	C	LTJ	J		
1MISV0160	HYDROGEN MONITOR SAMPLE SELECTION TRAIN B	/	A	PASS	NC		SV	SO	C	C	C	LTJ	J		
1MISV0170	HYDROGEN MONITOR SAMPLE SELECTOR TRAIN A	/	A	PASS	NC		SV	SO	C	C	C	LTJ	J		
1MISV0180	HYDROGEN MONITORING SAMPLE SELECTOR TRAIN B	/	A	PASS	NC		SV	SO	C	C	C	LTJ	J		
1MISV5230	CONT EMF SUP OTSD CONT ISOL	/	A	ACT	2		SV	SO	O	C	C	RPI	2Y		
												LTJ	J		
												FC	Q		
												FSC	Q		
												ST-C	Q		
1MISV5231	CONT EMF SUP INSD CONT ISOL	/	A	ACT	2		SV	SO	O	C	C	RPI	2Y		
												LTJ	J		
												FC	Q		
												FSC	Q		
												ST-C	Q		

Valve Summary Listing

Page 29 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1MISV5232	CONT EMF RET OTSD CONT ISOL	/	A	ACT	2		SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
1MISV5233	CONT EMF RET INSD CONT ISOL	/	A	ACT	2		SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
1NB103	RELIEF HEADER CHECK TO RHT	CN-1556-01.03 / E-11	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
1NB134	RECYCLE EVAP FEED PUMP A RECIRC	CN-1556-01.03 / J- 08	B	ACT	3	1	GL	MA	O/C	C	N/A	FS	2Y		
1NB223	NB EVAP CONDENSER FILTER OUTLET TO NB EVAP FEED DEMIN	CN-1556-01.04 / D-07	B	ACT	3	2	PL	AO/M A	O/C	C	N/A	FS	2Y		
1NB260B	RMWST CONT ISOL	CN-1556-02.00 / G-04	A	ACT	2	1	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NB262	RMWST REACTOR BLDG SUPPLY HEADER CHECK	CN-1556-02.00 / G-06	A/C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NB331	RMWST REACTOR BLDG SUPPLY HEADER RELIEF TO NCDT	CN-1556-02.00 / G-08	C	ACT	NC	1	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 30 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NB382	LEAKOFF HEADER TO RHT CHECK	CN-1556-01.06 / I- 12	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO CVC	II II		
1NB383	RECYCLE EVAP FEED PUMP B RECIRC	CN-1556-01.03 / J- 08	B	ACT	3	1	GL	MA	O/C	C	N/A	FS	2Y		
1NB447	RECIRC TO RECYCLE HOLDUP TANK A ISOL	CN-1556-01.02 / J- 14	B	ACT	3	1	PL	MA	O/C	C	N/A	FS	2Y		
1NB448	RECIRC TO RECYCLE HOLDUP TANK B ISOL	CN-1556-01.02 / I- 14	B	ACT	3	1	PL	MA	O/C	C	N/A	FS	2Y		
1NB800	RMWST AND BAT OVERFLOW CHECK	CN-1556-01.01 / H-05	C	ACT	3	4	CK	SA	O/C	C	N/A	BDO CVC	II II		
1NC001	UNIT 1 PZR SAFETY RELIEF	CN-1553-01.01 / K-03	C	ACT	1	6	RV	SA	C	O/C	N/A	RV	I		
1NC002	UNIT 1 PZR SAFETY RELIEF	CN-1553-01.01 / K-04	C	ACT	1	6	RV	SA	C	O/C	N/A	RV	I		
1NC003	UNIT 1 PZR SAFETY RELIEF	CN-1553-01.01 / K-05	C	ACT	1	6	RV	SA	C	O/C	N/A	RV	I		
1NC031B	UNIT 1 PZR PORV ISOL	CN-1553-01.01 / F- 04	B	ACT	1	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NC032B	UNIT 1 PZR PORV	CN-1553-01.01 / G-04	B	ACT	1	4	PORV	AO	C	O/C	C	STT FC FSC FSO ST-C ST-O	2Y CS CS CS CS CS		CSJ-CN-NC- 02 CSJ-CN-NC- 02 CSJ-CN-NC- 02 CSJ-CN-NC- 02 CSJ-CN-NC- 02

Valve Summary Listing

Page 31 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NC033A	UNIT 1 PZR PORV ISOL	CN-1553-01.01 / F-03	B	ACT	1	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NC034A	UNIT 1 PZR PORV	CN-1553-01.01 / G-03	B	ACT	1	4	PORV	AO	C	O/C	C	STT FC FSC FSO ST-C ST-O	2Y CS CS CS CS CS CS		CSJ-CN-NC-02 CSJ-CN-NC-02 CSJ-CN-NC-02 CSJ-CN-NC-02 CSJ-CN-NC-02 CSJ-CN-NC-02
1NC035B	UNIT 1 PZR PORV ISOL	CN-1553-01.01 / F-02	B	ACT	1	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NC036B	UNIT 1 PZR PORV	CN-1553-01.01 / G-02	B	ACT	1	4	PORV	AO	C	O/C	C	STT FC FSC FSO ST-C ST-O	2Y CS CS CS CS CS		CSJ-CN-NC-02 CSJ-CN-NC-02 CSJ-CN-NC-02 CSJ-CN-NC-02 CSJ-CN-NC-02 CSJ-CN-NC-02

Valve Summary Listing

Page 32 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NC053B	N2 TO PRT CONT ISOL	CN-1553-01.01 / K-11	A	ACT	2	1	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NC054A	NITROGEN TO PZR RELIEF TANK CONTAINMENT ISOL	CN-1553-01.01 / K-09	A	ACT	2	1	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NC056B	RMW PUMP DISCH CONT ISOL	CN-1553-01.01 / I- 13	A	ACT	2	3	GA	MO	C	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
1NC057	PZR RELIEF TANK SPRAY SUPPLY CHECK	CN-1553-01.01 / I- 12	A/C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NC141	UNIT 1 NC MOTOR OIL DRAIN PUMP INSIDE CONTAINMENT ISOL	CN-1553-01.03 / J- 08	A	PASS	2	2	GA	MA	C	C	N/A	LTJ	J		
1NC142	NC MTR OIL DRN PMP OUTSIDE CONT ISOL	CN-1553-01.03 / K-08	A	PASS	2	2	GA	MA	C	C	N/A	LTJ	J		

Valve Summary Listing

Page 33 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NC195B	NC PUMP MTR OIL FILL ISOL	CN-1553-01.03 / D-07	A	ACT	2	2	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NC196A	UNIT 1 NC PUMP MOTOR OIL FILL ISOL	CN-1553-01.03 / D-07	A	ACT	2	2	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NC250A	UNIT 1 REACTOR HEAD VENT BLOCK	CN-1553-01.01 / L- 07	B	ACT	1	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NC- 03 CSJ-CN-NC- 03 CSJ-CN-NC- 03 CSJ-CN-NC- 03
1NC251B	UNIT 1 REACTOR HEAD VENT	CN-1553-01.01 / L- 06	B	ACT	1	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NC- 03 CSJ-CN-NC- 03 CSJ-CN-NC- 03 CSJ-CN-NC- 03

Valve Summary Listing

Page 34 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NC252B	UNIT 1 REACTOR HEAD VENT BLOCK	CN-1553-01.01 / K-07	B	ACT	1	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03
1NC253A	RX HEAD VENT	CN-1553-01.01 / K-06	B	ACT	1	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03
1ND001B	ND PUMP 1A SUCT FRM LOOP B	CN-1561-01.00 / L- 13	A	ACT	1	12	GA	MO	C	O	FAI	RPI LT FSO ST-O	2Y 2Y CS CS		CSJ-CN-ND-01 CSJ-CN-ND-01
1ND002A	ND PUMP 1A SUCT FRM LOOP B	CN-1561-01.00 / J- 13	A	ACT	1	12	GA	MO	C	O	FAI	RPI LT FSO ST-O	2Y 2Y CS CS		CSJ-CN-ND-01 CSJ-CN-ND-01
1ND003	1A ND PUMP SUCTION FROM NC LOOP B HEADER RELIEF	CN-1561-01.00 / I- 13	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 35 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1ND010	1A ND PUMP DISCH CHECK	CN-1561-01.00 / G-10	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1ND024A	1A ND HX OUTLET TO LETDOWN HX	CN-1561-01.00 / G-05	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
1ND025A	1A ND PUMP MINIFLOW	CN-1561-01.00 / E-13	B	ACT	2	2	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1ND026	1A ND HX OUTLET CONTROL	CN-1561-01.00 / G-04	B	ACT	2	8	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1ND027	1A ND HX BYPASS CONTROL	CN-1561-01.00 / J- 06	B	ACT	2	8	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1ND028A	ND SUPPLY TO NV & 1A NI PUMPS	CN-1561-01.00 / H-04	B	ACT	2	8	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-ND- 05 CSJ-CN-ND- 05 CSJ-CN-ND- 05 CSJ-CN-ND- 05

Valve Summary Listing

Page 36 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1ND031	1A ND TRAIN COLD LEG INJ RETURN SAFETY RELIEF	CN-1561-01.00 / G-02	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
1ND032A	ND TRAIN 1A HOT LEG INJ ISOL	CN-1561-01.00 / F- 03	B	ACT	2	8	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-ND- 04 CSJ-CN-ND- 04 CSJ-CN-ND- 04 CSJ-CN-ND- 04
1ND035	ND HOT LEG INJ RETURN SAFETY RELIEF	CN-1561-01.00 / D-02	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
1ND036B	ND PUMP 1B SUCT FRM LOOP C	CN-1561-01.01 / L- 13	A	ACT	1	12	GA	MO	C	O	FAI	RPI LT FSO ST-O	2Y 2Y CS CS		CSJ-CN-ND- 02 CSJ-CN-ND- 02
1ND037A	ND PUMP 1B SUCT FRM LOOP C	CN-1561-01.01 / J- 13	A	ACT	1	12	GA	MO	C	O	FAI	RPI LT FSO ST-O	2Y 2Y CS CS		CSJ-CN-ND- 02 CSJ-CN-ND- 02
1ND038	1B ND PUMP SUCTION FROM NC LOOP C HEADER RELIEF	CN-1561-01.01 / I- 13	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
1ND044	1B ND PUMP DISCH CHECK	CN-1561-01.01 / G-10	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 37 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAI				
1ND058B	1B ND HX OUTLET TO LETDOWN HX	CN-1561-01.01 / G-05	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
1ND059B	1B ND PUMP MINIFLOW	CN-1561-01.01 / E-13	B	ACT	2	2	GL	MO	C	O/C	FAI	RPI	2Y		
												FSC	Q		
												FSO	Q		
												ST-C	Q		
												ST-O	Q		
1ND060	1B ND HX OUTLET CONTROL	CN-1561-01.01 / G-04	B	ACT	2	8	FC	AO	O	O	O	RPI	2Y		
												FO	Q		
												FSO	Q		
												ST-O	Q		
1ND061	1B ND HX BYPASS CONTROL	CN-1561-01.01 / J- 06	B	ACT	2	8	FC	AO	C	C	C	RPI	2Y		
												FC	Q		
												FSC	Q		
												ST-C	Q		
1ND064	1B ND TRAIN COLD LEG INJ RETURN SAFETY RELIEF	CN-1561-01.01 / H-02	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
1ND065B	ND TRAIN 1B HOT LEG INJ ISOL	CN-1561-01.01 / F- 03	B	ACT	2	8	GA	MO	O	O/C	FAI	RPI	2Y		
												FSC	CS		CSJ-CN-ND-04
												FSO	CS		CSJ-CN-ND-04
												ST-C	CS		CSJ-CN-ND-04
												ST-O	CS		CSJ-CN-ND-04

Valve Summary Listing

Page 38 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1ND090	1A ND TRAIN AUX PZR SPRAY ISOL	CN-1561-01.00 / E-09	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
1ND091	1B ND TRAIN AUX PZR SPRAY ISOL	CN-1561-01.00 / E-09	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
1ND116	OVER PRESSURE CHECK VALVE AROUND 1ND-1B	CN-1561-01.00 / K-12	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1ND117	OVER PRESSURE CHECK VALVE AROUND 1ND-36B	CN-1561-01.01 / K-12	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NF228A	GLYCOL SUPPLY OUTSIDE CONTAINMENT ISOL	CN-1558-02.00 / H-14	A	ACT	2	4	GA	AO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
1NF229	NF AHU GLY SUPPLY HDR CHECK	CN-1558-02.00 / F- 14	A/C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NF233B	GLYCOL RET CONT ISOL	CN-1558-02.00 / L- 10	A	ACT	2	4	GA	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 39 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NF234A	GLYCOL RETURN CONTAINMENT ISOL	CN-1558-02.00 / L- 12	A	ACT	2	4	GA	AO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
1NF235	NF AHU GLYCOL RETURN C/I PRESS RELIEF CHECK	CN-1558-02.00 / K-10	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NF895	NF AHU GLYCOL SUPPLY RELIEF	CN-1558-02.06 / G-02	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
1NI009A	NV PMP C/L INJ ISOL	CN-1562-01.00 / D-09	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 01 CSJ-CN-NI- 01 CSJ-CN-NI- 01 CSJ-CN-NI- 01
1NI010B	NV PMP C/L INJ ISOL	CN-1562-01.00 / D-06	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 01 CSJ-CN-NI- 01 CSJ-CN-NI- 01 CSJ-CN-NI- 01
1NI012	NV PUMPS TO COLD LEG CHECK	CN-1562-01.00 / F- 07	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 40 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI015	NV PUMPS TO A COLD LEG CHECK	CN-1562-01.00 / J- 10	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI017	NV PUMPS TO B COLD LEG CHECK	CN-1562-01.00 / J- 09	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI019	NV PUMPS TO C COLD LEG CHECK	CN-1562-01.00 / J- 07	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI021	NV PUMPS TO D COLD LEG CHECK	CN-1562-01.00 / J- 05	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI047A	C-LEG ACCUM N2 SUP CONT ISOL	CN-1562-01.01 / K-09	A	ACT	2	1	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NI048	COLD LEG ACCUMULATOR N2 SUPPLY CONT CHECK	CN-1562-01.01 / K-08	A/C	ACT	2	1	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
1NI052	1A COLD LEG ACCUMULATOR RELIEF	CN-1562-01.01 / I- 03	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
1NI054A	C-LEG ACCUM A DISCH ISOL	CN-1562-01.01 / F- 01	B	ACT	1	10	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y RO RO RO RO		ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25

Valve Summary Listing

Page 41 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI059	1A ACCUMULATOR DISCH CHECK	CN-1562-01.01 / D-02	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI060	1A ACCUMULATOR DISCH CHECK	CN-1562-01.01 / C-02	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI063	ACCUM 1B RELIEF	CN-1562-01.01 / I- 05	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
1NI065B	C-LEG ACCUM B DISCH ISOL	CN-1562-01.01 / F- 05	B	ACT	1	10	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y RO RO RO RO		ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25
1NI070	1B COLD LEG ACCUMULATOR DISCH CHECK	CN-1562-01.01 / D-05	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI071	1B COLD LEG ACCUMULATOR DISCH CHECK	CN-1562-01.01 / C-05	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI074	1C COLD LEG ACCUMULATOR RELIEF	CN-1562-01.01 / I- 08	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 42 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI076A	C-LEG ACCUM C DISCH ISOL	CN-1562-01.01 / G-07	B	ACT	1	10	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y RO RO RO RO		ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25
1NI081	1C COLD LEG ACCUMULATOR DISCH CHECK	CN-1562-01.01 / D-07	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI082	1C COLD LEG ACCUMULATOR DISCH CHECK	CN-1562-01.01 / C-07	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI086	1D COLD LEG ACCUMULATOR RELIEF	CN-1562-01.01 / I- 11	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
1NI088B	C-LEG ACCUM D DISCH ISOL	CN-1562-01.01 / G-10	B	ACT	1	10	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y RO RO RO RO		ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25
1NI093	1D COLD LEG ACCUMULATOR DISCH CHECK	CN-1562-01.01 / D-10	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI094	1D COLD LEG ACCUMULATOR DISCH CHECK	CN-1562-01.01 / C-10	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		

Valve Summary Listing

Page 43 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI095A	COLD LEG ACCUMULATOR CHECK VALVE TEST ISOL	CN-1562-01.01 / F- 12	A	ACT	2	0.75	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NI096B	C-LEG ACCUM CHK VLV TST ISOL	CN-1562-01.01 / H-13	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NI100B	NI PMPS SUCT FROM FWST	CN-1562-01.02 / G-13	B	ACT	2	8	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C	2Y CS CS CS		CSJ-CN-NI- 08 CSJ-CN-NI- 08 CSJ-CN-NI- 08
1NI101	FWST TO SUCTION HEADER OF NI PUMPS CHECK	CN-1562-01.02 / G-13	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI102	NI PUMPS SUCTION HEADER RELIEF	CN-1562-01.02 / H-14	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
1NI103A	1A NI PUMP SUCTION	CN-1562-01.02 / I- 13	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 24 CSJ-CN-NI- 24 CSJ-CN-NI- 24 CSJ-CN-NI- 24

Valve Summary Listing

Page 44 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI114	1A NI PUMP RECIRC CHECK	CN-1562-01.02 / I- 08	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI115A	NI PUMP 1A MINIFLOW ISOL	CN-1562-01.02 / H-08	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NI116	1A NI PUMP DISCH CHECK	CN-1562-01.02 / J- 08	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI118A	NI PUMP 1A TO C-LEG INJ ISOL	CN-1562-01.02 / H-06	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NI119	1A NI PUMP DISCH HEADER RELIEF	CN-1562-01.02 / K-06	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
1NI120B	NI PMPS TO C-LEG ACCUM FILL	CN-1562-01.02 / I- 05	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing
Page 45 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI121A	1A NI PUMP TO HOT LEGS B&C	CN-1562-01.02 / J- 05	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 21 CSJ-CN-NI- 21 CSJ-CN-NI- 21 CSJ-CN-NI- 21
1NI122B	HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-1562-01.02 / J- 04	B	ACT	2	0.75	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NI124	NI PUMPS TO C HOT LEG CHECK	CN-1562-01.02 / I- 04	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI125	ND TO C HOT LEG CHECK	CN-1562-01.02 / H-04	A/C	ACT	1	8	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI126	1C HOT LEG INJECTION CHECK	CN-1562-01.02 / I- 01	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI128	NI PUMPS TO B HOT LEG CHECK	CN-1562-01.02 / K-04	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		

Valve Summary Listing

Page 46 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI129	ND TO B HOT LEG CHECK	CN-1562-01.02 / J-03	A/C	ACT	1	8	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI134	1B HOT LEG INJECTION CHECK	CN-1562-01.02 / K-01	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI135B	1B NI PUMP SUCTION	CN-1562-01.02 / E-13	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NI136B	ND SUPPLY TO NI PUMP 1B	CN-1562-01.02 / D-13	B	ACT	2	8	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-19 CSJ-CN-NI-19 CSJ-CN-NI-19 CSJ-CN-NI-19
1NI143	1B NI PUMP RECIRC CHECK	CN-1562-01.02 / E-08	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI144A	NI PUMP 1B MINIFLOW ISOL	CN-1562-01.02 / F-08	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-22 CSJ-CN-NI-22 CSJ-CN-NI-22 CSJ-CN-NI-22

Valve Summary Listing

Page 47 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI147B	NI MINIFLOW HDR TO FWST ISOL	CN-1562-01.02 / G-09	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C	2Y CS CS CS		CSJ-CN-NI- 09 CSJ-CN-NI- 09 CSJ-CN-NI- 09
1NI148	1B NI PUMP DISCH CHECK	CN-1562-01.02 / D-08	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI150B	NI PUMP 1B C-LEG INJ ISOL	CN-1562-01.02 / F- 06	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NI151	1B NI PUMP DISCH RELIEF	CN-1562-01.02 / E-06	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
1NI152B	NI PUMP 1B TO H-LEGS A&D	CN-1562-01.02 / D-05	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 21 CSJ-CN-NI- 21 CSJ-CN-NI- 21 CSJ-CN-NI- 21
1NI153A	HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-1562-01.02 / D-04	B	ACT	2	0.75	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 48 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI154B	ND TO HOT LEGS CHECK VALVE TEST ISOL	CN-1562-01.02 / H-03	B	ACT	2	12	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NI156	1B NI PUMP TO HOT LEG D CHECK	CN-1562-01.02 / E-03	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI157	1A HOT LEG INJECTION CHECK	CN-1562-01.02 / E-01	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI159	1B NI PUMP TO HOT LEG D CHECK	CN-1562-01.02 / C-02	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI160	1D HOT LEG INJECTION CHECK	CN-1562-01.02 / C-01	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI161	NI TO COLD LEGS RELIEF	CN-1562-01.03 / K-07	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
1NI162A	NI TO C-LEGS INJ HDR ISOL	CN-1562-01.03 / J- 08	A	ACT	2	4	GA	MO	O	O/C	FAI	RPI LT FSC FSO ST-C	2Y 2Y CS CS CS		CSJ-CN-NI- 12 CSJ-CN-NI- 12 CSJ-CN-NI- 12

Valve Summary Listing

Page 49 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI165	COLD LEG DISCH HEADER TO COLD LEG A CHECK	CN-1562-01.03 / G-03	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI167	COLD LEG DISCH HEADER TO COLD LEG B CHECK	CN-1562-01.03 / G-06	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI169	COLD LEG DISCH HEADER TO COLD LEG D CHECK	CN-1562-01.03 / G-09	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI171	COLD LEG DISCH HEADER TO COLD LEG C CHECK	CN-1562-01.03 / G-12	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		

Valve Summary Listing

Page 50 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI173A	ND HEADER 1A TO COLD LEGS C & D	CN-1562-01.03 / E-10	A	ACT	2	8	GA	MO	O	O/C	FAI	RPI LT FSC FSO ST-C ST-O	2Y 2Y CS CS CS CS		CSJ-CN-NI- 15 CSJ-CN-NI- 15 CSJ-CN-NI- 15 CSJ-CN-NI- 15
1NI175	ND HDR 1A TO C C-LEG CHK	CN-1562-01.03 / F- 11	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI176	1A ND HEADER TO D COLD LEG CHECK	CN-1562-01.03 / F- 09	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI178B	ND HDR 1B TO COLD LEGS A&B	CN-1562-01.03 / E-04	A	ACT	2	8	GA	MO	O	O/C	FAI	RPI LT FSC FSO ST-C ST-O	2Y 2Y CS CS CS CS		CSJ-CN-NI- 15 CSJ-CN-NI- 15 CSJ-CN-NI- 15 CSJ-CN-NI- 15

Valve Summary Listing

Page 51 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI180	1B ND HEADER TO B COLD LEG CHECK	CN-1562-01.03 / F- 05	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI181	1B ND HEADER TO A COLD LEG CHECK	CN-1562-01.03 / F- 04	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
1NI183B	ND HDR A&B HOT LEG INJ ISOL	CN-1562-01.02 / G-04	A	ACT	2	12	GA	MO	C	O/C	FAI	RPI LT FSC FSO ST-C ST-O	2Y 2Y CS CS CS CS		CSJ-CN-NI- 16 CSJ-CN-NI- 16 CSJ-CN-NI- 16 CSJ-CN-NI- 16
1NI184B	ND PUMP 1B CONT SUMP SUCTION	CN-1562-01.03 / C-10	B	ACT	2	18	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 17 CSJ-CN-NI- 17 CSJ-CN-NI- 17 CSJ-CN-NI- 17

Valve Summary Listing

Page 52 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI185A	ND PUMP 1A CONT SUMP SUCT	CN-1562-01.03 / C-05	B	ACT	2	18	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-17 CSJ-CN-NI-17 CSJ-CN-NI-17 CSJ-CN-NI-17
1NI332A	NI PUMP SUCT X-OVER FROM ND	CN-1562-01.02 / L- 12	B	ACT	2	6	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18
1NI333B	NI PUMP SUCT FROM ND	CN-1562-01.02 / K-12	B	ACT	2	6	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18

Valve Summary Listing

Page 53 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI334B	NI PUMP SUCT X-OVER FROM ND	CN-1562-01.02 / K-11	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 23 CSJ-CN-NI- 23 CSJ-CN-NI- 23 CSJ-CN-NI- 23
1NI342	ND TO SUCTION OF 1B NI PUMP CHECK	CN-1562-01.02 / D-13	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI351	NV PUMPS TO A COLD LEG CHECK	CN-1562-01.00 / I- 10	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI352	NV PUMPS TO B COLD LEG CHECK	CN-1562-01.00 / I- 09	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI353	NV PUMPS TO C COLD LEG CHECK	CN-1562-01.00 / I- 07	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI354	NV PUMPS TO D COLD LEG CHECK	CN-1562-01.00 / I- 05	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NI391	1A COLD LEG INJ CHECK VALVE TEST ISOL	CN-1562-01.01 / C-03	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
1NI392	1B COLD LEG INJECTION CHECK VALVE TEST ISOL	CN-1562-01.01 / C-04	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
1NI393	1C COLD LEG INJECTION CHECK VALVE TEST ISOL	CN-1562-01.01 / C-08	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
1NI394	1D COLD LEG INJECTION CHECK VALVE TEST ISOL	CN-1562-01.01 / C-11	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		

Valve Summary Listing

Page 54 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI395	1A HOT LEG INJ CHECK VALVE TEST ISOL	CN-1562-01.02 / E-01	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
1NI396	1B HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-1562-01.02 / K-01	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
1NI397	1C HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-1562-01.02 / I- 01	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
1NI398	1D HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-1562-01.02 / C-01	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
1NI438A	EMER N2 FROM CLA A TO 1NC-34A	CN-1562-01.01 / K-01	B	ACT	2	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NI439B	EMER N2 FROM CLA B TO 1NC-32B	CN-1562-01.01 / K-05	B	ACT	2	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NI471	COLD LEG ACCUMULATOR CHECK VALVE TEST ISOL BYPASS CHECK	CN-1562-01.01 / F- 13	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NI481	CONTAINMENT PENETRATION M-322 RELIEF	CN-1562-01.01 / D-12	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 55 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI485	NI PUMPS TO COLD LEG VENT CHECK	CN-1562-01.03 / H-07	A/C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NI495	1B ND HEADER PRESS RELIEF LINE CHECK	CN-1562-01.03 / E-05	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NI501	1A ND HEADER PRESS RELIEF LINE CHECK	CN-1562-01.03 / E-09	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NI515	1A ECCS SUMP PIPING DRAIN FIRST ISOL	CN-1562-01.03 / C-05	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
1NI516	1A ECCS SUMP PIPING DRAIN SECOND ISOL	CN-1562-01.03 / B-05	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI517	1A ECCS SUMP PIPING VENT FIRST ISOL	CN-1562-01.03 / C-06	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
1NI518	1A ECCS SUMP PIPING VENT SECOND ISOL	CN-1562-01.03 / B-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI519	1NI185A RESERVOIR DRAIN FIRST ISOL	CN-1562-01.03 / A-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI520	1NI185A RESERVOIR DRAIN SECOND ISOL	CN-1562-01.03 / A-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI521	1NI185A RESERVOIR VENT FIRST ISOL	CN-1562-01.03 / B-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI522	1NI185A RESERVOIR VENT SECOND ISOL	CN-1562-01.03 / B-07	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI523	1B ECCS SUMP PIPING DRAIN FIRST ISOL	CN-1562-01.03 / C-10	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
1NI524	1B ECCS SUMP PIPING DRAIN SECOND ISOL	CN-1562-01.03 / C-10	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI525	1B ECCS SUMP PIPING VENT FIRST ISOL	CN-1562-01.03 / C-09	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
1NI526	1B ECCS SUMP PIPING VENT SECOND ISOL	CN-1562-01.03 / B-09	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		

Valve Summary Listing

Page 56 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NI527	1NI184B RESERVOIR DRAIN FIRST ISOL	CN-1562-01.03 / B-12	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI528	1NI184B RESERVOIR DRAIN SECOND ISOL	CN-1562-01.03 / B-12	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI529	1NI184B RESERVOIR VENT FIRST ISOL	CN-1562-01.03 / B-10	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
1NI530	1NI184B RESERVOIR VENT SECOND ISOL	CN-1562-01.03 / B-10	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
1NI532	1D CLA CHECK VALVE VENT LINE CHECK	CN-1562-01.03 / G-10	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NI537	1A CLA CHECK VALVE VENT LINE CHECK	CN-1562-01.03 / G-04	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NM003A	PZR LIQ SMPL LINE CONT ISOL	CN-1572-01.00 / K-03	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NM006A	PZR STEAM SAMPLE LINE CONTAINMENT ISOL	CN-1572-01.00 / J- 03	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NM007B	PZR SMPL HDR CONT ISOL	CN-1572-01.00 / K-6	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 57 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NM022A	1A HOT LEG SAMPLE CONTAINMENT ISOL	CN-1572-01.00 / J- 12	A	ACT	2	0.5	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NM025A	1C HOT LEG SAMPLE CONTAINMENT ISOL	CN-1572-01.00 / K-12	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NM026B	HOT LEG SMPL HDR CONT ISOL	CN-1572-01.00 / K-8	A	ACT	2	0.5	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NM069	UNIT 1 NI ACCUMULATOR SAMPLE LINE RELIEF	CN-1572-01.01 / G-10	A/C	ACT	2	0.75	RV	SA	C	O/C	N/A	RV LTJ	I J		
1NM072B	1A ACCUMULATOR SAMPLE LINE CONTAINMENT ISOL	CN-1572-01.01 / I- 06	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 58 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NM075B	1B ACCUMULATOR SAMPLE LINE CONTAINMENT ISOL	CN-1572-01.01 / I- 08	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NM078B	1C ACCUMULATOR SAMPLE LINE CONTAINMENT ISOL	CN-1572-01.01 / I- 10	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NM081B	1D ACCUMULATOR SAMPLE LINE CONTAINMENT ISOL	CN-1572-01.01 / I- 11	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NM082A	ACCUM SMPL HDR CONT ISOL	CN-1572-01.01 / E-09	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 59 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NM187A	1A S/G UPPER SHELL SAMPLE CONTAINMENT ISOL	CN-1572-01.04 / K-01	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM190A	1A S/G BLOWDOWN SAMPLE CONTAINMENT ISOL	CN-1572-01.04 / K-02	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM191B	1A S/G SAMPLE HEADER CONTAINMENT ISOL	CN-1572-01.04 / I- 02	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM197B	1B S/G UPPER SHELL SAMPLE CONTAINMENT ISOL	CN-1572-01.04 / K-05	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM200B	1B S/G BLOWDOWN SAMPLE CONTAINMENT ISOL	CN-1572-01.04 / K-06	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM201A	1B S/G SAMPLE HEADER CONTAINMENT ISOL	CN-1572-01.04 / I- 06	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 60 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NM207A	1C S/G UPPER SHELL SAMPLE CONTAINMENT ISOL	CN-1572-01.04 / K-08	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM210A	1C S/G BLOWDOWN SAMPLE CONTAINMENT ISOL	CN-1572-01.04 / K-09	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM211B	1C S/G SAMPLE HEADER CONTAINMENT ISOL	CN-1572-01.04 / I- 09	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM217B	1D S/G UPPER SHELL SAMPLE CONTAINMENT ISOL	CN-1572-01.04 / K-11	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM220B	1D S/G BLOWDOWN SAMPLE CONTAINMENT ISOL	CN-1572-01.04 / K-12	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1NM221A	1D S/G SAMPLE HEADER CONTAINMENT ISOL	CN-1572-01.04 / I- 12	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 61 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NM424	PZR SAMPLE LINE BYPASS CHECK	CN-1572-01.00 / I- 03	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NM425	1C HOT LEG SAMPLE CONTAINMENT ISOL BYPASS CHECK	CN-1572-01.00 / K-12	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NM426	1A S/G SAMPLE CONTAINMENT ISOL BYPASS CHECK	CN-1572-01.04 / K-02	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NM427	1B S/G BLOWDOWN SAMPLE CONTAINMENT ISOL BYPASS CHECK	CN-1572-01.04 / K-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NM428	1C S/G UPPERSHELL SAMPLE CONTAINMENT ISOL BYPASS CHECK	CN-1572-01.04 / K-09	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NM429	1D S/G UPPERSHELL SAMPLE CONTAINMENT ISOL BYPASS CHECK	CN-1572-01.04 / K-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 62 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NS001B	NS PMP B SUCT FROM CONT SUMP	CN-1563-01.00 / C-13	B	ACT	2	12	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NS002	1B NS PUMP SUCTION RELIEF	CN-1563-01.00 / B-13	C	ACT	2	0.75	RV	SA	C	O/C	N/A	RV	I		
1NS003B	NS PUMP 1B SUCT FROM FWST	CN-1563-01.00 / E-13	B	ACT	2	12	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1NS004	FWST TO 1B NS PUMP SUCTION CHECK	CN-1563-01.00 / E-13	C	ACT	2	12	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NS012B	NS SPRAY HDR 1B CONT ISOL	CN-1563-01.00 / C-05	A	ACT	2	8	GA	MO	C	O/C	FAI	LT RPI FSC FSO ST-C ST-O	2Y 2Y Q Q Q Q		
1NS013	1B NS SPRAY HEADER CHECK	CN-1563-01.00 / C-03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing
Page 63 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NS015B	NS SPRAY HDR 1B CONT ISOL	CN-1563-01.00 / E-05	A	ACT	2	8	GA	MO	C	O/C	FAI	LT RPI FSC FSO ST-C ST-O	2Y 2Y Q Q Q Q		
1NS016	1B NS SPRAY HEADER CHECK	CN-1563-01.00 / E-03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NS018A	NS PMP A SUCT FROM CONT SUMP	CN-1563-01.00 / K-13	B	ACT	2	12	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NS019	1A NS PUMP SUCTION RELIEF	CN-1563-01.00 / K-13	C	ACT	2	0.75	RV	SA	C	O/C	N/A	RV	I		
1NS020A	NS PUMP 1A SUCT FROM FWST	CN-1563-01.00 / I- 13	B	ACT	2	12	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1NS021	FWST TO 1A NS PUMP SUCTION CHECK	CN-1563-01.00 / I- 13	C	ACT	2	12	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 64 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NS029A	NS SPRAY HDR 1A CONT ISOL	CN-1563-01.00 / I- 05	A	ACT	2	8	GA	MO	C	O/C	FAI	LT RPI FSC FSO ST-C ST-O	2Y 2Y Q Q Q Q		
1NS030	1A NS SPRAY HEADER CHECK	CN-1563-01.00 / I- 03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NS032A	NS SPRAY HDR 1A CONT ISOL	CN-1563-01.00 / I- K-05	A	ACT	2	8	GA	MO	C	O/C	FAI	LT RPI FSC FSO ST-C ST-O	2Y 2Y Q Q Q Q		
1NS033	1A NS SPRAY HEADER CHECK	CN-1563-01.00 / I- K-03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NS038B	1B ND PUMP TO CONTAINMENT SPRAY HEADER	CN-1563-01.00 / F- 05	A	ACT	2	8	GA	MO	C	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-NS- 03 CSJ-CN-NS- 03
1NS041	1B ND TO NS SPRAY HEADER CHECK	CN-1563-01.00 / F- 03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 65 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NS043A	1A ND PUMP TO CONTAINMENT SPRAY HEADER	CN-1563-01.00 / H-05	A	ACT	2	8	GA	MO	C	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-NS-03 CSJ-CN-NS-03
1NS046	1A ND TO NS SPRAY HEADER CHECK	CN-1563-01.00 / H-03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NS098	1A NS PUMP DISCH CHECK	CN-1563-01.00 / J- 09	C	ACT	2	10	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NS099	1B NS PUMP DISCH CHECK	CN-1563-01.00 / D-09	C	ACT	2	10	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV001A	NC LETDOWN TO REGEN HX ISOL	CN-1554-01.00 / H-01	B	ACT	1	3	GA	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-NV-12 CSJ-CN-NV-12 CSJ-CN-NV-12
1NV002A	NC LETDOWN TO REGEN HX ISOL	CN-1554-01.00 / H-02	B	ACT	1	1	GA	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-NV-12 CSJ-CN-NV-12 CSJ-CN-NV-12

Valve Summary Listing

Page 66 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NV010A	LETDOWN ORIFICE 1B OUTLET CONT ISOL	CN-1554-01.00 / H-09	A	ACT	2	2	GA	AO	O	C	C	LT RPI FC FSC ST-C	2Y 2Y CS CS CS		CSJ-CN-NV- 11 CSJ-CN-NV- 11 CSJ-CN-NV- 11
1NV011A	LETDOWN ORIFICE 1C OUTLET CONT ISOL	CN-1554-01.00 / I- 09	A	ACT	2	2	GA	AO	O/C	C	C	LT RPI FC FSC ST-C	2Y 2Y CS CS CS		CSJ-CN-NV- 11 CSJ-CN-NV- 11 CSJ-CN-NV- 11
1NV013A	LETDOWN ORIFICE 1A OUTLET CONT ISOL	CN-1554-01.00 / G-09	A	ACT	2	2	GA	AO	O	C	C	LT RPI FC FSC ST-C	2Y 2Y CS CS CS		CSJ-CN-NV- 11 CSJ-CN-NV- 11 CSJ-CN-NV- 11
1NV014	LETDN ORIF HDR RELIEF	CN-1554-01.00 / G-10	A/C	ACT	2	3	RV	SA	C	O/C	N/A	RV LTJ	I J		

Valve Summary Listing

Page 67 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NV015B	LETDN CONT ISOL	CN-1554-01.00 / H-12	A	ACT	2	3	GL	MO	O	C	FAI	RPI FSC ST-C LTJ	2Y CS CS J		CSJ-CN-NV-01 CSJ-CN-NV-01
1NV022	CONT ISOL CHECK	CN-1554-01.00 / F- 04	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV033	NV CHARGING TO LOOP A CHECK	CN-1554-01.00 / K-11	C	ACT	1	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV034	NV CHARGING TO LOOP A CHECK	CN-1554-01.00 / K-11	C	ACT	1	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV036	NV CHARGING TO NC LOOP D BYP CHECK	CN-1554-01.00 / J- 04	C	ACT	2	0.75	CK	SA	C	O	N/A	BDC CVO	II II		
1NV037A	NV SUP TO PZR AUX SPRAY	CN-1554-01.00 / L- 08	B	PASS	1	2	GL	MO	C	C	FAI	RPI	2Y		
1NV038	NV SUPPLY TO PZR AUX SPRAY CHECK	CN-1554-01.00 / L- 11	C	ACT	1	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
1NV040	NV CHARGING TO LOOP D CHECK	CN-1554-01.00 / K-03	C	ACT	1	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV041	NV CHARGING TO LOOP D CHECK	CN-1554-01.00 / K-02	C	ACT	1	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV044A	NC PMP A SEAL SUPPLY CONT ISOL	CN-1554-01.05 / J- 04	B	PASS	2	2	GL	MO	O	O	FAI	RPI	2Y		
1NV046	NC PUMP 1A SEAL SUPPLY CONT ISOL CHECK	CN-1554-01.05 / J- 05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 68 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NV049	1A NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / J- 07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV055A	NC PMP B SEAL SUPPLY CONT ISOL	CN-1554-01.05 / H-04	B	PASS	2	2	GL	MO	O	O	FAI	RPI	2Y		
1NV057	1B NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / H-05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV060	1B NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / H-07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV066A	NC PMP C SEAL SUPPLY CONT ISOL	CN-1554-01.05 / F- 04	B	PASS	2	2	GL	MO	O	O	FAI	RPI	2Y		
1NV068	1C NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / F- 05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV071	1C NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / F- 07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV077A	NC PMP D SEAL SUPPLY CONT ISOL	CN-1554-01.05 / D-04	B	PASS	2	2	GL	MO	O	O	FAI	RPI	2Y		
1NV079	NC PUMP 1D SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / D-05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV082	1D NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / D-07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV087	NC PUMPS SEAL RETURN HDR INSIDE RELIEF	CN-1554-01.00 / C-08	C	ACT	2	3	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 69 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NV089A	NC PUMPS SEAL RETURN CONT ISOL	CN-1554-01.00 / B-10	A	ACT	2	4	GA	MO	O	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-NV-02 CSJ-CN-NV-02
1NV090	NC PUMPS SEAL RETURN CONT ISOL RELIEVING CHECK	CN-1554-01.00 / D-10	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1NV091B	NC PMPS SEAL RET CONT ISOL	CN-1554-01.00 / B-13	A	ACT	2	4	GA	MO	O	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-NV-02 CSJ-CN-NV-02
1NV122B	LOOP C TO EXS LETDOWN HX ISOL	CN-1554-01.00 / D-12	B	PASS	1	1	GL	AO	C	C	C	RPI	2Y		
1NV123B	LOOP C TO EXS LETDOWN HX ISOL	CN-1554-01.00 / D-10	B	PASS	1	1	GL	AO	C	C	C	RPI	2Y		
1NV188A	VCT OUTLET ISOL	CN-1554-01.01 / C-05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-NV-03 CSJ-CN-NV-03
1NV189B	VCT OUTLET ISOL	CN-1554-01.01 / C-04	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-NV-03 CSJ-CN-NV-03

Valve Summary Listing

Page 70 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NV202B	NV PMPS A & B RECIRC ISOL	CN-1554-01.06 / D-01	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NV-07 CSJ-CN-NV-07 CSJ-CN-NV-07 CSJ-CN-NV-07
1NV203A	NV PUMPS A&B RECIRC ISOL	CN-1554-01.06 / D-02	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NV-07 CSJ-CN-NV-07 CSJ-CN-NV-07 CSJ-CN-NV-07 CSJ-CN-NV-07
1NV220	SEAL WATER RETURN TO VCT CHECK	CN-1554-01.01 / G-04	C	ACT	2	3	CK	SA	O/C	C	N/A	BDO CVC	II II		
1NV223	VCT RELIEF TO RHT	CN-1554-01.01 / H-07	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
1NV236B	BORIC ACID TO NV PUMPS SUCT	CN-1554-01.07 / F- 12	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
1NV252A	NV PUMPS SUCT FROM FWST	CN-1554-01.07 / K-11	B	ACT	2	8	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NV-10 CSJ-CN-NV-10 CSJ-CN-NV-10 CSJ-CN-NV-10 CSJ-CN-NV-10

Valve Summary Listing
Page 71 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NV253B	NV PUMPS SUCT FROM FWST	CN-1554-01.07 / K-12	B	ACT	2	8	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NV- 10 CSJ-CN-NV- 10 CSJ-CN-NV- 10 CSJ-CN-NV- 10
1NV254	1A & 1B NV PUMPS SUPPLY CHECK	CN-1554-01.07 / K-12	C	ACT	2	8	CK	SA	C	O/C	N/A	CVC CVO	II II		
1NV268	1A NV PUMP MINI-FLOW CHECK	CN-1554-01.07 / I- 05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV270	1A NV PUMP DISCH CHECK	CN-1554-01.07 / I- 05	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV273	1A & 1B NV PUMPS SUCTION HEADER RELIEF	CN-1554-01.07 / E 12	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
1NV288	1B NV PUMP MINI- FLOW CHECK	CN-1554-01.07 / E-05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV290	1B NV PUMP DISCH CHECK	CN-1554-01.07 / D-05	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV312A	CHRG LINE CONT ISOL	CN-1554-01.02 / K-05	B	ACT	2	3	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-NV- 04 CSJ-CN-NV- 04
1NV314B	CHRG LINE CONT ISOL	CN-1554-01.02 / K-06	B	ACT	2	3	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-NV- 04 CSJ-CN-NV- 04

Valve Summary Listing

Page 72 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NV492	1A NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / J- 07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV493	1B NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / H-07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV494	1C NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / F- 07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV495	1D NC PUMP SEAL SUPPLY INSIDE CHECK	CN-1554-01.05 / D-07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV813	ND PUMP DISCH TO NI PUMP SUCTION CHECK	CN-1554-01.07 / C-12	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NV861	ND TO PZR SPRAY CHECK	CN-1554-01.00 / L- 10	C	ACT	2	2	CK	SA	C	O/C	N/A	CVC CVO	II II		
1NV865A	STANDBY M/U PUMP SUCTION FROM XFR TUBE	CN-1554-01.08 / H-01	B	ACT	2	3	GL	MO	O/C	C	FAI	RPI FSC ST-C	2Y Q Q		
1NV872A	STDBY M/U PMP FILT OTLT	CN-1554-01.08 / F- 08	A	ACT	2	2	GL	MO	O/C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1NV874	STANDBY MAKEUP CONT HEADER CHECK	CN-1554-01.08 / F- 10	A/C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		

Valve Summary Listing
Page 73 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NV878	STDBY MAKEUP TO NC PMP 1A CHK	CN-1554-01.08 / G-12	C	ACT	2	0.75	CK	SA	C	O/C	N/A	CVC CVO	II II		
1NV879	STDBY MAKEUP TO NC PMP 1C CHK	CN-1554-01.08 / G-13	C	ACT	2	0.75	CK	SA	C	O/C	N/A	CVC CVO	II II		
1NV880	STDBY MAKEUP TO NC PMP 1B CHK	CN-1554-01.08 / E-12	C	ACT	2	0.75	CK	SA	C	O/C	N/A	CVC CVO	II II		
1NV881	STDBY MAKEUP TO NC PMP 1D CHK	CN-1554-01.08 / E-13	C	ACT	2	0.75	CK	SA	C	O/C	N/A	CVC CVO	II II		
1NW002	1A NW SURGE CHAMBER NITROGEN	CN-1569-01.00 / H-11	B	PASS	2	0.5	SV	SO	C	C	C	RPI	2Y		
1NW006	NW SURGE CHAMBER RN SUPPLY CHECK	CN-1569-01.00 / G-12	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW008A	1A NW SURGE CHAMBER RN SUPPLY	CN-1569-01.00 / G-13	B	ACT	2	2	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW011	1A NW SURGE CHAMBER YM SUPPLY	CN-1569-01.00 / F- 13	B	PASS	2	1	SV	SO	C	C	C	RPI	2Y		
1NW013A	NW TO 1KC-425A	CN-1569-01.00 / E-09	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW017	NW SUPPLY CHECK TO 1KC425A	CN-1569-01.00 / E-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 74 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW020A	1A NW SURGE CHAMBER OUTLET	CN-1569-01.02 / F- 09	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW021	NW SUPPLY CHECK TO 1WLA24	CN-1569-01.00 / E-12	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW024	NW SUPPLY CHECK TO 1KC333A	CN-1569-01.00 / E-13	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW027	NW SUPPLY CHECK TO 1KC320A	CN-1569-01.00 / E-14	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW035A	CONT VLV INJ HDR 1A CONT ISOL	CN-1569-01.00 / G-09	B	ACT	2	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NW037	1A NW CONTAINMENT HEADER CHECK	CN-1569-01.00 / I- 09	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW040	NW SUPPLY CHECK TO 1WL825A	CN-1569-01.00 / J- 11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW043	NW SUPPLY CHECK TO 1WL805A	CN-1569-01.00 / J- 10	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 75 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW046A	SW TO 1RN-484A	CN-1569-01.00 / K-09	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW047	NW SUPPLY CHECK TO 1WL867A	CN-1569-01.00 / L- 10	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW050	NW SUPPLY CHECK TO 1RN484A	CN-1569-01.00 / L- 11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW057	1B NW SURGE CHAMBER NITROGEN	CN-1569-01.00 / H-4	B	PASS	2	0.5	SV	SO	C	C	C	RPI	2Y		
1NW061B	1B NW SURGE CHAMBER RN SUPPLY	CN-1569-01.00 / G-02	B	ACT	2	2	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW063	1B NW SURGE CHAMBER RN CHECK	CN-1569-01.00 / G-04	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW064	1B NW SURGE CHAMBER YM SUPPLY	CN-1569-01.00 / F- 2	B	PASS	2	1	SV	SO	C	C	C	RPI	2Y		
1NW068B	SEAL WATER TO 1RN487B AND 1RN437B	CN-1569-01.00 / E-05	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		

Valve Summary Listing

Page 76 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW069B	1B NW SURGE CHAMBER OUTLET	CN-1569-01.00 / F- 06	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW070	NW SUPPLY CHECK TO 1NC56B	CN-1569-01.00 / E-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW074	NW SUPPLY CHECK TO 1RN437B	CN-1569-01.00 / E-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW077	NW SUPPLY CHECK TO 1RN487B	CN-1569-01.00 / E-04	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW080	NW SUPPLY CHECK TO 1WL869B	CN-1569-01.00 / E-03	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW086	NW SUPPLY CHECK TO 1WL827B	CN-1569-01.00 / E-01	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW089	NW SUPPLY CHECK TO 1RF389B	CN-1569-01.00 / C-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW092	NW SUPPLY CHECK TO 1RN404B	CN-1569-01.00 / C-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW095	NW SUPPLY CHECK TO 1KC338B	CN-1569-01.00 / C-04	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW098	NW SUPPLY CHECK TO 1WL807B	CN-1569-01.00 / C-02	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 77 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW101	NW SUPPLY CHECK TO 1RF447B	CN-1569-01.00 / C-01	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW105B	CONT VLV INJ HDR 1B CONT ISOL	CN-1569-01.00 / H-06	B	ACT	2	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1NW107	1B NW CONTAINMENT HEADER CHECK	CN-1569-01.00 / I- 06	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW109	NW SUPPLY CHECK TO 1KC424B	CN-1569-01.00 / K-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW110B	NW SUPPLY TO 1KC-424B	CN-1569-01.00 / K-06	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW111	NW SUPPLY CHECK TO 1KC332B	CN-1569-01.00 / J- 05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW114	NW SUPPLY CHECK TO 1KC424B	CN-1569-01.00 / L- 05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW120	NW SUPPLY CHECK TO 1KC332B	CN-1569-01.00 / J- 05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 78 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW121	NW SUPPLY CHECK TO 1WL827B	CN-1569-01.00 / E-01	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW123	NW SUPPLY CHECK TO 1WL869B	CN-1569-01.00 / E-03	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW124	NW SUPPLY CHECK TO 1RN487B	CN-1569-01.00 / E-04	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW125	NW SUPPLY CHECK TO 1RN437B	CN-1569-01.00 / E-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW126	NW SUPPLY CHECK TO 1NC56B	CN-1569-01.00 / E-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW127	NW SUPPLY CHECK TO 1RF447B	CN-1569-01.00 / C-01	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW128	NW SUPPLY CHECK TO 1WL807B	CN-1569-01.00 / C-02	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW129	NW SUPPLY CHECK TO 1KC338B	CN-1569-01.00 / C-04	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW130	NW SUPPLY CHECK TO 1RN404B	CN-1569-01.00 / C-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW131	NW SUPPLY CHECK TO 1RF389B	CN-1569-01.00 / C-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW132	NW SUPPLY CHECK TO 1WL867A	CN-1569-01.00 / K-10	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 79 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW133	NW SUPPLY CHECK TO 1RN484A	CN-1569-01.00 / K-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW135	NW SUPPLY CHECK TO 1WL805A	CN-1569-01.00 / J- 10	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW136	NW SUPPLY CHECK TO 1WL825A	CN-1569-01.00 / J- 11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW138	NW SUPPLY CHECK TO 1KC425A	CN-1569-01.00 / E-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW139	NW SUPPLY CHECK TO 1WLA24	CN-1569-01.00 / E-12	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW140	NW SUPPLY CHECK TO 1KC333A	CN-1569-01.00 / E-13	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW141	NW SUPPLY CHECK TO 1KC320A	CN-1569-01.00 / E-14	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW145B	SEAL WATER TO 1KC- 338B & 1RN-404B	CN-1569-01.00 / C-05	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW147	NW SUPPLY CHECK TO 1WLA21	CN-1569-01.00 / J- 07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW148	NW SUPPLY CHECK TO 1WLA21	CN-1569-01.00 / J- 07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 80 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW159	NW SUP CHK TO 1NV-10A	CN-1569-01.00 / J-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW160	NW SUPPLY CHECK TO 1NV-10A	CN-1569-01.00 / J-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW163	NW SUPPLY CHECK TO 1NV-11A	CN-1569-01.00 / K-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW164	NW SUP CHK TO 1NV-11A	CN-1569-01.00 / J-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW168	NW SUP CHK TO 1NV-13A	CN-1569-01.00 / K-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW169	NW SUPPLY CHECK TO 1NV-13A	CN-1569-01.00 / J-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW171	NW SUP CHK TO 1NV-89A	CN-1569-01.00 / J-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW172	NW SUP CHK TO 1NV-89A	CN-1569-01.00 / J-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW175A	NW TO 1NI-173A	CN-1569-01.00 / C-12	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW178	NW SUPPLY CHECK TO 1NI-173A	CN-1569-01.00 / C-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 81 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW179	NW SUPPLY CHECK TO 1NI-173A	CN-1569-01.00 / C-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW180A	NW TO 1NS-43A	CN-1569-01.00 / C-13	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW183	NW SUPPLY CHECK TO 1NS-43A	CN-1569-01.00 / C-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW184	NW SUPPLY CHECK TO 1NS-43A	CN-1569-01.00 / C-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW185A	NW TO 1NI-162A	CN-1569-01.00 / C-13	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW188	NW SUP CHK TO 1NI- 162A	CN-1569-01.00 / C-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW189	NW SUP CHK TO 1NI- 162A	CN-1569-01.00 / C-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW195A	NW TO 1NS-32A	CN-1569-01.00 / F- 08	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		

Valve Summary Listing

Page 82 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW196	NW SUPPLY CHECK TO 1NS-32A	CN-1569-01.00 / F- 08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW197	NW SUPPLY CHECK TO 1NS-32A	CN-1569-01.00 / F- 08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW200A	NW TO 1NS-29A	CN-1569-01.00 / E-08	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW201	NW SUPPLY CHECK TO 1NS-29A	CN-1569-01.00 / E-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW202	NW SUPPLY CHECK TO 1NS-29A	CN-1569-01.00 / D-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW205	NW SUPPLY CHECK TO 1KC-305B	CN-1569-01.00 / E-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW206	NW SUPPLY CHECK TO 1KC-305B	CN-1569-01.00 / F- 07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW209	NW SUPPLY CHECK TO 1KC-315B	CN-1569-01.00 / E-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW210	NW SUPPLY CHECK TO 1KC-315B	CN-1569-01.00 / E-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW213	NW SUPPLY CHECK TO 1NV-91B	CN-1569-01.00 / C-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 83 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW214	NW SUPPLY CHECK TO 1NV-91B	CN-1569-01.00 / C-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW217B	NW TO 1NS-12B	CN-1569-01.00 / C-08	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW218	NW SUPPLY CHECK TO 1NS-12B	CN-1569-01.00 / C-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW219	NW SUPPLY CHECK TO 1NS-12B	CN-1569-01.00 / C-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW222B	NW TO 1NS-15B	CN-1569-01.00 / C-08	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW223	NW SUPPLY CHECK TO 1NS-15B	CN-1569-01.00 / C-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW224	NW SUPPLY CHECK TO 1NS-15B	CN-1569-01.00 / C-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW227B	NW TO 1NS-38B	CN-1569-01.00 / C-09	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		

Valve Summary Listing

Page 84 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW230	NW SUPPLY CHECK TO 1NS-38B	CN-1569-01.00 / C-09	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW231	NW SUPPLY CHECK TO 1NS-38B	CN-1569-01.00 / C-09	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW237B	NW TO 1NI-178B	CN-1569-01.00 / C-11	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW240	NW SUPPLY CHECK TO 1NI-178B	CN-1569-01.00 / C-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW241	NW SUPPLY CHECK TO 1NI-178B	CN-1569-01.00 / C-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW242B	NW TO 1NI 183B	CN-1569-01.00 / C-11	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1NW245	NW SUPPLY CHECK TO 1NI-183B	CN-1569-01.00 / C-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW246	NI SUPPLY CHECK TO 1NI-183B	CN-1569-01.00 / C-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1NW247	RELIEF VLV	CN-1569-01.00 / J- 11	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
1NW248	NW RELIEF	CN-1569-01.00 / D-11	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 85 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1NW249	NW RELIEF	CN-1569-01.00 / D-06	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
1RF389B	UNIT 1 RF CONTAINMENT ISOL	CN-1599-02.02 / D-07	A	ACT	2	4	GA	MO	C	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-RF-02 CSJ-CN-RF-02
1RF392	HOSE RACK CHECK	CN-1599-02.02 / F- 07	A/C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1RF447B	RF CONT ISOL	CN-1599-02.02 / C-03	A	ACT	2	4	GA	MO	C	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-RF-02 CSJ-CN-RF-02
1RF448	U-1 CONT ISOL CHECK	CN-1599-02.02 / E-03	A/C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1RF457B	ANNULUS SPRINKLER HEADER ISOL	CN-1599-02.02 / C-02	B	ACT	NC	6	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN001A	RN P/H PIT A ISOL FROM LAKE	CN-1574-01.00 / J- 07	B	ACT	3	48	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 86 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RN002B	RN P/H PIT A ISOL FROM LAKE	CN-1574-01.00 / J-07	B	ACT	3	48	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN003A	RN P/H PIT A ISOL FROM SNSWP	CN-1574-01.02 / J-11	B	ACT	3	48	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN004B	RN P/H PIT B ISOL FROM SNSWP	CN-1574-01.02 / J-05	B	ACT	3	48	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN005A	RN P/H PIT B ISOL FROM LAKE	CN-1574-01.00 / K-05	B	ACT	3	48	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN006B	RN P/H PIT B ISOL FROM LAKE	CN-1574-01.00 / K-04	B	ACT	3	48	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN009	1A RN PUMP DISCHARGE CHECK	CN-1574-01.00 / E-03	C	ACT	3	30	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1RN011A	1A RN PUMP MOTOR COOLER INLET ISOL	CN-1574-01.00 / E-06	B	ACT	3	2	BL	MO	O/C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN018	1B RN PUMP DISCHARGE CHECK	CN-1574-01.02 / F-02	C	ACT	3	30	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 87 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RN020B	1B RN PUMP MOTOR COOLER SUPPLY ISOL	CN-1574-01.02 / E-05	B	ACT	3	2	BL	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN028A	1A RN PUMP DISCHARGE ISOL	CN-1574-01.00 / E-03	B	ACT	3	30	BF	MO	O/C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN030A	1A RN STRAINER BACKFLUSH ISOL	CN-1574-01.00 / D-06	B	ACT	3	4	BL	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN038B	1B RN PUMP DISCHARGE ISOL	CN-1574-01.02 / F- 02	B	ACT	3	30	BF	MO	O/C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN040B	1B RN STRAINER BACKFLUSH ISOL	CN-1574-01.02 / D-04	B	ACT	3	4	BL	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN047A	RN SUPPLY X-OVER ISOL	CN-1574-01.01 / E-03	B	ACT	3	30	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN048B	RN SUPPLY X-OVER ISOL	CN-1574-01.01 / E-08	B	ACT	3	30	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 88 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RN049A	NON-ESS SUPPLY HDR ISOL	CN-1574-01.01 / D-04	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN050B	NON-ESS SUPPLY HDR ISOL	CN-1574-01.01 / D-04	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN051A	NON-ESS RET HDR ISOL	CN-1574-01.05 / D-07	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN052B	NON-ESS RET HDR ISOL	CN-1574-01.05 / D-07	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN053B	STATION RN DISCHARGE HEADER X-OVER	CN-1574-01.05 / E-09	B	ACT	3	42	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN054A	STATION RN DISCH HEADER X-OVER	CN-1574-01.05 / E-08	B	ACT	3	42	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN057A	STATION RN DISCH TO RL SYSTEM	CN-1574-01.05 / E-05	B	ACT	3	42	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 89 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RN058B	RN HEADER B RETURN TO SNSWP	CN-1574-01.05 / E-11	B	ACT	3	42	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN063A	RN HEADER A RETURN TO SNSWP	CN-1574-01.05 / G-08	B	ACT	3	42	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN067A	1A RN HEADER SUPPLY ISOL	CN-1574-01.01 / F- 09	B	PASS	3	30	BF	MO	O	O	FAI	RPI	2Y		
1RN069B	1B RN HEADER SUPPLY ISOL	CN-1574-01.01 / F- 02	B	PASS	3	30	BF	MO	O	O	FAI	RPI	2Y		
1RN144A	1A NS HX INLET ISOL	CN-1574-02.00 / B-08	B	ACT	3	18	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN147	1A NS HX RELIEF	CN-1574-02.00 / I- 13	C	ACT	3	4	RV	SA	C	O/C	N/A	RV	I		
1RN148A	1A NS HX OUTLET ISOL	CN-1574-02.00 / L- 02	B	ACT	3	18	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN225B	1B NS HX INLET ISOL	CN-1574-02.04 / B-08	B	ACT	3	12	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN228	1B NS HX RELIEF	CN-1574-02.04 / I- 13	C	ACT	3	4	RV	SA	C	O/C	N/A	RV	I		
1RN229B	1B NS HX OUTLET ISOL	CN-1574-02.04 / L- 2	B	ACT	3	18	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing

Page 90 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RN232A	1A D/G HX INLET ISOL	CN-1574-02.01 / D-03	B	ACT	3	10	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN235	1A D/G COOLING WATER HX RELIEF	CN-1574-02.01 / H-03	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1RN250A	1A RN SUPPLY HEADER TO CA PUMPS SUCTION ISOL	CN-1574-02.01 / D-06	B	ACT	3	8	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN287A	1A KC HX INLET ISOL	CN-1574-02.01 / D-13	B	PASS	3	24	BF	MO	O	O	FAI	RPI	2Y		
1RN290	1A KC HX RELIEF	CN-1574-02.01 / J- 12	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1RN291	1A KC HX OUTLET THROTTLE	CN-1574-02.01 / L- 13	B	ACT	3	12	BL	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1RN292B	1B D/G HX INLET ISOL	CN-1574-02.05 / D-02	B	ACT	3	10	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN295	1B D/G COOLING WATER HX RELIEF	CN-1574-02.05 / I- 02	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1RN310B	1B RN HEADER TO CA PUMPS SUCTION ISOL	CN-1574-02.05 / D-07	B	ACT	3	8	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN347B	1B KC HX INLET ISOL	CN-1574-02.05 / D-13	B	PASS	3	24	BF	MO	O	O	FAI	RPI	2Y		

Valve Summary Listing

Page 91 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RN350	1B KC HX RELIEF	CN-1574-02.05 / J-13	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1RN351	1B KC HX OUTLET THROTTLE	CN-1574-02.05 / K-13	B	ACT	3	12	BL	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1RN404B	UPPER CONT VENT UNIT SUPPLY	CN-1574-02.08 / G-05	A	ACT	2	6	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
1RN405	UPPER CONT VENT UNIT SUPPLY CHECK	CN-1574-02.08 / G-03	A/C	ACT	2	6	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
1RN437B	LOWER CONT VENT UNIT SUPPLY	CN-1574-02.08 / G-12	A	ACT	2	12	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-RN-02 CSJ-CN-RN-02
1RN438	LOWER CONT VENT UNITS SUPPLY CONT ISOL INSIDE CHECK	CN-1574-02.08 / D-13	A/C	ACT	2	12	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		

Valve Summary Listing

Page 92 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RN484A	LOWER CONT VENT UNIT RETURN	CN-1574-02.02 / G-08	A	ACT	2	12	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-RN-03 CSJ-CN-RN-03
1RN485	LOWER CONT VENT UNITS RETURN INSIDE ISOL PRESS RELIEF CHECK	CN-1574-02.02 / G-09	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1RN487B	LOWER CONT VENT UNIT RETURN	CN-1574-02.02 / F- 08	A	ACT	2	12	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-RN-03 CSJ-CN-RN-03
1RN807	1B NC PUMP MOTOR AIR COOLER SAFETY RELIEF	CN-1574-02.03 / J- 07	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
1RN843B	STATION RN DISCH TO RL SYSTEM	CN-1574-01.05 / E-05	B	ACT	3	42	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN846A	1A D/G HX RETURN TO SNSWP	CN-1574-02.01 / J- 03	B	ACT	3	10	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing

Page 93 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RN847A	1A D/G HX RETURN TO LAKE	CN-1574-02.01 / J-02	B	ACT	3	10	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN848B	1B D/G HX RETURN TO SNSWP	CN-1574-02.05 / J-02	B	ACT	3	10	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1RN849B	1B D/G HX RETURN TO LAKE	CN-1574-02.05 / J-01	B	ACT	3	10	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1RN854	RN PUMP 1A DISCH VACUUM BREAKER	CN-1574-01.00 / F-03	C	ACT	3	4	VB	SA	C	O/C	N/A	RV	I		
1RN855	RN PUMP 1B DISCH VACUUM BREAKER	CN-1574-01.02 / F-01	C	ACT	3	4	VB	SA	C	O/C	N/A	RV	I		
1RN861	UPPER CONT VENT UNITS SUPPLY HEADER RELIEF	CN-1574-02.08 / J-01	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
1RN863	LOWER CONT VENT UNITS SUPPLY HEADER RELIEF	CN-1574-02.08 / D-09	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
1RN882	1A CONTROL ROOM AREA CHILLER CONDENSER OUTLET RELIEF	CN-1574-02.01 / H-10	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1RN883	1B CONTROL ROOM AREA CHILLER CONDENSER OUTLET RELIEF	CN-1574-02.05 / H-09	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
1RNC66	1A NS WET LAYUP RECIRC PUMP DISCH CHECK	CN-1574-02.00 / D-09	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO CVC	II II		
1RNC67	1A NS HX WET LAYUP INLET ISOL	CN-1574-02.00 / K-03	B	ACT	3	2	BL	MA	O	C	N/A	FS	2Y		

Valve Summary Listing

Page 94 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1RNC69	1B NS WET LAYUP RECIRC PUMP DISCH CHECK	CN-1574-02.04 / D-09	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO CVC	II II		
1RNC70	1B NS HX WET LAYUP INLET ISOL	CN-1574-02.04 / K-03	B	ACT	3	2	BL	MA	O	C	N/A	FS	2Y		
1RNP47	1A1 D/G STARTING AIR AFTERCOOLER OUTLET CHECK	CN-1574-02.01 / I- 05	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO CVC	II II		
1RNP48	1A2 D/G STARING AIR AFTERCOOLER OUTLET CHECK	CN-1574-02.01 / I- 01	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO CVC	II II		
1RNP49	1B1 D/G STARTING AIR AFTERCOOLER OUTLET CHECK	CN-1574-02.05 / I- 1	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO CVC	II II		
1RNP50	1B2 D/G STARTING AIR AFTERCOOLER OUTLET CHECK	CN-1574-02.05 / I- 3	C	ACT	3	0.75	CK	SA	O/C	C	N/A	BDO CVC	II II		
1SA001	1B S/G MAIN STEAM TO CAPT MAINTENANCE ISOL	CN-1593-01.01 / G-04	B	ACT	2	6	GA	MA	O	O/C	N/A	FS	2Y		
1SA002	1B S/G MAIN STEAM SUPPLY TO CAPT	CN-1593-01.01 / G-04	B	ACT	2	4	GA	AO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		

Valve Summary Listing

Page 95 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1SA003	1B S/G MAIN STEAM TO CAPT STOP CHECK	CN-1593-01.01 / G-05	C	ACT	2	6	SCK	SA	O/C	O/C	N/A	FS CVC CVO	2Y II II		
1SA004	1C S/G MAIN STEAM TO CAPT MAINTENANCE ISOL	CN-1593-01.01 / H-04	B	ACT	2	6	GA	MA	O	O/C	N/A	FS	2Y		
1SA005	1C S/G MAIN STEAM SUPPLY TO CAPT	CN-1593-01.01 / H-04	B	ACT	2	4	GA	AO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
1SA006	1C S/G MAIN STEAM TO CAPT STOP CHECK	CN-1593-01.01 / H-05	C	ACT	2	6	SCK	SA	O/C	O/C	N/A	FS CVC CVO	2Y II II		
1SM001	1D S/G MAIN STEAM ISOL	CN-1593-01.00 / K-13	B	ACT	2	34	GL	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-SM- 01 CSJ-CN-SM- 01 CSJ-CN-SM- 01
1SM003	1C S/G MAIN STEAM ISOL	CN-1593-01.00 / H-13	B	ACT	2	34	GL	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-SM- 01 CSJ-CN-SM- 01 CSJ-CN-SM- 01

Valve Summary Listing

Page 96 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1SM005	1B S/G MAIN STEAM ISOL	CN-1593-01.00 / F-13	B	ACT	2	34	GL	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-SM-01 CSJ-CN-SM-01 CSJ-CN-SM-01
1SM007	1A S/G MAIN STEAM ISOL VALVE	CN-1593-01.00 / C-13	B	ACT	2	34	GL	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-SM-01 CSJ-CN-SM-01 CSJ-CN-SM-01
1SM009	1D S/G MAIN STEAM ISOL BYPASS	CN-1593-01.00 / J-13	B	ACT	2	3	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1SM010	1C S/G MAIN STEAM ISOL BYPASS	CN-1593-01.00 / G-13	B	ACT	2	3	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1SM011	1B S/G MAIN STEAM ISOL BYPASS	CN-1593-01.00 / E-13	B	ACT	2	3	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		

Valve Summary Listing

Page 97 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1SM012	1A S/G MAIN STEAM ISOL BYPASS	CN-1593-01.00 / B-13	B	ACT	2	3	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
1SM074B	S/G 1D OTLT HDR BLDWN C/V	CN-1593-01.07 / E-06	B	PASS	2	2	GA	MO	O	O	FAI	RPI	2Y		
1SM075A	S/G 1C OTLT HDR BLDWN C/V	CN-1593-01.07 / E-13	B	PASS	2	2	GA	MO	O	O	FAI	RPI	2Y		
1SM076B	S/G 1B OTLT HDR BLDWN C/V	CN-1593-01.07 / E-09	B	PASS	2	2	GA	MO	O	O	FAI	RPI	2Y		
1SM077A	S/G 1A OTLT HDR BLDWN C/V	CN-1593-01.07 / E-02	B	PASS	2	2	GA	MO	O	O	FAI	RPI	2Y		
1SV001	1D S/G POWER OPERATED RELIEF VALVE	CN-1593-01.00 / L- 05	B	ACT	2	6	PORV	AO	C	O/C	C	FC FSC FSO MS RPI STT ST-C	2Y 2Y 2Y 2Y 2Y 2Y Q		
1SV002	1D S/G SAFETY NO 1	CN-1593-01.00 / K-06	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV003	1D S/G SAFETY NO 2	CN-1593-01.00 / K-07	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV004	1D S/G SAFETY NO 3	CN-1593-01.00 / K-09	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV005	1D S/G SAFETY NO 4	CN-1593-01.00 / K-10	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV006	1D S/G SAFETY NO 5	CN-1593-01.00 / K-11	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 98 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1SV007	1C S/G POWER OPERATED RELIEF VALVE	CN-1593-01.00 / I- 9	B	ACT	2	6	PORV	AO	C	O/C	C	FC FSC FSO MS RPI STT ST-C	2Y 2Y 2Y 2Y 2Y 2Y Q		
1SV008	1C S/G SAFETY NO 1	CN-1593-01.00 / I- 06	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV009	1C S/G SAFETY NO 2	CN-1593-01.00 / I- 07	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV010	1C S/G SAFETY NO 3	CN-1593-01.00 / I- 09	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV011	1C S/G SAFETY NO 4	CN-1593-01.00 / I- 10	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV012	1C S/G SAFETY NO 5	CN-1593-01.00 / I- 11	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV013	1B S/G POWER OPERATED RELIEF VALVE	CN-1593-01.00 / F- 05	B	ACT	2	6	PORV	AO	C	O/C	C	FC FSC FSO MS RPI STT ST-C	2Y 2Y 2Y 2Y 2Y 2Y Q		
1SV014	1B S/G SAFETY NO 1	CN-1593-01.00 / F- 06	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV015	1B S/G SAFETY NO 2	CN-1593-01.00 / F- 07	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV016	1B S/G SAFETY NO 3	CN-1593-01.00 / F- 09	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 99 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1SV017	1B S/G SAFETY NO 4	CN-1593-01.00 / F-10	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV018	1B S/G SAFETY NO 5	CN-1593-01.00 / F-11	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV019	1A S/G POWER OPERATED RELIEF VALVE	CN-1593-01.00 / D-05	B	ACT	2	6	PORV	AO	C	O/C	C	FC FSC FSO MS RPI STT ST-C	2Y 2Y 2Y 2Y 2Y 2Y Q		
1SV020	1A S/G SAFETY NO 1	CN-1593-01.00 / C-06	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV021	1A S/G SAFETY NO 2	CN-1593-01.00 / C-07	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV022	1A S/G SAFETY NO 3	CN-1593-01.00 / C-09	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV023	1A S/G SAFETY NO 4	CN-1593-01.00 / C-10	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV024	1A S/G SAFETY NO 5	CN-1593-01.00 / C-11	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
1SV025B	1D S/G PORV ISOL	CN-1593-01.00 / K-05	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		

Valve Summary Listing

Page 100 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1SV026B	1C S/G PORV ISOL	CN-1593-01.00 / I-05	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1SV027A	1A S/G PORV ISOL	CN-1593-01.00 / C-05	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1SV028A	1B S/G PORV ISOL	CN-1593-01.00 / F-05	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
1VB083B	VB CONT ISOL	CN-1605-3.2 / I-07	A	ACT	2	2	DA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1VB085	UNIT 1 CONTAINMENT HEADER SUPPLY CHECK	CN-1605-3.2 / H-07	A/C	ACT	2	2	CK	SA	C	C	N/A	BDO CVC LTJ	II II J		

Valve Summary Listing

Page 101 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1VG005	1A D/G ENG STARTING AIR DRYER 1A1 DISCH CHECK	CN-1609-04.00 / I- 02	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG006	1A D/G ENG STARTING AIR DRYER 1A2 DISCH CHECK	CN-1609-04.00 / I- 13	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG007	1A D/G ENG STARTING AIR DRYER 1A1 DISCH CHECK	CN-1609-04.00 / I- 02	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG008	1A D/G ENG STARTING AIR DRYER 1A2 DISCH CHECK	CN-1609-04.00 / J- 13	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG015	1A D/G ENG STARTING AIR TANK 1A1 OUTLET CHECK	CN-1609-04.00 / G-02	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG016	1A D/G ENG STARTING AIR TANK 1A2 OUTLET CHECK	CN-1609-04.00 / G-13	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG049	1B D/G ENG STARTING AIR DRYER 1B1 DISCH CHECK	CN-1609-04.01 / I- 02	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 102 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1VG050	1B D/G ENG STARTING AIR DRYER 1B2 DISCH CHECK	CN-1609-04.01 / I- 13	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG051	1B D/G ENG STARTING AIR DRYER 1B1 DISCH CHECK	CN-1609-04.01 / I- 02	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG052	1B D/G ENG STARTING AIR DRYER 1B2 DISCH CHECK	CN-1609-04.01 / I- 13	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG059	1B D/G ENG STARTING AIR TANK 1B1 OUTLET CHECK	CN-1609-04.01 / F- 02	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG060	1B D/G ENG STARTING AIR TANK 1B2 OUTLET CHECK	CN-1609-04.01 / F- 13	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG133	1B D/G ENG STARTING AIR TANK 1B1 SUP TO ENG CONTROL PNL 1B C	CN-1609-04.01 / H-02	C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG134	1B D/G ENG STARTING AIR TANK 1B2 SUP TO ENG CONTROL PNL 1B C	CN-1609-04.01 / H-13	C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 103 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1VG135	1A D/G ENG STARTING AIR TANK 1A1 SUP TO ENG CONTROL PNL 1A C	CN-1609-04.00 / H-02	C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VG136	1A D/G ENG STARTING AIR TANK 1A2 SUP TO ENG CONTROL PNL 1A C	CN-1609-04.00 / H-13	C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1VI077B	VI CONT ISOL	CN-1605-01.04 / K-06	A	ACT	2	2	DA	MO	O	C	FAI	RPI FSC ST-C LTJ	2Y CS CS J		CSJ-CN-VI- 02 CSJ-CN-VI- 02
1VI079	VI CONTAINMENT HEADER CHECK	CN-1605-01.04 / H-09	A/C	ACT	2	2	CK	SA	O	C	N/A	BDO CVC LTJ	II II J		
1VI312A	VI TO VP CONT ISOL	CN-1605-01.04 / H-08	A	ACT	2	2	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1VI367	NC PORV 1NC 34A AIR SUP CHECK	CN-1605-01.14 / E-11	C	ACT	3	2	CK	SA	O	C	N/A	BDO CVC	II II		
1VI368	NC PORV 1NC 32B AIR SUP CHECK	CN-1605-01.14 / E-12	C	ACT	3	2	CK	SA	O	C	N/A	BDO CVC	II II		
1VI369	NC PORV 1NC 34A NI ACCUM SUP CHECK	CN-1605-01.14 / F- 10	C	ACT	3	2	CK	SA	C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 104 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1VI370	NC PORV 1NC 32B NI ACCUM SUP CHECK	CN-1605-01.14 / F- 13	C	ACT	3	2	CK	SA	C	O/C	N/A	CVC CVO	II II		
1VI373	NI ACCUM 1A TO NC PORV R/V	CN-1605-01.14 / G-10	C	ACT	3	1.5	RV	SA	C	O/C	N/A	RV	I		
1VI374	1B CLA TO NC PORV RELIEF	CN-1605-01.14 / G-13	C	ACT	3	1.5	RV	SA	C	O/C	N/A	RV	I		
1VP001B	UPPER CONT PURGE SUPPLY OUTSIDE ISOL	CN-1576-01.00 / I- 05	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP002A	UPPER CONT PURGE SUPPLY INSIDE ISOL	CN-1576-01.00 / I- 06	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP003B	UPPER CONT PURGE SUPPLY OUTSIDE ISOL	CN-1576-01.00 / H-05	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP004A	UPPER CONT PURGE SUPPLY INSIDE ISOL	CN-1576-01.00 / H-06	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP006B	LOWER CONT PURGE SUPPLY OUTSIDE ISOL	CN-1576-01.00 / G-05	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP007A	LOWER CONT PURGE SUPPLY INSIDE ISOL	CN-1576-01.00 / G-06	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP008B	LOWER CONT PURGE SUPPLY OUTSIDE ISOL	CN-1576-01.00 / F- 05	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP009A	LOWER CONT PURGE SUPPLY INSIDE ISOL	CN-1576-01.00 / F- 06	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP010A	UPPER CONT PURGE EXHAUST INSIDE ISOL	CN-1576-01.00 / I- 09	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP011B	UPPER CONT PURGE EXHAUST OUTSIDE ISOL	CN-1576-01.00 / I- 10	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP012A	UPPER CONT PURGE EXHAUST INSIDE ISOL	CN-1576-01.00 / H-09	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP013B	UPPER CONT PURGE EXHAUST OUTSIDE ISOL	CN-1576-01.00 / H-10	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP015A	LOWER CONT PURGE EXHAUST INSIDE ISOL	CN-1576-01.00 / G-09	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP016B	LOWER CONT PURGE EXHAUST OUTSIDE ISOL	CN-1576-01.00 / G-10	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP017A	INCORE INSTRUMENTATION ROOM PURGE SUPPLY INSIDE ISOL	CN-1576-01.00 / E-09	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		

Valve Summary Listing

Page 105 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1VP018B	INCORE INSTRUMENTATION ROOM PURGE SUPPLY OUTSIDE ISOL	CN-1576-01.00 / E-10	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP019A	INCORE INSTRUMENTATION ROOM PURGE EXHAUST INSIDE ISOL	CN-1576-01.00 / E-06	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VP020B	INCORE INSTRUMENTATION ROOM PURGE EXHAUST OUTSIDE ISOL	CN-1576-01.00 / E-05	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
1VQ002A	VQ FAN SUCT FROM CONT ISOL	CN-1585-01.00 / I- 02	A	ACT	2	4	DA	MO	C	C	FAI	RPI	2Y		
												LTJ	J		
												FSC	Q		
												ST-C	Q		
1VQ003B	VQ FAN SUCT FROM CONT ISOL	CN-1585-01.00 / G-02	A	ACT	2	4	GA	MO	C	C	FAI	RPI	2Y		
												LTJ	J		
												FSC	Q		
												ST-C	Q		
1VQ015B	CONT AIR ADD CONT ISOL	CN-1585-01.00 / I- 12	A	ACT	2	4	GA	MO	C	C	FAI	RPI	2Y		
												LTJ	J		
												FSC	Q		
												ST-C	Q		
1VQ016A	CONT AIR ADD CONT ISOL	CN-1585-01.00 / J- 12	A	ACT	2	4	DA	MO	C	C	FAI	RPI	2Y		
												LTJ	J		
												FSC	Q		
												ST-C	Q		

Valve Summary Listing

Page 106 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1VS054B	VS CONT ISOL	CN-1605-02.01 / G-10	A	ACT	2	3	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1VS056	UNIT 1 CONTAINMENT HEADER CHECK	CN-1605-02.01 / G-12	A/C	ACT	2		CK	SA	C	C	N/A	BDO CVC LTJ	II II J		
1VX001A	1A HYDROGEN SKIMMER FAN INLET ISOL	CN-1557-01.00 / G-03	B	ACT	2	12	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1VX002B	1B HYDROGEN SKIMMER FAN INLET ISOL	CN-1557-01.00 / G-14	B	ACT	2	12	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
1VY015B	VY INLT BLWR DISCH ISOL	CN-1559-01.00 / F- 07	A	PASS	2	4	GA	MO	C	C	FAI	RPI LTJ	2Y J		
1VY016	CONTAINMENT H2 PURGE INLET BLOWER DISCH CHECK	CN-1559-01.00 / D-07	A/C	ACT	2	4	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
1VY017A	CONTAINMENT H2 PURGE OUTLET CONTAINMENT ISOL	CN-1559-01.00 / D-04	A	PASS	2	4	GA	MO	C	C	FAI	RPI LTJ	2Y J		

Valve Summary Listing

Page 107 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1VY018B	VY OTLT CONT ISOL	CN-1559-01.00 / F-04	A	PASS	2	4	GA	MO	C	C	FAI	RPI LTJ	2Y J		
1WE020	CONTAINMENT BUILDING SUPPLY OUTSIDE ISOL	CN-1568-01.00 / E-11	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
1WE022	CONTAINMENT BLDG SUPPLY INSIDE ISOL	CN-1568-01.00 / E-13	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
1WL022	1B ND & NS SUMP PUMP DISCH CHECK	CN-1565-01.01 / C-08	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1WL024	1A ND & NS SUMP PUMP DISCH CHECK	CN-1565-01.01 / C-08	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1WL026	2B ND & NS SUMP PUMP DISCH CHECK	CN-1565-01.01 / C-12	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1WL028	2A ND & NS SUMP PUMP DISCH CHECK	CN-1565-01.01 / D-13	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1WL321	INCORE INSTRUMENT SUMP PUMP DISCH TEST DRAIN CHECK	CN-1565-02.04 / H-06	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1WL450A	NCDT VENT CONT ISOL	CN-1565-02.00 / I-04	A	ACT	2	0.75	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 108 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1WL451B	NCDT VENT CONT ISOL	CN-1565-02.00 / J-04	A	ACT	2	0.75	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
1WL462	UNIT 1 NCDT RELIEF VALVE	CN-1565-02.00 / H-03	C	ACT	NC	2	RV	SA	C	O/C	N/A	RV	I		
1WL805A	NCDT PUMP DISCH CONT ISOL	CN-1565-02.00 / I-08	A	ACT	2	3	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
1WL806	NCDT PUMP DISCH CONT ISOL BYPASS	CN-1565-02.00 / I-08	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1WL807B	NCDT PUMPS DISCH CONT ISOL	CN-1565-02.00 / J-08	A	ACT	2	3	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
1WL825A	UNIT 1 CONTAINMENT SUMP PUMPS DISCH CONTAINMENT ISOL	CN-1565-02.04 / H-07	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		

Valve Summary Listing

Page 109 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1WL826	INCORE INSTRUMENT/CONTAINM ENT AND EQUIP SUMP PUMPS DISCH REL	CN-1565-02.04 / H-10	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
1WL827B	CONT SMP PMPS DISCH CONT ISOL	CN-1565-02.04 / J- 07	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
1WL830	CAPT#1 SUMP PUMP 1A DISCH CHECK	CN-1565-02.02 / H-04	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1WL832	CAPT # 1 SUMP PUMP 1B DISCH CHECK	CN-1565-02.02 / H-05	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1WL838	1A CA PUMP SUMP PUMP DISCH CHECK	CN-1565-02.02 / D-08	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1WL840	1B CA PUMP SUMP PUMP DISCH CHECK	CN-1565-02.02 / D-11	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
1WL847	FLOOR DRAIN SUMP D DISCH TO ND & NS SUMP	CN-1565-02.02 / K-07	B	ACT	3	4	PL	AO	C	O	O	FO FSO	Q Q		
1WL848	FLOOR DRAIN SUMP D DISCH TO TURBINE BLDG SUMP	CN-1565-02.02 / K-08	B	ACT	3	4	PL	AO	O	C	C	FC FSC	Q Q		

Valve Summary Listing

Page 110 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1WL850	CA PUMP ROOM SUMP DISCHARGE HEADER CHECK VALVE	CN-1565-02.02 / J- 09	C	ACT	3	4	CK	SA	O/C	O	N/A	BDC CVO	II II		
1WL867A	VUCDT CONTAINMENT ISOL	CN-1565-02.01 / I- 07	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
1WL868	VUCDT CONTAINMENT ISOL BYPASS CHECK	CN-1565-02.01 / I- 06	A/C	ACT	2	1	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
1WL869B	VUCDT CONTAINMENT ISOL	CN-1565-02.01 / H- 07	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
1WL894	FLOOR DRAIN SUMP D PUMPS DISCH CHECK	CN-1565-02.02 / I- 08	C	ACT	3	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
1WLA21	S/G DRAIN PUMP DISCH CONTAINMENT ISOL	CN-1565-02.06 / J- 10	A	PASS	2	3	GA	MA	C	C	N/A	LT	2Y		
1WLA22	S/G DRAIN PUMP DISCH CONTAINMENT ISOL BYPASS	CN-1565-02.06 / K- 10	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
1WLA24	UNIT 1 S/G DRAIN PUMP DISCH CONTAINMENT	CN-1565-02.06 / J- 12	A	PASS	2	3	GA	MA	C	C	N/A	LT	2Y		

Valve Summary Listing

Page 111 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1WN004	1A D/G ENG SUMP PUMP 1A1 DISCH CHECK	CN-1609-07.00 / J- 6	C	ACT	3	3	CK	SA	O/C	O	N/A	BDC CVO	II II		
1WN006	1A D/G ENG SUMP PUMP 1A2 DISCH CHECK	CN-1609-07.00 / J- 9	C	ACT	3	3	CK	SA	O/C	O	N/A	BDC CVO	II II		
1WN012	1B D/G ENG SUMP PUMP 1B1 DISCH CHECK	CN-1609-07.00 / E-6	C	ACT	3	3	CK	SA	O/C	O	N/A	BDC CVO	II II		
1WN014	1B D/G ENG SUMP PUMP 1B2 DISCH CHECK	CN-1609-07.00 / E-9	C	ACT	3	3	CK	SA	O/C	O	N/A	BDC CVO	II II		
1YC068	YC COMPRESSION TANK A RELIEF	CN-1578-02.00 / B-10	C	ACT	3	1	RV	SA	O	O/C	N/A	RV	I		
1YC077A	YC LOOP-A M/U ISOL	CN-1578-02.00 / D-12	B	ACT	3	2	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1YC112	YC COMPRESSION TANK B RELIEF	CN-1578-02.02 / B-10	C	ACT	3	1	RV	SA	O	O/C	N/A	RV	I		
1YC121B	YC LOOP-B M/U ISOL	CN-1578-02.02 / D-12	B	ACT	3	2	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
1YM119B	YM CONT ISOL	CN-1601-03.01 / E-06	A	ACT	2		GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 112 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1YM121	UNIT-1 CONTAINMENT YM HEADER CHECK	CN-1601-03.01 / E-05	A/C	ACT	2		CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		

Valve Summary Listing

Page 113 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2BB008A	S/G 2D BLOWDOWN INSIDE CONT ISOL	CN-2580-01.00 / J- 05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
2BB010B	S/G 2D BLDWN CONT ISOL OTSD	CN-2580-01.00 / J- 06	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
2BB019A	S/G 2B BLOWDOWN INSIDE CONT ISOL	CN-2580-01.00 / D-05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
2BB021B	S/G 2B BLDWN CONT ISOL OTSD	CN-2580-01.00 / D-06	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
2BB052	2D S/G BLOWDOWN CONT ISOL PRESS RELIEF CHECK	CN-2580-01.00 / J- 05	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2BB053	2A S/G BLOWDOWN CONT ISOL PRESS RELIEF CHECK	CN-2580-01.00 / H-05	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 114 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2BB054	2C S/G BLOWDOWN CONT ISOL PRESS RELIEF CHECK	CN-2580-01.00 / F- 05	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2BB055	2B S/G BLOWDOWN CONT ISOL PRESS RELIEF CHECK	CN-2580-01.00 / D-05	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2BB056A	S/G 2A BLOWDOWN INSIDE CONT ISOL	CN-2580-01.00 / H-05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
2BB057B	S/G 2A BLDWN CONT ISOL OTSD	CN-2580-01.00 / H-06	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
2BB060A	S/G 2C BLOWDOWN INSIDE CONT ISOL	CN-2580-01.00 / F- 05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01
2BB061B	S/G 2C BLDWN CONT ISOL OTSD	CN-2580-01.00 / F- 06	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-BB- 01 CSJ-CN-BB- 01

Valve Summary Listing

Page 115 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2BB147B	S/G 2D BLDWN CONT ISOL BYP	CN-2580-01.00 / K-06	B	ACT	2	4	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2BB148B	S/G 2A BLDWN CONT ISOL BYP	CN-2580-01.00 / I- 06	B	ACT	2	4	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2BB149B	S/G 2C BLDWN CONT ISOL BYP	CN-2580-01.00 / G-06	B	ACT	2	4	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2BB150B	S/G 2B BLDWN CONT ISOL BYP	CN-2580-01.00 / E-06	B	ACT	2	4	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2CA008	CAPT #2 SUCTION CHECK	CN-2592-01.00 / D-09	C	ACT	3	10	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA010	2B CA PUMP SUCTION CHECK	CN-2592-01.00 / D-05	C	ACT	3	10	CK	SA	C	O/C	N/A	CVC CVO	II II		
2CA012	2A CA PUMP SUCTION CHECK	CN-2592-01.00 / D-01	C	ACT	3	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA015A	CA PUMP 2A SUCT FRM RN ISOL	CN-2592-01.00 / D-02	B	ACT	3	6	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing

Page 116 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CA018B	CA PUMP 2B SUCT FRM RN ISOL	CN-2592-01.00 / D-06	B	ACT	3	6	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2CA020	CAPT #2 MINIFLOW CONTROL	CN-2592-01.00 / I- 11	C	ACT	3	6	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q		
2CA023	CAPT #2 MINIFLOW TO UST DOME CHECK	CN-2592-01.00 / J- 10	C	ACT	3	2.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA027	2A CA PUMP MINIFLOW CONTROL	CN-2592-01.00 / I- 04	C	ACT	3	4	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q		
2CA028	2A CA PUMP MINIFLOW TO UST DOME CHECK	CN-2592-01.00 / J- 03	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA032	2B CA PUMP MINIFLOW CONTROL	CN-2592-01.00 / I- 07	C	ACT	3	4	CK	SA	O/C	O/C	N/A	CVC CVO	Q Q		
2CA033	2B CA PUMP MINIFLOW TO UST DOME CHECK	CN-2592-01.00 / J- 07	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA036	CA PUMP #2 FLOW TO S/G 2D	CN-2592-01.01 / C-12	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2CA037	CAPT #2 DISCH TO 2D S/G CHECK	CN-2592-01.01 / G-12	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 117 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CA038A	CA PMP 2 DISCH TO S/G 2D ISOL	CN-2592-01.01 / H-12	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2CA040	CA PUMP 2B FLOW TO S/G 2D	CN-2592-01.01 / J- 12	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2CA041	2B CA PUMP DISCH TO 2D S/G CHECK	CN-2592-01.01 / I- 12	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA042B	CA PMP B DISCH TO S/G 2D ISOL	CN-2592-01.01 / I- 12	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2CA044	CA PUMP 2B FLOW TO S/G 2C	CN-2592-01.01 / J- 09	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2CA045	2B CA PUMP DISCH TO 2C S/G CHECK	CN-2592-01.01 / I- 09	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 118 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CA046B	CA PMP B DISCH TO S/G 2C ISOL	CN-2592-01.01 / I- 09	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2CA048	CA PUMP #2 FLOW TO S/G 2C	CN-2592-01.01 / C-09	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2CA049	CAPT #2 DISCH TO 2C S/G CHECK	CN-2592-01.01 / G-09	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA050A	CA PMP 2 DISCH TO S/G 2C ISOL	CN-2592-01.01 / H-09	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2CA052	CA PUMP #2 FLOW TO S/G 2B	CN-2592-01.01 / C-06	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2CA053	CAPT #2 DISCH TO 2B S/G CHECK	CN-2592-01.01 / G-06	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing
Page 119 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CA054B	CA PMP 2 DISCH TO S/G 2B ISOL	CN-2592-01.01 / H-06	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2CA056	CA PUMP 2A FLOW TO S/G 2B	CN-2592-01.01 / J- 06	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2CA057	2A CA PUMP DISCH TO 2B S/G CHECK	CN-2592-01.01 / I- 06	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA058A	CA PMP A DISCH TO S/G 2B ISOL	CN-2592-01.01 / I- 06	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2CA060	CA PUMP 2A FLOW TO S/G 2A	CN-2592-01.01 / J- 03	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2CA061	2A CA PUMP DISCH TO 2A S/G CHECK	CN-2592-01.01 / I- 03	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 120 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CA062A	CA PUMP A DISCH TO S/G 2A ISOL	CN-2592-01.01 / I- 03	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2CA064	CA PUMP #2 FLOW TO S/G 2A	CN-2592-01.01 / C-03	B	ACT	3	4	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2CA065	CAPT #2 DISCH TO 2A S/G CHECK	CN-2592-01.01 / G-03	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA066B	CA PMP 2 DISCH TO S/G 2A ISOL	CN-2592-01.01 / H-03	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2CA085B	CA PUMP #2 SUCT FRM RN HDR B	CN-2592-01.00 / D-07	B	ACT	3	6	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2CA116A	CA PUMP #2 SUCT FRM RN HDR A	CN-2592-01.00 / D-08	B	ACT	3	6	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing

Page 121 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CA149	2A S/G CF BYPASS TO CA NOZZLE	CN-2592-01.01 / I- 01	B	ACT	2	6	GA	AO	O	C	C	RPI	2Y		CSJ-CN-CA- 05 CSJ-CN-CA- 05 CSJ-CN-CA- 05
												FC	CS		
												FSC	CS		
2CA150	2B S/G CF BYPASS TO CA NOZZLE	CN-2592-01.01 / I- 05	B	ACT	2	6	GA	AO	O	C	C	RPI	2Y		CSJ-CN-CA- 05 CSJ-CN-CA- 05 CSJ-CN-CA- 05
												FC	CS		
												FSC	CS		
2CA151	2C S/G CF BYPASS TO CA NOZZLE	CN-2592-01.01 / I- 08	B	ACT	2	6	GA	AO	O	C	C	RPI	2Y		CSJ-CN-CA- 05 CSJ-CN-CA- 05 CSJ-CN-CA- 05
												FC	CS		
												FSC	CS		
2CA152	2D S/G CF BYPASS TO CA NOZZLE	CN-2592-01.01 / I- 11	B	ACT	2	6	GA	AO	O	C	C	RPI	2Y		CSJ-CN-CA- 05 CSJ-CN-CA- 05 CSJ-CN-CA- 05
												FC	CS		
												FSC	CS		
2CA152	2D S/G CF BYPASS TO CA NOZZLE	CN-2592-01.01 / I- 11	B	ACT	2	6	GA	AO	O	C	C	RPI	2Y		CSJ-CN-CA- 05 CSJ-CN-CA- 05 CSJ-CN-CA- 05
												FC	CS		
												FSC	CS		
2CA152	2D S/G CF BYPASS TO CA NOZZLE	CN-2592-01.01 / I- 11	B	ACT	2	6	GA	AO	O	C	C	RPI	2Y		CSJ-CN-CA- 05 CSJ-CN-CA- 05 CSJ-CN-CA- 05
												FC	CS		
												FSC	CS		
2CA152	2D S/G CF BYPASS TO CA NOZZLE	CN-2592-01.01 / I- 11	B	ACT	2	6	GA	AO	O	C	C	RPI	2Y		CSJ-CN-CA- 05 CSJ-CN-CA- 05 CSJ-CN-CA- 05
												FC	CS		
												FSC	CS		
2CA152	2D S/G CF BYPASS TO CA NOZZLE	CN-2592-01.01 / I- 11	B	ACT	2	6	GA	AO	O	C	C	RPI	2Y		CSJ-CN-CA- 05 CSJ-CN-CA- 05 CSJ-CN-CA- 05
												FC	CS		
												FSC	CS		

Valve Summary Listing

Page 122 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CA173	RC TO CA SUCTION CHECK	CN-2592-01.00 / E-07	C	ACT	3	8	CK	SA	O/C	C	N/A	BDO CVC	II II		
2CA174	RC TO CA SUCTION ISOL	CN-2592-01.00 / E-07	B	PASS	3	8	BF	AO	C	C	O	RPI	2Y		
2CA185	2A S/G CA NOZZLE TEMPERING ISOL	CN-2592-01.01 / E-01	B	ACT	2	2	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2CA186	2B S/G CA NOZZLE TEMPERING ISOL	CN-2592-01.01 / E-05	B	ACT	2	2	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2CA187	2C S/G CA NOZZLE TEMPERING ISOL	CN-2592-01.01 / E-08	B	ACT	2	2	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2CA188	2D S/G CA NOZZLE TEMPERING ISOL	CN-2592-01.01 / E-11	B	ACT	2	2	GA	AO	O	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2CA255	2A CA PUMP SUCTION RELIEF	CN-2592-01.00 / F- 01	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2CA256	2B CA PUMP SUCTION RELIEF	CN-2592-01.00 / F- 05	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2CA257	CAPT #2 SUCTION RELIEF	CN-2592-01.00 / F- 09	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 123 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CA291	RN TO CA X-OVER TRAIN 2A CHECK	CN-2592-01.00 / D-8	C	ACT	3	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CA292	RN TO CA X-OVER TRAIN 2B CHECK	CN-2592-01.00 / D-7	C	ACT	3	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CF028	2A S/G CF CONTROL	CN-2591-01.01 / J- 13	B	ACT	3	16	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 04 CSJ-CN-CF- 04 CSJ-CN-CF- 04
2CF030	2A S/G CF BYPASS CONTROL	CN-2591-01.01 / J- 11	B	ACT	NC	6	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 05 CSJ-CN-CF- 05 CSJ-CN-CF- 05
2CF031	2A S/G FEEDWATER CONTAINMENT ISOL INLET CHECK	CN-2591-01.01 / G-13	C	ACT	2	18	CK	SA	O/C	C	N/A	BDO CVC	II II		
2CF033	2A S/G CF CONTAINMENT ISOL	CN-2591-01.01 / F- 13	B	ACT	2	18	GA	HO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 01 CSJ-CN-CF- 01 CSJ-CN-CF- 01
2CF035	S/G 2A FEEDWATER INLET CHECK	CN-2591-01.01 / D-13	C	ACT	2	16	CK	SA	O/C	C	N/A	BDO CVC	II II		

Valve Summary Listing

Page 124 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CF037	2B S/G CF CONTROL	CN-2591-01.01 / J-09	B	ACT	3	16	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF-04 CSJ-CN-CF-04 CSJ-CN-CF-04
2CF039	2B S/G CF BYPASS CONTROL	CN-2591-01.01 / J-11	B	ACT	NC	6	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF-05 CSJ-CN-CF-05 CSJ-CN-CF-05
2CF040	2B S/G FEEDWATER CONTAINMENT ISOL INLET CHECK	CN-2591-01.01 / G-09	C	ACT	2	18	CK	SA	O/C	C	N/A	BDO CVC	II II		
2CF042	2B S/G CF CONTAINMENT ISOL	CN-2591-01.01 / F-09	B	ACT	2	18	GA	HO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF-01 CSJ-CN-CF-01 CSJ-CN-CF-01
2CF044	2B S/G FEEDWATER INLET CHECK	CN-2591-01.01 / D-09	C	ACT	2	16	CK	SA	O/C	C	N/A	BDO CVC	II II		
2CF046	2C S/G CF CONTROL	CN-2591-01.01 / J-06	B	ACT	3	16	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF-04 CSJ-CN-CF-04 CSJ-CN-CF-04

Valve Summary Listing

Page 125 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CF048	2C S/G CF BYPASS CONTROL	CN-2591-01.01 / J- 05	B	ACT	NC	6	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 05 CSJ-CN-CF- 05 CSJ-CN-CF- 05
2CF049	2C S/G FEEDWATER CONTAINMENT ISOL INLET CHECK	CN-2591-01.01 / G-06	C	ACT	2	18	CK	SA	O/C	C	N/A	BDO CVC	II II		
2CF051	2C S/G CF CONTAINMENT ISOL	CN-2591-01.01 / F- 06	B	ACT	2	18	GA	HO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 01 CSJ-CN-CF- 01 CSJ-CN-CF- 01
2CF053	2C S/G FEEDWATER INLET CHECK	CN-2591-01.01 / D-06	C	ACT	2	16	CK	SA	O/C	C	N/A	BDO CVC	II II		
2CF055	2D S/G CF CONTROL	CN-2591-01.01 / J- 03	B	ACT	3	16	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 04 CSJ-CN-CF- 04 CSJ-CN-CF- 04
2CF057	2D S/G CF BYPASS CONTROL	CN-2591-01.01 / J- 04	B	ACT	NC	6	FC	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 05 CSJ-CN-CF- 05 CSJ-CN-CF- 05

Valve Summary Listing

Page 126 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CF058	2D S/G FEEDWATER CONTAINMENT ISOL INLET CHECK	CN-2591-01.01 / G-03	C	ACT	2	18	CK	SA	O/C	C	N/A	BDO CVC	II II		
2CF060	2D S/G CF CONT ISOL	CN-2591-01.01 / F- 03	B	ACT	2	18	GA	HO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-CF- 01 CSJ-CN-CF- 01 CSJ-CN-CF- 01
2CF062	2D S/G FEEDWATER INLET CHECK	CN-2591-01.01 / D-03	C	ACT	2	16	CK	SA	O/C	C	N/A	BDO CVC	II II		
2CF087	2D S/G CF CONTAINMENT ISOL BYPASS	CN-2591-01.01 / F- 02	B	ACT	2	2	GA	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2CF088	2C S/G CF CONTAINMENT ISOL BYPASS	CN-2591-01.01 / F- 06	B	ACT	2	2	GA	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2CF089	2B S/G CF CONTAINMENT ISOL BYPASS	CN-2591-01.01 / F- 09	B	ACT	2	2	GA	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		

Valve Summary Listing

Page 127 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CF090	2A S/G CF CONTAINMENT ISOL BYPASS	CN-2591-01.01 / F- 13	B	ACT	2	2	GA	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2CF166	2A S/G CF TO AUX FEEDWATER NOZZLE CHECK	CN-2591-01.01 / G-13	C	ACT	2	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CF167	2B S/G CF TO AUX FEEDWATER NOZZLE CHECK	CN-2591-01.01 / G-09	C	ACT	2	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CF168	2C S/G CF TO AUX FEEDWATER NOZZLE CHECK	CN-2591-01.01 / G-06	C	ACT	2	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2CF169	2D S/G CF TO AUX FEEDWATER NOZZLE CHECK	CN-2591-01.01 / G-02	C	ACT	2	6	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2FD022	2A D/G ENG FUEL OIL DAY TANK 2A FILL	CN-2609-03.00 / H-12	B	ACT	3	2	SV	SO	C	O	C	RPI FC FSO ST-O	2Y Q Q Q		
2FD023	2A D/G ENG FUEL OIL DAY TANK 2A FILL VALVE BYPASS	CN-2609-03.00 / J- 12	B	ACT	3	2	PL	MA	C	O/C	N/A	FS	2Y		
2FD062	2B D/G ENG FUEL OIL DAY TANK 2B FILL	CN-2609-03.01 / H-12	B	ACT	3	2	SV	SO	C	O	C	RPI FC FSO ST-O	2Y Q Q Q		

Valve Summary Listing

Page 128 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2FD063	2B D/G ENG FUEL OIL DAY TANK 2B FILL VALVE BYPASS	CN-2609-03.01 / J- 12	B	ACT	3	2	PL	MA	C	O/C	N/A	FS	2Y		
2FW001A	FW LOOP ISOL	CN-2571-01.00 / J- 13	B	ACT	2	8	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2FW004	FW PUMP RETURN TO REFUELING CAVITY CONTAINMENT ISOL	CN-2571-01.00 / L- 07	A	PASS	2	6	GA	MA	C	C	N/A	LTJ	J		
2FW005	FW PUMP RETURN TO REFUELING CAVITY CHK	CN-2571-01.00 / L- 05	A/C	ACT	2	6	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2FW011	REFUELING CAVITY TO FW PUMP CONT ISOL	CN-2571-01.00 / J- 04	A	PASS	2	4	PL	MA	C	C	N/A	LTJ	J		
2FW013	REFUELING CAVITY TO FW PUMP CONTAINMENT ISOL	CN-2571-01.00 / J- 05	A	PASS	2	4	PL	MA	C	C	N/A	LTJ	J		
2FW027A	ND PUMP 2A SUCT FROM FWST	CN-2571-01.00 / F- 03	B	ACT	2	12	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2FW028	2A ND PUMP SUCTION FROM FWST CHECK	CN-2571-01.00 / F- 02	C	ACT	2	12	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2FW032B	FW LOOP ISOL	CN-2571-01.00 / J- 13	B	ACT	2	8	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 129 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2FW033A	FWST RECIRC LOOP ISOL	CN-2571-01.00 / B-08	B	ACT	2	2	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2FW049B	FWST RECIRC LOOP ISOL	CN-2571-01.00 / B-08	B	ACT	2	2	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2FW052	NS/NI TEST LINE TO FWST CHECK	CN-2571-01.00 / E-10	C	ACT	NC	4	CK	SA	O/C	O	N/A	BDC CVO	II II		
2FW055B	ND PUMP 2B SUCT FROM FWST	CN-2571-01.00 / H-03	B	ACT	2	12	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2FW056	2B ND PUMP SUCTION FROM FWST CHECK	CN-2571-01.00 / H-02	C	ACT	2	12	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2FW096	2A ND PUMP SUCTION HDR PRESSURE CONTROL CHECK	CN-2571-01.00 / E-02	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2FW097	2B ND PUMP SUCTION HDR PRESSURE CONTROL CHECK	CN-2571-01.00 / G-02	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 130 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2IACK5340	UPPER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2IACK5350	LOWER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2IACK5360	UPPER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2IACK5370	LOWER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2IACK5380	UPPER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2IACK5390	LOWER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A/C	ACT	2	0.5	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2IASV5080	UPPER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A	ACT	2	0.5	SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		

Valve Summary Listing

Page 131 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2IASV5160	LOWER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A	ACT	2	0.5	SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
2IASV5400	UPPER PERSONNEL AIR LOCK CONTROL	CN-2499-1A.01-01 /	A	ACT	2	0.5	SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
2IASV5410	LOWER PERSONNEL AIRLOCK CONTROL	CN-2499-1A.01-01 /	A	ACT	2	0.5	SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
2KC001A	AUX BLDG NON- ESSENTIAL RETURN HEADER ISOL	CN-2573-01.00 / C-06	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 132 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KC002B	AUX BLDG NON- ESSENTIAL RETURN HEADER ISOL	CN-2573-01.00 / C-09	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2KC003A	RX BLDG NON- ESSENTIAL RETURN HEADER ISOL	CN-2573-01.00 / C-06	B	ACT	3	10	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2KC005	2A1 KC PUMP DISCH CHECK	CN-2573-01.00 / E-04	C	ACT	3	16	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KC008	2A2 KC PUMP DISCH CHECK	CN-2573-01.00 / E-04	C	ACT	3	16	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KC011	2B1 KC PUMP DISCH CHECK	CN-2573-01.00 / E-10	C	ACT	3	16	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KC014	2B2 KC PUMP DISCH CHECK	CN-2573-01.00 / E-11	C	ACT	3	16	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KC018B	RX BLDG NON- ESSENTIAL RETURN HEADER ISOL	CN-2573-01.00 / C-09	B	ACT	3	10	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing
Page 133 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KC047	RX BLDG DRAIN HEADER PRESS EQUALIZATION CHECK	CN-2573-01.05 / H-04	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2KC050A	AUX BLDG NON- ESSENTIAL HEADER ISOL	CN-2573-01.00 / J- 12	B	ACT	3	20	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2KC053B	AUX BLDG NON- ESSENTIAL HEADER ISOL	CN-2573-01.00 / K-08	B	ACT	3	20	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2KC056A	KC TO ND HX 2A SUP ISOL	CN-2573-02.00 / E-03	B	ACT	3	16	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2KC057A	2A ND HX KC FLOW CONTROL	CN-2573-02.00 / J- 03	B	ACT	3	16	BL	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2KC061	2A ND HX OUTLET RELIEF	CN-2573-02.00 / I- 04	C	ACT	3	4	RV	SA	C	O/C	N/A	RV	I		
2KC079	2A ND PUMP MECH SEAL HX RELIEF	CN-2573-02.00 / I- 07	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC081B	KC TO ND HX 2B SUP ISOL	CN-2573-02.01 / E-03	B	ACT	3	16	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing

Page 134 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KC082B	2B ND HX KC FLOW CONTROL	CN-2573-02.01 / J- 03	B	ACT	3	16	BL	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2KC086	2B ND HX OUTLET RELIEF	CN-2573-02.01 / H-04	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC104	2B ND PUMP MECH SEAL HX RELIEF	CN-2573-02.01 / H-04	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC228B	RX BLDG NON- ESSENTIAL HEADER ISOL	CN-2573-01.00 / L- 08	B	ACT	3	8	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2KC230A	RX BLDG NON- ESSENTIAL HEADER ISOL	CN-2573-01.00 / L- 07	B	ACT	3	8	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2KC279	NC PUMPS RETURN HEADER PRESS EQUALIZATION CHECK	CN-2573-01.03 / K-05	A/C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2KC280	NCDT HX COOLING WATER RETURN PRESS EQUALIZATION CHECK	CN-2573-01.03 / E-01	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KC281	NC PUMPS BLOWDOWN HX'S RETURN HEADER RELIEF	CN-2573-01.03 / K-03	C	ACT	2	3	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 135 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KC305B	EXS LETDN HX SUPPLY CONT ISOL	CN-2573-01.03 / D-13	A	ACT	2	4	GA	MO	C	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
2KC313	EXCESS LETDOWN HX OUTLET RELIEF TO KC DRAIN SUMP	CN-2573-01.03 / I- 12	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC315B	EXS LETDN HX RET CONT ISOL	CN-2573-01.03 / L- 13	A	ACT	2	4	GA	MO	C	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
2KC320A	NCDT HX COOL SUPPLY CONT ISOL	CN-2573-01.03 / B-10	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC- 01 CSJ-CN-KC- 01
2KC322	NCDT HX SUPPLY HEADER CHECK	CN-2573-01.03 / B-08	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KC330	NCDT HX OUTLET RELIEF TO KC DRAIN SUMP	CN-2573-01.03 / B-01	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC332B	NCDT HX COOLING RETURN CONT ISOL	CN-2573-01.03 / E-02	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC- 01 CSJ-CN-KC- 01

Valve Summary Listing
Page 136 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KC333A	NCDT HX COOL RET CONT ISOL	CN-2573-01.03 / G-02	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC-01 CSJ-CN-KC-01
2KC338B	NC PUMPS SUP HDR CONT ISOL	CN-2573-01.03 / D-12	A	ACT	2	8	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC-02 CSJ-CN-KC-02
2KC340	NC PUMPS SUP HDR CHECK	CN-2573-01.03 / F- 12	A/C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2KC344	2C NC PUMP THERMAL BARRIER HX INLET CHECK	CN-2573-01.07 / K-13	C	ACT	2	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
2KC355	2C NC PUMP MOTOR LOWER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-2573-01.07 / K-10	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC361	2C NC PUMP MOTOR UPPER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-2573-01.07 / H-08	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC363	2B NC PUMP THERMAL BARRIER HX INLET CHECK	CN-2573-01.07 / K-06	C	ACT	2	2	CK	SA	O/C	C	N/A	BDO CVC	II II		

Valve Summary Listing

Page 137 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KC374	NC PUMP 2B MOTOR LOWER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-2573-01.07 / K-04	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC380	2B NC PUMP MOTOR UPPER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-2573-01.07 / H-02	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC386	2A NC PUMP MOTOR UPPER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-2573-01.04 / H-12	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC392	2A NC PUMP MOTOR LOWER BEARING COOLER RELIEF TO KC DRAIN SUM	CN-2573-01.04 / K-10	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC393	2A NC PUMP THERMAL BARRIER HX INLET CHECK	CN-2573-01.04 / K-09	C	ACT	2	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
2KC404	2D NC PUMP MOTOR UPPER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-2573-01.04 / H-06	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC410	2D NC PUMP MOTOR LOWER BRG COOLER RELIEF TO KC DRAIN SUMP	CN-2573-01.04 / J- 04	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2KC412	2D NC PUMP THERMAL BARRIER INLET CHK	CN-2573-01.04 / J- 03	C	ACT	2	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
2KC424B	NC PUMPS RETURN HEADER CONT ISOL	CN-2573-01.03 / L- 05	A	ACT	2	8	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC-02 CSJ-CN-KC-02

Valve Summary Listing

Page 138 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KC425A	NC PUMPS RET HDR CONT ISOL	CN-2573-01.03 / L- 07	A	ACT	2	8	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-KC- 02 CSJ-CN-KC- 02
2KC429B	RX BLDG DRAIN HEADER CONT ISOL	CN-2573-01.05 / H-03	A	ACT	2	2	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2KC430A	RX BLDG DRN HDR CONT ISOL	CN-2573-01.05 / J- 03	A	ACT	2	2	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2KC494	2A KC SURGE TANK EMERGENCY RN M/U	CN-2573-01.01 / H-02	B	ACT	3	4	BL	MA	C	O/C	N/A	FS	2Y		
2KC495	2A KC SURGE TANK EMERGENCY RN M/U CHECK	CN-2573-01.01 / H-03	C	ACT	3	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KC496	2A KC SURGE TANK EMERGENCY RN M/U	CN-2573-01.01 / H-04	B	ACT	3	4	PL	MA	C	O	N/A	FS	2Y		
2KC497	2B KC SURGE TANK EMERGENCY RN M/U	CN-2573-01.01 / H-13	B	ACT	3	4	BL	MA	C	O/C	N/A	FS	2Y		
2KC498	2B KC SURGE TANK EMERGENCY RN M/U CHECK	CN-2573-01.01 / H-12	C	ACT	3	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KC499	2B KC SURGE TANK EMERGENCY RN MAKEUP	CN-2573-01.01 / H-12	B	ACT	3	4	PL	MA	C	O	N/A	FS	2Y		
2KC814	KC DRAIN HEADER LIEF	CN-2573-01.05 / G-01	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 139 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KCC37A	UNIT 2 A TRAIN KC MINIFLOW ISOL	CN-2573-01.00 / D-10	B	ACT	3	6	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2KCC40B	UNIT 2 B TRAIN KC MINIFLOW ISOL	CN-2573-01.00 / C-12	B	ACT	3	6	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2KCC42	RADIATION MONITOR 2EMF-46A OUTLET CHECK	CN-2573-01.00 / K-01	C	ACT	3	0.75	CK	SA	O/C	C	N/A	BDO CVC	II II		
2KCC43	RADIATION MONITOR 2EMF-46B OUTLET CHECK	CN-2573-01.00 / K-14	C	ACT	3	0.75	CK	SA	O/C	C	N/A	BDO CVC	II II		
2KD006	2A D/G ENG DRIVEN JACKET WATER CIRCULATION PUMP DISCH CHECK	CN-2609-01.00 / J- 10	C	ACT	3	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KD021	2B D/G ENG DRIVEN JACKET WATER CIRCULATION PUMP DISCH CHECK	CN-2609-01.00 / E-10	C	ACT	3	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2KF097	2B KF ASSURED FUEL POOL M/U ISOL	CN-2570-01.00 / I- 11	B	ACT	3	4	PL	MA	C	O/C	N/A	FS	2Y		

Valve Summary Listing

Page 140 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2KF101B	FWST TO SPENT FUEL POOL	CN-2570-01.00 / H-12	B	ACT	2	4	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2KF103A	FWST TO SPENT FUEL POOL	CN-2570-01.00 / H-12	B	ACT	2	4	GA	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2KF104	2A KF ASSURED FUEL POOL M/U ISOL	CN-2570-01.00 / H-12	B	ACT	3	4	PL	MA	C	O/C	N/A	FS	2Y		
2LD017	2A D/G ENG LUBE OIL STRAINER 2A1 CHECK	CN-2609-02.00 / K-5	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
2LD018	2A D/G ENG LUBE OIL STRAINER 2A2 CHECK	CN-2609-02.00 / J- 6	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
2LD047	2B D/G ENG LUBE OIL STRAINER 2B1 CHECK	CN-2609-02.02 / K-5	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
2LD048	2B D/G ENG LUBE OIL STRAINER 2B2 CHECK	CN-2609-02.02 / J- 6	C	ACT	3	6	CK	SA	O/C	O	N/A	BDC CVO	II II		
2MIMV6470	ILRT ISOL	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
2MIMV6471	ILRT ISO VALVE	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
2MIMV6480	ILRT ISOL	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
2MIMV6481	ILRT ISO VALVE	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
2MIMV6490	ILRT ISOL	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		
2MIMV6491	ILRT ISO VALVE	/	A	PASS	2		GA	MA	C	C	N/A	LTJ	J		

Valve Summary Listing
Page 141 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2MISV0150	HYDROGEN MONITOR SAMPLE SELECTION TRAIN A	/	A	PASS	NC		SV	SO	C	C	C	LTJ	J		
2MISV0160	HYDROGEN MONITOR SAMPLE SELECTION TRAIN B	/	A	PASS	NC		SV	SO	C	C	C	LTJ	J		
2MISV0170	HYDROGEN MONITOR SAMPLE SELECTOR TRAIN A	/	A	PASS	NC		SV	SO	C	C	C	LTJ	J		
2MISV0180	HYDROGEN MONITOR SAMPLE SELECTOR TRAIN B	/	A	PASS	NC		SV	SO	C	C	C	LTJ	J		
2MISV5230	CONT EMF SUP OTSD CONT ISOL	/	A	ACT	2		SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
2MISV5231	CONT EMF SUP INSD CONT ISOL	/	A	ACT	2		SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
2MISV5232	CONT EMF RET OTSD CONT ISOL	/	A	ACT	2		SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		

Valve Summary Listing

Page 142 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2MISV5233	CONT EMF RET INSD CONT ISOL	/	A	ACT	2		SV	SO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
2NB260B	RMWST CONT ISOL	CN-2556-02.00 / G-04	A	ACT	2	1	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NB262	RMWST RX BLDG SUPPLY HEADER CHECK	CN-2556-02.00 / G-06	A/C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NB331	RMWST RX BLDG SUPPLY HEADER RELIEF VALVE TO NCDT	CN-2556-02.00 / G-07	C	ACT	NC	1	RV	SA	C	O/C	N/A	RV	I		
2NC001	PZR SAFETY RELIEF	CN-2553-01.01 / K-03	C	ACT	1	6	RV	SA	C	O/C	N/A	RV	I		
2NC002	PZR SAFETY RELIEF	CN-2553-01.01 / K-04	C	ACT	1	6	RV	SA	C	O/C	N/A	RV	I		
2NC003	PZR SAFETY RELIEF	CN-2553-01.01 / K-06	C	ACT	1	6	RV	SA	C	O/C	N/A	RV	I		
2NC031B	PRZ POWER OPERATED RELIEF VALVE ISOL	CN-2553-01.01 / F- 04	B	ACT	1	1	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		

Valve Summary Listing

Page 143 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NC032B	PRESSURIZER POWER OPERATED RELIEF CONTROL	CN-2553-01.01 / G-04	B	ACT	1	4	PORV	AO	C	O/C	C	STT	2Y		CSJ-CN-NC-02
												FC	CS		CSJ-CN-NC-02
												FSC	CS		CSJ-CN-NC-02
												FSO	CS		CSJ-CN-NC-02
												ST-C	CS		CSJ-CN-NC-02
												ST-O	CS		CSJ-CN-NC-02
2NC033A	PZR POWER OPERATED RELIEF VALVE ISOL	CN-2553-01.01 / F- 03	B	ACT	1	1	GA	MO	O	O/C	FAI	RPI	2Y		
												FSC	Q		
												FSO	Q		
												ST-C	Q		
												ST-O	Q		
2NC034A	PZR POWER OPERATED RELIEF VALVE	CN-2553-01.01 / G-03	B	ACT	1	4	PORV	AO	C	O/C	C	STT	2Y		CSJ-CN-NC-02
												FC	CS		CSJ-CN-NC-02
												FSC	CS		CSJ-CN-NC-02
												FSO	CS		CSJ-CN-NC-02
												ST-C	CS		CSJ-CN-NC-02
												ST-O	CS		CSJ-CN-NC-02

Valve Summary Listing

Page 144 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NC035B	PZR POWER OPERATED RELIEF VALVE ISOL	CN-2553-01.01 / F- 02	B	ACT	1	1	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2NC036B	PZR POWER OPERATED RELIEF VALVE	CN-2553-01.01 / G-02	B	ACT	1	4	PORV	AO	C	O/C	C	STT FC FSC FSO ST-C ST-O	2Y CS CS CS CS CS		CSJ-CN-NC- 02 CSJ-CN-NC- 02 CSJ-CN-NC- 02 CSJ-CN-NC- 02 CSJ-CN-NC- 02
2NC053B	N2 TO PRT CONT ISOL	CN-2553-01.01 / K-11	A	ACT	2	1	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NC054A	NITROGEN TO PZR RELIEF TANK CONTAINMENT ISOL	CN-2553-01.01 / K-09	A	ACT	2	1	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 145 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NC056B	RMW PUMP DISCH CONT ISOL	CN-2553-01.01 / I- 13	A	ACT	2	3	GA	MO	C	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
2NC057	PZR RELIEF TANK SPRAY SUPPLY CHECK	CN-2553-01.01 / I- 12	A/C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NC141	NC MOTOR OIL DRAIN PUMP INSIDE CONTAINMENT ISOL	CN-2553-01.03 / J- 08	A	PASS	2	2	GA	MA	C	C	N/A	LTJ	J		
2NC142	NC PUMP MOTOR OIL DRAIN PUMP OUTSIDE CONTAINMENT ISOL	CN-2553-01.03 / K-08	A	PASS	2	2	GA	MA	C	C	N/A	LTJ	J		
2NC195B	NC PUMP MTR OIL FILL ISOL	CN-2553-01.03 / E-07	A	ACT	2	2	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NC196A	2NC PUMP MOTOR OIL FILL ISOL	CN-2553-01.03 / D-07	A	ACT	2	2	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NC250A	REACTOR HEAD VENT BLOCK	CN-2553-01.01 / L- 07	B	ACT	1	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NC- 03 CSJ-CN-NC- 03 CSJ-CN-NC- 03 CSJ-CN-NC- 03

Valve Summary Listing

Page 146 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NC251B	REACTOR HEAD VENT	CN-2553-01.01 / L-07	B	ACT	1	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03
2NC252B	REACTOR VESSEL HEAD VENT BLOCK	CN-2553-01.01 / K-07	B	ACT	1	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03
2NC253A	REACTOR VESSEL HEAD VENT	CN-2553-01.01 / K-07	B	ACT	1	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03 CSJ-CN-NC-03
2ND001B	ND PUMP 2A SUCT FRM LOOP B	CN-2561-01.00 / L-13	A	ACT	1	12	GA	MO	C	O	FAI	RPI LT FSO ST-O	2Y 2Y CS CS		CSJ-CN-ND-01 CSJ-CN-ND-01

Valve Summary Listing

Page 147 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2ND002A	ND PUMP 2A SUCT FRM LOOP B	CN-2561-01.00 / J- 13	A	ACT	1	12	GA	MO	C	O	FAI	RPI LT FSO ST-O	2Y 2Y CS CS		CSJ-CN-ND- 01 CSJ-CN-ND- 01
2ND003	2A ND PUMP SUCT FROM NC LOOP B HDR RELIEF	CN-2561-01.00 / I- 13	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
2ND010	2A ND PUMP DISCH CHECK	CN-2561-01.00 / G-10	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2ND024A	2A ND HX OUTLET TO LETDOWN HX	CN-2561-01.00 / G-05	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
2ND025A	2A ND PUMP MINIFLOW	CN-2561-01.00 / E-13	B	ACT	2	2	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2ND026	2A ND HX OUTLET CONTROL	CN-2561-01.00 / G-04	B	ACT	2	8	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2ND027	2A ND HX BYPASS CONTROL	CN-2561-01.00 / J- 06	B	ACT	2	8	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		

Valve Summary Listing

Page 148 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2ND028A	ND SUPPLY TO NV & 2A NI PMPS	CN-2561-01.00 / I- 04	B	ACT	2	8	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-ND- 05 CSJ-CN-ND- 05 CSJ-CN-ND- 05 CSJ-CN-ND- 05
2ND031	2A ND TRAIN COLD LEG INJECTION RETURN SAFETY RELIEF	CN-2561-01.00 / G-02	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
2ND032A	ND TRAIN 2A HOT LEG INJ ISOL	CN-2561-01.00 / E-03	B	ACT	2	8	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-ND- 04 CSJ-CN-ND- 04 CSJ-CN-ND- 04 CSJ-CN-ND- 04
2ND035	ND HOT LEG INJECTION RETURN SAFETY RELIEF	CN-2561-01.00 / D-02	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
2ND036B	ND PUMP 2B SUCT FRM LOOP C	CN-2561-01.01 / L- 13	A	ACT	1	12	GA	MO	C	O	FAI	RPI LT FSO ST-O	2Y 2Y CS CS		CSJ-CN-ND- 02 CSJ-CN-ND- 02

Valve Summary Listing

Page 149 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2ND037A	ND PUMP 2B SUCT FRM LOOP C	CN-2561-01.01 / J- 13	A	ACT	1	12	GA	MO	C	O	FAI	RPI LT FSO ST-O	2Y 2Y CS CS		CSJ-CN-ND- 02 CSJ-CN-ND- 02
2ND038	2B ND PUMP SUCT FROM NC LOOP C HEADER RELIEF	CN-2561-01.01 / I- 13	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
2ND044	2B ND PUMP DISCH CHECK	CN-2561-01.01 / G-10	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2ND058B	2B ND HX OUTLET TO LETDOWN HX	CN-2561-01.01 / G-05	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
2ND059B	2B ND PUMP MINIFLOW	CN-2561-01.01 / E-13	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2ND060	2B ND HX OUTLET CONTROL	CN-2561-01.01 / G-04	B	ACT	2	8	FC	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2ND061	2B ND HX BYPASS CONTROL	CN-2561-01.01 / J- 06	B	ACT	2	8	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		

Valve Summary Listing

Page 150 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2ND064	2B ND TRAIN COLD LEG INJECTION RETURN SAFETY RELIEF	CN-2561-01.01 / G-02	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
2ND065B	ND TRAIN 2B HOT LEG INJ ISOL	CN-2561-01.01 / F- 03	B	ACT	2	8	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-ND- 04 CSJ-CN-ND- 04 CSJ-CN-ND- 04 CSJ-CN-ND- 04
2ND090	2A ND TRAIN AUX PZR SPRAY ISOL	CN-2561-01.00 / E-09	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
2ND091	2B ND TRAIN AUX PZR SPRAY ISOL	CN-2561-01.00 / E-09	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
2ND116	OVER PRESS CHECK VALVE AROUND 2ND1B	CN-2561-01.00 / K-12	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2ND117	OVER PRESS CHECK VALVE AROUND 2ND36B	CN-2561-01.01 / K-12	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NF228A	2NF GLYCOL SUPPLY OUTSIDE CONTAINMENT ISOL	CN-2558-02.00 / H-14	A	ACT	2	4	GA	AO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		

Valve Summary Listing

Page 151 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NF229	NF AHU GLYCOL SUPPLY HEADER CHECK	CN-2558-02.00 / F- 14	A/C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NF233B	GLYCOL RETURN CONTAINMENT ISOL	CN-2558-02.00 / L- 10	A	ACT	2	4	GA	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NF234A	2NF GLYCOL RETURN CONTAINMENT ISOL	CN-2558-02.00 / L- 12	A	ACT	2	4	GA	AO	O	C	C	RPI LTJ FC FSC ST-C	2Y J Q Q Q		
2NF235	NF AHU GLYCOL RETURN CONT ISOL PRESSURE RELIEF CHECK	CN-2558-02.00 / K-10	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NI009A	NV PMP C/L INJ ISOL	CN-2562-01.00 / C-09	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 01 CSJ-CN-NI- 01 CSJ-CN-NI- 01 CSJ-CN-NI- 01

Valve Summary Listing

Page 152 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI010B	NV PMP C/L INJ ISOL	CN-2562-01.00 / C-06	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-01 CSJ-CN-NI-01 CSJ-CN-NI-01 CSJ-CN-NI-01 CSJ-CN-NI-01
2NI012	NV PUMPS TO COLD LEG CHECK	CN-2562-01.00 / E-08	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI015	NV PUMPS TO LOOP A COLD LEG CHECK	CN-2562-01.00 / I- 11	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI017	NV PUMPS TO B C-LEG CHK	CN-2562-01.00 / I- 09	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI019	NV PUMPS TO LOOP C COLD LEG CHECK	CN-2562-01.00 / I- 07	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI021	NV PUMPS TO D C-LEG CHK	CN-2562-01.00 / I- 05	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI047A	C-LEG ACCUM N2 SUP CONT ISOL	CN-2562-01.01 / L- 09	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 153 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI048	ACCUMULATOR NITROGEN SUPPLY CONTAINMENT CHECK	CN-2562-01.01 / L- 08	A/C	ACT	2	1	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2NI052	2A COLD LEG ACCUM RELIEF	CN-2562-01.01 / I- 03	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
2NI054A	C-LEG ACCUM A DISCH ISOL	CN-2562-01.01 / G-02	B	ACT	1	10	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y RO RO RO RO		ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25
2NI059	2A COLD LEG ACCUM DISCH CHECK	CN-2562-01.01 / D-02	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI060	2A COLD LEG ACCUM DISCH CHECK	CN-2562-01.01 / C-02	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI063	2B CLA RELIEF	CN-2562-01.01 / I- 05	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
2NI065B	2B CLA DISCH ISOL	CN-2562-01.01 / G-05	B	ACT	1	10	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y RO RO RO RO		ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25

Valve Summary Listing

Page 154 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI070	2B CLA DISCH CHECK	CN-2562-01.01 / D-05	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI071	2B CLA DISCH CHECK	CN-2562-01.01 / C-05	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI074	2C CLA RELIEF	CN-2562-01.01 / I- 08	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
2NI076A	C-LEG ACCUM C DISCH ISOL	CN-2562-01.01 / G-07	B	ACT	1	10	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y RO RO RO RO		ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25
2NI081	ACCUM 2C DISCH CHK	CN-2562-01.01 / D-07	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI082	ACCUM 2C DISCH CHK	CN-2562-01.01 / C-07	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI086	2D CLA RELIEF	CN-2562-01.01 / I- 11	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 155 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI088B	C-LEG ACCUM D DISCH ISOL	CN-2562-01.01 / G-10	B	ACT	1	10	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y RO RO RO RO		ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25 ROJ-CN-NI- 25
2NI093	ACCUM 2D DISCH CHK	CN-2562-01.01 / D-10	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI094	ACCUM 2D DISCH CHK	CN-2562-01.01 / C-10	A/C	ACT	1	10	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI095A	COLD LEG ACCUM CHECK VALVE TEST ISOL	CN-2562-01.01 / F- 13	A	ACT	2	0.75	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NI096B	C-LEG ACCUM CHK VLV TST ISOL	CN-2562-01.01 / H-13	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NI100B	NI PMPS SUCT FROM FWST	CN-2562-01.02 / G-13	B	ACT	2	8	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C	2Y CS CS CS		CSJ-CN-NI- 08 CSJ-CN-NI- 08 CSJ-CN-NI- 08

Valve Summary Listing

Page 156 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI101	FWST TO SUCTION HEADER OF NI PUMPS CHECK	CN-2562-01.02 / G-13	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI102	NI PUMPS SUCTION HEADER RELIEF	CN-2562-01.02 / F- 13	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
2NI103A	2A NI PUMP SUCTION	CN-2562-01.02 / I- 13	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 24 CSJ-CN-NI- 24 CSJ-CN-NI- 24 CSJ-CN-NI- 24
2NI114	2A NI PUMP RECIRC LINE CHECK	CN-2562-01.02 / I- 08	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI115A	NI PUMP 2A MINIFLOW ISOL	CN-2562-01.02 / H-08	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2NI116	2A NI PUMP DISCH CHECK	CN-2562-01.02 / J- 08	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI118A	NI PUMP 2A C-LEG INJ ISOL	CN-2562-01.02 / H-06	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		

Valve Summary Listing

Page 157 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI119	2A NI PUMP DISCH HEADER RELIEF	CN-2562-01.02 / K-06	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
2NI120B	NI PMPS TO C-LEG ACCUM FILL	CN-2562-01.02 / I- 05	A	ACT	2	0.75	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NI121A	2A NI PUMP TO H-LEGS B&C	CN-2562-01.02 / J- 05	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 21 CSJ-CN-NI- 21 CSJ-CN-NI- 21 CSJ-CN-NI- 21
2NI122B	HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.02 / J- 04	B	ACT	2	0.75	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2NI124	2A NI PUMP HOT LEG INJECTION TO HOT LEG C CHECK	CN-2562-01.02 / I- 04	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI125	ND TO HOT LEG C CHECK	CN-2562-01.02 / H-04	A/C	ACT	1	8	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		

Valve Summary Listing

Page 158 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI126	INLET TO HOT LEG C CHECK	CN-2562-01.02 / I- 01	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI128	NI PUMPS TO HOT LEG B CHECK	CN-2562-01.02 / K-04	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI129	ND TO HOT LEG B CHECK	CN-2562-01.02 / J- 03	A/C	ACT	1	8	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI134	2B HOT LEG INJECTION CHECK	CN-2562-01.02 / K-01	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI135B	2B NI PUMP SUCTION	CN-2562-01.02 / E-13	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2NI136B	ND SUPPLY TO NI PUMP 2B	CN-2562-01.02 / D-13	B	ACT	2	8	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 19 CSJ-CN-NI- 19 CSJ-CN-NI- 19 CSJ-CN-NI- 19

Valve Summary Listing

Page 159 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI143	2B NI PUMP RECIRC LINE CHECK	CN-2562-01.02 / E-08	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI144A	NI PUMP 2B MINIFLOW ISOL	CN-2562-01.02 / F- 08	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 22 CSJ-CN-NI- 22 CSJ-CN-NI- 22 CSJ-CN-NI- 22
2NI147B	NI MINIFLOW HDR TO FWST ISOL	CN-2562-01.02 / G-10	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C	2Y CS CS CS		CSJ-CN-NI- 09 CSJ-CN-NI- 09 CSJ-CN-NI- 09
2NI148	2B NI PUMP DISCH CHECK	CN-2562-01.02 / D-08	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI150B	NI PUMP 2B C-LEG INJ ISOL	CN-2562-01.02 / F- 06	B	ACT	2	4	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2NI151	2B NI PUMP DISCH HEADER RELIEF	CN-2562-01.02 / E-06	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 160 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI152B	NI PUMP 2B TO H-LEGS A&D	CN-2562-01.02 / D-05	B	ACT	2	4	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI- 21 CSJ-CN-NI- 21 CSJ-CN-NI- 21 CSJ-CN-NI- 21
2NI153A	HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.02 / D-04	B	ACT	2	0.75	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2NI154B	ND TO HOT LEGS CHECK VALVE TEST ISOL	CN-2562-01.02 / H-03	B	ACT	2	12	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2NI156	2B NI PUMP HOT LEG INJECTION TO HOT LEG A CHECK	CN-2562-01.02 / E-03	A/C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI157	HOT LEG INJECTION A CHECK	CN-2562-01.02 / E-01	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI159	2B NI PUMP HOT LEG INJ TO HOT LEG D CHECK	CN-2562-01.02 / C-03	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		

Valve Summary Listing

Page 161 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI160	HOT LEG INJECTION D CHECK	CN-2562-01.02 / C-01	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI161	NI PUMPS DISCH TO COLD LEG HEADER RELIEF	CN-2562-01.03 / K-07	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
2NI162A	NI TO C-LEGS INJ HDR ISOL	CN-2562-01.03 / K-07	A	ACT	2	4	GA	MO	O	O/C	FAI	RPI LT FSC FSO ST-C	2Y 2Y CS CS CS		CSJ-CN-NI- 12 CSJ-CN-NI- 12 CSJ-CN-NI- 12
2NI165	NI PUMPS DISCH HEADER TO COLD LEG A CHECK	CN-2562-01.03 / G-03	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI167	NI PUMPS DISCH HEADER TO COLD LEG B CHECK	CN-2562-01.03 / G-06	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		

Valve Summary Listing

Page 162 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI169	NI PUMPS DISCH HEADER TO COLD LEG D CHECK	CN-2562-01.03 / G-09	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI171	NI PUMPS DISCH HEADER TO COLD LEG C CHECK	CN-2562-01.03 / G-12	A/C	ACT	1	2	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI173A	ND HDR 2A TO COLD LEGS C&D	CN-2562-01.03 / E-10	A	ACT	2	8	GA	MO	O	O/C	FAI	RPI LT FSC FSO ST-C ST-O	2Y 2Y CS CS CS CS		CSJ-CN-NI-15 CSJ-CN-NI-15 CSJ-CN-NI-15 CSJ-CN-NI-15
2NI175	2A ND HEADER TO C COLD LEG CHECK	CN-2562-01.03 / F- 11	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI176	2A ND HEADER TO D COLD LEG CHECK	CN-2562-01.03 / F- 09	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		

Valve Summary Listing

Page 163 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI178B	ND HDR 2B TO COLD LEGS A&B	CN-2562-01.03 / E-04	A	ACT	2	8	GA	MO	O	O/C	FAI	RPI LT FSC FSO ST-C ST-O	2Y 2Y CS CS CS CS		CSJ-CN-NI-15 CSJ-CN-NI-15 CSJ-CN-NI-15 CSJ-CN-NI-15
2NI180	2B ND HEADER TO B COLD LEG CHECK	CN-2562-01.03 / F- 05	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI181	2B ND HEADER TO A COLD LEG CHECK	CN-2562-01.03 / F- 04	A/C	ACT	1	6	CK	SA	O/C	O/C	N/A	LT CVC CVO	2Y II II		
2NI183B	ND HDR A&B HOT LEG INJ ISOL	CN-2562-01.02 / G-04	A	ACT	2	12	GA	MO	C	O/C	FAI	RPI LT FSC FSO ST-C ST-O	2Y 2Y CS CS CS CS		CSJ-CN-NI-16 CSJ-CN-NI-16 CSJ-CN-NI-16 CSJ-CN-NI-16

Valve Summary Listing

Page 164 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI184B	ND PUMP 2B CONT SUMP SUCT	CN-2562-01.03 / C-10	B	ACT	2	18	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-17 CSJ-CN-NI-17 CSJ-CN-NI-17 CSJ-CN-NI-17
2NI185A	ND PUMP 2A CONT SUMP SUCT	CN-2562-01.03 / C-05	B	ACT	2	18	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-17 CSJ-CN-NI-17 CSJ-CN-NI-17 CSJ-CN-NI-17
2NI332A	NI PUMP SUCT X-OVER FROM ND	CN-2562-01.02 / L- 12	B	ACT	2	6	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18

Valve Summary Listing

Page 165 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI333B	NI PUMP SUCT FROM ND	CN-2562-01.02 / K-12	B	ACT	2	6	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18 CSJ-CN-NI-18
2NI334B	NI PUMP SUCT X-OVER FROM ND	CN-2562-01.02 / K-11	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NI-23 CSJ-CN-NI-23 CSJ-CN-NI-23 CSJ-CN-NI-23 CSJ-CN-NI-23
2NI342	ND TO SUCTION OF 2B NI PUMP CHECK	CN-2562-01.02 / D-13	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI351	NV PUMPS TO NC LOOP A CHECK	CN-2562-01.00 / I- 11	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI352	CCP TO NC LOOP B CHECK	CN-2562-01.00 / I- 09	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI353	CCP TO NC LOOP C CHECK	CN-2562-01.00 / I- 07	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NI354	NV PUMPS TO NC LOOP D CHECK	CN-2562-01.00 / I- 05	C	ACT	1	1.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 166 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI391	2A COLD LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.01 / C-03	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
2NI392	2B COLD LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.01 / C-03	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
2NI393	2C COLD LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.01 / C-08	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
2NI394	2D COLD LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.01 / C-11	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
2NI395	2A HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.02 / E-02	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
2NI396	2B HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.02 / K-02	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
2NI397	2C HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.02 / I- 02	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
2NI398	2D HOT LEG INJECTION CHECK VALVE TEST ISOL	CN-2562-01.02 / C-02	A	PASS	2	0.75	GL	AO	C	C	C	LT	2Y		
2NI438A	N2 TO 2NC-34A FROM ACCUM 2A	CN-2562-01.01 / K-01	B	ACT	2	1	GL	MO	C	O/C	FAI	RPI	2Y		
												FSC	Q		
												FSO	Q		
												ST-C	Q		
												ST-O	Q		
2NI439B	N2 TO 2NC-32B FROM ACCUM 2B	CN-2562-01.01 / K-05	B	ACT	2	1	GL	MO	C	O/C	FAI	RPI	2Y		
												FSC	Q		
												FSO	Q		
												ST-C	Q		
												ST-O	Q		

Valve Summary Listing
Page 167 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI471	BYPASS CHECK VALVE FOR 2NI95A.	CN-2562-01.01 / F- 13	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NI481	NI TEST HEADER RELIEF	CN-2562-01.01 / E-12	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
2NI485	NI LEAKOFF HEADER CHECK	CN-2562-01.03 / H-07	A/C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NI495	2B ND HEADER PRESS RELIEF LINE CHECK	CN-2562-01.03 / E-06	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NI501	2A ND HEADER PRESS RELIEF LINE CHECK	CN-2562-01.03 / G-10	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NI515	2A ECCS SUMP PIPING DRAIN 1ST ISOL	CN-2562-01.03 / B-05	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
2NI516	2A ECCS SUMP PIPING DRAIN 2ND ISOL	CN-2562-01.03 / B-05	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI517	2A ECCS SUMP PIPING VENT 1ST ISOL	CN-2562-01.03 / B-06	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
2NI518	2A ECCS SUMP PIPING VENT 2ND ISOL	CN-2562-01.03 / B-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI519	2NI185A RESERVOIR DRAIN 1ST ISOL	CN-2562-01.03 / B-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI520	2NI185A RESERVOIR DRAIN 2ND ISOL	CN-2562-01.03 / B-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI521	2NI185A RESERVOIR VENT 1ST ISOL	CN-2562-01.03 / B-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI522	2NI185A RESERVOIR VENT 2ND ISOL	CN-2562-01.03 / B-06	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		

Valve Summary Listing

Page 168 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NI523	2B ECCS SUMP PIPING DRAIN 1ST ISOL	CN-2562-01.03 / C-10	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
2NI524	2B ECCS SUMP PIPING DRAIN 2ND ISOL	CN-2562-01.03 / B-10	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI525	2B ECCS SUMP PIPING VENT 1ST ISOL	CN-2562-01.03 / C-09	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
2NI526	2B ECCS SUMP PIPING VENT 2ND ISOL	CN-2562-01.03 / B-09	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI527	2NI184B RESERVOIR DRAIN 1ST ISOL	CN-2562-01.03 / B-12	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI528	2NI184B RESERVOIR DRAIN 2ND ISOL	CN-2562-01.03 / B-12	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI529	2NI184B RESERVOIR VENT 1ST ISOL	CN-2562-01.03 / B-10	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI530	2NI184B RESERVOIR VENT 2ND ISOL	CN-2562-01.03 / B-10	A	PASS	2		GL	MA	C	C	N/A	LTJ	J		
2NI532	2D CLA CHECK VALVE VENT LINE CHECK	CN-2562-01.03 / G-09	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NI537	2A CLA CHECK VALVE VENT LINE CHECK	CN-2562-01.03 / G-03	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NM003A	PZR LIQUID SAMPLE LINE CONTAINMENT ISOL	CN-2572-01.00 / K-03	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM006A	PZR STEAM SAMPLE LINE CONT ISOL	CN-2572-01.00 / J- 03	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 169 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NM007B	PZR SMPL HDR CONT ISOL	CN-2572-01.00 / K-06	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM022A	HOT LEG A SMPL CONT ISOL	CN-2572-01.00 / K-11	A	ACT	2	0.5	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM025A	2C HOT LEG SAMPLE CONTAINMENT ISOL	CN-2572-01.00 / K-12	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM026B	HOT LEG SMPL HDR CONT ISOL	CN-2572-01.00 / K-08	A	ACT	2	0.5	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM069	NI ACCUMULATOR SAMPLE LINE RELIEF	CN-2572-01.01 / G-10	A/C	ACT	2	0.5	RV	SA	C	O/C	N/A	RV LTJ	I J		

Valve Summary Listing

Page 170 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NM072B	2A ACCUMULATOR SAMPLE LINE CONTAINMENT ISOL.	CN-2572-01.01 / I- 06	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM075B	2B ACCUMULATOR SAMPLE LINE CONTAINMENT ISOL.	CN-2572-01.01 / I- 08	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM078B	2C ACCUMULATOR SAMPLE LINE CONTAINMENT ISOL.	CN-2572-01.01 / I- 10	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM081B	2D ACCUMULATOR SAMPLE LINE CONTAINMENT ISOL.	CN-2572-01.01 / I- 11	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 171 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NM082A	ACCUM SMPL HDR CONT ISOL	CN-2572-01.01 / E-09	A	ACT	2	0.5	GL	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2NM187A	2A S/G UPPER SHELL SAMPLE CONTAINMENT ISOL	CN-2572-01.04 / K-01	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM190A	2A S/G BLOWDOWN SAMPLE CONTAINMENT ISOL	CN-2572-01.04 / K-02	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM191B	S/G 2A SMPL HDR CONT ISOL	CN-2572-01.04 / I- 02	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM197B	2B S/G UPPER SHELL SAMPLE CONTAINMENT ISOL	CN-2572-01.04 / K-05	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM200B	2B S/G BLOWDOWN SAMPLE CONTAINMENT ISOL	CN-2572-01.04 / K-06	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 172 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NM201A	S/G 2B SMPL HDR CONT ISOL	CN-2572-01.04 / I- 06	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM207A	2C S/G UPPER SHELL SAMPLE CONTAINMENT ISOL	CN-2572-01.04 / K-08	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM210A	2C S/G BLOWDOWN SAMPLE CONTAINMENT ISOL	CN-2572-01.04 / K-09	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM211B	S/G 2C SMPL HDR CONT ISOL	CN-2572-01.04 / I- 09	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM217B	2D SG UPPER SHELL SAMPLE CONTAINMENT ISOL	CN-2572-01.04 / K-11	B	ACT	2	0.5	GL	MO	C	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM220B	2D S/G BLOWDOWN SAMPLE CONTAINMENT ISOL	CN-2572-01.04 / K-12	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		

Valve Summary Listing

Page 173 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NM221A	S/G 2D SMPL HDR CONT ISOL	CN-2572-01.04 / H-12	B	ACT	2	0.5	GL	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2NM424	PZR SMPL LINE BYP CK	CN-2572-01.00 / J- 03	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NM425	2C HOT LEG SAMPLE CONTAINMENT ISOL BYPASS CHECK	CN-2572-01.00 / K-12	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NM426	2A S/G BLOWDOWN SAMPLE CONTAINMENT ISOL BYPASS	CN-2572-01.04 / K-02	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NM427	2B S/G BLOWDOWN SAMPLE CONTAINMENT ISOL BYPASS	CN-2572-01.04 / K-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NM428	2C S/G UPPER SHELL SAMPLE CONTAINMENT ISOL BYPASS	CN-2572-01.04 / K-09	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NM429	2D S/G UPPER SHELL SAMPLE CONTAINMENT ISOL BYPASS	CN-2572-01.04 / K-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 174 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NS001B	NS PMP B SUCT FROM CONT SUMP	CN-2563-01.00 / C-13	B	ACT	2	12	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2NS002	2B NS PUMP SUCTION RELIEF	CN-2563-01.00 / B-13	C	ACT	2	0.75	RV	SA	C	O/C	N/A	RV	I		
2NS003B	NS PUMP 2B SUCT FROM FWST	CN-2563-01.00 / E-13	B	ACT	2	12	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2NS004	FWST TO 2B NS PUMP SUCTION CHECK	CN-2563-01.00 / D-13	C	ACT	2	12	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NS012B	NS SPRAY HDR 2B CONT ISOL	CN-2563-01.00 / C-05	A	ACT	2	8	GA	MO	C	O/C	FAI	LT RPI FSC FSO ST-C ST-O	2Y 2Y Q Q Q Q		
2NS013	2B NS SPRAY HEADER CHECK	CN-2563-01.00 / C-03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 175 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NS015B	NS SPRAY HDR 2B CONT ISOL	CN-2563-01.00 / E-05	A	ACT	2	8	GA	MO	C	O/C	FAI	LT RPI FSC FSO ST-C ST-O	2Y 2Y Q Q Q Q		
2NS016	NS SPRAY HDR 2B CHECK VLV	CN-2563-01.00 / E-02	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NS018A	NS PMP A SUCT FROM CONT SUMP	CN-2563-01.00 / J- 13	B	ACT	2	12	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2NS019	2A NS PUMP SUCTION RELIEF	CN-2563-01.00 / K-13	C	ACT	2	0.75	RV	SA	C	O/C	N/A	RV	I		
2NS020A	NS PUMP 2A SUCT FROM FWST	CN-2563-01.00 / J- 13	B	ACT	2	12	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2NS021	FWST TO 2A NS PUMP SUCTION CHECK	CN-2563-01.00 / I- 13	C	ACT	2	12	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 176 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NS029A	NS SPRAY HDR 2A CONT ISOL	CN-2563-01.00 / I- 05	A	ACT	2	8	GA	MO	C	O/C	FAI	LT RPI FSC FSO ST-C ST-O	2Y 2Y Q Q Q Q		
2NS030	2A NS SPRAY HEADER CHECK	CN-2563-01.00 / I- 03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NS032A	NS SPRAY HDR 2A CONT ISOL	CN-2563-01.00 / I- K-05	A	ACT	2	8	GA	MO	C	O/C	FAI	LT RPI FSC FSO ST-C ST-O	2Y 2Y Q Q Q Q		
2NS033	2A NS SPRAY HEADER CHECK	CN-2563-01.00 / I- K-03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NS038B	2B ND PUMP TO CONTAINMENT SPRAY HEADER	CN-2563-01.00 / F- 05	A	ACT	2	8	GA	MO	C	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-NS- 03 CSJ-CN-NS- 03
2NS041	ND 2B/NS SPRAY HEADER CHECK	CN-2563-01.00 / F- 03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 177 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NS043A	2A ND PUMP TO CONTAINMENT SPRAY HEADER	CN-2563-01.00 / H-05	A	ACT	2	8	GA	MO	C	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-NS-03 CSJ-CN-NS-03
2NS046	ND 2A/NS SPRAY HEADER CHECK	CN-2563-01.00 / G-03	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NS098	2A NS PUMP DISCH CHECK	CN-2563-01.00 / J- 09	C	ACT	2	10	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NS099	2B NS PUMP DISCH CHECK	CN-2563-01.00 / D-09	C	ACT	2	10	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV001A	NC LETDOWN TO REGEN HX ISOL	CN-2554-01.00 / H-02	B	ACT	1	3	GA	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-NV-12 CSJ-CN-NV-12 CSJ-CN-NV-12
2NV002A	NC LETDOWN TO REGEN HX ISOL	CN-2554-01.00 / H-02	B	ACT	1	1	GA	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-NV-12 CSJ-CN-NV-12 CSJ-CN-NV-12

Valve Summary Listing

Page 178 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NV010A	LETDOWN ORIFICE 2B OUTLET CONTAINMENT ISOL	CN-2554-01.00 / H-08	A	ACT	2	2	GA	AO	O	C	C	LT RPI FC FSC ST-C	2Y 2Y CS CS CS		CSJ-CN-NV- 11 CSJ-CN-NV- 11 CSJ-CN-NV- 11
2NV011A	LETDN ORIF 2C OTLT CONT ISOL	CN-2554-01.00 / I- 09	A	ACT	2	2	GA	AO	O/C	C	C	LT RPI FC FSC ST-C	2Y 2Y CS CS CS		CSJ-CN-NV- 11 CSJ-CN-NV- 11 CSJ-CN-NV- 11
2NV013A	LETDN ORIF 2A OTLT CONT ISOL	CN-2554-01.00 / G-08	A	ACT	2	2	GA	AO	O	C	C	LT RPI FC FSC ST-C	2Y 2Y CS CS CS		CSJ-CN-NV- 11 CSJ-CN-NV- 11 CSJ-CN-NV- 11
2NV014	LETDOWN ORIFICE HEADER RELIEF	CN-2554-01.00 / G-09	A/C	ACT	2	3	RV	SA	C	O/C	N/A	RV LTJ	I J		

Valve Summary Listing

Page 179 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NV015B	LETDN CONT ISOL	CN-2554-01.00 / H-12	A	ACT	2	3	GL	MO	O	C	FAI	RPI FSC ST-C LTJ	2Y CS CS J		CSJ-CN-NV-01 CSJ-CN-NV-01
2NV022	CONTAINMENT ISOL CHECK	CN-2554-01.00 / F- 03	C	ACT	2	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV033	NV CHARGING TO LOOP A CHECK	CN-2554-01.00 / K-10	C	ACT	1	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV034	NV CHARGING TO LOOP A CHECK	CN-2554-01.00 / K-10	C	ACT	1	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV036	NV CHARGING TO NC LOOP D BYPASS CHECK	CN-2554-01.00 / K-06	C	ACT	2	0.75	CK	SA	C	O	N/A	BDC CVO	II II		
2NV037A	NV SUPPLY TO PZR AUX SPRAY	CN-2554-01.00 / L- 07	B	PASS	1	2	GL	MO	C	C	FAI	RPI	2Y		
2NV038	NV SUPPLY TO PZR AUX SPRAY CHECK	CN-2554-01.00 / L- 11	C	ACT	2	3	CK	SA	O/C	C	N/A	BDO CVC	II II		
2NV040	NV CHARGING TO LOOP D CHECK	CN-2554-01.00 / K-03	C	ACT	1	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV041	NV CHARGING TO LOOP D CHECK	CN-2554-01.00 / K-02	C	ACT	1	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV044A	NC PMP A SEAL SUPPLY CONT ISOL	CN-2554-01.05 / J- 04	B	PASS	2	2	GL	MO	O	O	FAI	RPI	2Y		
2NV046	2A NC PUMP SEAL SUPPLY CONT ISOL CHECK	CN-2554-01.05 / J- 05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 180 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NV049	2A NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / J- 07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV055A	NC PMP B SEAL SUPPLY CONT ISOL	CN-2554-01.05 / H-04	B	PASS	2	2	GL	MO	O	O	FAI	RPI	2Y		
2NV057	2B NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / H-05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV060	2B NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / H-07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV066A	NC PMP C SEAL SUPPLY CONT ISOL	CN-2554-01.05 / F- 04	B	PASS	2	2	GL	MO	O	O	FAI	RPI	2Y		
2NV068	2C NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / F- 05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV071	2C NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / F- 07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV077A	NC PMP D SEAL SUPPLY CONT ISOL	CN-2554-01.05 / D-04	B	PASS	2	2	GL	MO	O	O	FAI	RPI	2Y		
2NV079	2D NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / D-05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV082	2D NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / D-07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV087	NC PUMPS SEAL RETURN HEADER INSIDE RELIEF	CN-2554-01.00 / C-07	C	ACT	2	3	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing
Page 181 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NV089A	NC PUMPS SEAL RETURN CONT ISOL	CN-2554-01.00 / B-09	A	ACT	2	4	GA	MO	O	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-NV-02 CSJ-CN-NV-02
2NV090	NC PUMPS SEAL RETURN CONT ISOL RELIEVING CHECK	CN-2554-01.00 / D-10	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NV091B	NC PMPS SEAL RET CONT ISOL	CN-2554-01.00 / B-11	A	ACT	2	4	GA	MO	O	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-NV-02 CSJ-CN-NV-02
2NV122B	LOOP C TO EXCESS LETDOWN HX ISOL	CN-2554-01.00 / D-12	B	PASS	1	1	GL	AO	C	C	C	RPI	2Y		
2NV123B	LOOP C TO EXCESS LETDOWN HX ISOL	CN-2554-01.00 / D-10	B	PASS	1	1	GL	AO	C	C	C	RPI	2Y		
2NV188A	VCT OUTLET ISOL	CN-2554-01.01 / C-05	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-NV-03 CSJ-CN-NV-03
2NV189B	VCT OUTLET ISOL	CN-2554-01.01 / C-04	B	ACT	2	4	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-NV-03 CSJ-CN-NV-03

Valve Summary Listing

Page 182 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NV202B	NV PMPS A&B RECIRC ISOL	CN-2554-01.06 / D-02	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NV- 07 CSJ-CN-NV- 07 CSJ-CN-NV- 07 CSJ-CN-NV- 07
2NV203A	NV PUMPS A&B RECIRC ISOL	CN-2554-01.06 / D-02	B	ACT	2	2	GL	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NV- 07 CSJ-CN-NV- 07 CSJ-CN-NV- 07 CSJ-CN-NV- 07
2NV206	SEAL WATER HX INLET	CN-2554-01.06 / C-03	B	PASS	2	4	PL	AO	O	O	O	NTR	NR		
2NV218	SEAL WATER HX OUTLET	CN-2554-01.06 / C-06	B	PASS	2	4	PL	AO	O	O	O	NTR	NR		
2NV220	SEAL WATER RETURN TO VCT CHECK	CN-2554-01.01 / G-04	C	ACT	2	3	CK	SA	O/C	C	N/A	BDO CVC	II II		
2NV223	VCT RELIEF TO RHT	CN-2554-01.01 / H-07	C	ACT	2	4	RV	SA	C	O/C	N/A	RV	I		
2NV236B	BORIC ACID TO NV PUMPS SUCT	CN-2554-01.07 / F- 12	B	PASS	2	2	GL	MO	C	C	FAI	RPI	2Y		
2NV252A	NV PUMPS SUCT FROM FWST	CN-2554-01.07 / K-11	B	ACT	2	8	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NV- 10 CSJ-CN-NV- 10 CSJ-CN-NV- 10 CSJ-CN-NV- 10

Valve Summary Listing

Page 183 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NV253B	NV PUMPS SUCT FROM FWST	CN-2554-01.07 / K-12	B	ACT	2	8	GA	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y CS CS CS CS		CSJ-CN-NV- 10 CSJ-CN-NV- 10 CSJ-CN-NV- 10 CSJ-CN-NV- 10
2NV254	2A & 2B NV PUMPS SUPPLY CHECK	CN-2554-01.07 / K-12	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV268	2A NV PUMP MINI-FLOW CHECK	CN-2554-01.07 / I- 05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV270	2A NV PUMP DISCH CHECK	CN-2554-01.07 / I- 05	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV273	2A & 2B NV PUMPS SUCTION HEADER RELIEF	CN-2554-01.07 / D-11	C	ACT	2	1.5	RV	SA	C	O/C	N/A	RV	I		
2NV288	2B NV PUMP MINIFLOW CHECK	CN-2554-01.07 / E-05	C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV290	2B NV PUMP DISCH CHECK	CN-2554-01.07 / D-05	C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV312A	CHRG LINE CONT ISOL	CN-2554-01.02 / K-05	B	ACT	2	3	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-NV- 04 CSJ-CN-NV- 04
2NV314B	CHRG LINE CONT ISOL	CN-2554-01.02 / K-06	B	ACT	2	3	GA	MO	O	C	FAI	RPI FSC ST-C	2Y CS CS		CSJ-CN-NV- 04 CSJ-CN-NV- 04

Valve Summary Listing

Page 184 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NV492	2A NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / J- 07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV493	2B NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / H-07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV494	2C NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / F- 07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV495	2D NC PUMP SEAL SUPPLY INSIDE CHECK	CN-2554-01.05 / D-07	C	ACT	1	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV813	ND PUMP DISCH TO NI PUMP SUCTION CHECK	CN-2554-01.07 / C-12	C	ACT	2	8	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV861	ND TO PZR SPRAY CHECK	CN-2554-01.00 / L- 09	C	ACT	2	2	CK	SA	C	O/C	N/A	CVC CVO	II II		
2NV865A	STANDBY M/U PUMP SUCTION FROM TRANSFER TUBE	CN-2554-01.08 / H-01	B	ACT	2	3	GL	MO	O/C	C	FAI	RPI FSC ST-C	2Y Q Q		
2NV872A	STDBY M/U PMP FILT OTLT	CN-2554-01.08 / F- 08	A	ACT	2	2	GL	MO	O/C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 185 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NV874	STANDBY M/U CONTAINMENT HEADER CHECK	CN-2554-01.08 / F- 10	A/C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2NV878	STANDBY M/U TO NC PUMP 2A CHECK	CN-2554-01.08 / G-12	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV879	STANDBY M/U TO NC PUMP 2C CHECK	CN-2554-01.08 / G-13	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV880	STANDBY M/U TO NC PUMP 2B CHECK	CN-2554-01.08 / E-12	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NV881	STANDBY M/U TO NC PUMP 2D CHECK	CN-2554-01.08 / E-13	C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW002	2A NW SURGE CHAMBER NITROGEN	CN-2569-01.00 / H-11	B	PASS	2	0.5	SV	SO	C	C	C	RPI	2Y		
2NW006	2A NW SURGE CHAMBER RN SUPPLY CHECK	CN-2569-01.00 / G-12	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW008A	2A NW SURGE CHAMBER RN SUPPLY	CN-1569-01.00 / G-13	B	ACT	2	2	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW011	2A NW SURGE CHAMBER YM SUPPLY ISOL	CN-2569-01.00 / F- 13	B	PASS	2	1	SV	SO	C	C	C	RPI	2Y		

Valve Summary Listing

Page 186 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW013A	NW TO 2KC-425A	CN-1569-01.00 / E-09	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW017	NW SUPPLY CHECK TO 2KC425A	CN-2569-01.00 / E-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW020A	2A NW SURGE CHAMBER OUTLET	CN-2569-01.02 / F- 09	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW021	NW SUPPLY CHECK TO 2WLA24	CN-2569-01.00 / E-13	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW024	NW SUPPLY CHECK TO 2KC333A	CN-2569-01.00 / E-13	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW027	NW SUPPLY CHECK TO 2KC320A	CN-2569-01.00 / E-14	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW035A	CONT VLV INJ HDR 2A CONT ISOL	CN-2569-01.00 / H-09	B	ACT	2	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2NW037	2A NW CONT HEADER CHECK	CN-2569-01.00 / I- 09	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 187 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW040	NW SUPPLY CHECK TO 2WL825A	CN-2569-01.00 / J- 11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW043	NW SUPPLY CHECK TO 2WL805A	CN-2569-01.00 / J- 10	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW046A	NW TO 2RN-484A	CN-1569-01.00 / K-09	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW047	NW SUPPLY CHECK TO 2WL867A	CN-2569-01.00 / L- 10	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW050	NW SUPPLY CHECK TO 2RN484A	CN-2569-01.00 / L- 11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW057	2B NW SURGE CHAMBER NITROGEN	CN-2569-01.00 / H-4	B	PASS	2	0.5	SV	SO	C	C	C	RPI	2Y		
2NW061B	2B NW SURGE CHAMBER RN SUPPLY	CN-1569-01.00 / G-02	B	ACT	2	2	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW063	2B NW SURGE CHAMBER RN SUPPLY CHECK	CN-2569-01.00 / G-04	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW064	2B NW SURGE CHAMBER YM SUPPLY	CN-2569-01.00 / F- 2	B	PASS	2	1	SV	SO	C	C	C	RPI	2Y		

Valve Summary Listing

Page 188 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW068B	NW TO 2RN-487B & 2RN-437B	CN-1569-01.00 / E-05	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW069B	2B NW SURGE CHAMBER OUTLET	CN-1569-01.00 / F-06	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW070	NW SUPPLY CHECK TO 2NC56B	CN-2569-01.00 / E-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW074	NW SUPPLY CHECK TO 2RN437B	CN-2569-01.00 / E-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW077	NW SUPPLY CHECK TO 2RN487B	CN-2569-01.00 / E-04	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW080	NW SUPPLY CHECK TO 2WL869B	CN-2569-01.00 / E-03	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW086	NW SUPPLY CHECK TO 2WL827B	CN-2569-01.00 / E-01	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW089	NW SUPPLY CHECK TO 2RF389B	CN-2569-01.00 / C-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW092	NW SUPPLY CHECK TO 2RN404B	CN-2569-01.00 / C-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 189 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW095	NW SUPPLY CHECK TO 2KC338B	CN-2569-01.00 / C-04	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW098	NW SUPPLY CHECK TO 2WL807B	CN-2569-01.00 / C-02	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW101	NW SUPPLY CHECK TO 2RF447B	CN-2569-01.00 / C-01	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW105B	CONT VLV INJ HDR 2B CONT ISOL	CN-2569-01.00 / H-06	B	ACT	2	1	GL	MO	C	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2NW107	2B NW CONT HEADER CHECK	CN-2569-01.00 / I- 06	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW109	NW SUPPLY CHECK TO 2KC424B	CN-2569-01.00 / K-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW110B	NW SUPPLY TO 2KC424B	CN-1569-01.00 / K-06	B	ACT	2	1	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW111	NW SUPPLY CHECK TO 2KC332B	CN-2569-01.00 / J- 05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 190 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW114	NW SUPPLY CHECK TO 2KC424B	CN-2569-01.00 / L- 05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW120	NW SUPPLY CHECK TO 2KC332B	CN-2569-01.00 / J- 05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW121	NW SUPPLY CHECK TO 2WL827B	CN-2569-01.00 / E-01	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW123	NW SUPPLY CHECK TO 2WL869B	CN-2569-01.00 / E-03	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW124	NW SUPPLY CHECK TO 2RN487B	CN-2569-01.00 / E-04	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW125	NW SUPPLY CHECK TO 2RN437B	CN-2569-01.00 / E-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW126	NW SUPPLY CHECK TO 2NC56B	CN-2569-01.00 / E-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW127	NW SUPPLY CHECK TO 2RF447B	CN-2569-01.00 / C-01	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW128	NW SUPPLY CHECK TO 2WL807B	CN-2569-01.00 / C-02	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW129	NW SUPPLY CHECK TO 2KC338B	CN-2569-01.00 / C-04	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW130	NW SUPPLY CHECK TO 2RN404B	CN-2569-01.00 / C-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 191 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW131	NW SUPPLY CHECK TO 2RF389B	CN-2569-01.00 / C-05	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW132	NW SUPPLY CHECK TO 2WL867A	CN-2569-01.00 / L- 10	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW133	NW SUPPLY CHECK TO 2RN484A	CN-2569-01.00 / K-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW135	NW SUPPLY CHECK TO 2WL805A	CN-2569-01.00 / J- 10	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW136	NW SUPPLY CHECK TO 2WL825A	CN-2569-01.00 / J- 11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW138	NW SUPPLY CHECK TO 2KC425A	CN-2569-01.00 / E-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW139	NW SUPPLY CHECK TO 2WLA24	CN-2569-01.00 / E-13	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW140	NW SUPPLY CHECK TO 2KC333A	CN-2569-01.00 / E-13	C	ACT	2	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW141	NW SUPPLY CHECK TO 2KC320A	CN-2569-01.00 / E-14	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW145B	NW TO KC-338B & RN- 404B	CN-1569-01.00 / C-05	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		

Valve Summary Listing
Page 192 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW147	NW SUPPLY CHECK TO 2WLA21	CN-2569-01.00 / J- 07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW148	NW SUPPLY CHECK TO 2WLA21	CN-2569-01.00 / J- 07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW159	NW SUPPLY CHECK TO NV-10A	CN-2569-01.00 / I- 12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW160	NW SUPPLY CHECK TO 2NV-10A	CN-2569-01.00 / J- 12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW163	NW SUPPLY CHECK TO 2NV-11A	CN-2569-01.00 / K-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW164	NW SUPPLY CHECK TO 2NV-11A	CN-2569-01.00 / K-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW168	NW SUPPLY CHECK TO 2NV-13A	CN-2569-01.00 / K-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW169	NW SUPPLY CHECK TO 2NV-13A	CN-2569-01.00 / K-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW171	NW SUPPLY CHECK TO 2NV-89A	CN-2569-01.00 / J- 13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW172	NW SUPPLY CHECK TO 2NV-89A	CN-2569-01.00 / I- 13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 193 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW175A	NW TO 2NI-173A	CN-1569-01.00 / C-12	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW178	NW SUPPLY CHECK TO 2NI-173A	CN-2569-01.00 / C-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW179	NW SUPPLY CHECK TO 2NI-173A	CN-2569-01.00 / C-12	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW180A	NW TO 2NS-43A	CN-1569-01.00 / C-13	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW183	NW SUPPLY CHECK TO 2NS-43A	CN-2569-01.00 / C-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW184	NW SUPPLY CHECK TO 2NS-43A	CN-2569-01.00 / C-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW185A	NW TO 2NI-162A	CN-1569-01.00 / C-13	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW188	NW SUPPLY CHECK TO 2NI-162A	CN-2569-01.00 / C-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 194 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW189	NW SUPPLY CHECK TO 2NI-162A	CN-2569-01.00 / C-13	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW195A	NW TO 2NS-32A	CN-1569-01.00 / F- 08	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW196	NW SUPPLY CHECK TO 2NS-32A	CN-2569-01.00 / F- 08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW197	NW SUPPLY CHECK TO 2NS-32A	CN-2569-01.00 / F- 08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW200A	NW TO 2NS-29A	CN-1569-01.00 / E-08	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW201	NW SUPPLY CHECK TO 2NS-29A	CN-2569-01.00 / E-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW202	NW SUPPLY CHECK TO 2NS-29A	CN-2569-01.00 / D-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW205	NW SUPPLY CHECK TO 2KC-305B	CN-2569-01.00 / E-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW206	NW SUPPLY CHECK TO 2KC-305B	CN-2569-01.00 / F- 07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 195 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW209	NW SUPPLY CHECK TO 2KC-315B	CN-2569-01.00 / E-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW210	NW SUPPLY CHECK TO 2KC-315B	CN-2569-01.00 / E-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW213	NW SUPPLY CHECK TO 2NV-91B	CN-2569-01.00 / C-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW214	NW SUPPLY CHECK TO 2NV-91B	CN-2569-01.00 / C-07	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW217B	NW TO 2NS-12B	CN-1569-01.00 / C-08	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW218	NW SUPPLY CHECK TO 2NS-12B	CN-2569-01.00 / C-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW219	NW SUPPLY CHECK TO 2NS-12B	CN-2569-01.00 / C-08	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW222B	NW TO 2NS-15B	CN-1569-01.00 / C-08	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW223	NW SUPPLY CHECK TO 2NS-15B	CN-2569-01.00 / C-09	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 196 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW224	NW SUPPLY CHECK TO 2NS-15B	CN-2569-01.00 / C-09	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW227B	NW TO 2NS-38B	CN-1569-01.00 / C-09	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW230	NW SUPPLY CHECK TO 2NS-38B	CN-2569-01.00 / C-09	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW231	NW SUPPLY CHECK TO 2ND-38B	CN-2569-01.00 / C-09	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW237B	NW TO 2NI-178B	CN-1569-01.00 / C-11	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2NW240	NW SUPPLY CHECK TO 2NI-178B	CN-2569-01.00 / C-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW241	NW SUPPLY CHECK TO 2NI-178B	CN-2569-01.00 / C-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW242B	NW TO 2NI-183B	CN-1569-01.00 / C-11	B	ACT	2	0.5	SV	SO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		

Valve Summary Listing

Page 197 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2NW245	NW SUPPLY CHECK TO 2NI-183B	CN-2569-01.00 / C-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW246	NW SUPPLY CHECK TO 2NI-183B	CN-2569-01.00 / C-11	C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2NW247	2A NW INSIDE CONT RELIEF	CN-2569-01.00 / J- 11	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
2NW248	NW RELIEF	CN-2569-01.00 / D-11	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
2NW249	NW RELIEF	CN-2569-01.00 / D-06	C	ACT	2	1	RV	SA	C	O/C	N/A	RV	I		
2RF389B	UNIT 2 RF CONTAINMENT ISOL	CN-1599-02.01 / E-01	A	ACT	2	4	GA	MO	C	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-RF- 02 CSJ-CN-RF- 02
2RF392	CONT BLDG HOSE RACK SUPPLY HEADER CHECK	CN-1599-02.01 / E-04	A/C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2RF447B	RF CONT ISOL	CN-1599-02.01 / G-04	A	ACT	2	4	GA	MO	C	C	FAI	LT RPI FSC ST-C	2Y 2Y CS CS		CSJ-CN-RF- 02 CSJ-CN-RF- 02
2RF448	CONT BLDG SPRINKLER SUPPLY HEADER CHECK	CN-1599-02.01 / H-07	A/C	ACT	2	4	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		

Valve Summary Listing

Page 198 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAI				
2RF457B	ANNULUS SPRINKLER SYSTEM HEADER ISOL	CN-1599-02.01 / G-03	B	ACT	NC	6	GA	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN009	2A RN PUMP DISCH CHECK	CN-1574-01.00 / E-11	C	ACT	3	30	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2RN011A	2A RN PUMP MOTOR COOLER INLET ISOL	CN-1574-01.00 / E-09	B	ACT	3	2	BL	MO	O	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN018	2B RN PUMP DISCH CHECK VALVE	CN-1574-01.02 / F- 13	C	ACT	3	30	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2RN020B	2B RN PUMP MOTOR COOLER SUPPLY ISOL	CN-1574-01.02 / E-11	B	ACT	3	2	BL	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN028A	2A RN PUMP DISCH ISOL	CN-1574-01.00 / E-11	B	ACT	3	30	BF	MO	O/C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN030A	2A RN STRAINER BACKFLUSH ISOL	CN-1574-01.00 / D-08	B	ACT	3	4	BL	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN038B	2B RN PUMP DISCH ISOL	CN-1574-01.02 / F- 13	B	ACT	3	30	BF	MO	O/C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing

Page 199 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2RN040B	2B RN STRAINER BACKFLUSH ISOL	CN-1574-01.02 / D-09	B	ACT	3	4	BL	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN047A	RN SUPPLY X-OVER ISOL	CN-1574-01.01 / E-06	B	ACT	3	30	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN048B	RN SUPPLY X-OVER ISOL	CN-1574-01.01 / E-12	B	ACT	3	30	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN049A	NON-ESS SUPPLY HDR ISOL	CN-1574-01.01 / D-11	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN050B	NON-ESS SUPPLY HDR ISOL	CN-1574-01.01 / D-11	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN051A	NON-ESS RET HDR ISOL	CN-1574-01.05 / F- 07	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN052B	NON-ESS RET HDR ISOL	CN-1574-01.05 / F- 07	B	ACT	3	20	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN067A	2A RN HEADER SUPPLY ISOL	CN-1574-01.01 / F- 13	B	PASS	3	30	BF	MO	O	O	FAI	RPI	2Y		

Valve Summary Listing

Page 200 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAI				
2RN069B	2B RN HEADER SUPPLY ISOL	CN-1574-01.01 / F- 06	B	PASS	3	30	BF	MO	O	O	FAI	RPI	2Y		
2RN144A	2A NS HX INLET ISOL	CN-2574-02.00 / C-05	B	ACT	3	18	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN147	2A NS HX RELIEF	CN-2574-02.00 / G-14	C	ACT	3	4	RV	SA	C	O/C	N/A	RV	I		
2RN148A	2A NS HX OUTLET ISOL	CN-2574-02.00 / L- 01	B	ACT	3	18	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN225B	2B NS HX INLET ISOL	CN-2574-02.04 / C-06	B	ACT	3	18	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN228	2B NS HX RELIEF	CN-2574-02.04 / H-13	C	ACT	3	4	RV	SA	C	O/C	N/A	RV	I		
2RN229B	2B NS HX OUTLET ISOL	CN-2574-02.04 / L- 07	B	ACT	3	18	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN232A	2A D/G HX INLET ISOL	CN-2574-02.01 / D-02	B	ACT	3	10	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN235	2A D/G COOLING WATER HX RELIEF	CN-2574-02.01 / H-03	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2RN250A	2A RN HEADER TO CA PUMPS SUCTION ISOL	CN-2574-02.01 / D-07	B	ACT	3	8	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		

Valve Summary Listing

Page 201 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2RN287A	2A KC HX INLET ISOL	CN-2574-02.01 / D-13	B	PASS	3	20	BF	MO	O	O	FAI	RPI	2Y		
2RN290	2A KC HX RELIEF	CN-2574-02.01 / I-12	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2RN291	2A KC HX OUTLET THROTTLE VALVE	CN-2574-02.01 / J-13	B	ACT	3	12	BL	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2RN292B	2B D/G HX INLET ISOL	CN-2574-02.05 / E-02	B	ACT	3	10	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN295	2B D/G COOLING WATER HX RELIEF	CN-2574-02.05 / I-02	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2RN310B	2B RN HEADER TO CA PUMPS SUCTION ISOL	CN-2574-02.05 / G-06	B	ACT	3	8	GA	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN347B	2B KC HX INLET ISOL	CN-2574-02.05 / F-13	B	PASS	3	20	BF	MO	O	O	FAI	RPI	2Y		
2RN350	2B KC HX RELIEF	CN-2574-02.05 / I-14	C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	I		
2RN351	2B KC HX OUTLET THROTTLE	CN-2574-02.05 / I-13	B	ACT	3	12	BL	AO	O	O	O	RPI FO FSO ST-O	2Y Q Q Q		

Valve Summary Listing

Page 202 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2RN404B	UPPER CONT VENT UNIT SUP	CN-2574-02.07 / D-04	A	ACT	2	6	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
2RN405	UPPER CONT VENT UNIT SUPPLY CHECK	CN-2574-02.07 / E-03	A/C	ACT	2	6	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2RN437B	LOWER CONT VENT UNIT SUP	CN-2574-02.02 / L- 06	A	ACT	2	12	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-RN- 02 CSJ-CN-RN- 02
2RN438	LOWER CONT VENT UNITS SUPPLY 2 CONT ISOL INSIDE CHECK	CN-2574-02.02 / L- 08	A/C	ACT	2	12	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2RN484A	LOWER CONT VENT UNIT RETURN	CN-2574-02.02 / C-08	A	ACT	2	12	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-RN- 03 CSJ-CN-RN- 03

Valve Summary Listing

Page 203 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2RN485	LOWER CONT VENT UNITS RETURN INSIDE ISOL PRESS RELIEF CHK VL	CN-2574-02.02 / B-08	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2RN487B	LOWER CONT VENT UNIT RET	CN-2574-02.02 / C-07	A	ACT	2	12	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y CS CS		CSJ-CN-RN- 03 CSJ-CN-RN- 03
2RN807	2B NC PUMP MOTOR AIR COOLER SAFETY RELIEF	CN-2574-02.03 / J- 07	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
2RN846A	2A D/G HX RETURN TO SNSWP	CN-2574-02.01 / J- 02	B	ACT	3	10	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN847A	2A D/G HX RETURN TO LAKE	CN-2574-02.01 / J- 01	B	ACT	3	10	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN848B	2B D/G HX RETURN TO SNSWP	CN-2574-02.05 / J- 02	B	ACT	3	10	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2RN849B	2B D/G HX RETURN TO LAKE	CN-2574-02.05 / J- 02	B	ACT	3	10	BF	MO	O	C	FAI	RPI FSC ST-C	2Y Q Q		
2RN854	2A RN PUMP DISCH VACUUM BREAKER	CN-1574-01.00 / F- 12	C	ACT	3	4	VB	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 204 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2RN855	2B RN PUMP DISCH VACUUM BREAKER	CN-1574-01.02 / F- 14	C	ACT	3	4	VB	SA	C	O/C	N/A	RV	I		
2RN861	UPPER CONT VENT UNITS SUPPLY HEADER RELIEF	CN-2574-02.07 / E-03	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
2RN863	LOWER CONT VENT UNITS SUPPLY HEADER RELIEF	CN-2574-02.02 / K-09	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
2RNC66	2A NS HX WET LAYUP RECIRC PUMP OUTLET CHECK	CN-2574-02.00 / D-07	C	ACT	3	2	CK	SA	O/C	C	N/A	BDO	II		
												CVC	II		
2RNC67	2A NS HX WET LAYUP INLET ISOL	CN-2574-02.00 / K-09	B	ACT	3		BL	MA	N/A	C	N/A	FS	2Y		
2RNC69	2B NS HX WET LAYUP RECIRC PUMP OUTLET CHECK	CN-2574-02.04 / C-07	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO	II		
												CVC	II		
2RNC70	2B NS HX WET LAYUP INLET ISOL	CN-2574-02.04 / K-09	B	ACT	3		BL	MA	O	C	N/A	FS	2Y		
2RNP47	2A1 D/G STARTING AIR AFTERCOOLER OUTLET CHECK	CN-2574-02.01 / I- 03	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO	II		
												CVC	II		
2RNP48	2A2 D/G STARTING AIR AFTERCOOLER OUTLET CHECK	CN-2574-02.01 / I- 01	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO	II		
												CVC	II		
2RNP49	2B1 D/G STARTING AIR AFTERCOOLER OUTLET CHECK	CN-2574-02.05 / I- 01	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO	II		
												CVC	II		

Valve Summary Listing

Page 205 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2RNP50	2B2 D/G STARTING AIR AFTERCOOLER OUTLET CHECK	CN-2574-02.05 / I- 03	C	ACT	3	1	CK	SA	O/C	C	N/A	BDO CVC	II II		
2SA001	2B S/G MAIN STEAM TO #2 CAPT MAINTENANCE ISOL	CN-2593-01.01 / G-04	B	ACT	2	6	GA	MA	O	O/C	N/A	FS	2Y		
2SA002	2B S/G MAIN STEAM TO #2 CAPT	CN-2593-01.01 / G-04	B	ACT	2	4	GA	AO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2SA003	2B S/G MAIN STEAM TO UNIT 2 CAPT STOP CHECK	CN-2593-01.01 / G-05	C	ACT	2	6	SCK	SA	O/C	O/C	N/A	FS CVC CVO	2Y II II		
2SA004	2C S/G MAIN STEAM TO #2 CAPT MAINTENANCE ISOL	CN-2593-01.01 / H-04	B	ACT	2	6	GA	MA	O	O/C	N/A	FS	2Y		
2SA005	2C S/G MAIN STEAM TO #2 CAPT	CN-2593-01.01 / H-04	B	ACT	2	4	GA	AO	C	O	O	RPI FO FSO ST-O	2Y Q Q Q		
2SA006	2C S/G MAIN STEAM TO UNIT 2 CAPT STOP CHECK	CN-2593-01.01 / H-05	C	ACT	2	6	SCK	SA	O/C	O/C	N/A	FS CVC CVO	2Y II II		

Valve Summary Listing

Page 206 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2SM001	2D S/G MAIN STEAM ISOL	CN-2593-01.00 / K-13	B	ACT	2	34	GL	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-SM-01 CSJ-CN-SM-01 CSJ-CN-SM-01
2SM003	2C S/G MAIN STEAM ISOL	CN-2593-01.00 / H-13	B	ACT	2	34	GL	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-SM-01 CSJ-CN-SM-01 CSJ-CN-SM-01
2SM005	2B S/G MAIN STEAM ISOL	CN-2593-01.00 / F- 13	B	ACT	2	34	GL	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-SM-01 CSJ-CN-SM-01 CSJ-CN-SM-01
2SM007	2A S/G MAIN STEAM ISOL	CN-2593-01.00 / C-13	B	ACT	2	34	GL	AO	O	C	C	RPI FC FSC ST-C	2Y CS CS CS		CSJ-CN-SM-01 CSJ-CN-SM-01 CSJ-CN-SM-01
2SM009	2D S/G MAIN STEAM ISOL BYPASS	CN-2593-01.00 / J- 13	B	ACT	2	3	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		

Valve Summary Listing

Page 207 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2SM010	2C S/G MAIN STEAM ISOL BYPASS	CN-2593-01.00 / G-13	B	ACT	2	3	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2SM011	2B S/G MAIN STEAM ISOL BYPASS	CN-2593-01.00 / E-13	B	ACT	2	3	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2SM012	2A S/G MAIN STEAM ISOL BYPASS	CN-2593-01.00 / B-13	B	ACT	2	3	FC	AO	C	C	C	RPI FC FSC ST-C	2Y Q Q Q		
2SM074B	S/G 2D OTLT HDR BLDWN C/V	CN-2593-01.07 / E-06	B	PASS	2	2	GA	MO	O	O	FAI	RPI	2Y		
2SM075A	S/G 2C OTLT HDR BLDWN C/V	CN-2593-01.07 / E-13	B	PASS	2	2	GA	MO	O	O	FAI	RPI	2Y		
2SM076B	S/G 2B OTLT HDR BLDWN C/V	CN-2593-01.07 / E-09	B	PASS	2	2	GA	MO	O	O	FAI	RPI	2Y		
2SM077A	S/G 2A OTLT HDR BLDWN C/V	CN-2593-01.07 / E-02	B	PASS	2	2	GA	MO	O	O	FAI	RPI	2Y		
2SV001	2D S/G POWER OPERATED RELIEF VALVE	CN-2593-01.00 / L- 12	B	ACT	2	6	PORV	AO	O	O/C	C	FC FSC FSO MS RPI STT ST-C	2Y 2Y 2Y 2Y 2Y 2Y Q		

Valve Summary Listing

Page 208 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2SV002	2D S/G SAFETY NO 1	CN-2593-01.00 / K-04	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV003	2D S/G SAFETY NO 2	CN-2593-01.00 / K-06	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV004	2D S/G SAFETY NO 3	CN-2593-01.00 / K-07	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV005	2D S/G SAFETY NO 4	CN-2593-01.00 / K-08	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV006	2D S/G SAFETY NO 5	CN-2593-01.00 / K-10	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV007	2C S/G POWER OPERATED RELIEF VALVE	CN-2593-01.00 / I- 12	B	ACT	2	6	PORV	AO	O	O/C	C	FC FSC FSO MS RPI STT ST-C	2Y 2Y 2Y 2Y 2Y 2Y Q		
2SV008	2C S/G SAFETY NO 1	CN-2593-01.00 / I- 04	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV009	2C S/G SAFETY NO 2	CN-2593-01.00 / I- 06	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV010	2C S/G SAFETY NO 3	CN-2593-01.00 / I- 07	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV011	2C S/G SAFETY NO 4	CN-2593-01.00 / I- 08	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV012	2C S/G SAFETY NO 5	CN-2593-01.00 / I- 10	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 209 of 222

VALVE ID	FUNCTION	DRAWING/COORD	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2SV013	2B S/G POWER OPERATED RELIEF VALVE	CN-2593-01.00 / F- 12	B	ACT	2	6	PORV	AO	O	O/C	C	FC FSC FSO MS RPI STT ST-C	2Y 2Y 2Y 2Y 2Y 2Y Q		
2SV014	2B S/G SAFETY NO 1	CN-2593-01.00 / F- 04	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV015	2B S/G SAFETY NO 2	CN-2593-01.00 / F- 06	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV016	2B S/G SAFETY NO 3	CN-2593-01.00 / F- 07	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV017	2B S/G SAFETY NO 4	CN-2593-01.00 / F- 08	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV018	2B S/G SAFETY NO 5	CN-2593-01.00 / F- 10	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV019	2A S/G POWER OPERATED RELIEF VALVE	CN-2593-01.00 / D-12	B	ACT	2	6	PORV	AO	O	O/C	C	FC FSC FSO MS RPI STT ST-C	2Y 2Y 2Y 2Y 2Y 2Y Q		
2SV020	2A S/G SAFETY NO 1	CN-2593-01.00 / C-04	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV021	2A S/G SAFETY NO 2	CN-2593-01.00 / C-06	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV022	2A S/G SAFETY NO 3	CN-2593-01.00 / C-07	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		

Valve Summary Listing

Page 210 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2SV023	2A S/G SAFETY NO 4	CN-2593-01.00 / C-08	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV024	2A S/G SAFETY NO 5	CN-2593-01.00 / C-10	C	ACT	2	6	RV	SA	C	O/C	N/A	RV	I		
2SV025B	2D S/G PORV ISOL	CN-2593-01.00 / K-11	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2SV026B	2C S/G PORV ISOL	CN-2593-01.00 / I- 11	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2SV027A	2A S/G PORV ISOL	CN-2593-01.00 / C-11	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		
2SV028A	2B S/G PORV ISOL	CN-2593-01.00 / F- 11	B	ACT	2	6	GA	MO	O	O/C	FAI	RPI FSC FSO ST-C ST-O	2Y Q Q Q Q		

Valve Summary Listing

Page 211 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2VB083B	VB CONT ISOL	CN-2605-3.2 / I-07	A	ACT	2	2	DA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2VB085	UNIT 2 CONTAINMENT HEADER SUPPLY CHECK	CN-2605-3.2 / H-07	A/C	ACT	2	2	CK	SA	C	C	N/A	BDO CVC LTJ	II II J		
2VG005	2A D/G ENG STARTING AIR DRYER 2A1 DISCH CHECK	CN-2609-04.00 / I-02	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG006	2A D/G ENG STARTING AIR DRYER 2A2 DISCH CHECK	CN-2609-04.00 / H-13	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG007	2A D/G ENG STARTING AIR DRYER 2A1 DISCH CHECK	CN-2609-04.00 / I-02	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG008	2A D/G ENG STARTING AIR DRYER 2A2 DISCH CHECK	CN-2609-04.00 / I-13	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG015	2A D/G ENG STARTING AIR TANK 2A1 OUTLET CHECK	CN-2609-04.00 / G-02	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 212 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2VG016	2A D/G ENG STARTING AIR TANK 2A2 OUTLET CHECK	CN-2609-04.00 / G-13	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG049	D/G STARTING AIR DRYER 2B1 DISCH CHECK	CN-2609-04.01 / I- 02	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG050	2B D/G ENG STARTING AIR DRYER 2B2 DISCH CHECK	CN-2609-04.01 / H-13	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG051	2B D/G ENG STARTING AIR DRYER 2B1 DISCH CHECK	CN-2609-04.01 / J- 02	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG052	2B D/G ENG STARTING AIR DRYER 2B2 DISCH CHECK	CN-2609-04.01 / J- 13	C	ACT	3	1	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG059	2B D/G ENG STARTING AIR TANK 2B1 OUTLET CHECK	CN-2609-04.01 / G-02	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG060	2B D/G ENG STARTING AIR TANK 2B2 OUTLET CHECK	CN-2609-04.01 / G-13	C	ACT	3	3	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG133	2B D/G ENG STARTING AIR TANK 2B1 SUP TO ENG CONTROL PNL 2B C	CN-2609-04.01 / I- 02	C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 213 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2VG134	2B D/G ENG STARTING AIR TANK 2B2 SUP TO ENG CONTROL PNL 2B C	CN-2609-04.01 / H-13	C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG135	2A D/G ENG STARTING AIR TANK 2A1 SUP TO ENG CONTROL PNL 2A C	CN-2609-04.00 / H-02	C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VG136	2A D/G ENG STARTING AIR TANK 2A2 SUP TO ENG CONTROL PNL 2A C	CN-2609-04.00 / H-13	C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2VI077B	VI CONT ISOL	CN-2605-01.05 / I- 05	A	ACT	2	2	DA	MO	O	C	FAI	RPI FSC ST-C LTJ	2Y CS CS J		CSJ-CN-VI- 02 CSJ-CN-VI- 02
2VI079	VI CONTAINMENT HEADER CHECK	CN-2605-01.05 / I- 08	A/C	ACT	2	2	CK	SA	O	C	N/A	BDO CVC LTJ	II II J		
2VI312A	VI TO VP CONT ISOL	CN-2605-01.05 / I- 06	A	ACT	2	2	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2VI367	PORV 2NC 34A VI SUPPLY CHECK	CN-2605-01.05 / E-09	C	ACT	3	2	CK	SA	O	C	N/A	BDO CVC	II II		

Valve Summary Listing

Page 214 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2VI368	PORV 2NC 32B VI SUPPLY CHECK	CN-2605-01.05 / F- 09	C	ACT	3	2	CK	SA	O	C	N/A	BDO CVC	II II		
2VI369	NITROGEN FROM 2A COLD LEG ACCUMULATOR SUPPLY CHECK	CN-2605-01.05 / E-08	C	ACT	3	2	CK	SA	C	O/C	N/A	CVC CVO	II II		
2VI370	NITROGEN FROM 2B COLD LEG ACCUMULATOR SUPPLY CHECK	CN-2605-01.05 / F- 08	C	ACT	3	2	CK	SA	C	O/C	N/A	CVC CVO	II II		
2VI373	NITROGEN FROM 2A COLD LEG ACCUMULATOR SUPPLY HEADER RELIEF	CN-2605-01.05 / E-08	C	ACT	3	1.5	RV	SA	C	O/C	N/A	RV	I		
2VI374	NITROGEN FROM 2B COLD LEG ACCUMULATOR SUPPLY HEADER RELIEF	CN-2605-01.05 / G-08	C	ACT	3	1.5	RV	SA	C	O/C	N/A	RV	I		
2VP001B	UPPER CONT PURGE SUPPLY OUTSIDE ISOL	CN-2576-01.00 / I- 5	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP002A	UPPER CONT PURGE SUPPLY INSIDE ISOL	CN-2576-01.00 / I- 6	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP003B	UPPER CONT PURGE SUPPLY OUTSIDE ISOL	CN-2576-01.00 / H-5	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP004A	UPPER CONT PURGE SUPPLY INSIDE ISOL	CN-2576-01.00 / I- 6	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP006B	LOWER CONT PURGE SUPPLY OUTSIDE ISOL	CN-2576-01.00 / G-5	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP007A	LOWER CONT PURGE SUPPLY INSIDE ISOL	CN-2576-01.00 / G-6	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP008B	LOWER CONT PURGE SUPPLY OUTSIDE ISOL	CN-2576-01.00 / F- 5	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP009A	LOWER CONT PURGE SUPPLY INSIDE ISOL	CN-2576-01.00 / F- 6	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP010A	UPPER CONT PURGE EXHAUST INSIDE ISOL	CN-2576-01.00 / I- 9	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		

Valve Summary Listing

Page 215 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2VP011B	UPPER CONT PURGE EXHAUST OUTSIDE ISOL	CN-2576-01.00 / I- 10	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP012A	UPPER CONT PURGE EXHAUST INSIDE ISOL	CN-2576-01.00 / H-9	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP013B	UPPER CONT PURGE EXHAUST OUTSIDE ISOL	CN-2576-01.00 / H-10	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP015A	LOWER CONT PURGE EXHAUST INSIDE ISOL	CN-2576-01.00 / G-9	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP016B	LOWER CONT PURGE EXHAUST OUTSIDE ISOL	CN-2576-01.00 / G-10	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP017A	INCORE INST ROOM PURGE SUPPLY INSIDE ISOL	CN-2576-01.00 / E-9	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP018B	INCORE INST ROOM PURGE SUPPLY OUTSIDE ISOL	CN-2576-01.00 / E-10	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP019A	INCORE INST ROOM PURGE EXHAUST INSIDE ISOL	CN-2576-01.00 / E-5	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VP020B	INCORE INST ROOM PURGE EXHAUST OUTSIDE ISOL	CN-2576-01.00 / E-6	A	PASS	2	24	BF	AO	C	C	C	LTJ	J		
2VQ002A	VQ FAN SUCT FROM CONT ISOL	CN-1585-01.00 / I- 02	A	ACT	2	4	DA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2VQ003B	VQ FAN SUCT FROM CONT ISOL	CN-1585-01.00 / G-02	A	ACT	2	4	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 216 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2VQ015B	CONT AIR ADD CONT ISOL	CN-1585-01.00 / I- 12	A	ACT	2	4	GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2VQ016A	CONT AIR ADDITION CONT ISOL	CN-1585-01.00 / K-12	A	ACT	2	4	DA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2VS054B	VS CONT ISOL	CN-1605-02.01 / G-05	A	ACT	2		GA	MO	C	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2VS056	UNIT 2 CONT HEADER CHECK	CN-1605-02.01 / G-03	A/C	ACT	2		CK	SA	C	C	N/A	BDO CVC LTJ	II II J		
2VX001A	2A HYDROGEN SKIMMER FAN INLET ISOL	CN-2557-01.00 / G-03	B	ACT	2	12	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2VX002B	2B HYDROGEN SKIMMER FAN INLET ISOL	CN-2557-01.00 / G-14	B	ACT	2	12	BF	MO	C	O	FAI	RPI FSO ST-O	2Y Q Q		
2VY015B	VY INLET BLOWER DISCH ISOL	CN-2559-01.00 / F- 07	A	PASS	2	4	GA	MO	C	C	FAI	RPI LTJ	2Y J		

Valve Summary Listing

Page 217 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2VY016	CONTAINMENT H2 PURGE INLET BLOWER DISCH CHECK	CN-2559-01.00 / D-07	A/C	ACT	2	4	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2VY017A	VY OUTLET CONTAINMENT ISOL	CN-2559-01.00 / D-04	A	PASS	2	4	GA	MO	C	C	FAI	RPI LTJ	2Y J		
2VY018B	VY OUTLET CONT ISOL	CN-2559-01.00 / F- 04	A	PASS	2	4	GA	MO	C	C	FAI	RPI LTJ	2Y J		
2WE020	CONTAINMENT BUILDING SUPPLY OUTSIDE ISOL	CN-2568-01.00 / J- 8	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
2WE022	CONTAINMENT BUILDING SUPPLY INSIDE ISOL	CN-2568-01.00 / H-8	A	PASS	2	1	GL	MA	C	C	N/A	LTJ	J		
2WL321	INCORE INST SUMP PUMP DISCH TEST DRAIN CHECK	CN-2565-02.04 / H-06	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2WL450A	NCDT VENT CONTAINMENT ISOL	CN-2565-02.00 / I- 04	A	ACT	2	0.75	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 218 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2WL451B	NCDT VENT CONT ISOL	CN-2565-02.00 / J-04	A	ACT	2	0.75	GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		
2WL462	NCDT RELIEF	CN-2565-02.00 / H-03	C	ACT	NC	2	RV	SA	C	O/C	N/A	RV	I		
2WL805A	REACTOR COOLANT DRAIN TANK PUMP DISCH CONTAINMENT ISOL	CN-2565-02.00 / I-08	A	ACT	2	3	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
2WL806	REACTOR COOLANT DRAIN TANK PUMP DISCH CONTAINMENT ISOL BYPAS	CN-2565-02.00 / I-08	A/C	ACT	2	0.5	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2WL807B	NCDT PUMPS DISCH CONT ISOL	CN-2565-02.00 / J-08	A	ACT	2	3	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		

Valve Summary Listing

Page 219 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2WL825A	CONTAINMENT SUMP PUMPS DISCH CONTAINMENT ISOL	CN-2565-02.04 / H-07	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
2WL826	INCORE INST/CONT AND EQUIP SUMP PUMPS DISCH RELIEF	CN-2565-02.04 / H-10	C	ACT	NC	0.75	RV	SA	C	O/C	N/A	RV	I		
2WL827B	CONT SMP PMPS DISCH CONT ISOL	CN-2565-02.04 / J- 07	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
2WL830	2CA TURBINE DRIVEN PUMP SUMP PUMP 2A DISCH CHECK	CN-2565-02.02 / D-08	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2WL832	2CA TURBINE DRIVEN PUMP SUMP PUMP 2B DISCH CHECK	CN-2565-02.02 / D-10	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2WL838	2A CA PUMP SUMP PUMP DISCH CHECK	CN-2565-02.02 / E-05	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		
2WL840	2B CA PUMP SUMP PUMP DISCH CHECK	CN-2565-02.02 / D-06	C	ACT	3	2	CK	SA	O/C	O/C	N/A	CVC CVO	II II		

Valve Summary Listing

Page 220 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2WL847	FLOOR DRAIN SUMP C DISCH TO ND / NS SUMP	CN-2565-02.02 / J- 10	B	ACT	3	4	PL	AO	C	O	O	FO FSO	Q Q		
2WL848	FLOOR DRAIN SUMP C DISCH TO TURBINE BUILDING SUMP	CN-2565-02.02 / J- 08	B	ACT	3	4	PL	AO	O	C	C	FC FSC	Q Q		
2WL850	CA PUMP ROOM SUMP DISCHARGE HEADER CHECK VALVE	CN-2565-02.02 / H-10	C	ACT	3	4	CK	SA	O/C	O	N/A	BDC CVO	II II		
2WL867A	VUCDT CONTAINMENT ISOL	CN-2565-02.01 / I- 07	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		
2WL868	VUCDT CONTAINMENT ISOL BYPASS CHECK	CN-2565-02.01 / I- 06	A/C	ACT	2	1	CK	SA	O/C	C	N/A	BDO CVC LTJ	II II J		
2WL869B	UNIT 2 VENT UNIT CONDENSATE DRAIN TANK CONTAINMENT ISOL	CN-2565-02.01 / H-07	A	ACT	2	4	GA	MO	O	C	FAI	RPI LT FSC ST-C	2Y 2Y Q Q		

Valve Summary Listing

Page 221 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2WL894	FLOOR DRAIN SUMP C PUMPS DISCH CHECK	CN-2565-02.02 / E-09	C	ACT	3	2	CK	SA	O/C	C	N/A	BDO CVC	II II		
2WLA21	S/G DRAIN PUMP DISCH CONTAINMENT ISOL	CN-2565-02.06 / G-10	A	PASS	2	3	GA	MA	C	C	N/A	LT	2Y		
2WLA22	S/G DRAIN PUMP DISCH CONTAINMENT ISOL CHECK	CN-2565-02.06 / H-10	A/C	ACT	2	0.75	CK	SA	O/C	O/C	N/A	CVC CVO LTJ	II II J		
2WLA24	UNIT 2 S/G DRAIN PUMP DISCH CONTAINMENT ISOL	CN-2565-02.06 / G-12	A	PASS	2	3	GA	MA	C	C	N/A	LT	2Y		
2WLA33	S/G DRAIN PUMP DISCH RELIEF	CN-2565-02.06 / H-07	C	ACT	NC	2	RV	SA	C	O/C	N/A	RV	I		
2WN004	2A D/G ENG SUMP PUMP 2A1 DISCH CHECK	CN-2609-07.00 / J- 6	C	ACT	3	3	CK	SA	O/C	O	N/A	BDC CVO	II II		
2WN006	2A D/G ENG SUMP PUMP 2A2 DISCH CHECK	CN-2609-07.00 / J- 9	C	ACT	3	3	CK	SA	O/C	O	N/A	BDC CVO	II II		
2WN012	2B D/G ENG SUMP PUMP 2B1 DISCH CHECK	CN-2609-07.00 / E-6	C	ACT	3	3	CK	SA	O/C	O	N/A	BDC CVO	II II		
2WN014	2B D/G ENG SUMP PUMP 2B2 DISCH CHECK	CN-2609-07.00 / E-9	C	ACT	3	3	CK	SA	O/C	O	N/A	BDC CVO	II II		
2YM119B	YM CONT ISOL	CN-1601-03.01 / E-09	A	ACT	2		GL	MO	O	C	FAI	RPI LTJ FSC ST-C	2Y J Q Q		

Valve Summary Listing

Page 222 of 222

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2YM121	YM HDR CONTAINMENT ISOL CHECK	CN-1601-03.01 / E-11	A/C	ACT	2		CK	SA	O/C	C	N/A	BDO	II		
												CVC	II		
												LTJ	J		

Valve Justifications Listing - Image

Page 1 of 2

Justification for Deferral

Item Number: CSJ-CN-BB-01

Valve: 1BB8A, 1BB10B, 1BB19A, 1BB21B, 1BB56A, 1BB57B, 1BB60A, 1BB61B 2BB8A, 2BB10B, 2BB19A, 2BB21B, 2BB56A, 2BB57B, 2BB60A, 2BB61B

Flow Diagram: CN-1580-01.00, CN-2580-01.00

Code Category: B

ASME Class: 2

Function: The BB System operates continuously during most modes of unit operation, to control steam generator water chemistry and corrosion product buildup. This helps to control the corrosive attack on the steam generator materials.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve close every three months.

Basis for Deferral: Full stroke testing of these BB system valves results in a plant reactivity transient of an approximate 0.6 percent power increase. To establish test conditions during normal plant operation, reactor engineering and plant operators must develop and implement a reactivity plan. Several industry documents which are based on industry operating experience, risk insights, etc. contain recommendations and practices that tend to discourage plant elected reactivity changes. For example, WANO SOER 2007-1 states economic and scheduling concerns are secondary to reactor safety. WANO GL 2005-03 Attribute III provides precautions to control activities that could affect core reactivity such as procedure details describing amount/rate of reactivity changes, new procedures, as well as maintenance activities during work planning activities. Attribute VI describes adequate work management processes that establish proper priority and coordination of work on systems that affect reactivity control and monitoring. Regulatory Guide DG-1287 paragraph 1.1.3 'Reduce Unnecessary Burdens' discusses changes to surveillances that may lead to plant transients or place unnecessary administrative burdens on plant personnel that are not justified by the safety significance of the surveillance requirement. It adds that these

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 2 of 2
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Valve Justifications Listing - Image

Page 2 of 2

changes might allow an increased allocation of the plant personnel's time to more safety-significant aspects. In addition, paragraph 2.3.4 'Assumption in Completion Time and Surveillance Frequency Evaluations' refers to surveillance frequency evaluations should consider a certain assumption: Notwithstanding the beneficial aspects of testing to detect failures that occur in a standby period, a number of adverse effects may be associated with the test, including downtime to conduct the test, errors of restoration after the test, test-caused transients, and test-caused wear of the equipment. NUREG-1482 revision2 paragraph 2.4.5 also discusses the risk associated with quarterly testing may outweigh the benefits that might otherwise be achieved. Thus, it is appropriate for licensees to weigh the safety impact against the benefits of testing as a basis for deferring testing from a quarterly frequency to cold shutdown or refueling outages. In summary, failures of these valves in the closed position have a short duration impact on the overall SG chemistry index. However, these valves have exhibited exemplary performance. Reactivity management impacts when combined with potential SG health effects from Chemistry Index changes support a Cold Shutdown test frequency..

Test Alternative &
Frequency:

These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTD IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number:	CSJ-CN-CA-05
Valve:	2CA0149, 2CA0150, 2CA0151, 2CA0152
Flow Diagram:	CN-2592-1.1
Code Category:	B
ASME Class:	2
Function:	Close on Feedwater Isolation signal and Phase "A" Containment Isolation signal.
Test Requirement:	Exercise Fail to Safe Position every three months. Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve close every three months.
Basis for Deferral:	The Westinghouse D-5 steam generator design requires these valves to be used for a portion of the main Feedwater flow during power operation. Closing these valves at 100% power would isolate this flow, possibly resulting in preheater damage.
Test Alternative & Frequency:	These valves will be: Exercise Fail to Safe Position at Cold Shutdown conditions. Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1

Justification for Deferral

Item Number:	CSJ-CN-CF-01
Valve:	1CF0033, 1CF0042, 1CF0051, 1CF0060 2CF0033, 2CF0042, 2CF0051, 2CF0060
Flow Diagram:	CN-1591-1.1 CN-2591-1.1
Code Category:	B
ASME Class:	2
Function:	Isolates main feedwater piping from the steam generators upon receipt of a feedwater isolation signal.
Test Requirement:	Exercise Fail to Safe Position every three months. Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve close every three months.
Basis for Deferral:	Closing these valves during power operation is considered impractical from an operating viewpoint. Closure would isolate feedwater to the steam generator which may result in a severe transient in the steam generator, possibly causing a unit trip.
Test Alternative & Frequency:	These valves will be: Exercise Fail to Safe Position at Cold Shutdown conditions. Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number:	CSJ-CN-CF-04
Valve:	1CF0028, 1CF0037, 1CF0046, 1CF0055 2CF0028, 2CF0037, 2CF0046, 2CF0055
Flow Diagram:	CN-1591-1.1 CN-2591-1.1
Code Category:	B
ASME Class:	3
Function:	Control valves normally modulated by the Digital Feedwater Control System (DFCS) to maintain proper steam generator water level. Automatic closure will occur upon transfer to the auxiliary shutdown panel, an inboard doghouse Hi-Hi water level, or a feedwater isolation signal.
Test Requirement:	Measure Full Stroke Time – Quarterly Exercise valve (full stroke) to the position required to fulfill its function every 3 months.
Basis for Deferral:	Closing these valves during power operation is considered impractical from an operating viewpoint. Closure would reduce feedwater to the steam generators which may result in a severe transient in the steam generator, possibly causing a unit trip.
Test Alternative & Frequency:	Valves will be exercised (full stroke) to the closed position and stroke timed during cold shutdown.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 2

Justification for Deferral

Item Number: CSJ-CN-CF-05

Valve: 1CF0030, 1CF0039, 1CF0048, 1CF0057
2CF0030, 2CF0039, 2CF0048, 2CF0057

Flow Diagram: CN-1591-1.1
CN-2591-1.1

Code Category: B

ASME Class: ANSI B31.1 (Class F)

Function: Bypass control valves normally modulated by the Digital Feedwater Control System (DFCS) to maintain proper steam generator water level. Automatic closure will occur upon transfer to the auxiliary shutdown panel, an inboard doghouse Hi-Hi water level, or a feedwater isolation signal.

Test Requirement: Exercise Fail to Safe Position every three months.
Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve close every three months.

Basis for Deferral: Closing these valves during power operation is considered impractical from an operating viewpoint. Closure would reduce feedwater to the steam generators which may result in a severe transient in the steam generator, possibly causing a unit trip.

Test Alternative & Frequency: These valves will be:
Exercise Fail to Safe Position at Cold Shutdown conditions.
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

These valves are Augmented and the CSJ is entered for record keeping purposes only. ASME Code requirements do not apply to Augmented components. The components entered on the document will not be shown on the Standard ISTC valve table, but will be shown as part of the Augmented Test Program.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTD IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-KC-01

Valve: 1KC320A, 1KC332B, 1KC333A
2KC320A, 2KC332B, 2KC333A

Flow Diagram: CN-1573-1.3
CN-2573-1.3

Code Category: B

ASME Class: 2

Function: Isolates flow to the reactor coolant drain tank heat exchanger upon receipt of a high containment pressure signal.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve close every three months.

Basis for Deferral: Failure of one of these valves in the closed position during testing would inhibit the flow path through the reactor coolant drain tank heat exchanger. This would result in boiling of the water in the reactor coolant drain tank resulting in excess heat in containment. This increased heat load could cause unit shutdown due to exceeding Tech Spec containment temperature limits.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Justification for Deferral

Item Number:	CSJ-CN-KC-02
Valve:	1KC0338B, 1KC0424B, 1KC0425A 2KC0338B, 2KC0424B, 2KC0425A
Flow Diagram:	CN-1573-1.3 CN-2573-1.3
Code Category:	B
ASME Class:	2
Function:	Isolates flow for the reactor vessel support coolers, reactor coolant pump motor bearing coolers, and reactor coolant pump thermal barriers, upon receipt of a high-high containment pressure signal.
Test Requirement:	Measure Full Stroke Time – Quarterly Exercise valve (full stroke) to the position required to fulfill its function and stroke time every 3 months.
Basis for Deferral:	Failure of these valves in the closed position during testing would inhibit flow to the reactor vessel support coolers, reactor coolant pump motor bearing coolers, and reactor coolant pump thermal barriers. This action could result in unit shutdown and possible damage to the vessel and reactor coolant pumps.
Test Alternative & Frequency:	Valve will be exercised (full stroke) to the position required to fulfill its safety function and stroke timed during cold shutdown.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 2
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Valve Justifications Listing - Image
Page 1 of 2
Justification for Deferral

Item Number: CSJ-CN-NC-02

Valve: 1NC0032B, 1NC0034A, 1NC0036B
2NC0032B, 2NC0034A, 2NC0036B

Flow Diagram: CN-1553-1.1
CN-2553-1.1

Code Category: B

ASME Class: 1

Function: Reactor Coolant System PORV opens to relieve pressure for the primary system.

Test Requirement: Exercise Fail to Safe Position every three months.
Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve close every three months.
Stroke time valve open every three months.

Basis for Deferral: The PORVs are operated automatically or by remote manual control and perform several design basis functions requiring open and close operations including: NC System pressure control in the mitigation of a steam generator tube rupture (SGTR) accident, NC System pressure control (depressurization) during plant cooldown, reduction in challenges to the Pressurizer Safety Relief Valves for overpressurization events, low temperature overpressure protection of the reactor vessel during startup and shutdown, and aid in maintaining integrity of the RCPB (related to controlling identified leakage and ensuring the ability to detect unidentified RCPB leakage). With NC32B open and incapable of closing or closed and experiencing excessive seat leakage, the valve is declared inoperable. These valves have a safety related function in the closed position to in order to maintain the system pressure boundary. This normally closed valve is a Class 1 to non-Code boundary valve. Also according to NRC Branch Technical Position RSB5-2 the full stroke exercise should take place during cold shutdown vs. quarterly during power operations due to the high probability of sticking open. Technical Specifications prevents Catawba from performing the surveillance test in Modes 1 and 2.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTD IST 1.0.6 Page 2 of 2
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Valve Justifications Listing - Image
Page 2 of 2

Test Alternative &
Frequency:

These valves will be:
Exercise Fail to Safe Position at Cold Shutdown conditions.
Exercise valve (full stroke) to the position required to fulfill its
function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1

Justification for Deferral

Item Number: CSJ-CN-NC-03

Valve: 1NC0250A, 1NC0251B, 1NC0252B, 1NC0253A
2NC0250A, 2NC0251B, 2NC0252B, 2NC0253A

Flow Diagram: CN-1553-1.1
CN-2553-1.1

Code Category: B

ASME Class: 1

Function: Reactor vessel head vent.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open and closed every three months.

Basis for Deferral: Opening these valves at full pressure could cause damage to the valve seating surfaces. A reactor coolant leak could be caused.

Test Alternative & Frequency: Valve will be cycled and timed during cold shutdown.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-ND-01
Valve:	1ND0001B, 1ND0002A 2ND0001B, 2ND0002A
Flow Diagram:	CN-1561-1.0 CN-2561-1.0
Code Category:	A
ASME Class:	1
Function:	Valves open to provide suction to Residual Heat Removal Pump A during normal unit cooldown.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months.
Basis for Deferral:	These valves have been provided with an interlock which prevents their opening when Reactor Coolant System pressure is above approximately 425 PSIG.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number: CSJ-CN-ND-02

Valve: 1ND0036B, 1ND0037A
2ND0036B, 2ND0037A

Flow Diagram: CN-1561-1.1
CN-2561-1.1

Code Category: A

ASME Class: 1

Function: Valves open to provide suction to Residual Heat Removal Pump B during normal unit cooldown.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open every three months.

Basis for Deferral: These valves have been provided with an interlock which prevents their opening when Reactor Coolant System pressure is above approximately 425 PSIG.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number:	CSJ-CN-ND-04
Valve:	1ND0032A, 1ND0065B 2ND0032A, 2ND0065B
Flow Diagram:	CN-1561-1.0, CN-1561-1.1 CN-2561-1.0, CN-2561-1.1
Code Category:	B
ASME Class:	2
Function:	Cross connect cold leg injection flow path from the two trains of residual heat removal.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	Based on Engineering and Westinghouse evaluation, closing one of these valves renders both trains of residual heat removal inoperable. This is not allowed by Technical Specification in Modes 1-3 since both trains are required to be operable. Technical Specification requires one of train of ND to be operable in Mode 4.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTD IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-ND-05
Valve:	1ND0028A 2ND0028A
Flow Diagram:	CN-1561-1.0 CN-2561-1.0
Code Category:	B
ASME Class:	2
Function:	Residual Heat Removal pump supply to NV and NI pumps.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	Opening valve provides flow path from FWST to suction of centrifugal charging pumps. This could result in a plant transient due to an increase in RCS Boron inventory.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-NI-01
Valve:	1NI0009A, 1NI0010B 2NI0009A, 2NI0010B
Flow Diagram:	CN-1562-1.0 CN-2562-1.0
Code Category:	B
ASME Class:	2
Function:	Opens to allow flow from centrifugal charging pump discharge to reactor coolant loop cold leg.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	Exercising these valves quarterly during power operations would result in flow of non-preheated water through the injection lines and thermal shocking of the injection nozzles.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-NI-08
Valve:	1NI0100B 2NI0100B
Flow Diagram:	CN-1562-1.2 CN-2562-1.2
Code Category:	B
ASME Class:	2
Function:	Provides suction for both trains of safety injection pumps from the refueling water storage tank.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	Failure of this valve in the closed position during testing would render both trains of safety injection pumps inoperable.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1

Justification for Deferral

Item Number:	CSJ-CN-NI-09
Valve:	1NI0147B 2NI0147B
Flow Diagram:	CN-1562-1.2 CN-2562-1.2
Code Category:	B
ASME Class:	2
Function:	Valve is normally open to provide miniflow path to the refueling water storage tank.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	Failure of this valve in the closed position during testing would result in loss of miniflow path for both trains of safety injection pumps. This would result in pump damage due to dead heading the safety injection pumps in the event of a safety injection signal with reactor coolant pressure above 1520 psig (Safety Injection Pump Discharge Pressure).
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-NI-12

Valve: 1NI0162A
2NI0162A

Flow Diagram: CN-1562-1.3
CN-2562-1.3

Code Category: B

ASME Class: 2

Function: Valve is normally open to provide cold leg injection flow from both trains of safety injection pumps.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open every three months.
Stroke time valve close every three months.

Basis for Deferral: Failure of this valve in the closed position during testing would result in loss of cold leg injection flow from the safety injection pumps rendering both trains of safety injection inoperable.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-NI-15
Valve:	1NI0173A, 1NI0178B 2NI0173A, 2NI0178B
Flow Diagram:	CN-1562-1.3 CN-2562-1.3
Code Category:	B
ASME Class:	2
Function:	Each valve isolates two of the four cold leg injection flow paths from the residual heat removal discharge crossover line.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	Based on Engineering and Westinghouse evaluation, closing one of these valves renders both trains of residual heat removal inoperable. This is not allowed by Technical Specification in Modes 1-3 since both trains are required to be operable. Technical Specification requires one train of ND to be operable in Mode 4.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-NI-16

Valve: 1NI0183B
2NI0183B

Flow Diagram: CN-1562-1.2
CN-2562-1.2

Code Category: B

ASME Class: 2

Function: Opens to align hot leg injection during recirculation phase following safety injection actuation.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open every three months.
Stroke time valve close every three months.

Basis for Deferral: Based on Engineering and Westinghouse evaluation, in order for a train of ND to be operable to perform its ECCS function, it must be able to discharge into all four cold leg injection lines. This is in the event of single train failure. With this additional valve open, one ND pump could then be aligned to all four cold leg injection paths plus two hot leg paths during an ECCS actuation.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number:	CSJ-CN-NI-17
Valve:	1NI0184B, 1NI0185A 2NI0184B, 2NI0185A
Flow Diagram:	CN-1562-1.3 CN-2562-1.3
Code Category:	B
ASME Class:	2
Function:	Opens to provide flow from the Containment Sump to the suction of Residual Heat Removal and Containment Spray Pumps during post accident recirculation phase.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	To prevent water from entering lower containment when cycling these valves, piping downstream must be drained. This results in making one train of ECCS inoperable for an extended period of time until completion of the test, refilling the piping and realignment of isolation valves. Also, the large amount of potentially contaminated water that must be drained is a major Health Physics and Radwaste Chemistry problem.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-NI-18

Valve: 1NI0332A, 1NI0333B
2NI0332A, 2NI0333B

Flow Diagram: CN-1562-1.2
CN-2562-1.2

Code Category: B

ASME Class: 2

Function: Aligns discharge of ND Pump 1A to suction of NI and NV Pumps.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open every three months.
Stroke time valve close every three months.

Basis for Deferral: If one of these valves were to fail in the open position during testing, the FWST would be aligned to the suction of the charging pumps. This could result in an increase in RCS Boron inventory and could result in plant shutdown.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-NI-19
Valve:	1NI0136B 2NI0136B
Flow Diagram:	CN-1562-1.2 CN-2562-1.2
Code Category:	B
ASME Class:	2
Function:	Valve is opened for the recirculation phase of ECCS operation to allow flow from the residual heat removal pumps to the safety injection pumps.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	Based on Engineering evaluation, opening this valve during power operation could degrade ND system flow in the event of a Large Break LOCA.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1

Justification for Deferral

Item Number: CSJ-CN-NI-21

Valve: 1NI0121A, 1NI0152B
2NI0121A, 2NI0152B

Flow Diagram: CN-1562-1.2
CN-2562-1.2

Code Category: B

ASME Class: 2

Function: Valves 1(2)NI0121A and 1(2)NI0152B are motor operated gate valves on the discharge side of NI Pump A and B to NC Loops B&C and A&D, respectively. The valves are normally closed during the injection phase and cold leg recirculation phases of ECCS operation to prevent diversion of flow via the NC hot legs.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open every three months.
Stroke time valve close every three months.

Basis for Deferral: Exercising the valves in modes 1-3 can result in challenging NI pump discharge relief valves and overpressurization of NI piping due to reactor coolant leakage pressurizing piping downstream.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number:	CSJ-CN-NI-22
Valve:	1NI0144A, 2NI0144A
Flow Diagram:	CN-1562-1.2 CN-2562-1.2
Code Category:	B
ASME Class:	2
Function:	Valves NI0144A are motor operated valves on the NI Pump B miniflow line. The valves are open during the injection mode when the NI Pumps are operating. During the recirculation mode, when the NI Pumps are taking suction from the containment sump (via the ND System), the valves are closed to isolate the miniflow line. Closure of the valves prevents the possibility of introducing reactor coolant water into the FWST and diversion of flow from the NC System. The valves are also interlocked with valves ND0028A & NI0136B such that they can not be opened unless valves ND0028A and NI0136B are closed.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve open every three months. Stroke time valve close every three months.
Basis for Deferral:	If NI0144A was closed for testing and of a loss of offsite power with the loss of Train A diesel generator as the single failure occurred, the valve could not be reopened which would result in a loss of both NI pumps.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve open at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-NI-23

Valve: 1NI0334B, 2NI0334B

Flow Diagram: CN-1562-1.2
CN-2562-1.2

Code Category: B

ASME Class: 2

Function: Provides flowpath from B Train of Residual Heat Removal to B Train of Chemical and Volume Control, and from A Train of Residual Heat Removal to A Train of Safety Injection.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open every three months.
Stroke time valve close every three months.

Basis for Deferral: Closing this valve during power operation degrades both trains of Safety Injection. With the single failure of Train B diesel generator, Train A of Safety Injection, which is provided suction from Residual Heat Removal via NI0334B or NI0136B, would be inoperable (since NI0136B is normally closed). Train B of Safety Injection would already be inoperable due to the single failure.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1

Justification for Deferral

Item Number: CN-NI-24

Valve: 1NI0103A, 2NI0103A

Flow Diagram: CN-1562-1.2
CN-2562-1.2

Code Category: B

ASME Class: 2

Function: Provides flow from the Refueling Water Storage Tank to the A Train Safety Injection Pump suction. This valve also provides a flow path from the B Train Residual Heat Removal Pump to the A Train Safety Injection Pump and both Centrifugal Charging Pumps.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open every three months.
Stroke time valve close every three months.

Basis for Deferral: Closing this valve during power operations degrades both trains of the Chemical and Volume Control System. In the event of a loss of offsite power with the loss of the Train A Diesel Generator as the single failure when the valve was closed, B Train NV would be lost for sump recirculation mode of operation. Train A NV would already be inoperable due to the single failure.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number: CSJ-CN-NS-03

Valve: 1NS0038B, 1NS0043A
2NS0038B, 2NS0043A

Flow Diagram: CN-1563-1.0
CN-2563-1.0

Code Category: B

ASME Class: 2

Function: Residual Heat Pump A (and B) to Containment Spray Header
Containment Isolation Valve.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its
function every three months.
Stroke time valve close every three months.

Basis for Deferral: If an accident occurred with one of these valves open, injection
flow would be diverted from both trains of the ND System.

Test Alternative &
Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its
function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-NV-01
Valve:	1NV0015B 2NV0015B
Flow Diagram:	CN-1554-1.0 CN-2554-1.0
Code Category:	A
ASME Class:	2
Function:	Valves closes to isolate flow to the letdown heat exchanger.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve close every three months.
Basis for Deferral:	Failure of this valve in the closed position during testing would result in loss of pressurizer level control and could result in plant shutdown.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-NV-02

Valve: 1NV0089A, 1NV0091B
2NV0089A, 2NV0091B

Flow Diagram: CN-1554-1.0
CN-2554-1.0

Code Category: B

ASME Class: 2

Function: These valves isolate the return flow path from the reactor coolant pump seal water supply.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve close every three months.

Basis for Deferral: Closure of one of these valves during power operation would increase backpressure on the seals, reducing leakoff flow and lifting relief valve 1(2)NV0087 to divert leakoff to the PRT. Damage to RCP seals could result.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-NV-03

Valve: 1NV0188A, 1NV0189B
2NV0188A, 2NV0189B

Flow Diagram: CN-1554-1.1
CN-2554-1.1

Code Category: B

ASME Class: 2

Function: Valves close to isolate the volume control tank (normal charging supply) upon receipt of a safety injection signal.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve close every three months.

Basis for Deferral: Closure of one of these valves during normal unit operation would isolate the normal suction for the charging pumps. Alternate suction paths would result in increasing the reactor coolant system boron inventory and could result in plant shutdown. In addition, seal water for the reactor coolant pumps would be inhibited. This may result in damage to the reactor coolant pump seals.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-NV-04
Valve:	1NV0312A, 1NV0314B 2NV0312A, 2NV0314B
Flow Diagram:	CN-1554-1.2 CN-2554-1.2
Code Category:	B
ASME Class:	2
Function:	Valves close to isolate the charging line to the Reactor Coolant System upon receipt of a safety injection signal.
Test Requirement:	Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve close every three months.
Basis for Deferral:	Closure of one of these valves during power operation would isolate charging flow to the Reactor Coolant System. This could result in loss of pressurizer level control and cause plant shutdown.
Test Alternative & Frequency:	These valves will be: Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-NV-10

Valve: 1NV0252A, 1NV0253B
2NV0252A, 2NV0253B

Flow Diagram: CN-1554-1.7
CN-2554-1.7

Code Category: B

ASME Class: 2

Function: Aligns refueling water storage tank (FWST) to the suction of the centrifugal charging pumps upon receipt of a safety injection signal.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve open every three months.
Stroke time valve close every three months.

Basis for Deferral: If one of these valves were to fail in the open position during testing, the FWST would be aligned to the suction of the charging pumps. This would result in an increase in RCS Boron inventory and could result in a plant shutdown.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve open at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 2
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Valve Justifications Listing - Image

Page 1 of 2

Justification for Deferral

Item Number:	CSJ-CN-NV-11
Valve:	1NV0010A, 1NV0011A, 1NV0013A 2NV0010A, 2NV0011A, 2NV0013A
Flow Diagram:	CN-1554-1.0 CN-2554-1.0
Code Category:	B
ASME Class:	2
Function:	<p>These valves must automatically close to isolate containment upon receipt of a Pressurizer Low Level signal, if either valve 1(2)NV0001A or 1(2)NV0002A closes, upon receipt of a Phase A Containment Isolation Signal (ST), or on a concurrent failure of the PD pump and both centrifugal charging pumps. These valves are cross-interlocked with valves 1(2)NV0001A and 1(2)NV0002A such that they will automatically close if either 1(2)NV0001A or 1(2)NV0002A is not in the "Open" position. These valves can be operated from the Auxiliary Shutdown Panel, and cannot be opened unless valves 1(2)NV0001A and 1(2)NV0002A are both open.</p>
Test Requirement:	<p>Exercise Fail to Safe Position every three months. Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve close every three months.</p>
Basis for Deferral:	<p>Letdown header relief valve 1(2)NV0014 has experienced lifting and subsequent seat leakage as a result of pressure transients during orifice swaps for stroke time testing of valves 1(2)NV0010A, 1(2)NV0011A, and 1(2)NV0013A. Leakage past 1(2)NV0014 is considered Reactor Coolant (NC) system leakage. This leakage directly impacts Technical Specification.</p> <p>Based on the above, testing of these valves is impractical and non-conservative during power operation.</p>
Test Alternative & Frequency:	These valves will be:

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 2 of 2
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Valve Justifications Listing - Image

Page 2 of 2

Exercise Fail to Safe Position at Cold Shutdown conditions.

Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.

Stroke time valve close at Cold Shutdown conditions.

Justification for Deferral

Item Number:	CSJ-CN-NV-12
Valve:	1NV0001A, 1NV0002A 2NV0001A, 1NV0002A
Flow Diagram:	CN-1554-1.0 CN-2554-1.0
Code Category:	B
ASME Class:	1
Function:	Valves closes to isolate flow to the letdown heat exchanger on a Pressurizer low level signal.
Test Requirement:	Exercise Fail to Safe Position every three months. Exercise valve (full stroke) to the position required to fulfill its function every three months. Stroke time valve close every three months.
Basis for Deferral:	Failure of this valve in the closed position during testing would result in loss of pressurizer level control and could result in plant shutdown. Failure of a letdown valve in the closed position coincident with normal charging flow could also result in a high RCS water level trip.
Test Alternative & Frequency:	These valves will be: Exercise Fail to Safe Position at Cond Shutdown conditions. Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions. Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number: CN-RF-02

Valve: 1RF0389B, 1RF0447B
2RF0389B, 2RF0447BFlow Diagram: CN-1599-2.2
CN-2599-2.2

Category: A

ASME Class: 2

Function: Opens to allow Fire Protection (RF) System supply to the containment fire suppression headers. Closes to provide containment isolation.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve close every three months.

Basis for Deferral: Opening these valves during power operations could introduce water into normally dry headers. Containment entry at power is required to drain the headers.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: CSJ-CN-RN-02

Valve: 1RN0437B
2RN0437B

Flow Diagram: CN-1574-2.8
CN-2574-2.2

Code Category: B

ASME Class: 2

Function: This valve closes on a high-high containment pressure signal to isolate the supply header to lower containment.

Test Requirement: Exercise valve (full stroke) to the position required to fulfill its function every three months.
Stroke time valve close every three months.

Basis for Deferral: Failure of this valve in the closed position during testing would result in loss of nuclear service water flow to the reactor coolant pump motor coolers. This would result in unit shutdown and possible damage to the reactor coolant pumps.

Test Alternative & Frequency: These valves will be:
Exercise valve (full stroke) to the position required to fulfill its function at Cold Shutdown conditions.
Stroke time valve close at Cold Shutdown conditions.

Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number:	CSJ-CN-RN-03
Valve:	1RN0484A, 1RN0487B 2RN0484A, 2RN0487B
Flow Diagram:	CN-1574-2.2 CN2574-2.1, CN-2574-2.2
Code Category:	B
ASME Class:	2
Function:	Valves close on a high-high containment pressure signal to isolate the lower containment return header.
Test Requirement:	Measure Full Stroke Time – Quarterly Exercise valves (full stroke) to the position required to fulfill its function and stroke time every 3 months.
Basis for Deferral:	Failure of one of these valves in the closed position during testing would result in loss of nuclear service water flow to the reactor coolant pump motor coolers. This would result in unit shutdown and possible damage to the reactor coolant pumps.
Test Alternative & Frequency:	Valve will be exercised (full stroke) to the position required to fulfill its function and stroke timed during cold shutdown.

Catawba 4th Interval Catawba Nuclear Plant Interval 4	Standard Code ISTC IST 1.0.6 Page 1 of 1
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Valve Justifications Listing - Image
Page 1 of 1

Justification for Deferral

Item Number:	CSJ-CN-VI-02
Valve:	1VI0077B 2VI0077B
Flow Diagram:	CN-1605-1.4 CN-2605-1.5
Code Category:	A
ASME Class:	2
Function:	Provides containment isolation. Closes upon receipt of a containment high-high pressure signal.
Test Requirement:	Measure Full Stroke Time – Quarterly Exercise valve (full stroke) to the position required to fulfill its function and stroke time every 3 months.
Basis for Deferral:	Failure of this valve in the closed position during testing would result in loss of instrument air supply to valves and controls within containment. This would result in loss of normal reactor coolant letdown, containment ventilation unit controls, normal air supply to the power operated relief valves, etc., thereby possibly causing unit shutdown.
Test Alternative & Frequency:	Valve will be exercised (full stroke) to the position required to fulfill its function and stroke timed during cold shutdown. Leak rate performance testing will be performed at refueling.

Valve Justifications Listing - Image

Page 1 of 1

Justification for Deferral

Item Number:	CN-NV-07
Valve:	1NV0202B, 1NV0203A 2NV0202B, 2NV0203A
Flow Diagram:	CN-1554-1.6 CN-2554-1.6
Code Category:	B
ASME Class:	2
Function:	Valves can be closed to isolate the centrifugal charging pump miniflow line during cold leg injection phase following a LOCA.
Test Requirement:	Measure Full Stroke Time – Quarterly Exercise valve (full stroke) to the position required to fulfill its function and stroke time every 3 months.
Basis for Deferral:	Failure of one of these valves in the closed position during test would isolate the centrifugal charging pumps miniflow line. This path must remain open in the event of a LOCA until the operator verifies a primary side break at which time the valves are closed. In the event of a secondary side break, the miniflow path must remain open in order to prevent possible dead heading and damaging the centrifugal charging pumps.
Test Alternative & Frequency:	Valve will be exercised (full stroke) to the position required to fulfill its function and stroke timed during cold shutdown.

Valve Justifications Listing - Image
Page 1 of 1

Justification for Deferral

Item Number: CSJ-CN-SM-01

Valve: 1SM0001, 1SM0003, 1SM0005, 1SM0007
2SM0001, 2SM0003, 2SM0005, 2SM0007

Flow Diagram: CN-1593-1.0
CN-2593-1.0

Code Category: B

ASME Class: 2

Function: Main steam isolation valves.

Test Requirement: Measure Full Stroke Time/Failed to Safe Position – Quarterly
Exercise valve (full stroke) to the position required to fulfill its
function, stroke time, and verify fail safe actuation every 3 months.

Basis for Deferral: Closure of these valves during power operation could introduce a
severe transient in the main steam lines which could cause a unit
trip.

Test Alternative & : Valves will be exercised (full stroke) to the position required to fulfill
Frequency its function, stroke timed, and fail safe actuation verified during
startup after cold shutdown.

Valve Justifications Listing - Image
Page 1 of 1
Justification for Deferral

Item Number: ROJ-CN-NI-25

Valve: INI0054A, INI0065B, 1NI0076A, 1NI0088B
2NI0054A, 2NI0065B, 2NI0076A, 2NI0088B

Flow Diagram: CN-1562-1.1
CN-2562-1.1

Code Category: B

ASME Class: 2

Function: Valve is administratively open with power removed during normal operation. Some accidents require closure of these valves to prevent injecting nitrogen into the NC System.

Test Requirement: Measure Full Stroke Time - Quarterly
Exercise valve full stroke to the position required to fulfill its function and stroke time every three months.

Basis for Deferral: Valves cannot be full or partial stroke exercised during power operations since closure of any of the four valves violates TS
3.5.1.

Test Alternative & Frequency: These valves will be exercised (Open/Closed) to the position required to fulfill their safety function during refueling.

Pump Summary Listing

Page 1 of 2

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
1NVPUSB	STANDBY MAKEUP PUMP	CN-1554-01.08	Aug-B	NC	Positive Displacement	Fixed	GE600	dP Q	2Y 2Y		

Pump Summary Listing

Page 2 of 2

PUMP ID	FUNCTION	DRAWING/COOR	GROUP	CLASS	TYPE	FIXED OR VAR.	ACTUAL SPEED	TEST REQ	FREQ	PROCEDURE	NOTES
2NVPUSB	STANDBY MAKEUP PUMP	CN-2554-01.08	Aug-B	NC	Positive Displacement	Fixed	GE600	dP Q	2Y 2Y		

Valve Summary Listing

Page 1 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CACK0360	CA PUMP #1 (TD) FLOW CONTROL TO 1D S/G CHECK VALVE #1	CN-1499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CACK0361	CA PUMP #1 (TD) FLOW CONTROL TO 1D S/G CHECK VALVE #2	CN-1499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CACK0400	1B CA PUMP (MD) FLOW CONTROL TO 1D S/G CHECK VALVE #1	CN-1499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CACK0401	1B CA PUMP (MD) FLOW CONTROL TO 1D S/G CHECK VALVE #2	CN-1499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CACK0440	1B CA PUMP (MD) FLOW CONTROL TO 1C S/G CHECK VALVE #1	CN-1499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CACK0441	1B CA PUMP (MD) FLOW CONTROL TO 1C S/G CHECK VALVE #2	CN-1499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CACK0480	CA PUMP #1 (TD) FLOW CONTROL TO 1C S/G CHECK VALVE #1	CN-1499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		

Valve Summary Listing

Page 2 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CAACK0481	CA PUMP #1 (TD) FLOW CONTROL TO 1C S/G CHECK VALVE #2	CN-1499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CAACK0520	CA PUMP #1 (TD) FLOW CONTROL TO 1B S/G CHECK VALVE #1	CN-1499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CAACK0521	CA PUMP #1 (TD) FLOW CONTROL TO 1B S/G CHECK VALVE #2	CN-1499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CAACK0560	CA (MD) FLOW CONTROL TO 1B S/G CHECK VALVE #1	CN-1499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CAACK0561	CA (MD) FLOW CONTROL TO 1B S/G CHECK VALVE #2	CN-1499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CAACK0600	CA (MD) FLOW CONTROL TO 1A S/G CHECK VALVE #1	CN-1499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CAACK0601	CA (MD) FLOW CONTROL TO 1A S/G CHECK #2	CN-1499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
1CAACK0640	CA PUMP #1 (TD) FLOW CONTROL TO 1A S/G CHECK VALVE #1	CN-1499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		

Valve Summary Listing
Page 3 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1CACK0641	CA PUMP #1 (TD) FLOW CONTROL TO 1A S/G CHECK VALVE #2	CN-1499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC	18M		
												CVO	18M		
1CACK1740	RC TO CA SUCTION -AIR SUPPLY CHECK VALVE	CN-1499-CA.16-00 /	Aug-C	ACT	NC	0.5	CK	SA	O/C	O/C	N/A	CVC	18M		
												CVO	18M		
1LD002	1A D/G ENG DRIVEN LUBE OIL PUMP SUCTION RELIEF	CN-1609-02.00 / F- 9	Aug-C	ACT	NC	1.5	RV	SA	C	O/C	N/A	RV	10Y		
1LD032	1B D/G ENG DRIVEN LUBE OIL PUMP SUCTION RELIEF	CN-1609-02.02 / F- 9	Aug-C	ACT	NC	1.5	RV	SA	C	O/C	N/A	RV	10Y		
1NV234	BORIC ACID TO CHARGING PUMP CHECK	CN-1554-01.07 / G-12	Aug-C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVO	18M		
												DA	5Y		
1NV423	1A BORIC ACID TRANSFER PUMP DISCH CHECK	CN-1554-01.04 / F- 09	Aug-C	ACT	3		CK	SA	O/C	O/C	N/A	CVO	18M		
												DA	5Y		
1NV439	1B BORIC ACID TRANSFER PUMP DISCH CHECK	CN-1554-01.04 / C-09	Aug-C	ACT	3		CK	SA	O/C	O/C	N/A	CVO	18M		
												DA	5Y		
1SM185	1SM1 ACCUMULATOR AIR SUPPLY CHECK	CN-1593-01.08 / J- 05	Aug-C	ACT	3	0.75	CK	SA	O/C	O/C	N/A	CVC	CM		
												CVO	CM		
1SM189	1SM1 ACCUMULATOR RELIEF	CN-1593-01.08 / J- 05	Aug-C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	10Y		
1SM193	1SM3 ACCUMULATOR AIR SUPPLY CHECK	CN-1593-01.08 / E-05	Aug-C	ACT	3	0.75	CK	SA	O/C	O/C	N/A	CVC	CM		
												CVO	CM		
1SM197	1SM3 ACCUMULATOR RELIEF	CN-1593-01.08 / E-05	Aug-C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	10Y		

Valve Summary Listing
Page 4 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1SM201	1SM5 ACCUMULATOR AIR SUPPLY CHECK	CN-1593-01.08 / E-12	Aug-C	ACT	3	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	CM CM		
1SM205	1SM5 ACCUMULATOR RELIEF	CN-1593-01.08 / E-12	Aug-C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	10Y		
1SM209	1SM7 ACCUMULATOR AIR SUPPLY CHECK	CN-1593-01.08 / J- 12	Aug-C	ACT	3	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	CM CM		
1SM213	1SM7 ACCUMULATOR RELIEF	CN-1593-01.08 / J- 12	Aug-C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	10Y		
1VA028B	1A AUX BLDG FILTER UNIT (ABFU-1A) MINIFLOW INLET	CN-1577-1.2 / J-3	Aug-B	ACT	NC	6	BF	MO	C	O/C	FAI	FSC FSO RPI	2Y 2Y 2Y		
1VA029A	1A AUX BLDG FILTER UNIT (ABFU-1A) MINIFLOW OUTLET	CN-1577-1.2 / H-4	Aug-B	ACT	NC	6	BF	MO	C	O	FAI	FSO RPI	2Y 2Y		
1VA030B	1B AUX BLDG FILTER UNIT (ABFU-1B) MINIFLOW OUTLET	CN-1577-1.2 / H-5	Aug-B	ACT	NC	6	BF	MO	C	O	FAI	FSO RPI	2Y 2Y		
1VA031A	1B AUX BLDG FILTER UNIT (ABFU-1B) MINIFLOW INLET	CN-1577-1.2 / J-5	Aug-B	ACT	NC	6	BF	MO	C	O/C	FAI	FSC FSO RPI	2Y 2Y 2Y		

Valve Summary Listing

Page 5 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
1VE004	1AVS-D-4 (VE FAN 1A MINIFLOW DAMPER) (1VE-4)	CN1564-01.00 / G- 8	Aug-B	ACT	NC		BF	MO	C	O	FAI	FSO RPI	2Y 2Y		
1VE009	1AVS-D-9 (VE FAN 1B MINIFLOW DAMPER) (1VE-9)	CN1564-01.00 / G- 8	Aug-B	ACT	NC		BF	MO	C	O	FAI	FSO RPI	2Y 2Y		

Valve Summary Listing
Page 6 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CACK0360	CA PUMP #2 (TD) FLOW CONTROL TO 2D S/G CHECK VALVE #1	CN-2499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0361	CA PUMP #2 (TD) FLOW CONTROL TO 2D S/G CHECK VALVE #2	CN-2499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0400	2B CA PUMP (MD) FLOW CONTROL TO 2D S/G CHECK VALVE #1	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0401	2B CA PUMP (MD) FLOW CONTROL TO 2D S/G CHECK VALVE #2	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0440	2B CA PUMP (MD) FLOW CONTROL TO 2C S/G CHECK VALVE #1	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0441	2B CA PUMP (MD) FLOW CONTROL TO 2C S/G CHECK VALVE #2	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0480	CA PUMP #2 (TD) FLOW CONTROL TO 2C S/G CHECK VALVE #1	CN-2499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		

Valve Summary Listing
Page 7 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CACK0481	CA PUMP #2 (TD) FLOW CONTROL TO 2C S/G CHECK VALVE #2	CN-2499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0520	CA PUMP #2 (TD) FLOW CONTROL TO 2B S/G CHECK VALVE #1	CN-2499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0521	CA PUMP #2 (TD) FLOW CONTROL TO 2B S/G CHECK VALVE #2	CN-2499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0560	CA PUMP (MD) FLOW CONTROL TO 2B S/G CHECK VALVE #1	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0561	CA PUMP (MD) FLOW CONTROL TO 2B S/G CHECK VALVE #2	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0600	CA PUMP (MD) FLOW CONTROL TO 2A S/G CHECK VALVE #1	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0601	CA PUMP (MD) FLOW CONTROL TO 2A S/G CHECK VALVE #2	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		

Valve Summary Listing

Page 8 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2CACK0640	CAPT #2 (TD) FLOW CONTROL TO 2A S/G CHECK VALVE #1	CN-2499-CA.10-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK0641	CAPT #2 (TD) FLOW CONTROL TO 2A S/G CHECK VALVE #2	CN-2499-CA.07-00 /	Aug-C	ACT	3	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2CACK1740	RC TO CA SUCTION -AIR SUPPLY CHECK VALVE	CN-2499-CA.16-00 /	Aug-C	ACT	NC	0.5	CK	SA	O/C	O/C	N/A	CVC CVO	18M 18M		
2LD002	2A D/A ENG DRIVEN LUBE OIL PUMP SUCTION RELIEF	CN-2609-02.00 / F- 9	Aug-C	ACT	NC	1.5	RV	SA	C	O/C	N/A	RV	10Y		
2LD032	2B D/G ENG DRIVEN LUBE OIL PUMP SUCTION RELIEF	CN-2609-02.02 / F- 9	Aug-C	ACT	NC	1.5	RV	SA	C	O/C	N/A	RV	10Y		
2NV234	BORIC ACID TO NV PUMP CHECK	CN-2554-01.07 / G-12	Aug-C	ACT	2	2	CK	SA	O/C	O/C	N/A	CVO DA	18M 5Y		
2NV423	2A BORIC ACID TRANSFER PUMP DISCH CHECK	CN-2554-01.04 / F- 09	Aug-C	ACT	3		CK	SA	O/C	O/C	N/A	CVO DA	18M 5Y		
2NV439	2B BORIC ACID TRANSFER PUMP DISCH CHECK	CN-2554-01.04 / C-09	Aug-C	ACT	3		CK	SA	O/C	O/C	N/A	CVO DA	18M 5Y		
2SM185	2SM1 ACCUMULATOR AIR SUPPLY CHECK	CN-2593-01.08 / J- 05	Aug-C	ACT	3		CK	SA	O/C	O/C	N/A	CVC CVO	CM CM		
2SM189	2SM1 ACCUMULATOR RELIEF	CN-2593-01.08 / J- 05	Aug-C	ACT	3		RV	SA	C	O/C	N/A	RV	10Y		

Valve Summary Listing
Page 9 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2SM193	2SM3 ACCUMULATOR AIR SUPPLY CHECK	CN-2593-01.08 / E-05	Aug-C	ACT	3	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	CM CM		
2SM197	2SM3 ACCUMULATOR RELIEF	CN-2593-01.08 / E-05	Aug-C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	10Y		
2SM201	2SM5 ACCUMULATOR AIR SUPPLY CHECK	CN-2593-01.08 / E-12	Aug-C	ACT	3	0.75	CK	SA	O/C	O/C	N/A	CVC CVO	CM CM		
2SM205	2SM5 ACCUMULATOR RELIEF	CN-2593-01.08 / E-12	Aug-C	ACT	3	0.75	RV	SA	C	O/C	N/A	RV	10Y		
2SM209	2SM7 ACCUMULATOR AIR SUPPLY CHECK	CN-2593-01.08 / J- 12	Aug-C	ACT	3		CK	SA	O/C	O/C	N/A	CVC CVO	CM CM		
2SM213	2SM7 ACCUMULATOR RELIEF	CN-2593-01.08 / J- 13	Aug-C	ACT	3		RV	SA	C	O/C	N/A	RV	10Y		
2VA028B	2A AUX BLDG FILTER UNIT (ABFU-2A) MINIFLOW INLET	CN-1577-1.2 / J-12	Aug-B	ACT	NC	6	BF	MO	C	O/C	FAI	FSC FSO RPI	2Y 2Y 2Y		
2VA029A	2A AUX BLDG FILTER UNIT (ABFU-2A) MINIFLOW OUTLET	CN-1577-1.2 / H- 11	Aug-B	ACT	NC	6	BF	MO	C	O	FAI	FSO RPI	2Y 2Y		
2VA030B	2B AUX BLDG FILTER UNIT (ABFU-2B) MINIFLOW OUTLET	CN-1577-1.2 / H- 11	Aug-B	ACT	NC	6	BF	MO	C	O	FAI	FSO RPI	2Y 2Y		

Valve Summary Listing
Page 10 of 10

VALVE ID	FUNCTION	DRAWING/COOR	CAT	ACT/ PASS	CLASS	SIZE	TYPE	ACT	POSITION			TEST REQ	FREQ	PROCEDURE	NOTES
									NORM	SAFE	FAIL				
2VA031A	2B AUX BLDG FILTER UNIT (ABFU-2B) MINIFLOW INLET	CN-1577-1.2 / J-10	Aug-B	ACT	NC	6	BF	MO	C	O/C	FAI	FSC FSO RPI	2Y 2Y 2Y		
2VE004	2VE-4 (VE FAN 2A MINIFLOW ISOL) (2AVS-D- 4)	CN-2564-01.00- 010 / G-8	Aug-B	ACT	NC		BF	MO	C	O	FAI	FSO RPI	2Y 2Y		
2VE009	2VE-9 (VE FAN 2B MINIFLOW ISOL) (2AVS-D- 9)	CN-2564-01.00- 010 / G-8	Aug-B	ACT	NC		BF	MO	C	O	FAI	FSO RPI	2Y 2Y		