

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

January 22, 2020

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

Serial No.:	19-466
NSSL/RAP:	R0
Docket Nos.:	50-338
	50-339
License Nos.:	NPF-4
	NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION ENERGY VIRGINIA)
NORTH ANNA POWER STATION UNITS 1 AND 2
INSERVICE TESTING PROGRAM PLAN FOR PUMPS, VALVES, AND SNUBBERS
FIFTH 10-YEAR INTERVAL UPDATE FOR UNITS 1 AND 2
REQUEST FOR ALTERNATIVES TO REQUIREMENTS OF ASME OM CODE

Pursuant to 10 CFR 50.55a(f)(4)(ii), Virginia Electric and Power Company (Dominion Energy Virginia) submits the North Anna Power Station (NAPS) Units 1 (NAPS1) and 2 (NAPS2) Inservice Testing (IST) Programs for Pumps, Valves, and Snubbers for the fifth 10-year IST interval. 10 CFR 50.55a(a)(1)(iv) refers to the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance (OM) of Nuclear Power Plants and includes the 2012 Edition. The ASME OM Code reference became effective on August 17, 2017 and applies to the fifth IST interval for NAPS1 and NAPS2. The IST Programs for the fifth IST interval will be updated to comply with the appropriate edition of the ASME OM Code. The Enclosure provides the IST Programs and associated summary of relief request changes for NAPS1 and NAPS2. The fifth IST interval begins on December 15, 2020 for both units.

The following seven relief requests, contained in the NAPS1 and NAPS2 fifth IST interval Programs, are common to both NAPS1 and NAPS2:

- Five relief requests for pumps (P-01 through P-05)
- One relief request for valves (V-01)
- One relief request for snubbers (S-01)

Additionally, NAPS1 contains an additional relief request specific to Unit 1 for a pump (P-06).

Relief requests similar to relief requests P-01 through P-03, and V-01 were previously approved in the Safety Evaluation Reports for the NAPS1 and NAPS2 fourth 10-year IST interval (Agencywide Documents Access and Management System Accession Nos.: ML102460223 and ML103060097).

Pursuant to 10 CFR 50.55a(z), the proposed relief requests require Nuclear Regulatory Commission (NRC) review and approval before implementation. The remaining portions of the IST Programs are within the provisions of the Code and therefore do not require NRC approval for implementation.

Dominion Energy Virginia requests NRC approval of the NAPS1 and NAPS2 IST Program's relief requests by December 1, 2020.

If you have any questions or require additional information, please contact Erica Combs at (804)-273-3386.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark D. Sartain", followed by a horizontal line.

Mark D. Sartain

Vice President – Nuclear Engineering and Fleet Support

Enclosure: North Anna Power Station Unit 1 and Unit 2, Fifth Interval Inservice Testing Program and Associated Relief Requests

Commitments made in this letter: None

cc: Regional Administrator, Region II (w/o attachments)
U.S. Nuclear Regulatory Commission
Marquis One Tower
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257

G. E. Miller
NRC Senior Project Manager – North Anna Power Station
U. S. Nuclear Regulatory Commission
Mail Stop 09 E-3
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Mr. Marcus Harris (w/o attachments)
Old Dominion Electric Cooperative
Innsbrook Corporate Center
4201 Dominion Blvd.
Suite 300
Glen Allen, Virginia 23060

NRC Senior Resident Inspector (w/o attachments)
North Anna Power Station

ENCLOSURE

**North Anna Power Station Unit 1 and Unit 2
Fifth Interval Inservice Testing Program and Associated Relief Requests**

- Attachment 1 Summary of Proposed Relief Requests
- Attachment 2 Proposed Relief Requests
- Attachment 3 Unit 1 Inservice Testing Program Plan for Pumps and Valves, Fifth
10-Year Interval
- Attachment 4 Unit 2 Inservice Testing Program Plan for Pumps and Valves, Fifth
10-Year Interval
- Attachment 5 Unit 1 and Unit 2 Inservice Testing Program Plan for Snubbers, Fifth
10-Year Interval

**Virginia Electric and Power Company
(Dominion Energy Virginia)
North Anna Power Station Units 1 and 2**

ENCLOSURE

Attachment 1

Summary of Proposed Relief Requests

**Virginia Electric and Power Company
(Dominion Energy Virginia)
North Anna Power Station Units 1 and 2**

**North Anna Unit 1 and Unit 2 Inservice Testing Program
Proposed Relief Request Change Summary for the Fifth 10-Year Interval**

Fifth Interval Proposed Relief Request	Relief Request Description	Fourth Interval Relief Request	Relief Request Summary
None	Relief to use Code Case OMN-20 which provides scheduling grace on IST surveillances.	G-1	General program relief to use OMN-20, which allows for the application of a 25% grace period when scheduling tests. Code Case OMN-20 has been incorporated by reference in the CFR therefore relief is no longer requested.
P-1	Code Case OMN-22 allows alternate acceptance criteria on vibration reference values of ≤ 0.05 inches per second.	P-1	Code Case OMN-22 has been approved by ASME but has not yet been published. The Interval 5 relief request will reference this Code Case. The previous relief request did not reference Code Case OMN-22. By referencing OMN-22 it is believed that we will not need to list specific pumps in the relief request.
P-2	Relief from Group A quarterly test requirement for Residual Heat Removal pumps. The Comprehensive Pump Test will be performed every CSD or RFO.	P-2	RHR pumps cannot be tested online. Use of Code Case OMN-16 was previously requested for interval 4. The RHR pumps will be tested at a specific point for interval 5.

**North Anna Unit 1 and Unit 2 Inservice Testing Program
Proposed Relief Request Change Summary for the Fifth 10-Year Interval**

Fifth Interval Proposed Relief Request	Relief Request Description	Fourth Interval Relief Request	Relief Request Summary
None	Previously Requested relief from ISTA-3130(b) to use Code Case OMN-16, testing on a pump curve, with the Service Water pumps.	P-3	Requested relief to test Service Water Pumps on a pump curve per guidance in Code Case OMN-16. Code Case OMN-16 will be incorporated by reference in the 2017 Edition of the OM Code prior to the start of the fifth interval. This publication includes the 2012 Edition of the OM Code in the applicability statement therefore relief will not be requested.
None	Previously Requested relief from ISTA-3130(b) to use Code Case OMN-16, testing on a pump curve, with the Component Cooling pumps.	P-4	Requested relief to test Component Cooling Pumps on a pump curve per guidance in Code Case OMN-16. Code Case OMN-16 will be incorporated by reference in the 2017 Edition of the OM Code prior to the start of the fifth interval. This publication includes the 2012 Edition of the OM Code in the applicability statement therefore relief will not be requested.
P-3	Request to test Boric Acid Transfer pumps on recirculation loop quarterly, measuring differential pressure and vibrations only, due to lack of installed flow instrumentation.	P-5	The proposed alternative has been modified to reflect a hardship rather than impracticality as discussed in the fourth interval SER.

**North Anna Unit 1 and Unit 2 Inservice Testing Program
Proposed Relief Request Change Summary for the Fifth 10-Year Interval**

Fifth Interval Proposed Relief Request	Relief Request Description	Fourth Interval Relief Request	Relief Request Summary
P-4	Request to test Outside Recirculation Spray pumps below the Code required flow rate.	P-6	These ORS pumps are tested with a 4" recirc line. The relief request was updated to include the new requirements in Mandatory Appendix V. Guidance provided in section 5.10 of NUREG-1482 was followed.
None	Relief was previously requested to use Code Case OMN-6 which discusses calibrated range of digital instruments.	P-7	Code Case OMN-6 allows the use of digital instruments where the reference value does not exceed 90% of the calibrated range of the instrument. OMN-6 has been incorporated into the ASME OM Code therefore relief is no longer required.
None	Previously Requested relief from ISTA-3130(b) to use Code Case OMN-16, testing on a pump curve, with the Charging pumps.	P-8	Requested relief to test Charging Pumps on a pump curve per guidance in Code Case OMN-16. Code Case OMN-16 will be incorporated by reference in the 2017 Edition of the OM Code prior to the start of the fifth interval. This publication includes the 2012 Edition of the OM Code in the applicability statement therefore relief will not be requested.

**North Anna Unit 1 and Unit 2 Inservice Testing Program
Proposed Relief Request Change Summary for the Fifth 10-Year Interval**

Fifth Interval Proposed Relief Request	Relief Request Description	Fourth Interval Relief Request	Relief Request Summary
P-5	Request to test Quench Spray pumps below the Code required flow rate.	None	Request relief from Mandatory Appendix V V-3000(B) Pump Performance Verification for QS Pumps. CPTs are performed on a test recirc line to the RWST. Cannot consistently achieve the new requirement for a Pump Periodic Verification flow rate.
P-6	Request to monitor 1-CH-P-1A vibration point with the Group A test rather than the CPT on increased frequency. This relief request only applies to Unit 1.	P-9	This Unit 1 only relief request for Interval 4 is still under review by the NRC. The Interval 5 relief request is needed to document relief for the short period of time from the end of Interval 5 to the next Unit 1 outage in Q1 of 2021.
None	Request to evaluate rather than repair and replace RWST Isolation valves should they fail their leakage tests.	V-1	This relief will not be requested for the fifth interval.
None	Request to use Code Case OMN-8, Alternative Rules for Testing of Power-Operated Control Valves that are used for system control and only have a fail-safe safety function.	V-2	Code Case OMN-8 has been incorporated into the OM Code under ISTC-5100, so relief is no longer required. This relief has been turned into a Technical Position to maintain the list of Power Operated Control valves.

**North Anna Unit 1 and Unit 2 Inservice Testing Program
Proposed Relief Request Change Summary for the Fifth 10-Year Interval**

Fifth Interval Proposed Relief Request	Relief Request Description	Fourth Interval Relief Request	Relief Request Summary
V-1	Relief to eliminate the 5-minute hold time between set pressure tests on Class 2 and 3 relief valves (excluding MSSV).	V-3	There is no change in scope of relief requested.
S-1	Code Case OMN-13 – allows for extension of visual examinations on snubbers.	None	Code Case OMN-13 is currently approved for use, but the applicability statement does not include the 2012 edition. We are requesting relief on the requirement of ISTA-3130(b).

ENCLOSURE

Attachment 2

Proposed Relief Requests

**Virginia Electric and Power Company
(Dominion Energy Virginia)
North Anna Power Station Units 1 and 2**

RELIEF REQUEST P-1

Code Case OMN-22, Smooth Running Pumps

Proposed Alternative in Accordance with 10 CFR 50.55a(z)(1):
Alternative provides an acceptable level of quality and safety.

1.0 ASME Code Components Affected

All pumps within the scope of the ASME Inservice Testing Program for Unit 1 and Unit 2 with vibration reference values ≤ 0.050 in/sec.

2.0 Applicable Code Edition

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

- ISTA-3130(c), Code Cases shall be in effect at the time the test plan is filed
- ISTB-3300, Reference Values
- ISTB-5121-1, Centrifugal Pump Test Acceptance Criteria
- ISTB-5221-1, Vertical Line Shaft Centrifugal Pump Test Acceptance Criteria

Note: There are no ASME Code class positive displacement pumps in the North Anna IST Program.

4.0 Reason for Request

Pumps in the ASME Inservice Testing program with very small vibration reference values (V_r) ≤ 0.050 in/sec are considered to be smooth running pumps. Small values for V_r produce small acceptable ranges for pump operation. The acceptable ranges are defined in Tables ISTB-5121-1 and ISTB-5221-1 as $\leq 2.5V_r$. Based on the small acceptable range, a smooth running pump could be subject to unnecessary corrective action if the measured vibration parameter exceeds this acceptable range.

For very small reference values, hydraulic noise and instrument error can be a significant portion of the reading and affect the repeatability of subsequent measurements.

RELIEF REQUEST P-1 (Cont.)

5.0 Proposed Alternative and Basis for Use

This relief request seeks approval to apply Code Case OMN-22 which prescribes establishment of a minimum reference value of 0.050 in/sec for pumps with very low baseline vibration reference values ≤ 0.050 in/sec as an alternative to the specific requirements of ISTB-3300, Table ISTB-5121-1 and Table ISTB-5221-1. Although not currently approved under RG 1.192, this Code Case was approved by the ASME Committee and received favorable endorsement by NRC representatives.

Smooth running pumps shall have a V_r applied of 0.050 in/sec and test results compared to an Acceptable Range of ≤ 0.125 in/sec, Alert Range of > 0.125 to 0.300 in/sec and Required Action Range of > 0.300 in/sec as discussed in Code Case OMN-22. When new reference values are established the measured parameters will be evaluated for each vibration location to determine if the provisions of this relief request apply.

In addition to the requirements of ISTB, the pumps in the ASME Inservice Testing Program are included in the North Anna Predictive Maintenance Program. This program currently employs predictive monitoring techniques such as:

- vibration monitoring and analysis beyond that required by ISTB,
- spectral analysis of measured vibration data to provide early identification and diagnosis of pump performance issues, and
- oil sampling and analysis where applicable (e.g., for pumps with sufficiently large oil reservoirs).

If the measured parameters are outside the normal operating range or are determined by analysis to be trending toward an unacceptable degraded state, appropriate actions are taken that may include:

- increased monitoring to establish rate of change,
- review of component specific information to identify cause, and
- removal of the pump from service to perform maintenance.

The actions outlined above are in line with those prescribed in Code Case OMN-22. It should be noted that all of the pumps in the IST Program will remain in the Predictive Maintenance Program even if certain pumps have very low vibration readings and are considered to be smooth running pumps.

Using the provisions of Code Case OMN-22 as an alternative to the specific requirements of ISTB-3300, Table ISTB-5121-1, and Table ISTB-5221-1, this

RELIEF REQUEST P-1 (Cont.)

alternative will provide adequate indication of pump performance and continue to provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(z)(1), Relief Request P-1 requests relief from the specific ISTB requirements identified in this request.

6.0 Duration of the Proposed Alternative

The proposed alternative described in Relief Request P-1 will be used for the North Anna Power Station Unit 1 and Unit 2 Fifth 10-Year Inservice Testing Interval.

7.0 Precedents

A similar relief request for the North Anna Unit 1 and Unit 2 Fourth 10-Year Inservice Testing Interval was approved by the NRC in their safety evaluation entitled "North Anna Power Station (NAPS), Units Nos.1 and 2, Fourth 10-Year Inservice Testing Interval Program, Pumps and Valves Relief Request (RR) (ADAMS Accession No. ML102460223) dated September 30, 2010.

RELIEF REQUEST P-2

Impractical Testing of RHR Pumps During Normal Operation

Proposed Alternatives in Accordance with 10 CFR 50.55a(z)(1):
Alternatives provide acceptable level of quality and safety.

1.0 ASME Code Components Affected

Pump(s): 1-RH-P-1A 2-RH-P-1A
 1-RH-P-1B 2-RH-P-1B

System: Residual Heat Removal

Group: A

Class: 2

Function: The residual heat removal pumps are single stage, vertical centrifugal pumps (not a vertical line shaft design) which remove decay heat from the reactor core and the reactor coolant system during plant cool down.

2.0 Applicable Code Edition

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

- ISTB-3400, Frequency of Inservice Tests, states: "An inservice test shall be run on each pump as specified in Table ISTB-3400-1."
- Table ISTB-3400-1, Inservice Test Frequency, requires an inservice test be run on each Group A pump nominally every 3 months.

4.0 Reason for Request

The residual heat removal pumps are located inside containment and are low pressure (600 psig design pressure) pumps that take suction from and discharge to the reactor coolant system (RCS). The RCS is maintained at 2235 psig and the containment atmosphere is maintained at sub-atmospheric pressure during normal operation. The RHR system is considered to be a low pressure system that could

RELIEF REQUEST P-2 (Cont.)

be damaged if exposed to the normal operating RCS pressure of approximately 2235 psig. Therefore, to ensure system integrity or prevent system over pressurization/damage, the Technical Requirements Manual requires that the RHR subsystem be isolated from the RCS prior to the RCS exceeding 500 psig by closing and de-energizing both remote operated RHR suction isolation valves and locking the associated breakers open.

Therefore, testing the residual heat removal pumps during normal operation is considered impractical.

5.0 Proposed Alternatives and Bases for Use

These comprehensive pump test will be performed every cold shutdown and reactor refueling outage but not more frequently than once every three months.

Using the provisions of this relief request as an alternative to the specific requirements of ISTB-3400 and Table ISTB-3400-1 identified above, which have been identified to be impractical, will provide adequate indication of pump performance. Therefore, pursuant to 10 CFR 50.55a(z)(1) Relief Request P-2 requests relief from the specific ISTB Code requirements identified in this relief request.

6.0 Duration of the Proposed Alternative

The proposed alternatives described in Relief Request P-2 will be used for the North Anna Power Station Unit 1 and Unit 2 Fifth 10-Year Inservice Testing Interval.

7.0 Precedents

A similar relief request for the North Anna Unit 1 and Unit 2 Fourth 10-Year Inservice Testing Interval was approved by the NRC in their safety evaluation entitled "North Anna Power Station (NAPS), Units Nos.1 and 2, Fourth 10-Year Inservice Testing Interval Program, Pumps and Valves Relief Request (RR) (ADAMS Accession No. ML102460223) dated September 30, 2010.

RELIEF REQUEST P-3

Boric Acid Transfer Pump Flow Monitoring

Proposed Alternatives in Accordance with 10 CFR 50.55a(z)(2):
Hardship without a compensating increase in quality and safety.

1.0 ASME Code Components Affected

<u>Unit 1 pumps</u>	<u>Unit 2 Pumps</u>
---------------------	---------------------

1-CH-P-2A	1-CH-P-2C
-----------	-----------

1-CH-P-2B	1-CH-P-2D
-----------	-----------

System: Chemical and Volume Control

Group: A

Class: 2

Function: The boric acid transfer pumps are single stage horizontal centrifugal pumps that supply boric acid to the suction of the charging pumps for emergency boration in the Chemical and Volume Control system. During normal operation these pumps recirculate the contents of the boron injection tank and the boric acid storage tanks.

2.0 Applicable Code Edition

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

- Table ISTB-3000-1, Inservice Test Parameters, requires that flow rate be measured during a Group A test.
- Table ISTB-3400-1, Inservice Test Frequency, requires that Group A inservice test be run on each pump nominally every 3 months.
- ISTB-5121, Group A Test Procedure, requires that Group A tests be conducted with the pump operating as close as practical to a specified reference point. Paragraph ISTB-5121(b) states that, "the resistance of the system shall be varied until the flow rate is as close as practical to the reference point with the variance not to exceed +2% or -1% of the reference point. The differential pressure shall then be determined and compared to its reference value.

RELIEF REQUEST P-3 (Cont.)

- Alternatively, the flow rate shall be varied until the differential pressure is as close as practical to the reference point with the variance not to exceed +1% or – 2% of the reference point and the flow rate determined and compared with the reference flow rate.”

4.0 Reason for Request

The boric acid transfer pumps supply boric acid to the suction of the charging pumps for emergency boration. During normal operation, the pumps circulate the contents to the boron injection tank. Boric acid is stored in three boric acid storage tanks (shared by Unit 1 and Unit 2). There are four boric acid transfer pumps. Pumps 1-CH-P-2A and 2B are for Unit 1 and 1-CH-P-2C and 2D are for Unit 2. One pump per unit is normally aligned with one boric acid storage tank. Each aligned pump runs continuously at low speed to provide recirculation between the boric acid storage tank and the boron injection tank of the emergency core cooling system. The second pump in each unit is normally used for boric acid batching and transfer and serves as a standby for the normal running pump. Manual or automatic initiation of the reactor makeup control system activates the continuously running pump to a higher speed to provide the makeup of boric acid solution, as required.

The Group A pump test requires an extended period of boric acid injection which should only be performed when borating the reactor in preparation for refueling when the boron concentration is low. The test cannot be conducted during mid-cycle cold shutdowns because the boron concentration in the RCS is too high. The potential for over boration under these conditions could delay the ability of the plant to restart, due to the time required to dilute the excess boron in preparation for startup.

As such, only the recirculation flow path is available for the Group A pump test. Permanent flow instrumentation is not installed on the recirculation piping, which is the only test loop available for quarterly testing. To measure flow, flow must be established to the charging pump suction lines. This flow would increase the reactor coolant system (RCS) boron inventory and cause a reactivity transient during normal operation. Compliance with the ASME Code requirements would require system modifications and installation of online flow instrumentation and would therefore cause a hardship.

RELIEF REQUEST P-3 (Cont.)

5.0 Proposed Alternative and Bases for Use

These pumps will be tested quarterly on the recirculation loop, and differential pressure and vibration will be measured, evaluated, and trended. Every reactor refueling, a comprehensive test measuring differential pressure, flow rate and vibration will be performed.

The removal of quarterly flow testing of these pumps has been deemed acceptable per NRC Generic Letter 89-04, Position 9, which allows elimination of minimum flow test line flow rate measurements providing inservice tests are performed during cold shutdowns or refueling periods under full or substantial flow conditions where pump flow rate is recorded and evaluated. The proposed alternate testing is consistent with this philosophy and the intent of Position 9.

Using the provisions of this relief request as an alternative to the specific requirements of Table ISTB-3000-1, Table ISTB-3400-1 and ISTB-5121 identified above, which have been identified to be a hardship without a compensating increase in quality and safety, will provide adequate indication of pump performance. Therefore, pursuant to 10 CFR 50.55a(z)(2) Relief Request P-3 requests relief from the specific ISTB Code requirements identified in this relief request.

6.0 Duration of the Proposed Alternative

The proposed alternatives described in Relief Request P-3 will be used for the North Anna Power Station Unit 1 and Unit 2 Fifth 10-Year Inservice Testing Interval.

7.0 Precedents

A similar relief request for the North Anna Unit 1 and Unit 2 Fourth 10-Year Inservice Testing Interval was approved by the NRC in their safety evaluation entitled "North Anna Power Station (NAPS), Units Nos.1 and 2, Fourth 10-Year Inservice Testing Interval Program, Pumps and Valves Relief Request (RR) (ADAMS Accession No. ML102460223) dated September 30, 2010.

RELIEF REQUEST P-4

Outside Recirculation Spray PPV Test

Proposed Alternative in Accordance with 10 CFR 50.55a(f)(5)(iii):
Impractical IST Code requirements.

1.0 ASME Code Components Affected

Pump(s): 1-RS-P-2A 2-RS-P-2A
 1-RS-P-2B 2-RS-P-2A

System: Recirculation Spray

Group: B

Class: 2

Function: The outside recirculation spray pumps supply borated spray to cool and depressurize the containment atmosphere following a containment depressurization actuation signal and maintain containment subatmospheric following an accident.

2.0 Applicable Code Edition

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

Mandatory Appendix V - V-3000 requires certain applicable pumps with specific design basis accident flow rates in the Owner's credited safety analysis (e.g., technical specifications, technical requirements program, or updated safety analysis report) for inclusion in this program.

4.0 Impracticality of Requirement

The test loop for the outside recirculation pray pumps consists of a 10" pump discharge line feeding into a 4" recirculation line which feeds back to the pump sump (refer to Figure P-4.1). The LOCA containment analysis assumes that the outside recirculation spray pumps deliver 3350 gpm. With the 4" recirculation line as the test loop, the design basis accident flow rate of 3350 gpm cannot be achieved. The highest flow rate that can be established while maintaining stable

RELIEF REQUEST P-4 (Cont.)

test conditions is approximately 1450 gpm in the test loop, which is approximately 43% of the pump safety analysis flow rate.

Flow cannot be established in the existing discharge piping because the flow would be directed to the spray headers inside containment, which would spray water throughout the containment. Also, the discharge piping was not designed to be temporarily reconfigured so that pump design flow could be achieved.

The outside recirculation spray pumps for Unit 2 were subject to long term full flow testing in 1979, during the construction phase. A test loop was established by replacing the spray nozzles from each of the two spray headers (150 nozzles for each header) with plugs, discharging pump flow to the spray headers and directing the flow back to the containment sump. A dike was constructed around the containment sump to simulate water levels in containment that are expected during an accident. The outside recirculation spray pumps took suction from the sump, thus, completing the loop. Re-establishing this full flow test loop for the purpose of periodic testing would require plant modifications and is not practicable.

The spray headers are inaccessible without a significant amount of scaffolding. Even if the nozzles were accessible, the plugging of 300 spray nozzles, running the full flow test and returning the system to its operable configuration present substantial challenges in terms of complexity of the temporary modifications, labor intensive nature of the modifications, and controls and post modification testing needed to ensure that the system is returned to the original configuration.

5.0 Proposed Alternatives and Bases for Use

As an alternative to conducting a pump periodic verification test, the comprehensive test performed on the recirculation test line will be credited for meeting this code requirement. For the Outside Recirc Spray Pumps, the comprehensive test flow rate will be established at 1350 gpm or within 40% of the design basis accident flow rate. This flow rate approaches the maximum achievable through the 4" recirc line while accommodating flow adjustment and maintaining stable test flow conditions.

Testing at design basis accident flow rate as a general practice is important for pumps with characteristic head-flow curves that are flat or gently sloping in the low flow region (little change in developed head with increasing flow). In the low flow region, increasing internal flows, usually due to wear, are difficult if not impossible to detect. Pumps exhibiting "flat" curves at low flows should be tested at or near pump design flow to ascertain when increasing internal recirculation flows have

RELIEF REQUEST P-4 (Cont.)

degraded pump performance to the point where accident requirements cannot be met. This situation does not apply to the outside recirculation pumps as the pump performance curves exhibit a relatively constant slope from no flow to design flow conditions (refer to Figure P-4.2). Testing at the comprehensive test flow rate will detect pump degradation because the pump curve is well sloped at this point on the curve.

In addition to the requirements of ISTB, the outside recirculation pumps are included in the North Anna Predictive Maintenance Program. The North Anna Predictive Maintenance Program currently employs predictive monitoring techniques such as:

- Vibration monitoring and analysis beyond that required by ISTB
- Spectral analysis of measured vibration data to provide early identification and diagnosis of pump performance issues, and
- Oil sampling and analysis where applicable (e.g. for pumps with sufficiently large oil reservoirs).

In order to minimize wear and/or pump performance degradation, the performance of each comprehensive test will be limited in duration to accommodate accurate performance data while minimizing fluid temperature rise and material wear. Following each test the pump casing and associated test piping will be drained.

Preventive maintenance and performance monitoring efforts to date have been effective in maintaining outside recirculation spray pump performance. Corrective maintenance history for Unit 1 and Unit 2 pumps has been limited to pump seal replacements. Performance monitoring data for all pumps reflects no degrading trends. The linear nature of the pump curve from no flow conditions to design flow rate conditions coupled with the rigorous preventive maintenance strategies in place provide adequate assurance that the pump will meet design flow requirements when needed.

Using the provisions of this relief request as an alternative to the specific requirements of Mandatory Appendix V identified above, which have been identified to be impractical, will provide adequate indication of pump performance. Therefore, pursuant to 10 CFR 50.55a(f)(5)(iii), Relief Request P-4 requests relief from the specific Mandatory Appendix V Code requirements identified in this relief request.

RELIEF REQUEST P-4 (Cont.)

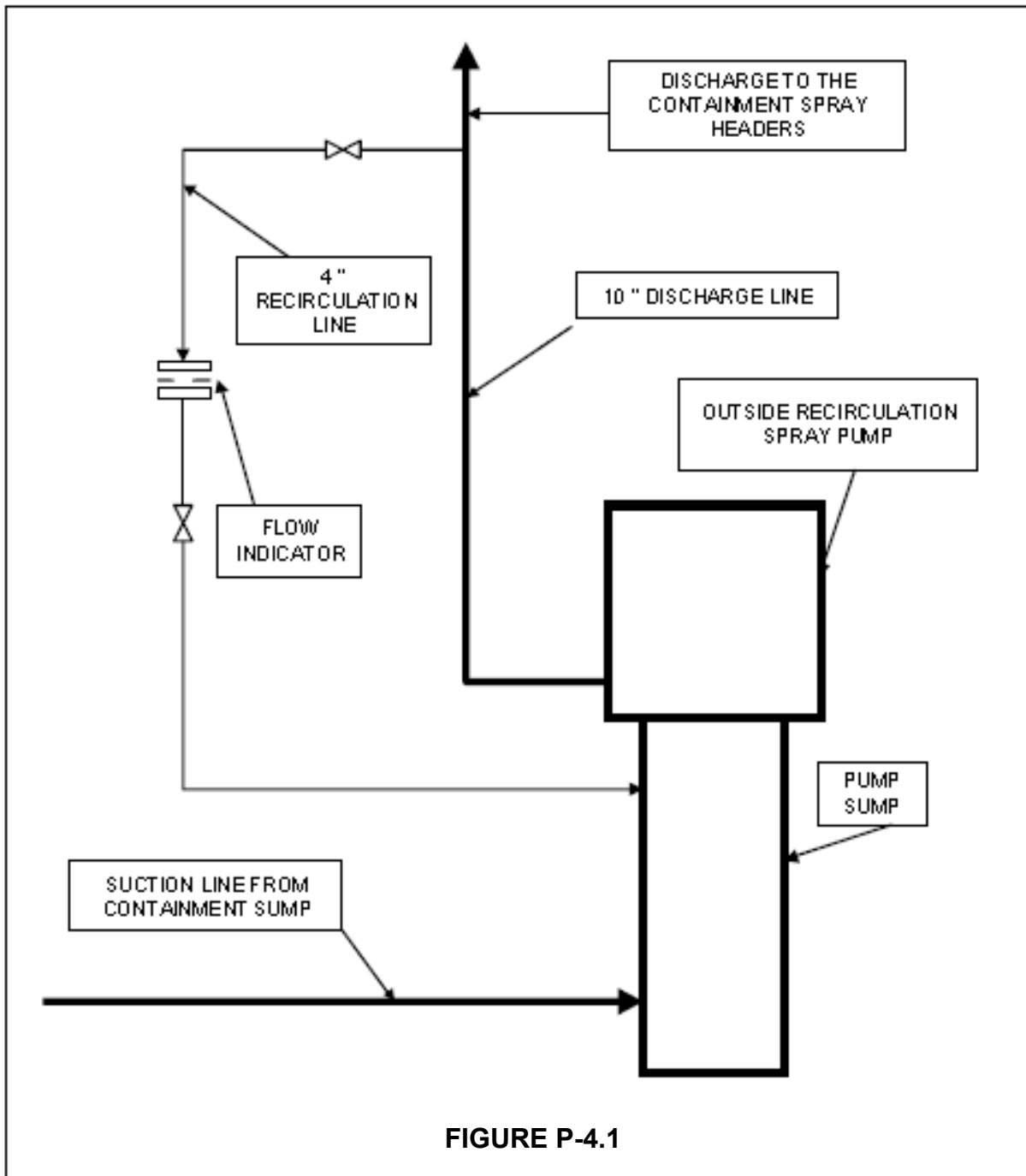
6.0 Duration of the Proposed Alternative

The proposed alternatives described in Relief Request P-4 will be used for the North Anna Power Station Unit 1 and Unit 2 Fifth 10-Year Inservice Testing Interval.

7.0 Precedents

None.

RELIEF REQUEST P-4 (Cont.)



RELIEF REQUEST P-4 (Cont.)

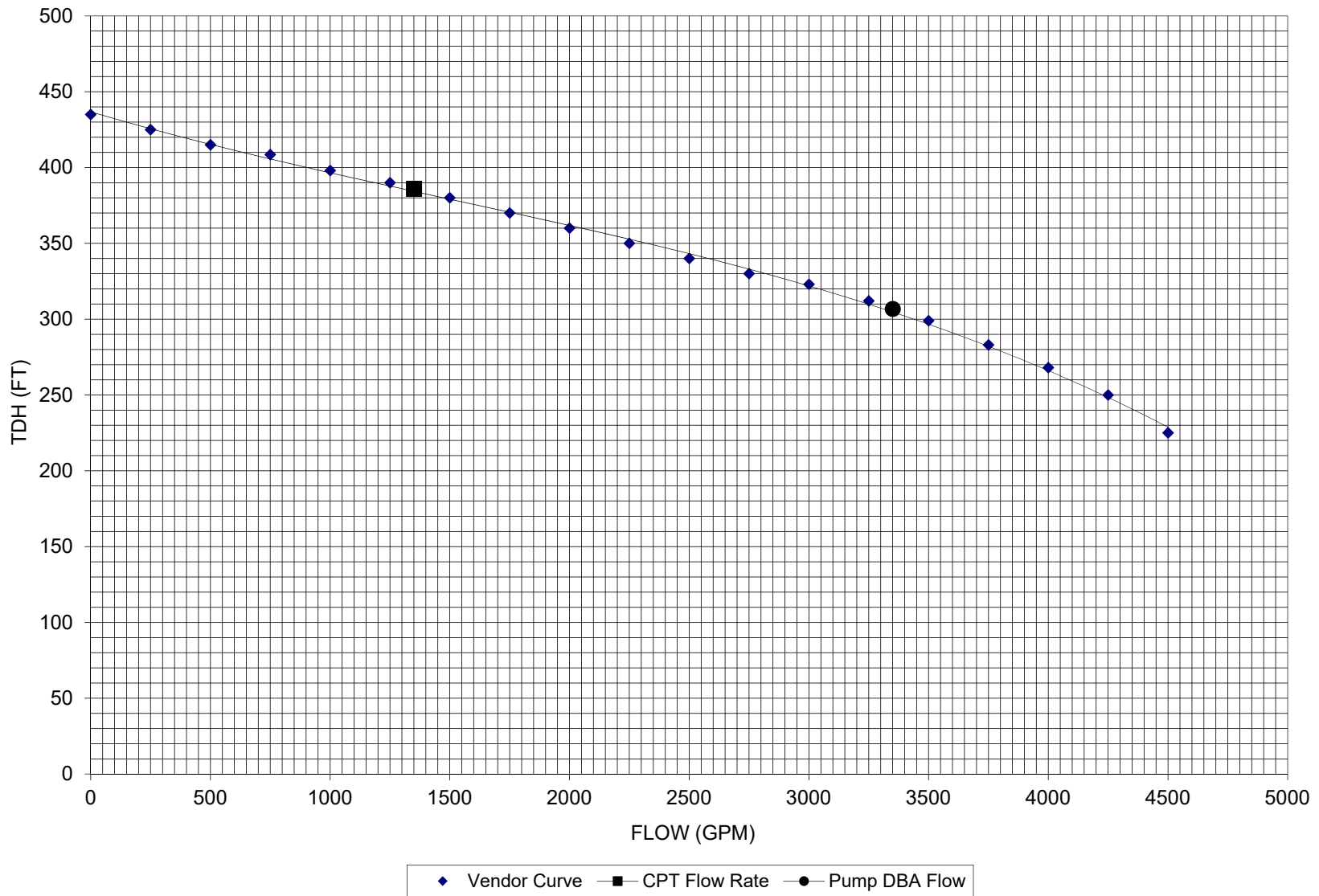


FIGURE P-4.2

RELIEF REQUEST P-5
Quench Spray PPV Test

Proposed Alternative in Accordance with 10 CFR 50.55a(f)(5)(iii):
Impractical IST Code requirements.

1.0 ASME Code Components Affected

Pump(s): 1-QS-P-1A 2-QS-P-1A
 1-QS-P-1B 2-QS-P-1B

System: Quench Spray

Group: B

Class: 2

Function: The quench spray pumps supply a borated, chemically treated spray to cool, remove iodine from, and depressurize the containment atmosphere following a containment depressurization actuation signal. The quench spray pumps are in a standby system and are defined as Group B pumps.

2.0 Applicable Code Edition

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

Mandatory Appendix V - V-3000 requires certain applicable pumps with specific design basis accident flow rates in the Owner's credited safety analysis (e.g., technical specifications, technical requirements program, or updated safety analysis report) for inclusion in this program.

4.0 Impracticality of Requirement

The test loop for the quench spray pumps consists of an 8" discharge line feeding into a 4" recirculation line that directs flow back to the Refueling Water Storage Tank (refer to Figure P-5.1). The 4" recirc path includes a 4" globe valve which is

RELIEF REQUEST P-5 (Cont.)

fully open during performance of the Group B test and the Comprehensive test. As such this test loop is characterized as a fixed resistance loop.

Normal flow is directed from the 8" pump discharge line into containment and up to an 8" 360° spray header. Flow cannot be established in this flow path as it would be directed to the spray headers inside containment, which would spray water throughout the containment. Also, the discharge piping was not designed to be temporarily reconfigured so that pump design flow could be achieved. As such all pump performance testing must be performed using the installed test loop.

For preoperational testing, ends of the quench spray headers were fitted with blind flanges, allowing connection of temporary drain lines for full-flow testing up to the nozzles. The recirculation spray nozzle connections were plugged for preoperational testing and temporary connections made between the spray headers and the containment sump, allowing full-flow test of the system. These provisions permitted testing of the containment depressurization system over the full range of flow and starting conditions. Re-establishing this full flow test loop for the purpose of periodic testing would require extensive plant modifications and as such, is not practicable.

Minimum design basis accident flow requirements for 1-QS-P-1A and 2-QS-P-1A (A Header) are 1669.4 gpm, and for 1-QS-P-1B and 2-QS-P-1B (B Header) are 1719.6 gpm accounting for flow losses and uncertainties. Current comprehensive test flow rates for these pumps when tested on the test loop are 1698.5 gpm, 1611.5 gpm, 1698.5 gpm and 1616.0 gpm respectively. Only 1-QS-P-1A achieves the prescribed PPV flow rate when flow is directed through the test loop. Accounting for normal pump hydraulic performance degradation allowed by the ASME code, this flow volume through the test loop may not be consistently achieved over time by this pump. The pump curve for 2-QS-P-1B, which produces the least flow of the four pumps, is shown in Figure P-5.2.

5.0 Proposed Alternatives and Bases for Use

As an alternative to conducting a pump periodic verification test, the comprehensive test performed on the recirculation test line will be performed each refueling outage. For the quench spray pumps, the comprehensive test flow rate has been established very near to the analyzed design basis flow rates. Achieving required flow during the bounding design basis accident is assured by the fact that the discharge pressure associated with flowing through the 4" test line exceeds the required discharge pressure associated with flowing through the 8" discharge line

RELIEF REQUEST P-5 (Cont.)

into the containment building and out the quench spray header spray rings. This is evidenced by the fact that the comprehensive pump test discharge pressure reference values for 1-QS-P-1A, 2-QS-P-1A, 1-QS-P-1B and 2-QS-P-1B are 131.9 psig, 135.0 psig, 138.6 psig and 141.0 psig respectively to achieve near design basis flow rates through the 4" test loop, while the maximum analyzed discharge pressure required to achieve design basis flow rates through the normal flow path to the associated spray ring headers is 105.9 psig (244.3 ft H₂O) for the A header and 108.6 psig (250.6 ft H₂O) for the B header.

In addition to the requirements of ISTB, the quench spray pumps are included in the North Anna Predictive Maintenance Program. The North Anna Predictive Maintenance Program currently employs predictive monitoring techniques such as:

- Vibration monitoring and analysis beyond that required by ISTB
- Spectral analysis of measured vibration data to provide early identification and diagnosis of pump performance issues, and
- Oil sampling and analysis where applicable (e.g. for pumps with sufficiently large oil reservoirs).

In order to minimize wear and/or pump performance degradation, the performance of each comprehensive test will be limited in duration to accommodate accurate performance data while minimizing fluid temperature rise and material wear.

Preventive maintenance and performance monitoring efforts to date have been effective in maintaining acceptable quench spray pump performance. Corrective maintenance history for Unit 1 and Unit 2 pumps has been limited to pump seal replacements. Performance monitoring data for all pumps reflects no degrading trends. The proximity to pump performance verification flow requirements at which the comprehensive test is performed, the margin between current pump hydraulic performance and analyzed design flow discharge pressure requirements, and the rigorous preventive maintenance strategies in place provide adequate assurance that the pump will meet design flow requirements when needed.

Using the provisions of this relief request as an alternative to the specific requirements of Mandatory Appendix V identified above, which have been identified to be impractical, will provide adequate indication of pump performance. Therefore, pursuant to 10 CFR 50.55a(f)(5)(iii), Relief Request P-5 requests relief from the specific Mandatory Appendix V Code requirements identified in this relief request.

RELIEF REQUEST P-5 (Cont.)

6.0 Duration of the Proposed Alternative

The proposed alternatives described in Relief Request P-5 will be used for the North Anna Power Station Unit 1 Fifth 10-Year Inservice Testing Interval.

7.0 Precedents

None.

RELIEF REQUEST P-5 (Cont.)

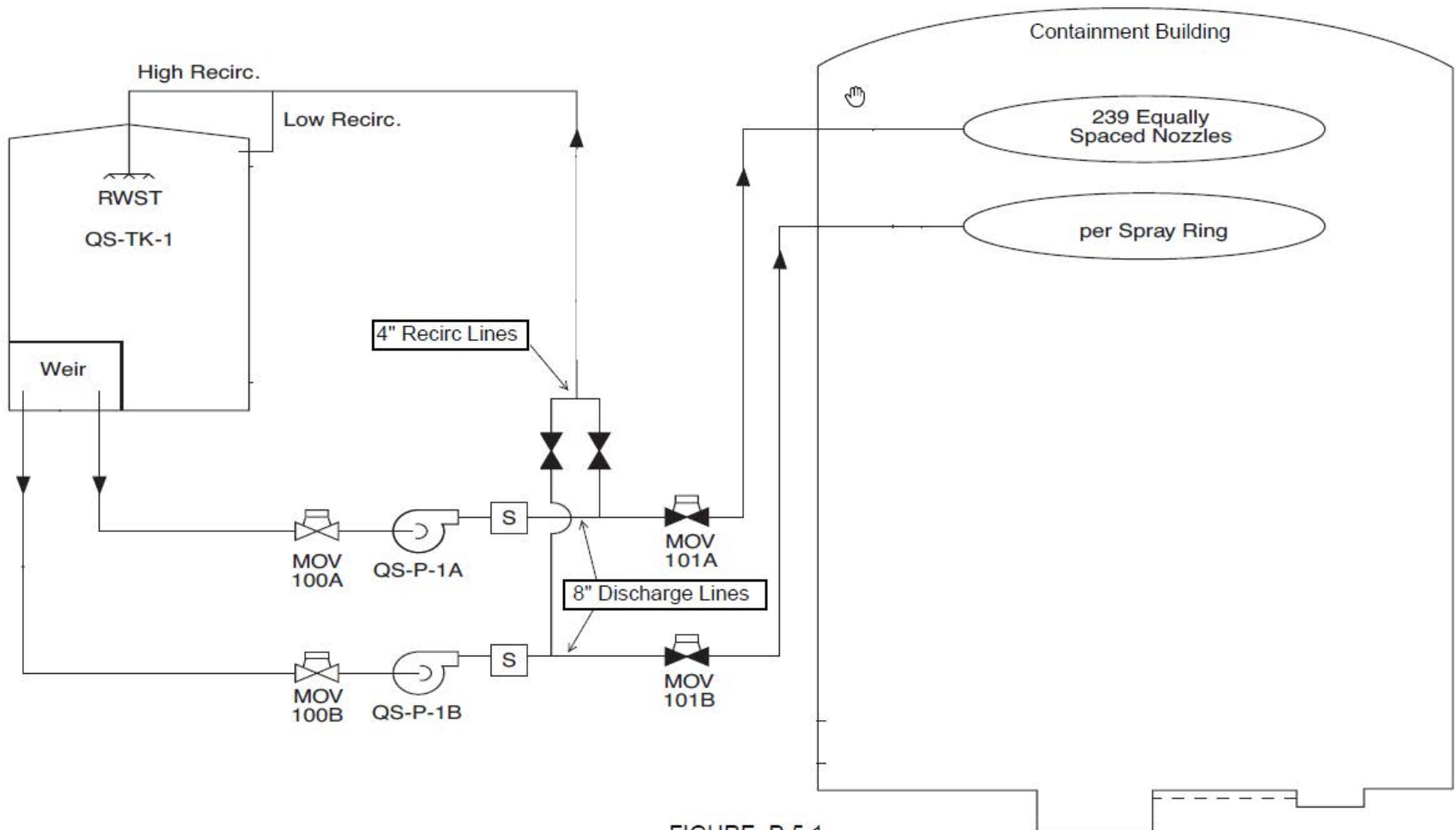


FIGURE P-5.1

RELIEF REQUEST P-5 (Cont.)

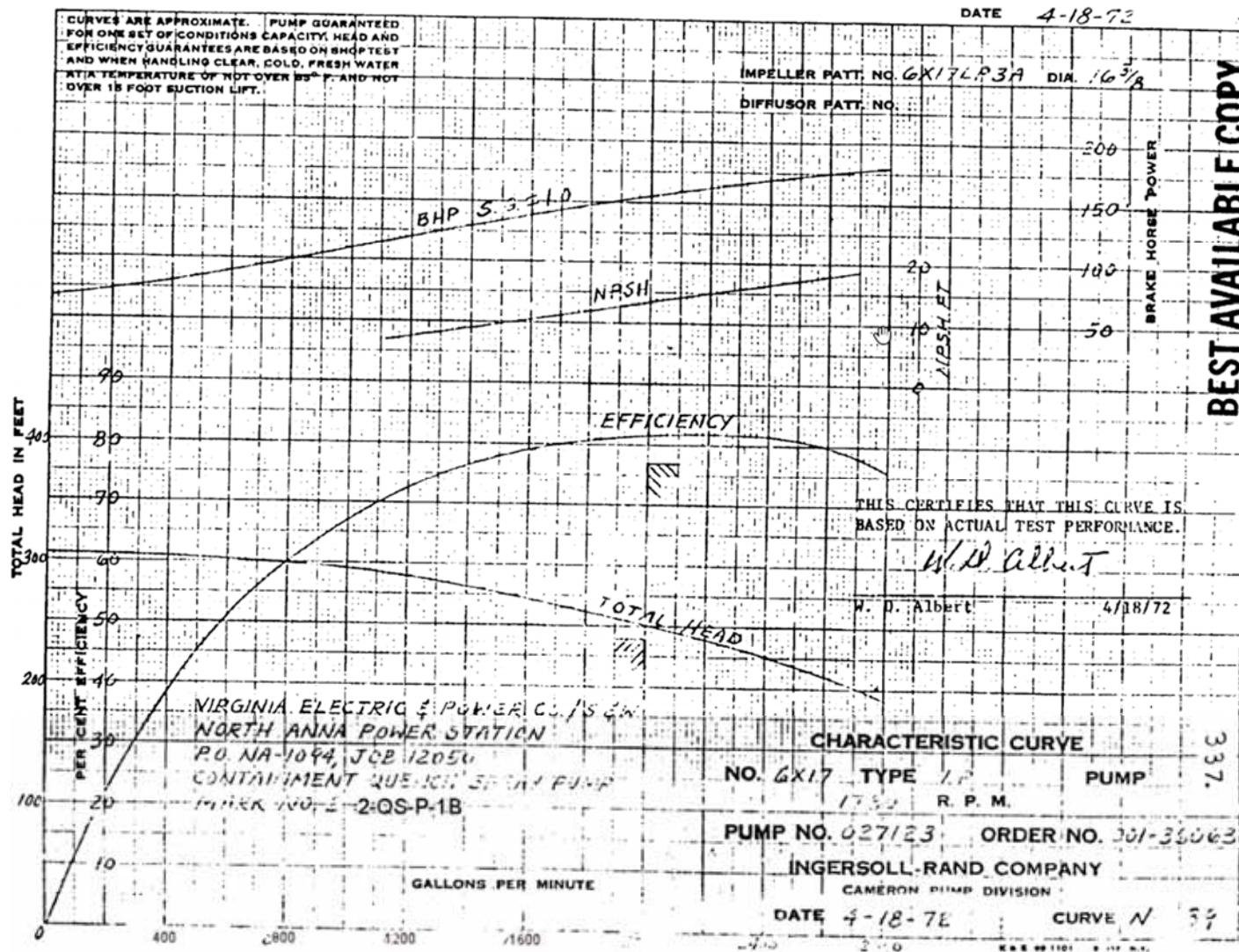


FIGURE P-5.2

RELIEF REQUEST P-6

Monitoring of 1-CH-P-1A Thrust Horizontal Vibration Point with the Group A Test

Proposed alternative in accordance with 10 CFR 50.55a(z)(2):
Hardship or Unusual Difficulty Without Compensating Increase in Level of
Quality or Safety

1.0 ASME Code Component Affected

Pump(s): 1-CH-P-1A

System: Chemical and Volume Control

Group: A

Class: 2

Function: This centrifugal pump supplies high pressure borated water to the reactor coolant system following a safety injection signal and provides normal charging to the reactor coolant system.

2.0 Applicable Code Edition

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

ISTB-6200(a), "Alert Range," requires that if the measured test parameter values fall within the alert range of the applicable table [Table ISTB-5121-1], the frequency of testing specified in ISTB-3400 shall be doubled until the cause of the deviation is determined and the condition is corrected.

4.0 Reason for Request

One of seven vibration points recently exceeded 'alert' criteria during performance of the Comprehensive Pump Test (CPT) scheduled in conjunction with the Fall 2019 Unit 1 refueling outage. Vibration monitoring is a component of the CPT that is performed at the frequency of every refueling outage (18 months) as required by ISTB-3400. Per ISTB-6200, since the vibration measurement falls within the alert range, CPT would be required to be performed every 9 months until the condition is corrected. Performance of the CPT to achieve the required reference

RELIEF REQUEST P-6 (Cont.)

flow rate can only be achieved with the reactor head removed from the reactor vessel, allowing flow to be directed into the reactor cavity. This test cannot be performed during normal power operations.

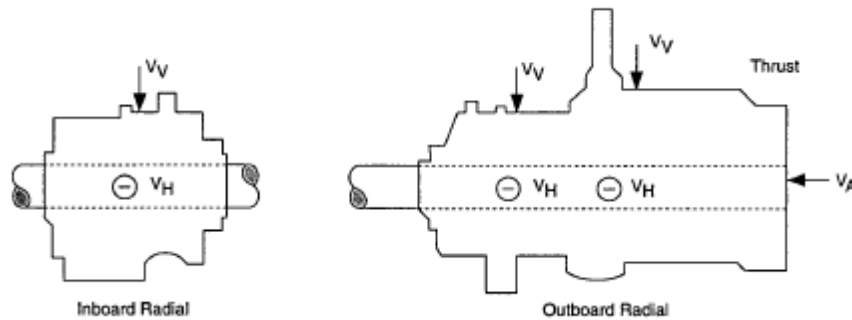
The proposed relief would permit continued performance monitoring of the Unit 1 Chemical and Volume Control System (CVCS) 1A charging pump (1-CH-P-1A) by performing quarterly Group A tests in lieu of performing the CPT at the increased test frequency of every 9 months. The Group A test can be performed safely while the associated unit is operational. This will eliminate the need to unnecessarily enter an outage reaching Mode 6 in order to perform the CPT. This alternative will only apply to ISTB-6200 requirements as they relate to doubling of the CPT test frequency. With subsequent Group A testing, if any measured IST parameter exceeds the alert criteria, the requirements of ISTB-6200(a) will be followed (i.e. the Group A test would be performed at the prescribed increased frequency).

5.0 Proposed Alternative and Bases for Use

The purpose of performing the CPT at double the normal test frequency while in the alert range is to monitor for additional pump performance degradation until the cause of the deviation is determined and the condition is corrected. This pump performance monitoring can be tracked and trended from the results of testing at flow rates other than that of the CPT. Currently, the CPT reference point flow rate is established at 634 gpm which exceeds the design basis accident flow rate for this pump. This flow rate cannot be achieved during normal plant operations when the Group A test is performed. The Group A test reference point flow rate is established as a range of flows, in accordance with Code Case OMN-16, from ≥ 120 gpm, but typically not more than 162 gpm, which is the highest practical flow rate for the Group A test.

The Unit 1 Chemical and Volume Control System (CVCS) 1A charging pump (1-CH-P-1A) is a horizontal, eleven-stage centrifugal pump, with a 900 HP, 1800 rpm motor that drives the pump at 4846 rpm through a speed increasing gearbox. A total of seven vibration monitoring points have been established in accordance with section ISTB of the ASME OM Code. The location of each monitoring point is depicted below:

RELIEF REQUEST P-6 (Cont.)



Pump vibration reference values do not differ significantly when comparing the Group A and CPT values as shown in Table 1 below. The vibration point that is in alert, Thrust Bearing Vertical, reflects a small difference when comparing test reference values. As such, the Group A test provides a method to monitor pump vibration parameters comparable to that of the CPT.

Table P-6.1. Comparison of Pump Vibration Reference Data: Quarterly v. Comprehensive Pump Tests

Location & Axis	Quarterly Group A Test	Comprehensive Test	Delta, ips
Total Flow	155.64 (gpm)	634.0 (gpm)	
Inboard Horizontal	0.1210 (ips)	0.1832 (ips)	0.0622
Inboard Vertical	0.0890 (ips)	0.1275 (ips)	0.0615
Outboard Horizontal	0.0620 (ips)	0.0870 (ips)	0.0250
Outboard Vertical	0.0960 (ips)	0.0908 (ips)	0.0052
Thrust Bearing Axial	0.1520 (ips)	0.1709 (ips)	0.0189
Thrust Bearing Horizontal	0.0660 (ips)	0.0927 (ips)	0.0267
Thrust Bearing Vertical	0.2890 (ips)	0.2760 (ips)	0.0130

Elevated vibration levels were first noticed on 1-CH-P-1A in August 2012 following a rebuild of the speed increaser gearbox, changing the speed increaser oil, and the installation of shaft guards/ permanent catch container. Step increases in measured vibration were noted on five of seven vibration monitoring locations, the most pronounced being the thrust bearing vertical and horizontal monitoring locations. During subsequent quarterly Group A tests, the thrust bearing vertical and horizontal measured vibrations periodically exceeded the associated ASME

RELIEF REQUEST P-6 (Cont.)

OM Code alert criteria which required a doubling of the Group A test frequency.

In January of 2013, an industry subject matter expert (SME) was contracted to perform in-depth vibration analysis of this pump. As a result of that analysis, a repair strategy was developed in February 2013 to address the increased vibration levels. In accordance with that strategy, the following actions were performed:

1. Verified pump hold down bolts are properly torqued.
2. Verified speed increaser hold-down bolts are properly torqued.
3. Verified pump bearing housing bolts are properly torqued.
4. Performed alignment checks (including soft foot and coupling gap) with laser alignment equipment for Speed increaser to pump & Motor to speed increaser.
5. Realigned pump during May 2013 pump seal replacement.
6. Performed dynamic inspection of the pump-to-gearbox coupling to check for wear or damage. None noted.
7. Verified gap setting between the speed increaser and pump to determine if an incorrect setting is pre-loading the pump and producing elevated vibration levels. No issues noted.
8. Removed IB and OB shaft guard/catch container and checked vibes afterwards. No deltas noted.
9. Loosened and raised shaft driven oil pump collar at top of oil reservoir and checked vibes afterwards. No deltas noted.
10. Performed bump test after shutdown using vibration vendor. No issues noted.
11. Checked shaft driven oil pump gear clearances. No issues noted.

In August 2013, a pump vendor was contracted to evaluate vibration data for 1-CH-P-1A and provide recommendations to assist with resolving the high vibration conditions. The vendor concluded natural frequency was not involved and a parallel misalignment condition could potentially exist due to an observed vibration peak at two times (2X) the running speed. This observed value was 200% higher than that at 1X the running speed. Further vibration data was obtained from the pump vendor on 10/6/2013 in order to facilitate further diagnostic evaluation for any evidence of pump/motor misalignment. The vibration data was carefully examined for indicators of coupling misalignment, cocked bearings, or a bowed rotor which could possibly be contributing to the elevated vibrations being

RELIEF REQUEST P-6 (Cont.)

measured. The results of this review concluded that the charging pump motor vibration data exhibited no indication of motor electrical issues, nor did the measured vibration spectra indicate any energy from imbalance, misalignment, looseness, bent shafts or eccentricity. The pump vendor concluded the existing amplitudes are considered normal for this type of pump at the pump free end bearing.

Later in October 2013, an engineering evaluation was performed, in accordance with the ASME OM Code, to establish the following new baseline vibration reference values for the CPT that reflected those measured following performance of the speed increaser maintenance in 2012:

Inboard Horizontal:	0.1832 ips
Inboard Vertical:	0.1275 ips
Outboard Horizontal:	0.0870 ips
Outboard Vertical:	0.0908 ips
Thrust Bearing Axial:	0.1709 ips
Thrust Bearing Horizontal:	0.0927 ips
Thrust Bearing Vertical:	0.2760 ips

Since March 2017, in an effort to correct the elevated vibrations, a vibration SME has provided further consultation support by reviewing planned recommendations and assessing the results. Recommendations have included verifying the coupling setup followed by obtaining coast down vibration data on the outboard pump bearing. Following an inspection and minor adjustment of the pump gearbox high speed shaft and pump shaft coupling, the vibration levels observed during the performance of the Group A test (July 13, 2017) remained relatively unchanged. Subsequently, the following new baseline vibration reference values were established for the Group A test, reflecting those measured following performance of the shaft coupling adjustment:

Inboard Horizontal:	0.1210 ips
Inboard Vertical:	0.0890 ips
Outboard Horizontal:	0.0620 ips
Outboard Vertical:	0.0960 ips
Thrust Bearing Axial:	0.1520 ips
Thrust Bearing Horizontal:	0.0660 ips
Thrust Bearing Vertical:	0.2890 ips

RELIEF REQUEST P-6 (Cont.)

On September 22, 2019, during performance of the CPT, measured vibrations at the thrust bearing vertical axis reached 0.357 ips, exceeding the ASME OM Code prescribed alert range absolute criteria of 0.325 ips.

Measured vibration data obtained on September 22, 2019 are provided below:

Table P-6.2. 1-CH-P-1A Vibration Data & Criteria from 22 September 2019 CPT

Location & Axis	Measured, ips	Reference Value, ips	Delta, ips	Alert Criteria, ips
Inboard Horizontal	0.1960	0.1832	0.0128	0.3250 (absolute)
Inboard Vertical	0.1530	0.1275	0.0255	0.3187 ($2.5 \cdot V_{\text{ref}}$)
Outboard Horizontal	0.1320	0.0870	0.0450	0.2175 ($2.5 \cdot V_{\text{ref}}$)
Outboard Vertical	0.1310	0.0908	0.0392	0.2270 ($2.5 \cdot V_{\text{ref}}$)
Thrust Bearing Axial	0.2150	0.1709	0.0441	0.3250 (absolute)
Thrust Bearing Horizontal	0.1580	0.0927	0.0653	0.2317 ($2.5 \cdot V_{\text{ref}}$)
Thrust Bearing Vertical	0.3570	0.2760	0.0810	0.3250 (absolute)

This test was the first occurrence of the alert range criteria being exceeded during the performance of a CPT following the speed increaser maintenance in 2012. When overlaid, data obtained during performance of each CPT reflects consistently good correlation with the associated Group A Test data. Vibrations have remained elevated but consistent following speed increaser maintenance, and data scatter has remained consistent since 2001.

Based on published industry guidance, a vibration level of 0.357 ips indicates a rough running machine, but this is not in a range of action required to cause imminent equipment failure which would be > 0.7 ips. Comparison of the vibration signatures associated with the Thrust Bearing Vertical monitoring point obtained during the CPT and a recent Group A test are depicted in Figures P-6.1 and Figure P-6.2, respectively.

RELIEF REQUEST P-6 (Cont.)

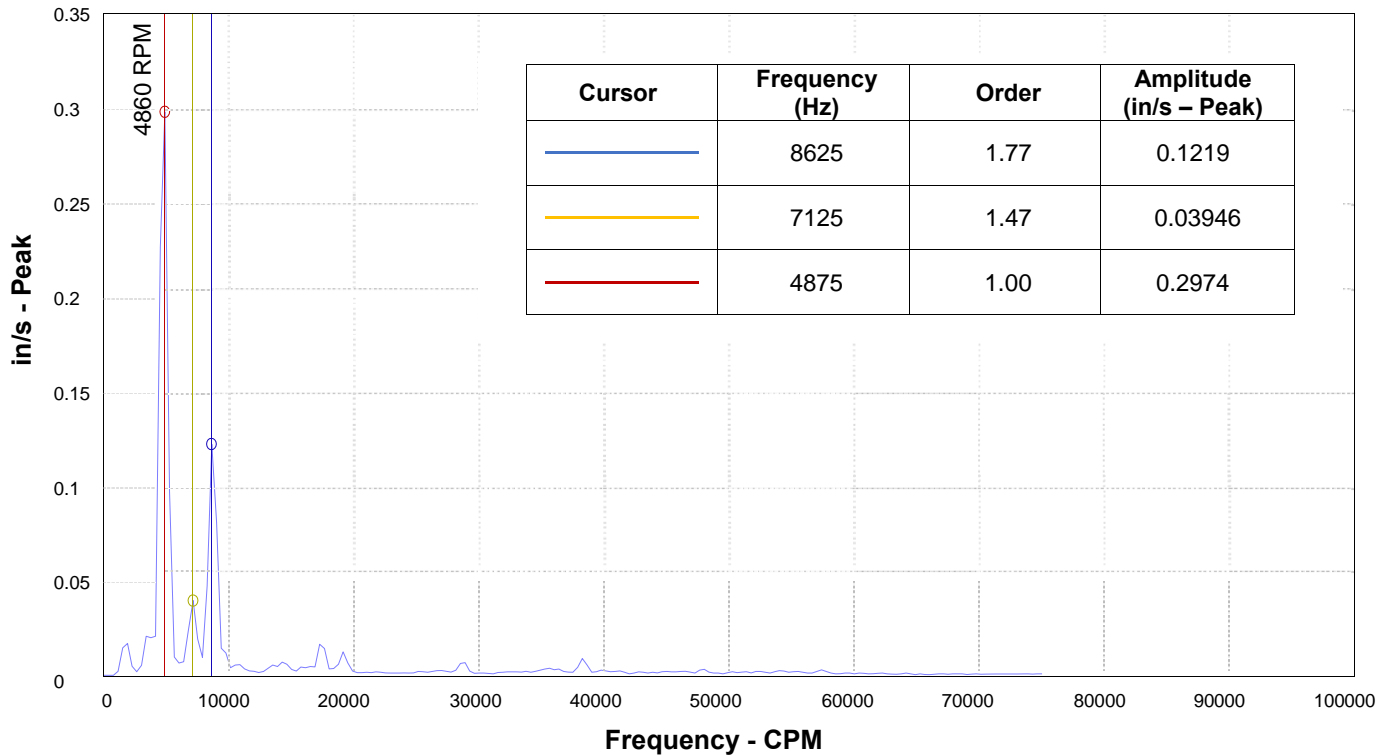


Figure P-6.1. Spectrum of Thrust Vertical Point on 1-CH-P-1A, Comprehensive Pump Test (1-PT-138.3 A/B/C) on 9/22/2019 10:53:48 AM

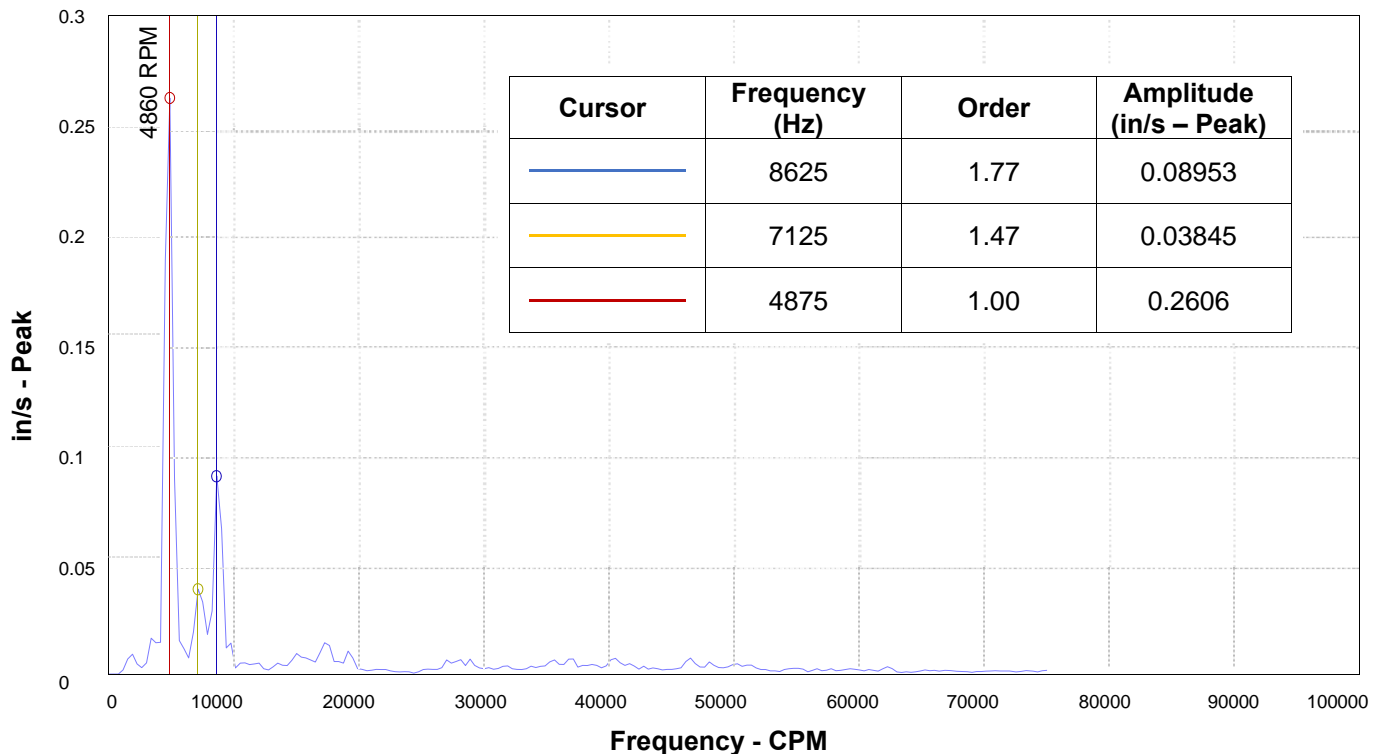


Figure P-6.2. Spectrum of Thrust Vertical Point on 1-CH-P-1A, Group A Pump Test (1-PT-14.1) on 7/10/2019 01:46:19 PM

RELIEF REQUEST P-6 (Cont.)

The spectrums shown are quite similar for both the Group A and CPT and indicate the data collected is accurate and consistent over the data collection time frame.

Evaluation of other pump performance criteria indicate the following:

Oil Analysis

Based on review of the oil samples collected on the pump bearing reservoir, no evidence of degradation has been identified since the initial increase of elevated vibrations noted in 2012. The presence of wear particles would indicate bearing or rotating element wear which would provide early indication of pump degradation. All critical parameters such as acceptable viscosity, stable presence of additives and no increase in wear particles indicate no abnormal wear pattern or degradation mechanism has been initiated as part of the elevated vibrations observed.

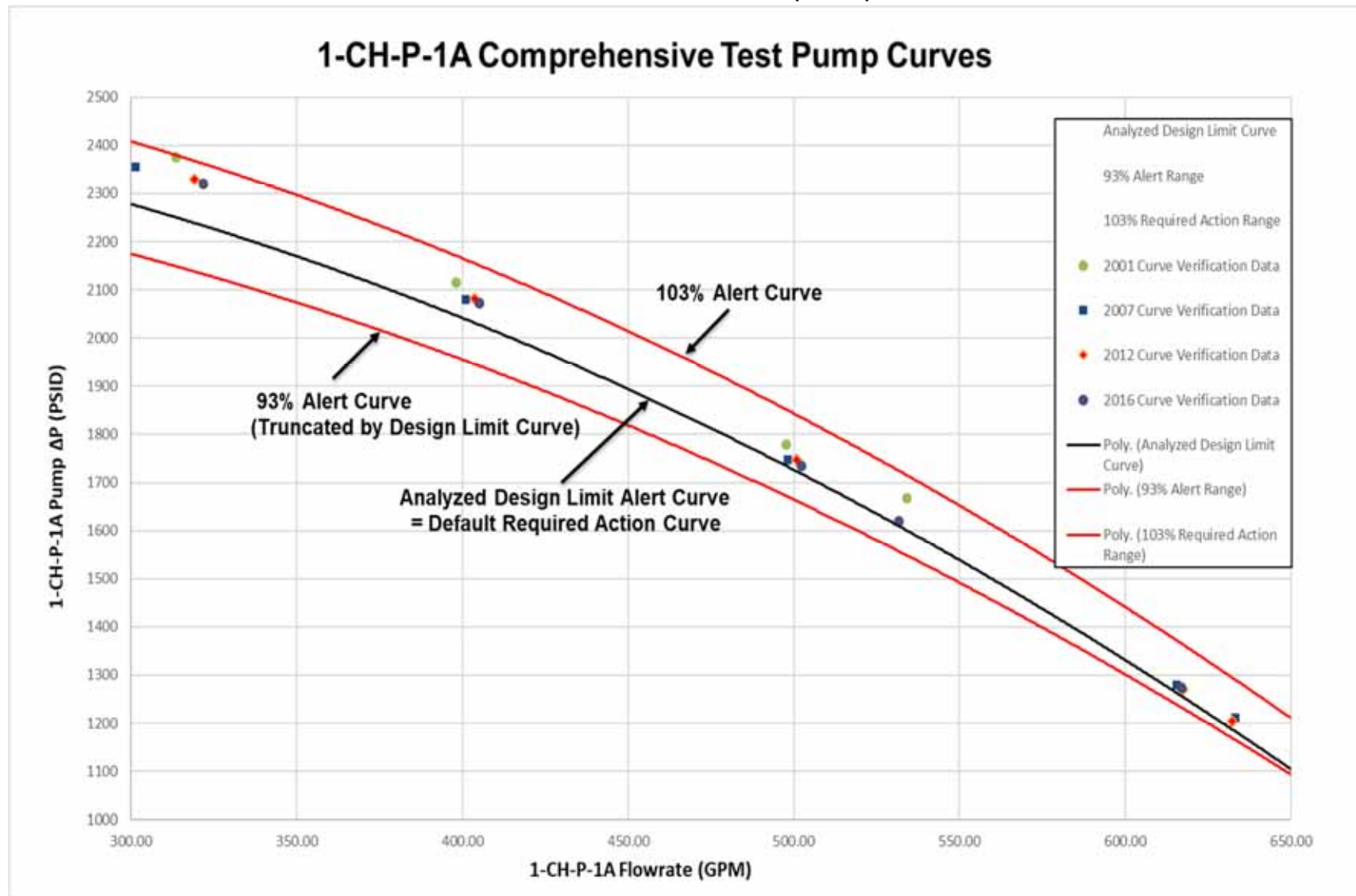
Hydraulic Performance

1-CH-P-1A has been defined as the weaker pump on Unit 1 since installation of the replacement rotating element (7/2001). Following rotating element replacement, hydraulic performance has degraded slightly, as would be expected of a continuously running pump, but remains well within the IST acceptance criteria. Hydraulic performance data recorded during performance of the CPT on September 22, 2019 (632.1 gpm, 1207.1 psid as compared to reference values of 634.0 gpm and 1213.3 psid respectively) indicates hydraulic performance continues to align with the operating curve. There is no notable decrease in flow or discharge pressure which would indicate changing conditions within the pump.

Table P-6.3. Comprehensive Pump Testing Hydraulic Performance

Date	Total Flow, GPM	Differential Pressure, psid	Total Developed Head, ft-H₂O
4/5/2003	626.3	1236.5	2880
3/30/2006	630.6	1227.2	2871
9/29/2010	633.6	1207.0	2826
3/21/2015	630.6	1188.0	2775
10/3/2016	631.5	1206.7	2827
4/8/2018	630.9	1216.3	2832
9/22/2019	632.1	1207.1	2822

RELIEF REQUEST P-6 (Cont.)



RELIEF REQUEST P-6 (Cont.)

The prescribed safety function of 1-CH-P-1A is to supply high pressure borated water to the reactor coolant system following a safety injection signal, and to provide normal charging to the reactor coolant system. The maximum analyzed design basis accident required flow is 594.4 gpm at 2961.2 ft TDH. Since 2012 total run time for this pump has been 2800 hours - 3900 hours each year. Although vibrations remain elevated, pump hydraulic parameters continue to show no evidence of degrading pump performance. Therefore, it can be concluded that 1-CH-P-1A will continue to meet its prescribed safety function and flow requirements with the thrust bearing vertical vibration point measurement in alert.

Dominion is proposing to perform the quarterly Group A test in lieu of the CPT with the associated Unit operational as an alternative to entering an outage and establishing Mode 6 conditions in order to perform the CPT required by ISTB-6200(a). Test data will be compared to the Group A vibration and hydraulic reference values and associated acceptance criteria. All performance data will continue to be analyzed for indications of degrading pump performance. Spectral analysis of vibration data will continue to be monitored for evidence of degrading trends. All aspects of ISTB-6200 shall remain applicable to Group A testing. Should vibrations exceed the alert threshold for the Group A test, testing frequency will be doubled.

Using the provisions of this relief request as an alternative to the specific requirements of ISTB-6200(a) identified above, which have been identified to be a hardship without a compensating increase in quality and safety, will provide adequate indication of pump performance. Therefore, pursuant to 10 CFR 50.55a(z)(2) Relief Request P-9 requests an alternative to the specific ISTB Code requirements identified in this relief request.

6.0 Duration of the Proposed Alternative

This is a relief request to accommodate continued pump performance monitoring utilizing the Group A test. The duration of the proposed relief request will be from the beginning of the fifth 10-year IST Program interval which starts on December 15, 2020 to the N1R28 refueling outage, spring of 2021, and when plant conditions allow for the next CPT surveillance.

RELIEF REQUEST P-6 (Cont.)

7.0 Precedents

Similar Relief Requests were submitted to the U.S. Nuclear Regulatory Commission for Palo Verde Nuclear Generating Station, Unit 3, Relief Request PRR-08 (ADAMS Accession No. ML091900274), dated August 3, 2009, and Waterford Steam Electric Station, Unit 3, Relief Requests PRR-WF3-2016-1 (ADAMS Accession No. ML16182A270) and PRR-WF3-2017-3 (ADAMS Accession No. ML17341A120).

8.0 References

1. ASME OM Code, 2012 Edition
2. Relief Request P-9 for North Anna's fourth IST interval, currently under review with the NRC

RELIEF REQUEST V-1

Five Minute Hold Time on Safety and Relief Valves

Proposed Alternative in Accordance with 10 CFR 50.55a(z)(1):
Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Code Components Affected

All Class 2 and 3 safety and relief valves, excluding the MSSVs as listed in Table V-1.1 for Unit 1 and Table V-1.2 for Unit 2.

2.0 Applicable Code Edition

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

- ISTC Appendix I, I-8120, "Compressible Fluid Services Other Than Steam"
- I-8120(h) requires that a minimum of 5 minutes shall elapse between successive openings.
- ISTC Appendix I, I-8130, "Liquid Service"
- I-8130(g) requires that a minimum of 5 minutes shall elapse between successive openings.

4.0 Reason for Request

The ASME OM Code requires a minimum of two consecutive valve actuations to establish the lift setpoint of safety and relief valves and that a minimum of 5 minutes elapse between successive tests. For the valves listed in Table V-1.1 and V-1.2, the requirement for verifying temperature stability by waiting 5 minutes between successive lift setpoint tests is inappropriate and adds no value. Lift setpoint testing is conducted using water or nitrogen as the test medium, and the tests are performed when the valve and the test medium are at the same temperature. There is a negligible effect on lift setpoint due to minor temperature deviations that might occur during testing.

Eliminating the 5-minute wait time will minimize system outage times and radiation exposure. Numerous Class 2 and 3 safety and relief valves associated with

RELIEF REQUEST V-1 (Cont.)

contaminated systems are bench tested in the hot shop, located within the RCA in the Auxiliary Building, to prevent contamination.

Entry into the hot shop testing facility requires full Anti-C's. During the test, personnel are exposed to background radiation levels present in the Auxiliary Building hot shop as well as the radiation levels associated with the specific valve being tested. The proposed elimination of the hold time between successive tests for Class 2 and 3 safety/relief valves tested under ambient conditions using a test medium at ambient conditions reduces the duration of each test. Most importantly, reducing the hold times reduces the length of time that the test personnel must spend in close proximity to the valve. As a result, personnel radiation exposure is reduced.

For all safety and relief valves, including those located in "clean areas" that are in-situ/bench-tested in the Mechanical Maintenance Shop, the proposed elimination of the hold time between successive tests will reduce the duration of each test. Since there are numerous safety/relief valve tests for both units and most require at least two people, the proposed elimination of the hold time between successive tests is expected to also result in a significant cumulative reduction in limited manpower resources.

5.0 Proposed Alternatives and Bases for Use

For Class 2 and 3 safety and relief valves, excluding the MSSVs, tested under ambient conditions using test medium at ambient conditions, the 5-minute hold requirement between successive openings will be deleted.

In accordance with 1-8120(a), and 1-8130(a), the test medium used will be the same as the normal system operating fluid and temperature for which the valves in Table V-1.1 and V-1.2 were designed. For liquid service this will be water. For compressible fluid services other than steam, this will be nitrogen. In both cases, the test stand and surrounding environment ambient temperature conditions are relatively fixed with negligible changes occurring over the set pressure and seat tightness test determinations. There is a negligible effect on valve setpoint due to minor temperature deviations that might occur at these conditions.

Using the provisions of this relief request as an alternative to the specific requirements of 1-8120(h) and 1-8130(g) identified above will provide adequate indication of valve performance and continue to provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(z)(1), Relief Request V-

RELIEF REQUEST V-1 (Cont.)

1 requests relief from the specific Mandatory Appendix I Code requirements identified in this relief request.

6.0 Duration of the Proposed Alternative

The proposed alternatives described in Relief Request V-1 will be used for the North Anna Power Station Unit 1 and Unit 2 Fifth 10-Year Inservice Testing Interval.

7.0 Precedents

A similar relief request for the North Anna Unit 1 and Unit 2 Fourth 10-Year Inservice Testing Interval was approved by the NRC in their safety evaluation entitled "North Anna Power Station (NAPS), Units Nos.1 and 2, Fourth 10-Year Inservice Testing Interval Program, Pumps and Valves Relief Request (RR) (ADAMS Accession No. ML102460223) dated September 30, 2010.

RELIEF REQUEST V-1 (Cont.)

Table V-1.1. Unit 1 Valves

Valve Number	System	ASME Class	Test Medium
1-CC-RV-124A	Component Cooling	3	Water
1-CC-RV-124B	Component Cooling	3	Water
1-CC-RV-124C	Component Cooling	3	Water
1-CC-RV-125A	Component Cooling	3	Water
1-CC-RV-125B	Component Cooling	3	Water
1-CC-RV-125C	Component Cooling	3	Water
1-CC-RV-126	Component Cooling	3	Water
1-CC-RV-128A	Component Cooling	3	Water
1-CC-RV-128B	Component Cooling	3	Water
1-CC-RV-131A	Component Cooling	3	Water
1-CC-RV-131B	Component Cooling	3	Water
1-CH-RV-1203	Chemical and Volume Control	2	Water
1-CH-RV-1382A	Chemical and Volume Control	2	Water
1-CH-RV-1382B	Chemical and Volume Control	2	Water
1-FW-RV-100	Auxiliary Feedwater	3	Water
1-HV-RV-1200	Control Room Chilled Water	3	Water
1-HV-RV-1201	Control Room Chilled Water	3	Water
1-HV-RV-1202A	Control Room Chilled Water	3	Water
1-HV-RV-1202B	Control Room Chilled Water	3	Water
1-HV-RV-1202C	Control Room Chilled Water	3	Water
1-HV-RV-1205A	Control Room Condenser Water	3	Water
1-HV-RV-1205B	Control Room Condenser Water	3	Water
1-HV-RV-1205C	Control Room Condenser Water	3	Water
1-RH-RV-1721A	Residual Heat removal	2	Water
1-RH-RV-1721B	Residual Heat removal	2	Water
1-SI-RV-1845A	Safety Injection	2	Water
1-SI-RV-1845B	Safety Injection	2	Water
1-SI-RV-1845C	Safety Injection	2	Water
1-SI-RV-1857	Safety Injection	2	Water
1-SI-RV-1858A	Safety Injection	2	Nitrogen
1-SI-RV-1858B	Safety Injection	2	Nitrogen
1-SI-RV-1858C	Safety Injection	2	Nitrogen
1-SW-RV-100A	Service Water	2	Water
1-SW-RV-100B	Service Water	2	Water
1-SW-RV-100C	Service Water	2	Water
1-SW-RV-100D	Service Water	2	Water
1-SW-RV-101A	Service Water	3	Water
1-SW-RV-101B	Service Water	3	Water

RELIEF REQUEST V-1 (Cont.)

Table V-1.2. Unit 2 Valves

Valve Number	System	ASME Class	Test Medium
2-CC-RV-224A	Component Cooling	3	Water
2-CC-RV-224B	Component Cooling	3	Water
2-CC-RV-224C	Component Cooling	3	Water
2-CC-RV-225A	Component Cooling	3	Water
2-CC-RV-225B	Component Cooling	3	Water
2-CC-RV-225C	Component Cooling	3	Water
2-CC-RV-226	Component Cooling	3	Water
2-CC-RV-228A	Component Cooling	3	Water
2-CC-RV-228B	Component Cooling	3	Water
2-CC-RV-231A	Component Cooling	3	Water
2-CC-RV-231B	Component Cooling	3	Water
2-CH-RV-2203	Chemical and Volume Control	2	Water
2-CH-RV-2382A	Chemical and Volume Control	2	Water
2-CH-RV-2382B	Chemical and Volume Control	2	Water
2-FW-RV-200	Auxiliary Feedwater	3	Water
2-HV-RV-2200	Control Room Chilled Water	3	Water
2-HV-RV-2201	Control Room Chilled Water	3	Water
2-HV-RV-2202A	Control Room Chilled Water	3	Water
2-HV-RV-2202B	Control Room Chilled Water	3	Water
2-HV-RV-2202C	Control Room Chilled Water	3	Water
2-HV-RV-2205A	Control Room Condenser Water	3	Water
2-HV-RV-2205B	Control Room Condenser Water	3	Water
2-HV-RV-2205C	Control Room Condenser Water	3	Water
2-RH-RV-2721A	Residual Heat Removal	2	Water
2-RH-RV-2721B	Residual Heat Removal	2	Water
2-SI-RV-2845A	Safety Injection	2	Water
2-SI-RV-2845B	Safety Injection	2	Water
2-SI-RV-2845C	Safety Injection	2	Water
2-SI-RV-2857B	Safety Injection	2	Water
2-SI-RV-2858A	Safety Injection	2	Nitrogen
2-SI-RV-2858B	Safety Injection	2	Nitrogen
2-SI-RV-2858C	Safety Injection	2	Nitrogen
2-SW-RV-200A	Service Water	2	Water
2-SW-RV-200B	Service Water	2	Water
2-SW-RV-200C	Service Water	2	Water
2-SW-RV-200D	Service Water	2	Water
2-SW-RV-201A	Service Water	3	Water
2-SW-RV-201B	Service Water	3	Water

RELIEF REQUEST S-1

OMN-13 Snubber Visual Examinations

Proposed Alternative in Accordance with 10 CFR 50.55a(z)(1):
Alternative provides an acceptable level of quality and safety.

1.0 ASME Code Components Affected

All snubbers in the scope of the North Anna Unit 1 and Unit 2 IST Program.

2.0 Applicable Code Edition

ASME OM Code 2012 Edition

3.0 Applicable Code Requirements

ISTA-3130(b) states that Code Cases shall be applicable to the edition and addenda specified in the test plan.

4.0 Reason for Request

Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (z)(1), relief is requested from the applicability statement in Revision 2 of Code Case OMN-13 as shown in the 2012 Edition of the ASME OM Code. This request is to allow the use of ASME Code Case OMN-13, Revision 2 with the 2012 Edition of the ASME OM Code.

Code Case OMN-13, Revision 2 provides alternative rules for establishing the intervals for the visual examination of snubbers. Code Case OMN-13, Revision 2 states in the Applicability section that it is applicable for the 1995 Edition through the 2011 Addenda. The 2012 Edition of the ASME OM Code will be the Code of record for North Anna's Unit 1 and Unit 2 Fifth 10-year Inservice Testing interval.

5.0 Proposed Alternative and Basis for Use

The IST snubber programs will follow the requirements of Code Case OMN-13, Revision 2, "Performance-Based Requirements for Extending Snubber Inservice Visual examination Interval at LWR Power Plants" as published in the 2012 Edition. Code Case OMN-13, Revision 2 has been referenced in Regulatory Guide 1.192, Revision 2,

RELIEF REQUEST S-1 (Cont.)

Operation and Maintenance Code Case Acceptability, ASME OM Code, Table 1, Acceptable OM Code Cases. OMN-13 has been approved for use with the 2012 Edition of the ASME OM Code without conditions in RG 1.192.

6.0 Duration of the Proposed Alternative

This proposed alternative described in Relief Request S-1 will be used for the North Anna Power Station Unit 1 and Unit 2 Fifth 10-Year Inservice Testing Interval.

7.0 Precedents

A similar relief request for the Millstone Unit 2 and Unit 3 Fifth and Fourth 10-Year Inservice Testing Interval was approved by the NRC in their November 13, 2018 safety evaluation, entitled, "Alternative Requests Related to the Fifth and Fourth 10-Year Interval Pump, Valve, and Snubber Inservice Testing Programs, Respectively (ADAMS Accession No. ML18290A602) – Millstone Power Station Units 2 and 3."

8.0 References

1. Code Case OMN-13, Performance-Based Requirements for Extending Snubber Inservice Visual Examination Intervals, Revision 2.
2. RG 1.192, Operation and Maintenance Code Case Acceptability, ASME OM Code, Revision 2, dated March 2017; published January 2018 (ML16321A337).

ENCLOSURE

Attachment 3

**Unit 1 Inservice Testing Program Plan for Pumps and Valves,
Fifth 10-Year Interval**

**Virginia Electric and Power Company
(Dominion Energy Virginia)
North Anna Power Station Unit 1**

DOMINION ENERGY

NORTH ANNA POWER STATION UNIT 1
INSERVICE TESTING PROGRAM PLAN

FOR PUMPS AND VALVES

FIFTH INSERVICE TESTING INTERVAL

DECEMBER 15, 2020 - DECEMBER 14, 2030

REVISION 0

COMMERCIAL OPERATION: JUNE, 1978

ADDRESS:

NORTH ANNA POWER STATION
P. O. BOX 402
MINERAL, VIRGINIA 23117

DOCUMENT NUMBER – PLAN: U1 IST PROGRAM PLAN INTERVAL 5

TABLE OF CONTENTS

INSERVICE TESTING PROGRAM PLAN FOR PUMPS AND VALVES

- 1.0 INTRODUCTION
- 2.0 GENERAL PROGRAM DEVELOPMENT
 - 2.1 Program Scope
 - 2.2 Program Update
- 3.0 PUMP INSERVICE TEST PROGRAM DESCRIPTION
 - 3.1 Program Development Philosophy
 - 3.2 Program Implementation
 - 3.3 Program Administration
 - 3.4 Pump Reference List
 - 3.5 Pump Inservice Test Table
 - 3.6 Pump Test Program Relief Requests
 - 3.7 Alternative Testing for Non-Code Pumps
- 4.0 VALVE INSERVICE TEST PROGRAM DESCRIPTION
 - 4.1 Program Development Philosophy
 - 4.2 Program Implementation
 - 4.3 Program Administration
 - 4.4 Valve Inservice Test Table
 - 4.5 Valve Test Program Relief Requests
 - 4.6 Valve Test Program Cold Shutdown Justifications
 - 4.7 Valve Test Program Reactor Refueling Justifications
 - 4.8 Alternative Testing for Non-Code Valves
- 5.0 CODE CASE APPLICATION SUMMARY
- 6.0 TECHNICAL POSITIONS
- 7.0 REPORTING OF INSERVICE TEST RESULTS
 - 7.1 Pump Inservice Test Program
 - 7.2 Valve Inservice Test Program
- 8.0 QUALITY ASSURANCE PROGRAM

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

1.0 INTRODUCTION

This Pump and Valve Inservice Test (IST) Program Plan is applicable to the North Anna Power Station Unit 1 which received its construction permit on February 19, 1971 and began commercial operation in June 1978. North Anna Power Station Unit 1 is a Pressurized Water Reactor located on Lake Anna in Louisa County, Virginia. The plant employs a Westinghouse Electric Corp. Nuclear Steam System.

The IST Program Plan is comprised of three subprograms – the IST Program for Pumps, the IST Program for Valves and the IST Program for Dynamic Restraints (Snubbers). The Snubber Program Plan is not included in this document. The development, implementation and administration of these programs are detailed in subsequent sections. This IST Program Plan applies to the fifth 10-year IST interval for North Anna Power Station Unit 1 which starts on December 15, 2020 and ends on December 14, 2030.

The end of the first IST interval for North Anna Unit 1 was extended from June 6, 1988 to December 14, 1990 to coincide with the end of the first inspection interval for North Anna Unit 2. This extension was granted in the form of an exemption to the Code of Federal Regulations, 10 CFR 50.55a(g)(4) per NRC, dated April 26, 1988. For IST, 10 CFR 50.55a(g) was subsequently replaced by 10 CFR 50.55a(f).

2.0 GENERAL PROGRAM DEVELOPMENT

The Code of Federal Regulations, paragraph 10 CFR 50.55a(f) describes the inservice testing requirements for pumps and valves which are within the scope of ISTA-1100. Paragraph 10 CFR 50.55a(f)(4)(ii) states that,

“Inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during successive 120-month intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (a)(1)(iv) of this section 12 months before the start of the 120-month interval (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147 or NRC Regulatory Guide 1.192 as incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section, respectively), subject to the conditions listed in paragraph (b) of this section.”

The Code of Federal Regulations, paragraph 10 CFR 50.55a(b)(3) refers to the ASME Code for Operation and Maintenance (OM) of Nuclear Power Plants and includes the 2012 Edition. The Code reference became effective on August 17, 2017 and applies to the fifth IST interval for North Anna Unit 1. The IST Program for the fifth IST interval complies with this edition.

The ASME OM Code requires that the owner of each nuclear power plant prepare a "plan" for testing and inspection of systems and components under the jurisdiction of 10 CFR 50.55a. The Code, Subsection ISTA, General Requirements, Subsection ISTB, Inservice Testing of Pumps, Subsection ISTC, Inservice Testing of Valves, Subsection ISTD, Preservice and Inservice Examination and Testing of Dynamic Restraints along with Appendix I, Inservice Testing of Pressure Relief Devices, Appendix II, Check Valve Condition Monitoring Program, Appendix III, Preservice and Inservice Testing of Active Electric Motor Operated Valve Assemblies and Appendix V, Pump Periodic Verification Test Program all apply to the IST program. Subsections ISTA, ISTB, ISTC and ISTD establish the IST program scope with the provision that the rules apply to ASME Code Classes 1, 2 and 3 and as well as Non-Code Class components as stated in the Code of Federal Regulations.

In accordance with ASME OM Code, the following are required to be included in the testing program:

- 1) Certain centrifugal pumps, centrifugal pumps with vertical line shafts and positive displacement pumps which are provided with an emergency power source and required to perform 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.
- 2) Certain valves and pressure relief devices (and their actuating and position indicating systems) which are required to perform 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.

- 3) Certain dynamic restraints (snubbers, pin to pin, inclusive) which are required to perform a specific function in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition or mitigating the consequences of an accident.

In addition to the general Code requirements outlined above, there are other interpretations and positions that have come about as a result of past regulatory and licensee actions including Generic Letter 89-04 and NUREG-1482, Guidelines for Inservice Testing at Nuclear Power Plants. Other than these guides, there is no specific guidance for developing the IST Program scope of testing. Therefore, a process was established by which the scope of the North Anna ASME IST Program is determined including components that are to be included and the extent and type of testing required for each. Based on this process, the philosophy and assumptions used in determining the test requirements for selected pumps and valves were documented.

2.1 PROGRAM SCOPE

In the course of developing the program scope, each of the significant safety systems included within the ASME Code Class boundaries and certain safety systems outside of the ASME Code Class boundaries (such as the emergency diesel fuel oil transfer system) were evaluated with respect to the function of each component and the need for its operability as it relates to the scope of the ASME OM Code. Supporting documents used include,

- Final Safety Analysis Report (FSAR),
- Technical Specifications,
- USNRC Regulatory Guide 1.26, Revision 3,
- Past program correspondence,
- Operating Procedures (normal, emergency and abnormal) and
- Plant System Descriptions.

The sequence used during the development effort was as follows.

1. Each of the plant systems was subjected to an overview to determine any potential active safety function as described in the scope statement. Those systems with no safety functions related to the ASME OM Code scope were excluded from further consideration. Plant documents as well as operating staff comments were utilized in this phase.
2. For the remaining systems, flow diagrams were studied and components that could have an active or passive safety function (other than simply maintaining the pressure boundary) were identified for further evaluation.
3. The function of components identified from the flow diagrams was determined based on available documentation, staff review or general

experience of the evaluator. Component test requirements were derived based on the component function(s) and Code requirements.

4. Available documents were reviewed, and specific or implied component operational requirements were compared to the component functions.
5. The results of the steps described above were reviewed by several knowledgeable members of the plant staff and evaluated for accuracy and consistency and compiled in an IST basis document. Based on this review, the final program scope was derived, and the IST Program Plan developed.

2.2 PROGRAM UPDATE

During the fifth IST interval, it is expected that the scope of the IST Program will occasionally be modified in response to activities including, but not limited to:

- 1) Plant design changes,
- 2) Changes in operating conditions (e.g. normal valve lineup),
- 3) Changes in accident mitigating procedure philosophy and
- 4) Later editions and addenda to the ASME OM Code.

As a result, it is expected that the IST Program will be revised to ensure continued compliance with the Code requirements relating to the scope of the test program. The IST Program Owner is provided copies of plant modifications that are designated by engineering to have a potential IST impact. Should a change require a program revision, the site IST Program owners would then implement the change to the program plan and the appropriate test procedure(s) in a timely manner.

3.0 PUMP INSERVICE TEST PROGRAM DESCRIPTION

3.1 PROGRAM DEVELOPMENT PHILOSOPHY

North Anna Technical Specification 5.5.7 describes the surveillance requirements that apply to the inservice testing of ASME Code Class 1, 2 and 3 pumps. The North Anna Unit 1 Inservice Testing (IST) Program for Pumps has been established to meet the requirements of 10 CFR 50, the ASME OM Code, Subsection ISTB, Mandatory Appendix V and Technical Specifications.

The scope of the program includes ASME Code Class 1, 2 and 3, and certain non-Code class pumps that are required to perform a specific function in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition or mitigating the consequences of an accident.

ISTB defines the rules and requirements of inservice testing of Code Class 1, 2, and 3 pumps and states that each pump to be tested by the rules of this subsection shall be identified by the owner and listed in the plant records.

The purpose of the IST Program Plan is to identify the pumps that are considered by Virginia Electric and Power Company (Dominion) as having a safety function and are therefore subject to the testing requirements of ISTB. The intent of the Code is to assess operational readiness and detect potentially adverse changes in the mechanical condition of these pumps. The relief requests for the IST Program Plan identify Code requirements considered to be impractical or for which an alternate testing method is proposed, provide technical basis for the request and propose alternate testing when warranted.

3.2 PROGRAM IMPLEMENTATION

Surveillance testing is performed to detect equipment malfunction or degradation and to initiate corrective action. The North Anna Power Station Unit 1 IST Program provides a schedule for testing safety-grade pumps and is implemented as part of normal periodic surveillance testing.

Reference data is gathered during initial surveillance tests. With the ASME OM Code, these initial reference tests can be a preservice test in accordance with ISTB-3100 or the first inservice test in accordance with ISTB-3200.

The ASME Code, ISTB-2000 defines pumps as either Group A pumps or Group B pumps. Group A pumps are pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operations. Group B pumps are pumps in standby systems that are not operated routinely except for testing.

The Code describes Group A and Group B testing requirements specific to Group A and Group B pumps. The Code also describes comprehensive test requirements. Comprehensive tests apply to both Group A and B pumps and require more accurate pressure instrumentation (0.5% versus 2% for the Group A

and B tests) but are performed on a less frequent basis.

The Group A test parameters include differential pressure (or discharge pressure for positive displacement pumps), flow rate, vibration and speed for variable speed pumps. The Group B test parameters include differential pressure for pumps other than positive displacement pumps, flow rate and speed for variable speed pumps. Differential pressure need not be measured for positive displacement pumps. The Group A and B test parameters are typically measured with normal plant instrumentation. Comprehensive test parameters include differential pressure (or discharge pressure for positive displacement pumps), flow rate, vibration and speed for variable speed pumps. The comprehensive test shall be performed at the comprehensive test flow rate. This reference value is defined as the flow rate established by the Owner that is effective for detecting mechanical and hydraulic degradation during subsequent testing. The best efficiency point, system flow rates, and any other plant-specific flow rates are considered. If practicable, Group A and B tests shall be performed at the comprehensive test flow rate. If not practicable, these tests shall be performed at the highest practical flow rate.

Group A and B inservice tests shall be performed every three months as required by Table ISTB-3400-1. Any deviation from this test frequency requires a request for relief from Code provisions. During subsequent surveillance tests, flow rate is normally selected as the independent test parameter and is set to match the reference flow rate. Other hydraulic and mechanical performance parameters are measured and evaluated against the appropriate reference values. The results of such evaluations determine whether or not corrective action is warranted. Comprehensive tests are performed at frequencies no greater than every two years in a manner similar to the Group A and B inservice tests.

Each pump in the IST Program is tested according to a detailed test procedure. The procedure includes, as a minimum:

- 1) References: This section identifies references applicable to Technical Specifications and other materials such as drawings needed to define the hydraulic circuit to be used for the test.
- 2) Purpose: This section identifies test objectives.
- 3) Initial Conditions: Each procedure should identify those independent actions or procedures which shall be completed and station conditions which shall exist prior to use.
- 4) Precautions: Precautions should be established to alert the individual performing the task to those situations in which important measures should be taken early or where extreme care should be used to protect equipment and personnel. Cautionary notes applicable to specific steps in the procedure should be included in the main body of the procedure as appropriate and should be identified as such.

- 5) Instructions: The main body of a procedure should contain step by step instructions in the degree of detail necessary for performing a required test. Included in this section is the location and type of measurement for the required test parameters and the method of determining test parameter values that are not directly measured by instrumentation.
- 6) Acceptance Criteria: The ranges within which test data are considered acceptable are established and included in the test procedure. In the event that data fall outside the acceptable range, operator action is governed by approved station procedures.

Finally, it is recognized that the IST Program for Pumps sets forth minimum testing requirements. Additional testing is performed, as required, after pump maintenance or as determined necessary by personnel at North Anna Power Station.

3.3 PROGRAM ADMINISTRATION

The engineering staff at North Anna is responsible for the administration of the IST Program for Pumps. The operations staff is responsible for performing the periodic tests as required by this program. The IST Program for Pumps is implemented by station periodic test procedures.

3.4 PUMP REFERENCE LIST

This list gives a brief description of each pump identified in the Pump IST Program.

1-CC-P-1A Component Cooling Water Pumps

1-CC-P-1B Drawing: 11715-CBM-79A, Sh 1 of 3

Description: These centrifugal pumps supply cooling water to transfer heat from heat exchangers containing reactor coolant or other radioactive fluids. The component cooling water pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

1-CH-P-1A High Head Safety Injection/Charging Pumps

1-CH-P-1B Drawing: 11715-CBM-95B, Sh 2 of 2

1-CH-P-1C

Description: These centrifugal pumps supply high pressure borated water to the

reactor coolant system following a safety injection signal, and to provide normal charging to the reactor coolant system. The high head safety injection/charging pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance during the Group A test and fixed resistance during Comprehensive testing.

1-CH-P-2A Boric Acid Transfer Pumps

1-CH-P-2B Drawing: 11715-CBM-95A, Sh 1 of 4

Description: These centrifugal pumps are used to supply concentrated boric acid to the blender; recirculate the contents of the boric acid storage tanks; recirculate the contents of the BIT, and for emergency boration. The boric acid transfer pumps operate at two constant speeds. The low speed is used when recirculating the contents of the boric acid storage tanks and BIT. The high speed (approximately double the low speed) is used during blended makeups and when the pumps discharge to the charging pump suction header during emergency boration events. The tests are conducted with the pumps on high speed. These pumps operate routinely during normal operation and are defined as Group A pumps. For the purposes of quarterly testing, the flow path through the recirculation loop is characterized as a fixed resistance system. Comprehensive testing is performed every refueling outage through a variable resistance flow path.

1-EG-P-1HA Emergency Diesel Generator Fuel Oil Transfer Pumps

1-EG-P-1HB Drawing: 11715-FB-35A, Sh 2 of 2

1-EG-P-1JA

1-EG-P-1JB

Description: These positive displacement pumps supply fuel oil to the emergency diesel generator fuel oil day tank which directly supplies the emergency diesel generator. The emergency diesel generator fuel oil pumps are in a standby system and are defined as Group B pumps and are included in the augmented IST program. The pumps are constant speed pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance. The pumps have one bearing housing located on the driver side of the rotor. There is no thrust bearing. Measurements will be taken in a plane approximately perpendicular to the rotating

shaft in two approximately orthogonal directions on the one pump bearing housing.

1-FW-P-2 Auxiliary Feedwater Pumps

1-FW-P-3A Drawing: 11715-CBM-74A, Sh 3 of 5

1-FW-P-3B

Description: These centrifugal pumps supply auxiliary feedwater to the steam generators following a loss of normal feedwater flow. The auxiliary feedwater pumps are in a standby system and are defined as Group B pumps. The steam driven pump 1-FW-P-2 is a variable speed pump, and the motor driven pumps 1-FW-P-3A and 3B are constant speed pumps. Pump testing is performed through a test loop characterized as variable resistance.

1-HV-P-20A Control and Relay Room Chilled Water Pumps

1-HV-P-20B Drawing: 11715-CBB-40C, Sh 1 of 3

1-HV-P-20C

Description: These centrifugal pumps circulate chilled water for the control and relay room cooling coils. The control and relay room chilled water pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

1-HV-P-22A Control and Relay Room Condenser Water Pumps

1-HV-P-22B Drawing: 11715-CBB-40D, Sh 1 of 3

1-HV-P-22C

Description: These centrifugal pumps supply service water to the control and relay room air conditioning condenser water system. The control and relay room condenser water pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

1-QS-P-1A Quench Spray Pumps

1-QS-P-1B Drawing: 11715-CBM-91A, Sh 2 of 4

Description: These centrifugal pumps supply a borated, chemically treated spray to cool, remove iodine from, and depressurize the containment atmosphere following a containment depressurization actuation signal. The quench spray pumps are in a standby system and are defined as Group B pumps. The pumps are constant speed pumps. Pump testing is performed through a recirculation flow path characterized as fixed resistance.

1-RH-P-1A Residual Heat Removal Pumps

1-RH-P-1B Drawing: 11715-CBM-94A, Sh 1 of 2

Description: These centrifugal pumps remove decay heat from the reactor core and the reactor coolant system during plant cool down. The residual heat removal pumps are constant speed pumps that operate routinely during cold shutdowns and reactor refuelings and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

1-RS-P-1A Inside Recirculation Spray Pumps

1-RS-P-1B Drawing: 11715-CBM-91A, Sh 3 of 4

Description: These vertical line shaft centrifugal pumps supply a borated spray to cool and depressurize the containment atmosphere following a containment depressurization actuation signal and maintain containment subatmospheric following an accident. The inside recirculation spray pumps are in a standby system and are defined as Group B pumps. According to ISTB-3430, they require a comprehensive test at least once every two years and the Group B test is not required. Because the pumps are inside containment, they will receive the comprehensive test during reactor refueling outages. The pumps are constant speed pumps. Pump testing is performed through a test loop characterized as variable resistance.

1-RS-P-2A Outside Recirculation Spray Pumps

1-RS-P-2B Drawing: 11715-CBM-91A, Sh 4 of 4

Description: These vertical line shaft centrifugal pumps supply borated spray to cool and depressurize the containment atmosphere following a

containment depressurization actuation signal and maintain containment subatmospheric following an accident. The outside recirculation spray pumps are in a standby system and are defined as Group B pumps. According to ISTB-3430, they require a comprehensive test at least once every two years and the Group B test is not required. The pumps are constant speed pumps. Pump testing is performed through a test loop characterized as variable resistance.

1-RS-P-3A Casing Cooling Pumps

1-RS-P-3B Drawing: 11715-CBM-91B, Sh 1 of 1

Description: These centrifugal pumps supply cool borated water to the outside recirculation spray pumps to increase the net positive suction head of these pumps. The casing cooling pumps are in a standby system and are defined as Group B pumps. The pumps are constant speed pumps. Pump testing is performed through a recirculation loop, characterized as variable resistance.

1-SI-P-1A Low Head Safety Injection Pumps

1-SI-P-1B Drawing: 11715-CBM-96A, Sh 1 of 3

Description: These vertical line shaft centrifugal pumps supply low pressure borated water to the reactor coolant system following a safety injection signal. The low head safety injection pumps are in a standby system and are defined as Group B pumps. The pumps are constant speed pumps. The comprehensive pump test is performed through the normal discharge flow path, characterized as variable resistance. The Group B test is performed through a recirculation loop and is characterized as fixed resistance.

1-SW-P-1A Service Water Pumps

1-SW-P-1B Drawing: 11715-CBM-78A, Sh 3 of 5

Description: These vertical line shaft centrifugal pumps supply cooling water to the component cooling and recirculation spray heat exchangers as well as other safety related components. The service water pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

3.5 PUMP INSERVICE TEST TABLE

The Pump Inservice Test Table identifies the pumps to be tested, code classes, required test quantities and frequencies. Relief from test requirements is requested in cases where test requirements are determined to be impractical. Where relief is requested, technical justification is provided along with alternative test methods when applicable. Relief requests are contained in Section 3.6.

Non-Code pumps are characterized as 'Augmented' within the IST Program. For non-Code class pumps, a request for relief is not necessary when provisions of the Code are determined to be impractical provided the basis for deviations from the ASME OM Code demonstrates an acceptable level of quality and safety, or that implementing the Code provisions would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Section 3.7 contains a discussion of the testing requirements for non-Code pumps and descriptions of alternative testing in cases where the provisions of the Code are not met.

To aid the reader in interpreting the Pump Inservice Test Table, brief explanations of the table headings and abbreviations are provided below.

<u>Pump Description</u>	Descriptive name of the pump.	
<u>Pump No.</u>	Unique pump identification number.	
<u>Drawing No. / COOR.</u>	Piping and Instrumentation Drawing (Flow Diagram) on which the pump is represented along with the P&ID Coordinate location.	
<u>Class</u>	ASME Code Class for the pump per RG 1.16.	
	1	Class 1
	2	Class 2
	3	Class 3
	NC	Non-Code Class
<u>Pump Type</u>	Pump type.	
	C-H	Centrifugal Horizontal
	C-V	Centrifugal Vertical
	VLS	Vertical Line Shaft Centrifugal
	PD	Positive Displacement

Pump Driver

Pump driver type.

MTR	Motor driven
TURB	Steam turbine driven
ENG	Engine Driven

Group

Pump Group as defined in ISTB-2000

A	Continuous/routinely operated pumps
B	Standby pumps not operated routinely except for testing

Test Type

Measured pump test parameters

DP	Differential Pressure
N	Speed
Q	Flow Rate
V	Vibration
PD	Discharge Pressure
C	Denotes a Comprehensive Pump Test

Test Freq

Frequencies for performing the specified inservice test:

3M	Quarterly (92 Days)
24M	Biennially (2 Years)
CS	Cold Shutdown
RR	Refueling Outage

Program

IST Program Type

Standard	Requires a relief request to deviate from Code requirements
Augmented	Is NOT a Code Class component

Relief Request

A relief request number, prefaced with a “P” is listed in the Notes column of the pump tables when a specific code requirement is determined to be impracticable. Relief requests are presented in Section 3.6.

Non-Code Alter Test

Non-Code alternative tests apply to pumps that are not ASME Code Class 1, 2 or 3. These tests are alternatives to Code tests and are described in Section 3.7 and are prefaced with “PNC” in the test tables.

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CC-P-1A	11715-CBM-079A SH-001 / C5	Standard	A	C-H	MTR	3	No	CC
DESCRIPTION: "1A" COMPONENT COOLING PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	OMN-16
C-V	24M	P-01
DP	3M	
Q	3M	OMN-16
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CC-P-1B	11715-CBM-079A SH-001 / B5	Standard	A	C-H	MTR	3	No	CC
DESCRIPTION: "1B" COMPONENT COOLING PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	OMN-16
C-V	24M	P-01
DP	3M	
Q	3M	OMN-16
V	3M	P-01

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CH-P-1A	11715-CBM-095B SH-002 / C7	Standard	A	C-H	MTR	2	No	CH

DESCRIPTION: "1A" CHARGING PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	
DP	3M	
Q	3M	OMN-16
V	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CH-P-1B	11715-CBM-095B SH-002 / C6	Standard	A	C-H	MTR	2	No	CH

DESCRIPTION: "1B" CHARGING PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	
DP	3M	
Q	3M	OMN-16
V	3M	

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CH-P-1C	11715-CBM-095B SH-002 / C4	Standard	A	C-H	MTR	2	No	CH

DESCRIPTION: "1C" CHARGING PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	
DP	3M	
Q	3M	OMN-16
V	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CH-P-2A	11715-CBM-095A SH-001 / B4	Standard	A	C-H	MTR	3	No	CH

DESCRIPTION: "2A" BORIC ACID TRANSFER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	P-03
V	3M	P-01

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CH-P-2B	11715-CBM-095A SH-001 / B5	Standard	A	C-H	MTR	3	No	CH

DESCRIPTION: "2B" BORIC ACID TRANSFER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	P-03
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-FW-P-2	11715-CBM-074A SH-003 / B8	Standard	B	C-H	TURB	3	Yes	FW

DESCRIPTION: TURBINE DRIVEN AUXILIARY FEEDWATER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-S	24M	
C-V	24M	
DP	3M	
Q	3M	
S	3M	

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-FW-P-3A	11715-CBM-074A SH-003 / B6	Standard	B	C-H	MTR	3	No	FW

DESCRIPTION: "3A" MOTOR DRIVEN AUX FEEDWATER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-FW-P-3B	11715-CBM-074A SH-003 / B5	Standard	B	C-H	MTR	3	No	FW

DESCRIPTION: "3B" MOTOR DRIVEN AUX FEEDWATER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-HV-P-20A	11715-CBB-040C SH-001 / E6	Standard	A	C-V	MTR	3	No	HV

DESCRIPTION: "20A" CONTROL ROOM CHILLER CHILL WATER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-HV-P-20B	11715-CBB-040C SH-001 / C6	Standard	A	C-V	MTR	3	No	HV

DESCRIPTION: "20B" CONTROL ROOM CHILLER CHILL WATER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-HV-P-20C	11715-CBB-040C SH-001 / D6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "20C" CONTROL ROOM CHILLER CHILL WATER PUMP								
				TEST	FREQUENCY	NOTES		
				C-DP	24M			
				C-Q	24M			
				C-V	24M			
				DP	3M			
				Q	3M			
				V	3M			
PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-HV-P-22A	11715-CBB-040D SH-001 / E6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "22A" CONTROL ROOM CHILLER CONDENSER PUMP								
				TEST	FREQUENCY	NOTES		
				C-DP	24M			
				C-Q	24M			
				C-V	24M	P-01		
				DP	3M			
				Q	3M			
				V	3M	P-01		

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-HV-P-22B	11715-CBB-040D SH-001 / B6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "22B" CONTROL ROOM CHILLER CONDENSER PUMP								
				TEST	FREQUENCY	NOTES		
				C-DP	24M			
				C-Q	24M			
				C-V	24M	P-01		
				DP	3M			
				Q	3M			
				V	3M	P-01		

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-HV-P-22C	11715-CBB-040D SH-001 / D6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "22C" CONTROL ROOM CHILLER CONDENSER PUMP								
				TEST	FREQUENCY	NOTES		
				C-DP	24M			
				C-Q	24M			
				C-V	24M	P-01		
				DP	3M			
				Q	3M			
				V	3M	P-01		

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-QS-P-1A	11715-CBM-091A SH-002 / B5	Standard	B	C-H	MTR	2	No	QS

DESCRIPTION: "1A" QUENCH SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	P-05
C-V	24M	
DP	3M	
Q	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-QS-P-1B	11715-CBM-091A SH-002 / B4	Standard	B	C-H	MTR	2	No	QS

DESCRIPTION: "1B" QUENCH SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	P-05
C-V	24M	
DP	3M	
Q	3M	

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-RH-P-1A	11715-CBM-094A SH-001 / D7	Standard	A	C-V	MTR	2	No	RH
DESCRIPTION: "1A" RESIDUAL HEAT REMOVAL PUMP								

TEST	FREQUENCY	NOTES
C-DP	CS	P-02
C-Q	CS	P-02
C-V	CS	P-02 : P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-RH-P-1B	11715-CBM-094A SH-001 / D4	Standard	A	C-V	MTR	2	No	RH
DESCRIPTION: "1B" RESIDUAL HEAT REMOVAL PUMP								

TEST	FREQUENCY	NOTES
C-DP	CS	P-02
C-Q	CS	P-02
C-V	CS	P-02 : P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-RS-P-1A	11715-CBM-091A SH-003 / B7	Standard	B	VLS	MTR	2	No	RS
DESCRIPTION: "1A" INSIDE RECIRCULATION SPRAY PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-RS-P-1B	11715-CBM-091A SH-003 / B4	Standard	B	VLS	MTR	2	No	RS

DESCRIPTION: "1B" INSIDE RECIRCULATION SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-RS-P-2A	11715-CBM-091A SH-004 / B4	Standard	B	VLS	MTR	2	No	RS

DESCRIPTION: "2A" OUTSIDE RECIRCULATION SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	P-04
C-V	24M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-RS-P-2B	11715-CBM-091A SH-004 / B3	Standard	B	VLS	MTR	2	No	RS

DESCRIPTION: "2B" OUTSIDE RECIRCULATION SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	P-04
C-V	24M	

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-RS-P-3A	11715-CBM-091B SH-001 / B6	Standard	B	C-H	MTR	3	No	RS

DESCRIPTION: "3A" CASING COOLING PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-RS-P-3B	11715-CBM-091B SH-001 / B6	Standard	B	C-H	MTR	3	No	RS

DESCRIPTION: "3B" CASING COOLING PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	
DP	3M	
Q	3M	

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-SI-P-1A	11715-CBM-096A SH-001 / C6	Standard	B	VLS	MTR	2	No	SI

DESCRIPTION: "1A" LOW HEAD SAFETY INJECTION PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	
DP	3M	
Q	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-SI-P-1B	11715-CBM-096A SH-001 / C4	Standard	B	VLS	MTR	2	No	SI

DESCRIPTION: "1B" LOW HEAD SAFETY INJECTION PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	
DP	3M	
Q	3M	

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-SW-P-1A	11715-CBM-078A SH-003 / D7	Standard	A	VLS	MTR	3	No	SW

DESCRIPTION: "1A" SERVICE WATER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	OMN-16
C-V	24M	P-01
DP	3M	
Q	3M	OMN-16
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-SW-P-1B	11715-CBM-078A SH-003 / D5	Standard	A	VLS	MTR	3	No	SW

DESCRIPTION: "1B" SERVICE WATER PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	OMN-16
C-V	24M	P-01
DP	3M	
Q	3M	OMN-16
V	3M	P-01

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-EG-P-1HA	11715-FB-035A SH-002 / B8	Augmented	B	PD	MTR	NC	No	EG

DESCRIPTION: "1HA" EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP

TEST	FREQUENCY	NOTES
C-PD	24M	PNC-01
C-Q	24M	PNC-01
C-V	24M	PNC-01
PD	3M	PNC-01
Q	3M	PNC-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-EG-P-1HB	11715-FB-035A SH-002 / B6	Augmented	B	PD	MTR	NC	No	EG

DESCRIPTION: "1HB" EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP

TEST	FREQUENCY	NOTES
C-PD	24M	PNC-01
C-Q	24M	PNC-01
C-V	24M	PNC-01
PD	3M	PNC-01
Q	3M	PNC-01

**NORTH ANNA UNIT 1
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-EG-P-1JA	11715-FB-035A SH-002 / D8	Augmented	B	PD	MTR	NC	No	EG
DESCRIPTION: "1JA" EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP								

TEST	FREQUENCY	NOTES
C-PD	24M	PNC-01
C-Q	24M	PNC-01
C-V	24M	PNC-01
PD	3M	PNC-01
Q	3M	PNC-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-EG-P-1JB	11715-FB-035A SH-002 / D6	Augmented	B	PD	MTR	NC	No	EG
DESCRIPTION: "1JB" EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP								

TEST	FREQUENCY	NOTES
C-PD	24M	PNC-01
C-Q	24M	PNC-01
C-V	24M	PNC-01
PD	3M	PNC-01
Q	3M	PNC-01

3.6 PUMP TEST PROGRAM RELIEF REQUESTS

Relief requests identify those ISTB Code requirements considered to be impractical or for which an alternative testing method is proposed. The basis for the relief request and the alternate testing to be performed is given.

Relief Request Number	Description
P-01	Smooth Running Pumps ($V_r \leq 0.50$ ips), Code Case OMN-22
P-02	RHR Pump Quarterly Testing
P-03	Boric Acid Transfer Pump Unmonitored Flow During Quarterly Testing
P-04	Outside Recirc Spray Pump PPV Flow Rate
P-05	Quench Spray Pump PPV Flow Rate
P-06	Monitoring of 1-CH-P-1A Thrust Horizontal Vibration Point with the Group A Test

RELIEF REQUESTS TO BE INSERTED UPON APPROVAL

3.7 ALTERNATIVE TESTING FOR NON-CODE PUMPS

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

North Anna Power Station has elected to include certain non-Code components in the ASME IST program. Where the Code provisions are not met for non-Code components, alternative testing is performed that is adequate to ensure continued operability. The alternate testing is described in this section. There may be other deviations from Code provisions that are not described in this section. For these cases, documentation is available at the plant site.

NON-CODE ALTERNATIVE TESTING PNC-1

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Pump(s): 1-EG-P-1HA 1-EG-P-1JA
 1-EG-P-1HB 1-EG-P-1JB

System: Fuel Oil

Group: B

Class: NC

Function: These positive displacement pumps supply fuel oil to the emergency diesel generator fuel oil day tank which directly supplies the emergency diesel generator.

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

ISTB-3300, "Reference Values"

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

ISTB-3300(d) requires that reference values shall be established at a point(s) of operation (reference point) readily duplicated during subsequent tests.

ISTB-3300(f) requires that all subsequent test results shall be compared to these initial reference values or to new reference values established in accordance with ISTB-3310, ISTB-3320, or ISTB-6200(c).

ISTB-5320, "Inservice Testing" (Positive Displacement Pumps)

ISTB-5321(e) and ISTB-5323(e), "Group A Test Procedure and Comprehensive Test Procedure", require that all deviations from the reference values shall be compared with the ranges of Table ISTB-5321-1 and corrective action taken as specified in ISTB-6200. Vibration measurements shall be compared to both the relative and absolute criteria shown in the alert and required action ranges of Table ISTB-5321-1.

NON-CODE ALTERNATIVE TESTING PNC-1 (Cont.)

Table ISTB-3510-1 requires that pressure be measured with instruments accurate to within $\pm 0.5\%$ of full scale.

ISTB-3100 requires that before implementing inservice testing an initial set of reference values shall be established for each pump.

ISTB-3400 requires that a comprehensive pump test be run on each pump biennially as specified in Table ISTB-3400-1.

ISTB-5321 for positive displacement pumps requires that test quantities be measured after the pump has been running for at least two minutes.

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

4.0 Reason for Alternative

ISTB-3300 and ISTB-5320

The diesel fuel oil transfer pump groups listed in Section 1.0 tend to be smooth running pumps. Pumps 1-EG-P-1HA, 1-EG-P-1HB and 1-EG-P-1JB have at least one vibration reference value (V_r) that is currently less than 0.05 inches per second (ips). Small values for V_r produce small acceptable ranges for pump operation. The acceptable ranges are defined in Table ISTB-5300-1 as less than or equal to $2.5V_r$. Based on a small acceptable range, a smooth-running pump could be subject to unnecessary corrective action.

For very small reference values, hydraulic noise and instrument error can be a significant portion of the reading and affect the repeatability of subsequent measurements. Also, experience gathered from the North Anna preventive maintenance program has shown that changes in vibration levels in the range of 0.05 ips do not normally indicate significant degradation in pump performance.

To avoid unnecessary corrective action, a minimum value for V_r of 0.05 ips has been established for velocity measurements. This minimum value will be applied to individual vibration locations for Pumps 1-EG-P-1HA, 1-EG-P-1HB, 1-EG-P-1JA and 1-EG-P-1JB where the measured reference value is less than 0.05 ips.

When new reference values are established per ISTB-3310, ISTB-3320 or ISTB-6200(c), the measured parameters will be evaluated for each location to determine if the provisions of this non-Code alternative test description still apply. If the measured V_r is greater than 0.05 ips, the requirements of ISTB-3300 will be applied. Conversely, if the measured V_r is less than 0.05 ips, a minimum value of 0.05 ips will be used for V_r even if the previous reference value was above 0.05 ips. This process will be applied to all of the EG pumps.

NON-CODE ALTERNATIVE TESTING PNC-1 (Cont.)

Table ISTB-3510-1

To comply with the pressure instrument accuracy requirement of $\pm 0.5\%$ for the preservice and comprehensive pump tests described in Table ISTB-3510-1, temporary pressure instrumentation must be installed. The permanently installed instruments do not meet the $\pm 0.5\%$ accuracy requirement. Using more accurate temporary pressure instruments with the diesel fuel oil supply system presents a hardship in that the diesel fuel oil contaminates the instruments. These instruments must then be dedicated for use with the diesel fuel oil transfer pumps and cannot be used with water systems.

ISTB-3500

The installed pressure instruments do meet the accuracy requirements of the Group A test which is $\pm 2\%$ of full scale. The Group A test requires the measurement of vibration as do the preservice test and the comprehensive test. Therefore, for the diesel fuel oil transfer pumps, the Group A test will provide a similar level of safety as the preservice and comprehensive tests.

ISTB-3510(b)(1)

The discharge pressure gauges have a full-scale range of 0 to 30 psig. Discharge pressure reference values range from 7.5 to 8.5 psig, less than the required 1/3 of full-scale or 10 psig. Test results show that the data is repeatable. Therefore, even though the reference values are less than 1/3 full-scale, the accuracy of the instruments provides acceptable results.

ISTB-5300(a)(1)

The pump operating time is limited due to operational restraints. While the diesels are running, these pumps start automatically when the fuel oil level in the day tank reaches the low level switch and stop when the level reaches the high level switch. The pump run time can vary depending upon the diesel load and the resulting fuel consumption rate. If the pumps are allowed to run for two minutes prior to measuring the test quantities and the fuel consumption rate is low, not enough time is available to gather all of the required ISTB test data.

NON-CODE ALTERNATIVE TESTING PNC-1 (Cont.)

5.0 Alternative

ISTB-3500 and Table ISTB-3510-1

The installed pressure instruments meet the accuracy requirements of the Group A test which is $\pm 2\%$ of full scale. The Group A test requires the measurement of vibration as does the preservice test and the comprehensive test. The current testing for the diesel fuel oil transfer pumps is performed at approximately 8 gpm which exceeds the system design required flow of 6.0 gpm. Application of criteria prescribed in Table ISTB 5321-1 establishes required action range pump performance thresholds that will ensure these pumps will continue meet system design flow requirements with adequate margin. Therefore, for the diesel fuel oil transfer pumps, the Group A test will provide a similar level of safety as the preservice and comprehensive tests.

As an alternative to performing the preservice tests, the diesel fuel oil transfer pumps will be subject to the requirements of the Group A test as described in ISTB-5321. As an alternative to performing the biennial comprehensive tests, the diesel fuel oil transfer pumps will be subject to biennial Group A tests as described in ISTB-5321.

ISTB-3510(b)(1)

Discharge pressure measurements will be performed with reference values slightly below the 1/3 full-scale requirement. Test results show that the data is repeatable. Therefore, even though the reference values are less than 1/3 full-scale, the accuracy of the instruments provides acceptable results.

Reference value	= 8.0 psig
Full scale range	= 30 psig
Instrument tolerance	= ± 0.6 psig (± 2 percent x 30 psig)

Indicated accuracy at 1/3 full scale requirement is:

$$\pm 0.6 \text{ psig} / 10 \text{ psig} \times 100 \text{ percent} = 6.0 \text{ percent}$$

Indicated accuracy at 8.0 psig is:

$$\pm 0.6 \text{ psig} / 8 \text{ psig} \times 100 \text{ percent} = 7.9 \text{ percent}$$

NON-CODE ALTERNATIVE TESTING PNC-1 (Cont.)

NUREG-1482 Revision 2 Section 5.5.1 states “the staff may grant relief when the combination of the range and accuracy yields a reading that is at least equivalent to that achieved using instruments that meet the Code requirements (i.e., up to ± 6 percent for Group A and B tests”. While the resulting indicated accuracy exceeds this +6 percent value, the accuracy of the instruments provides acceptable results.

ISTB-5300(a)(1)

As an alternative to performing the preservice tests, the diesel fuel oil transfer pumps will be subject to the requirements of the Group A test as described in ISTB-5321. As an alternative to performing the biennial comprehensive tests, the diesel fuel oil transfer pumps will be subject to biennial Group A tests as described in ISTB-5321. The Group A tests will be performed within 20% of the design flow rate.

The measurement of ISTB quantities will begin when the pump automatically starts on a low tank level signal.

6.0 Duration of Alternative

The alternative described in PNC-1 will be used for the North Anna Power Station Unit 1 Fifth Ten Year Inservice Testing Interval.

4.0 VALVE INSERVICE TESTING PROGRAM DESCRIPTION

4.1 PROGRAM DEVELOPMENT PHILOSOPHY

North Anna Technical Specification 5.5.7 describes the surveillance requirements that apply to the inservice testing of ASME Code Class 1, 2 and 3 valves. The North Anna Unit 1 Inservice Testing (IST) Program for Valves has been established to meet the requirements of 10 CFR 50, the ASME OM Code, Subsection ISTC, Mandatory Appendices I, II and III, and Technical Specifications.

The scope of the program includes ASME Class 1, 2 and 3, and certain non-Code class valves that are required to perform a specific function in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition or mitigating the consequences of an accident.

ISTC defines the rules and requirements of inservice testing of Code Class 1, 2, and 3 valves and states that each valve to be tested by the rules of this subsection shall be identified by the owner and listed in the plant records.

The purpose of the IST Program Plan is to identify the valves that are considered by Virginia Electric and Power (Dominion Energy) Company as having a safety function and are therefore subject to the testing requirements of ISTC. The intent of the Code is to assess operational readiness and detect potentially adverse changes in the mechanical condition of these valves. The relief requests for the IST Program Plan identify Code requirements considered to be impractical or for which an alternate testing method is proposed, provide technical basis for the request and propose alternate testing when warranted. The relief requests are presented in Section 4.5

North Anna Unit 1 is committed to meeting the leak rate testing requirements of:

- 1) 10 CFR 50, Appendix J, Option B for containment isolation valves and
- 2) ISTC for other valves for which seat leakage is limited to a specific maximum amount (i.e. pressure isolation valves) unless relief is specifically requested from ISTC requirements.

4.2 PROGRAM IMPLEMENTATION

The Valve Inservice Test Program is executed as part of the normal plant surveillance routine. Three types of tests are conducted as part of the Valve Test Program:

- 1) valve exercise tests
- 2) valve leakage tests and
- 3) safety valve tests

The exercise tests verify that:

- 1) the valve strokes properly,
 - 2) the valve responds to control commands,
 - 3) the valve stroke time is within specific limits and
 - 4) remote position indication accurately reflects the observed valve position.
- Remote valve position indication will be verified every two years unless governed by Mandatory Appendix III for MOVs.

Fail safe valves are tested by observing the valve operation upon loss of actuating power. In most cases, this can be accomplished using normal control circuits.

Obturator verification is accomplished exercising the valve while observing a variety of indicators, as permitted by section ISTC.

Power operated valves which are scheduled to be exercised during cold shutdown are subject to the requirements of ISTC-3521(g) which states that:

“valve exercising during cold shutdown shall commence within 48 hours of achieving cold shutdown and continue until all testing is complete or the plant is ready to return to operation at power. For extended outages, testing need not be commenced in 48 hours, provided all valves required to be tested during cold shutdown will be tested before or as part of plant startup.

Check valves which are scheduled to be exercised during cold shutdown are subject to the requirements of ISTC-3522(e) which is similar to ISTC-3521(g).

Relief and Safety valves are required to be tested to the requirements of ISTC, Appendix I.

Certain valves cannot be full stroke exercised during normal operation following maintenance. These valves are described in the cold shutdown justifications (refer to Section 4.6) and reactor refueling justifications (refer to Section 4.7). If maintenance cannot be deferred to a shutdown condition, then an engineering evaluation must be performed prior to the maintenance to determine the effect of the maintenance on valve performance. If the evaluation shows that performance will not be affected, then no post maintenance testing is required.

To test check valves to the full open position, the maximum required accident condition flow must be measured through the valve, or the flow required to fully open the valve. In certain cases, this flow cannot be practically established or verified. Per ISTC-5221(c), disassembly and inspection of the check valves on a sampling basis is an acceptable alternative testing method.

4.3 PROGRAM ADMINISTRATION

The engineering staff at North Anna is responsible for the administration of the IST Program for Valves. The operations staff is responsible for

performing the periodic tests as required by this program. The IST Program for Valves is implemented by station periodic test procedures.

4.4 VALVE INSERVICE TEST TABLE

The Valve Inservice Test Tables provide the vehicle within the IST Valve Program by which the requirements of section ISTC and associated Mandatory Appendix I, Mandatory Appendix II and Mandatory Appendix III are met. Exceptions to those requirements outlined in associated relief requests presented in section 4.5 are reflected in the table as well. Where frequency requirements for valve testing have been determined to be impracticable, Alternate (Cold Shutdown, Reactor Refueling) Test Justifications have been developed and presented in sections 4.6 and 4.7.

For non-Code valves, a request for relief is not necessary when provisions of the Code are not met. Section 4.8 contains a discussion of the testing requirements for non-Code valves and descriptions of alternative testing in cases where the provisions of the Code are not met.

To aid the reader in the interpretation of the tables, brief explanations of the table headings and abbreviations are provided.

Valve Description Descriptive name of the valve

Valve No. A unique identifier for the valve

Drawing No./COOR. Piping and Instrumentation Drawing (Flow Diagram) on which the valve is represented and the coordinate location

Program Standard or Augmented IST Program component

Type The valve body style abbreviation.

AN	Angle
BF	Butterfly
BA	Ball
CK	Check
DIA	Diaphragm
GA	Gate
GL	Globe

PLG	Plug
RV	Relief
SV	Safety

Actuator

The valve actuator type abbreviation.

AO	Air Operated
HO	Hydraulic Operated
MA	Manually Operated
MO	Motor Operated
MOL	Motor Operated – Low Risk
SA	Self-Actuated
SO	Solenoid Operated

Size

The nominal pipe size of the valve, in inches.

Class

The Code Class abbreviations per RG 1.26.

1	Class 1
2	Class 2
3	Class 3

NA or NC

Non-Code Class

Category

The ASME OM Code category (or categories) as defined in ISTC-1300.

A	Seat Leakage Limited
B	Seat Leakage Not Required
C	Self-Actuating Valves
D	Single Use Valves
AC	Both Categories A and C
BC	Both Categories B and C
BL	PORV

ACT/PASS

Active or Passive function determination for the valve in accordance with ISTC-2000.

A	Active
P	Passive

NP

The Normal Position abbreviation. This refers to the valve's position during normal power operation. If the system does not operate during power operation, then the normal position is the position of the valve when the system is not operating.

C	Closed
LC	Locked Closed
LO	Locked Open
LT	Locked Throttled
O	Open
O/C	Open or Closed
SYS	System Condition Dependent

SP

The Safety Position(s) for the valve required to perform its function. For valves that perform safety functions in the open and closed positions more than one safety function position may be specified.

C	Closed
NA	Not Applicable
O	Open
O/C	Open and Closed

FP

The abbreviation for Fail Position.

C	Closed
FAI	Fails As Is
NA	Not Applicable
O	Open

Test

The test type abbreviation.

CVC	Check Valve Test Closed
CVO	Check Valve Test Open
DIAG	MOV Diagnostic Test
FCE	Full Cycle Exercise – full stroke of the valve from and back to its initial position
FSC	Fail-Safe Test - Closed
FSO	Fail-Safe Test - Open
LT	Category A Seat Leakage Test
LT5112	PORV Seat Leakage Test
LTJ	Appendix J Leak Test
PIT	Position Indication Test
RD	Rupture Disk Test
SP	Set Pressure Relief Valve Test
STC	Full-Stroke Exercise with Stroke Time Closed
STO	Full-Stroke Exercise with Stroke Time Open
TSP	Set Pressure Test for Thermal Relief Valve

Test Freq.

The required test frequency abbreviation.

3M	Quarterly
6M	Every 6 Months
24M	Every 2 Years
CM	Condition Monitoring
CS	Cold Shutdown
III	Per Mandatory Appendix III
J	Per Appendix J Program
OR	Every Other Refueling Outage
RR	Refueling Outage
NPO	Normal Plant Operation
60M	Every 5 Years
120M	Every 10 Years

Notes

The Notes section will provide information for a components test where an alternate frequency is established as allowed by the Code, or by an approved relief request. This area may also have other references such as a Technical Position.

Relief Request

A Relief Request number is listed when a specific code requirement is determined to be impracticable. Attachment 4.4 contains an index of the valve relief requests included in Attachment 4.5 and that are prefixed with a "V".

CSV

This lists the applicable Alternate Test Justification. This section refers to Cold Shutdown Justifications, justifications that differ from the ASME OM Code required testing frequency. Alternate Test Justifications at a Cold Shutdown frequency are provided in section 4.6.

RRV

This lists the applicable Alternate Test Justification. This section refers to Refueling Outage Justifications, justifications that differ from the ASME OM Code required testing frequency. Alternate Test Justifications at a refueling frequency are provided in section 4.7.

TP

A Technical Position number is listed when the requirements of the code are not easily interpreted or clarifying information is needed. The technical position is used to document how Code requirements are being implemented at the station. Technical Positions are prefixed with "TP". Technical positions are provided in Section 6.

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100A	11715-CBM-098A SH-002 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD

DESCRIPTION: "A" STEAM GENERATOR BLOWDOWN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100B	11715-CBM-098A SH-002 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD

DESCRIPTION: "A" STEAM GENERATOR BLOWDOWN, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100C	11715-CBM-098A SH-003 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD

DESCRIPTION: "B" STEAM GENERATOR BLOWDOWN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100D	11715-CBM-098A SH-003 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD
DESCRIPTION: "B" STEAM GENERATOR BLOWDOWN, INSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100E	11715-CBM-098A SH-004 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD
DESCRIPTION: "C" STEAM GENERATOR BLOWDOWN, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100F	11715-CBM-098A SH-004 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD
DESCRIPTION: "C" STEAM GENERATOR BLOWDOWN, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SI	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100G	11715-CBM-098A SH-002 / C6	Standard	GL	AO	3	2	B	Active	O	C	C	BD
DESCRIPTION: "A" STEAM GENERATOR BLOWDOWN, HIGH FLOW TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100H	11715-CBM-098A SH-003 / C6	Standard	GL	AO	3	2	B	Active	O	C	C	BD
DESCRIPTION: "C" STEAM GENERATOR BLOWDOWN, HIGH FLOW TRIP VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-BD-TV-100J	11715-CBM-098A SH-004 / C6	Standard	GL	AO	3	2	B	Active	O	C	C	BD
DESCRIPTION: "C" STEAM GENERATOR BLOWDOWN, HIGH FLOW TRIP VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--111	11715-CBM-079B SH-002 / C7	Standard	CK	SA	3	3	C	Active	O	C	NA	CC
DESCRIPTION: "1A" RC PUMP THERMAL BARRIER CC SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	NPO	RRV-16 : TP-01
CVC	RR	RRV-16

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--119	11715-CBM-079B SH-003 / F7	Standard	CK	SA	6	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1B" RC PUMP COMPONENT COOLING SUPPLY, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-01 : TP-01			
							CVC	RR	RRV-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--146	11715-CBM-079B SH-003 / B7	Standard	CK	SA	3	3	C	Active	O	C	NA	CC
DESCRIPTION: "1B" RC PUMP THERMAL BARRIER CC SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	NPO	RRV-16 : TP-01			
							CVC	RR	RRV-16			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--154	11715-CBM-079B SH-004 / F7	Standard	CK	SA	6	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1C" RC PUMP COMPONENT COOLING SUPPLY, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-01 : TP-01			
							CVC	RR	RRV-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--181	11715-CBM-079B SH-004 / C7	Standard	CK	SA	3	3	C	Active	O	C	NA	CC
DESCRIPTION: "1C" RC PUMP THERMAL BARRIER CC SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	NPO	RRV-16 : TP-01
CVC	RR	RRV-16

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--193	11715-CBM-079B SH-001 / F7	Standard	CK	SA	18	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1A" RHR HEAT EXCHANGER CC SUPPLY HEADER CHECK VALVE												

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-18
CVO	RR	RRV-18

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--198	11715-CBM-079B SH-001 / F7	Standard	CK	SA	18	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1B" RHR HEAT EXCHANGER CC SUPPLY HEADER CHECK VALVE												

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-18
CVO	RR	RRV-18

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--24	11715-CBM-079A SH-001 / C5	Standard	CK	SA	18	3	C	Active	OC	OC	NA	CC
DESCRIPTION: "1A" COMPONENT COOLING PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--47	11715-CBM-079A SH-001 / B5	Standard	CK	SA	18	3	C	Active	OC	OC	NA	CC
DESCRIPTION: "1B" COMPONENT COOLING PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--546	11715-CBM-079D SH-004 / E8	Standard	CK	SA	6	2	AC	Active	O	C	NA	CC
DESCRIPTION: "2A" RECIRC AIR COOLER, CC SUPPLY OUTSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
LTJ	J	
CVO	NPO	RRV-15 : TP-01
CVC	RR	RRV-15

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--559	11715-CBM-079D SH-004 / D8	Standard	CK	SA	6	2	AC	Active	O	C	NA	CC
DESCRIPTION: "2B" RECIRC AIR COOLER, CC SUPPLY OUTSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-15 : TP-01			
							CVC	RR	RRV-15			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--572	11715-CBM-079D SH-004 / C8	Standard	CK	SA	6	2	AC	Active	O	C	NA	CC
DESCRIPTION: "2C" RECIRC AIR COOLER, CW SUPPLY OUTSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-15 : TP-01			
							CVC	RR	RRV-15			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC--84	11715-CBM-079B SH-002 / F7	Standard	CK	SA	6	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1A" RC PUMP COMPONENT COOLING SUPPLY, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-01 : TP-01			
							CVC	RR	RRV-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-MOV-100A	11715-CBM-079B SH-001 / A3	Standard	BF	MO	18	3	B	Passive	TH	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER RETURN THROTTLING VALVE FROM "A" RHR HEAT EXCHANGER												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-MOV-100B	11715-CBM-079B SH-001 / B3	Standard	BF	MO	18	3	B	Passive	TH	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER RETURN THROTTLING VALVE FROM "B" RHR HEAT EXCHANGER												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-124A	11715-CBM-079B SH-002 / F6	Standard	TRV	SA	3	3	C	Active	C	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER TO REACTOR SHROUD COOLERS RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-124B	11715-CBM-079B SH-003 / F6	Standard	TRV	SA	3	3	C	Active	C	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER TO REACTOR SHROUD COOLERS RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-124C	11715-CBM-079B SH-004 / F6	Standard	TRV	SA	3	3	C	Active	C	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER TO REACTOR SHROUD COOLERS RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-125A	11715-CBM-079B SH-002 / C6	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1A" RC PUMP THERMAL BARRIER CC INLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-125B	11715-CBM-079B SH-003 / C6	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1B" RC PUMP THERMAL BARRIER CC INLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-125C	11715-CBM-079B SH-004 / C6	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1C" RC PUMP THERMAL BARRIER CC INLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-126	11715-CBM-079B SH-005 / C6	Standard	TRV	SA	1	3	C	Active	C	O	NA	CC
DESCRIPTION: EXCESS LETDOWN HEAT EXCHANGER CC OUTLET HEADER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-128A	11715-CBM-079B SH-001 / E3	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "A" RHR HEAT EXCHANGER COMPONENT COOLING RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-128B	11715-CBM-079B SH-001 / D3	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "B" RHR HEAT EXCHANGER COMPONENT COOLING RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-131A	11715-CBM-079B SH-005 / C4	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "2A" RHR PUMP SEAL COOLER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-131B	11715-CBM-079B SH-005 / B4	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "2B" RHR PUMP SEAL COOLER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-100A	11715-CBM-079D SH-004 / E4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2A" RECIRC AIR COOLER CW RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			
								FSC	3M			
								STC	3M			
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-100B	11715-CBM-079D SH-004 / D4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2B" RECIRC AIR COOLER CW RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			
								FSC	3M			
								STC	3M			
								LTJ	J			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-100C	11715-CBM-079D SH-004 / C4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2C" RECIRC AIR COOLER CW RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-101A	11715-CBM-079B SH-001 / D7	Standard	GL	AO	4	2	A	Active	O	C	C	CC
DESCRIPTION: RC PUMPS THERMAL BARRIERS CC RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-101B	11715-CBM-079B SH-001 / D6	Standard	GL	AO	4	2	A	Active	O	C	C	CC

DESCRIPTION: RC PUMPS THERMAL BARRIERS CC RETURN, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-102A	11715-CBM-079B SH-004 / A5	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1C" RC PUMP COMPONENT COOLING RETURN, OUTSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-102B	11715-CBM-079B SH-004 / A3	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1C" RC PUMP COMPONENT COOLING RETURN, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-102C	11715-CBM-079B SH-003 / A5	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1B" RC PUMP COMPONENT COOLING RETURN, OUTSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-102D	11715-CBM-079B SH-003 / A3	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1B" RC PUMP COMPONENT COOLING RETURN, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-102E	11715-CBM-079B SH-002 / A5	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1A" RC PUMP COMPONENT COOLING RETURN, OUTSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-102F	11715-CBM-079B SH-002 / A3	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1A" RC PUMP COMPONENT COOLING RETURN, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-103A	11715-CBM-079B SH-001 / A7	Standard	BF	AO	18	2	A	Active	O	OC	C	CC

DESCRIPTION: "1A" RHR HEAT EXCHANGER CC RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
STO	3M	
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-103B	11715-CBM-079B SH-001 / B7	Standard	BF	AO	18	2	A	Active	O	OC	C	CC
DESCRIPTION: "1B" RHR HEAT EXCHANGER CC RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
STO	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-104A	11715-CBM-079B SH-002 / E8	Standard	BF	AO	8	2	A	Active	O	C	C	CC
DESCRIPTION: "1A" RC PUMP COMPONENT COOLING SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-104B	11715-CBM-079B SH-003 / E8	Standard	BF	AO	8	2	A	Active	O	C	C	CC
DESCRIPTION: "1B" RC PUMP COMPONENT COOLING SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-01			
							STC	CS	CSV-01			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-104C	11715-CBM-079B SH-004 / E8	Standard	BF	AO	8	2	A	Active	O	C	C	CC
DESCRIPTION: "1C" RC PUMP COMPONENT COOLING SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-01			
							STC	CS	CSV-01			
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-105A	11715-CBM-079D SH-004 / E4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2A" RECIRC AIR COOLER CW RETURN INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-105B	11715-CBM-079D SH-004 / D4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2B" RECIRC AIR COOLER CW RETURN INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-TV-105C	11715-CBM-079D SH-004 / C4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2C" RECIRC AIR COOLER CC RETURN INSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
L TJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CD--161	11715-CBB-040C SH-001 / E6	Standard	CK	SA	3	3	C	Active	OC	O	NA	CD
DESCRIPTION: CONTROL ROOM CHILLED WATER SYSTEM PUMP 20A DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-23

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CD--182	11715-CBB-040C SH-001 / D6	Standard	CK	SA	3	3	C	Active	OC	O	NA	CD
DESCRIPTION: CONTROL ROOM CHILLED WATER SYSTEM PUMP 20C DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-23

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CD--209	11715-CBB-040C SH-001 / C6	Standard	CK	SA	3	3	C	Active	OC	O	NA	CD
DESCRIPTION: CONTROL ROOM CHILLED WATER SYSTEM PUMP 20B DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-23

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--102	11715-CBM-095A SH-001 / C5	Standard	CK	SA	2	3	C	Active	OC	O	NA	CH
DESCRIPTION: "2B" BORIC ACID TRANSFER PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CSV-19
CVO	CS	CSV-19

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--215	11715-CBM-095B SH-001 / B6	Standard	CK	SA	4	2	AC	Active	O	OC	NA	CH
DESCRIPTION: CHARGING PUMP SUPPLY FROM VOLUME CONTROL TANK ISOLATION VALVE												

TEST	FREQUENCY	Notes
LT	24M	
CVO	3M	
CVC	RR	RRV-19

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--238	11715-CBM-095B SH-001 / B5	Standard	CK	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: EMERGENCY BORATION LINE TO CHARGING PUMP SUCTION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CM-07
CVO	CS	CM-07

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--240	11715-CBM-095B SH-001 / C3	Standard	CK	SA	1	3	C	Active	C	O	NA	CH
DESCRIPTION: 1-CH-FCV-1113A OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-34
CVO	RR	RRV-34

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--241	11715-CBM-095B SH-001 / B4	Standard	DIA	MA	1	2	B	Active	C	O	NA	CH
DESCRIPTION: MANUAL EMERGENCY BORATION LINE ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--242	11715-CBM-095B SH-001 / B5	Standard	CK	SA	1	2	C	Active	C	O	NA	CH
DESCRIPTION: MANUAL EMERGENCY BORATION LINE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CM-07
CVO	CS	CM-07

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--252	11715-CBM-095B SH-002 / D7	Standard	CK	SA	2	2	C	Active	OC	O	NA	CH
DESCRIPTION: "1A" CHARGING PUMP DISCHARGE RECIRC LINE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-26
CVO	RR	RRV-26

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--254	11715-CBM-095B SH-002 / D7	Standard	CK	SA	3	2	C	Active	OC	OC	NA	CH
DESCRIPTION: "1A" CHARGING PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	RR	RRV-13

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--264	11715-CBM-095B SH-002 / D6	Standard	CK	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: "1B" CHARGING PUMP DISCHARGE RECIRC LINE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-26
CVO	RR	RRV-26

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--267	11715-CBM-095B SH-002 / D6	Standard	CK	SA	3	2	C	Active	OC	OC	NA	CH
DESCRIPTION: "1B" CHARGING PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	RR	RRV-13

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--277	11715-CBM-095B SH-002 / D4	Standard	CK	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: "1C" CHARGING PUMP DISCHARGE RECIRC LINE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-26
CVO	RR	RRV-26

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--279	11715-CBM-095B SH-002 / D4	Standard	CK	SA	3	2	C	Active	OC	OC	NA	CH
DESCRIPTION: "1C" CHARGING PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	RR	RRV-13

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--322	11715-CBM-095C SH-001 / D4	Standard	CK	SA	3	1	C	Active	O	OC	NA	CH
DESCRIPTION: NORMAL CHARGING SUPPLY HEADER, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	NPO	RRV-02 : TP-01
CVC	RR	RRV-02

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--330	11715-CBM-095C SH-001 / A6	Standard	CK	SA	2	1	C	Active	C	C	NA	CH
DESCRIPTION: LOOP FILL HEADER, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-02
CVO	RR	RRV-02

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--336	11715-CBM-095C SH-002 / B8	Standard	CK	SA	2	1	C	Active	O	C	NA	CH
DESCRIPTION: "1A" RC PUMP SEAL INJECTION, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	NPO	RRV-02 : TP-01
CVC	RR	RRV-02

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--358	11715-CBM-095C SH-002 / B7	Standard	CK	SA	2	1	C	Active	O	C	NA	CH
DESCRIPTION: "1B" RC PUMP SEAL INJECTION, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	NPO	RRV-02 : TP-01
CVC	RR	RRV-02

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--380	11715-CBM-095C SH-002 / B5	Standard	CK	SA	2	1	C	Active	O	C	NA	CH
DESCRIPTION: "1C" RC PUMP SEAL INJECTION, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	NPO	RRV-02 : TP-01
CVC	RR	RRV-02

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--402	11715-CBM-095C SH-002 / F4	Standard	CK	SA	0.75	2	AC	Active	C	OC	NA	CH
DESCRIPTION: RC PUMP SEAL WATER RETURN, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-02
CVO	RR	RRV-02

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--550	11715-CBM-095B SH-002 / E4	Standard	GA	MA	4	2	B	Active	C	O	NA	CH
DESCRIPTION: CHARGING PUMP CROSS CONNECT ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--649	11715-CBM-095B SH-001 / B6	Standard	CK	SA	2	2	AC	Active	O	OC	NA	CH
DESCRIPTION: CHARGING PUMP RECIRC AND RCP SEAL WATER RETURN LINE ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
LT	24M	
CVC	RR	RRV-19
CVO	RR	RRV-19

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--84	11715-CBM-095A SH-001 / C4	Standard	CK	SA	2	3	C	Active	OC	O	NA	CH
DESCRIPTION: "2A" BORIC ACID TRANSFER PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CSV-19
CVO	CS	CSV-19

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-FCV-1113A	11715-CBM-095B SH-001 / C3	Standard	GL	AO	1	3	B	Active	O	O	O	CH
DESCRIPTION: Boric Acid to Blender System Flow Control Valve												

TEST	FREQUENCY	Notes
PIT	24M	
FSO	3M	TP-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-LCV-1460A	11715-CBM-095C SH-001 / F7	Standard	GL	AO	3	1	B	Active	O	C	C	CH
DESCRIPTION: LETDOWN ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-02
STC	CS	CSV-02

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-LCV-1460B	11715-CBM-095C SH-001 / F7	Standard	GL	AO	3	1	B	Active	O	C	C	CH
DESCRIPTION: LETDOWN ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-02			
							STC	CS	CSV-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1115B	11715-CBM-095B SH-002 / B8	Standard	GA	MO	8	2	A	Active	C	OC	NA	CH
DESCRIPTION: CHARGING PUMP SUPPLY ISOLATION VALVE FROM REFUELING WATER STORAGE TANK												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1115C	11715-CBM-095B SH-001 / C6	Standard	GA	MO	4	2	B	Active	O	C	NA	CH
DESCRIPTION: CHARGING PUMP SUPPLY ISOLATION FROM VOLUME CONTROL TANK												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1115D	11715-CBM-095B SH-002 / B8	Standard	GA	MO	8	2	A	Active	C	OC	NA	CH
DESCRIPTION: CHARGING PUMP SUPPLY ISOLATION VALVE FROM REFUELING WATER STORAGE TANK												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1115E	11715-CBM-095B SH-001 / C6	Standard	GA	MO	4	2	B	Active	O	C	NA	CH
DESCRIPTION: CHARGING PUMP SUPPLY ISOLATION VALVE FROM VOLUME CONTROL TANK												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1267A	11715-CBM-095B SH-002 / C7	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1A" CHARGING PUMP NORMAL SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1267B	11715-CBM-095B SH-002 / C7	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1A" CHARGING PUMP ALTERNATE SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1269A	11715-CBM-095B SH-002 / C5	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1B" CHARGING PUMP NORMAL SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1269B	11715-CBM-095B SH-002 / C5	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1B" CHARGING PUMP ALTERNATE SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1270A	11715-CBM-095B SH-002 / C3	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1C" CHARGING PUMP NORMAL SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1270B	11715-CBM-095B SH-002 / C3	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1C" CHARGING PUMP ALTERNATE SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1275A	11715-CBM-095B SH-002 / D7	Standard	GL	MOL	2	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1A" CHARGING PUMP MINIMUM RECIRCULATION ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1275B	11715-CBM-095B SH-002 / D5	Standard	GL	MOL	2	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1B" CHARGING PUMP MINIMUM RECIRCULATION ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1275C	11715-CBM-095B SH-002 / D4	Standard	GL	MOL	2	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1C" CHARGING PUMP MINIMUM RECIRCULATION ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1286A	11715-CBM-095B SH-002 / E7	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1A" CHARGING PUMP NORMAL DISCHARGE HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1286B	11715-CBM-095B SH-002 / E6	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1B" CHARGING PUMP NORMAL DISCHARGE HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1286C	11715-CBM-095B SH-002 / E4	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1C" CHARGING PUMP NORMAL DISCHARGE HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1287A	11715-CBM-095B SH-002 / D7	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1A" CHARGING PUMP ALTERNATE DISCHARGE HEADER ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1287B	11715-CBM-095B SH-002 / D6	Standard	GL	MOL	3	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1B" CHARGING PUMP ALTERNATE DISCHARGE HEADER ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1287C	11715-CBM-095B SH-002 / D4	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1C" CHARGING PUMP ALTERNATE DISCHARGE HEADER ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1289A	11715-CBM-095C SH-001 / C4	Standard	GL	MOL	3	1	B	Active	O	C	NA	CH
DESCRIPTION: NORMAL CHARGING HEADER ISOLATION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1289B	11715-CBM-095C SH-001 / B3	Standard	GL	MOL	3	2	B	Active	O	C	NA	CH
DESCRIPTION: NORMAL CHARGING HEADER ISOLATION VALVE, OUTSIDE CONTAINMENT												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1350	11715-CBM-095B SH-001 / B5	Standard	GA	MOL	2	3	B	Active	C	O	NA	CH
DESCRIPTION: EMERGENCY BORATE VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1373	11715-CBM-095B SH-001 / A8	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH
DESCRIPTION: CHARGING PUMP RECIRCULATION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1380	11715-CBM-095C SH-002 / F4	Standard	GA	MOL	3	2	A	Active	O	C	NA	CH
DESCRIPTION: REACTOR COOLANT PUMPS SEAL WATER RETURN, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	3M	TP-05			
							DIAG	III				
							PIT	III				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-MOV-1381	11715-CBM-095B SH-001 / C8	Standard	GA	MOL	3	2	A	Active	O	C	NA	CH
DESCRIPTION: REACTOR COOLANT PUMPS SEAL WATER RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
STC	3M	TP-05
DIAG	III	
PIT	III	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-RV-1203	11715-CBM-095C SH-001 / F4	Standard	RV	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: REGEN HEAT EXCHANGER LETDOWN HEADER RELIEF VALVE												

TEST	FREQUENCY	Notes
SP	120M	V-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-RV-1382A	11715-CBM-095C SH-002 / F5	Standard	RV	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: REACTOR COOLANT PUMPS SEAL LEAKOFF HEADER RELIEF VALVE												

TEST	FREQUENCY	Notes
SP	120M	V-01

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-RV-1382B	11715-CBM-095B SH-001 / C7	Standard	RV	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: SEAL WATER HEAT EXCHANGER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-TV-1204A	11715-CBM-095C SH-001 / E3	Standard	GL	AO	2	2	A	Active	O	C	C	CH
DESCRIPTION: LETDOWN ISOL VALVE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-02			
							STC	CS	CSV-02			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-TV-1204B	11715-CBM-095A SH-004 / C3	Standard	GL	AO	3	2	A	Active	O	C	C	CH
DESCRIPTION: LETDOWN ISOL VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-02			
							STC	CS	CSV-02			
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CV--4	11715-CBM-092A SH-002 / A5	Standard	GA	MA	8	2	A	Passive	LC	C	NA	CV
DESCRIPTION: CONTAINMENT VACUUM AIR EJECTOR, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CV-TV-100	11715-CBM-092A SH-002 / A3	Standard	BF	AO	8	2	A	Passive	C	C	C	CV
DESCRIPTION: CONTAINMENT VACUUM AIR EJECTOR, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CV-TV-150A	11715-CBM-092A SH-002 / B4	Standard	GL	AO	2	2	A	Active	OC	C	C	CV
DESCRIPTION: "A" CONTAINMENT VACUUM PUMP SUCTION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CV-TV-150B	11715-CBM-092A SH-002 / B5	Standard	GL	AO	2	2	A	Active	OC	C	C	CV
DESCRIPTION: "A" CONTAINMENT VACUUM PUMP SUCTION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CV-TV-150C	11715-CBM-092A SH-002 / C4	Standard	GL	AO	2	2	A	Active	OC	C	C	CV
DESCRIPTION: "B" CONTAINMENT VACUUM PUMP SUCTION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CV-TV-150D	11715-CBM-092A SH-002 / C5	Standard	GL	AO	2	2	A	Active	OC	C	C	CV
DESCRIPTION: "B" CONTAINMENT VACUUM PUMP SUCTION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-DA--39	11715-CBM-090C SH-003 / D3	Standard	DIA	MA	2	2	A	Passive	C	C	NA	DA
DESCRIPTION: VENT LINE FROM PRIMARY VENT POT, INSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-DA--41	11715-CBM-090C SH-003 / E3	Standard	DIA	MA	2	2	A	Passive	C	C	NA	DA
DESCRIPTION: VENT LINE FROM PRIMARY VENT POT, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-DA-TV-100A	11715-CBM-090A SH-001 / E7	Standard	GL	AO	2	2	A	Active	C	C	C	DA
DESCRIPTION: REACTOR CONTAINMENT SUMP PUMPS DISCHARGE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-DA-TV-100B	11715-CBM-090C SH-003 / C3	Standard	GL	AO	2	2	A	Active	C	C	C	DA
DESCRIPTION: REACTOR CONTAINMENT SUMP PUMPS DISCHARGE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-DA-TV-103A	11715-CBM-090C SH-003 / B7	Standard	GL	AO	2	2	A	Active	C	C	C	DA
DESCRIPTION: POST ACCIDENT SAMPLE SYSTEM RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-DA-TV-103B	11715-CBM-090C SH-003 / B8	Standard	GL	AO	2	2	A	Active	C	C	C	DA
DESCRIPTION: POST ACCIDENT SAMPLE SYSTEM RETURN, OUTSIDE CONTAINMENT TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-DG-TV-100A	11715-CBM-090C SH-001 / B8	Standard	GL	AO	2	2	A	Active	C	C	C	DG
DESCRIPTION: PRIMARY DRAIN TRANSFER PUMPS DISCHARGE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-DG-TV-100B	11715-CBM-090C SH-001 / B7	Standard	GL	AO	2	2	A	Active	C	C	C	DG
DESCRIPTION: PRIMARY DRAIN TRANSFER PUMPS DISCHARGE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FP--272	11715-CBB-102B SH-001 / C6	Standard	CK	SA	4	2	AC	Active	C	C	NA	FP
DESCRIPTION: FIRE PROTECTION SUPPLY TO CONTAINMENT, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-03			
							CVO	RR	RRV-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FP--274	11715-CBB-102B SH-001 / C7	Standard	GA	MA	4	2	A	Passive	LC	C	NA	FP
DESCRIPTION: FIRE PROTECTION SUPPLY TO CONTAINMENT, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--100	11715-CBM-074A SH-001 / D6	Standard	CK	SA	3	2	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER TO "B" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-16			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--111	11715-CBM-074A SH-001 / B6	Standard	CK	SA	16	2	C	Active	O	C	NA	FW
DESCRIPTION: "C" MAIN FEEDWATER HEADER TO "C" S/G INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CSV-14
CVO	NPO	CSV-14 : TP-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--125	11715-CBM-074A SH-001 / B7	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER "C" S/G MOV HEADER OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CSV-15
CVO	CS	CSV-15

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--126	11715-CBM-074A SH-001 / B7	Standard	GA	MA	3	3	B	Active	LC	OC	NA	FW
DESCRIPTION: AUX FEEDWATER "C" S/G MOV HEADER OUTLET ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--127	11715-CBM-074A SH-001 / B7	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER "C" S/G HCV HEADER OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	CS	CSV-15

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--128	11715-CBM-074A SH-001 / B7	Standard	GA	MA	3	3	B	Active	LO	OC	NA	FW
DESCRIPTION: AUX FEEDWATER "C" S/G HCV HEADER OUTLET ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--132	11715-CBM-074A SH-001 / B7	Standard	CK	SA	3	2	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER TO "C" S/G INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	CS	CSV-16

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--145	11715-CBM-074A SH-003 / B7	Standard	GA	MA	6	3	B	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP ALTERNATE SUCTION ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--148	11715-CBM-074A SH-003 / D8	Standard	CK	SA	6	3	C	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AUXILIARY FEEDWATER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-17			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--149	11715-CBM-074A SH-003 / E8	Standard	GA	MA	6	3	B	Active	LC	OC	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP TO MOV HEADER DISCHARGE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--150	11715-CBM-074A SH-003 / D7	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AUXILIARY FEEDWATER PUMP RECIRC LINE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	CS	CSV-15

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--155	11715-CBM-074A SH-003 / E7	Standard	GA	MA	6	3	B	Active	LC	OC	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP TO HCV HEADER OUTLET ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--162	11715-CBM-074A SH-003 / B6	Standard	GA	MA	4	3	B	Active	C	O	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP ALTERNATE SUCTION ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--165	11715-CBM-074A SH-003 / D6	Standard	CK	SA	4	3	C	Active	C	O	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	CS	CSV-17

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--166	11715-CBM-074A SH-003 / E6	Standard	GA	MA	4	3	B	Active	LC	OC	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP TO MOV HEADER DISCHARGE ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--167	11715-CBM-074A SH-003 / D6	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP RECIRC RECIRC LINE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	CS	CSV-15

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--172	11715-CBM-074A SH-003 / E6	Standard	GA	MA	4	3	B	Active	LO	OC	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP TO HCV HEADER INLET ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--180	11715-CBM-074A SH-003 / B5	Standard	GA	MA	4	3	B	Active	C	O	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AFW PUMP ALTERNATE SUCTION ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--183	11715-CBM-074A SH-003 / D5	Standard	CK	SA	4	3	C	Active	C	O	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AFW PUMP DISCHARGE CHECK VALVE												
								TEST	FREQUENCY	Notes		
								CVO	3M			
								CVC	CS	CSV-17		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--184	11715-CBM-074A SH-003 / E5	Standard	GA	MA	4	3	B	Active	LO	OC	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AFW PUMP TO MOV HEADER DISCHARGE ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--185	11715-CBM-074A SH-003 / D5	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AFW PUMP RECIRC LINE CHECK VALVE												
								TEST	FREQUENCY	Notes		
								CVO	3M			
								CVC	CS	CSV-15		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--190	11715-CBM-074A SH-003 / E5	Standard	GA	MA	4	3	B	Active	LC	OC	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP TO HCV HEADER INLET ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--227	11715-CBM-074A SH-003 / A7	Standard	GA	MA	6	3	B	Active	LC	O	NA	FW
DESCRIPTION: SERVICE WATER TO AFW ALTERNATE SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--279	11715-CBM-074A SH-003 / D8	Standard	CK	SA	4	3	C	Active	C	O	NA	FW
DESCRIPTION: 1-FW-MOV-100D OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-15			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--47	11715-CBM-074A SH-001 / E6	Standard	CK	SA	16	2	C	Active	O	C	NA	FW
DESCRIPTION: "A" MAIN FEEDWATER HEADER TO "A" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-14			
							CVO	NPO	CSV-14 : TP-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--526	11715-CBM-074A SH-003 / D7	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP LUBE OIL COOLER INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-29

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--527	11715-CBM-074A SH-003 / E6	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP LUBE OIL COOLER INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-29

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--528	11715-CBM-074A SH-003 / E4	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN PUMP LUBE OIL COOLER INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-29

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--61	11715-CBM-074A SH-001 / B5	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AFW "3B" MOV HEADER, 1-FW-MOV-100A OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CSV-15
CVO	CS	CSV-15

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--62	11715-CBM-074A SH-001 / B5	Standard	GA	MA	3	3	B	Active	LC	OC	NA	FW
DESCRIPTION: AFW "3B" MOV HEADER, 1-FW-MOV-100A OUTLET ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--63	11715-CBM-074A SH-001 / B6	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AFW "3A" HCV HEADER, 1-FW-HCV-100A OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CSV-15
CVO	CS	CSV-15

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--64	11715-CBM-074A SH-001 / B6	Standard	GA	MA	3	3	B	Active	LC	OC	NA	FW
DESCRIPTION: AFW "3A" HCV HEADER, 1-FW-HCV-100A OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--68	11715-CBM-074A SH-001 / D6	Standard	CK	SA	3	2	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER TO "A" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-16			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--79	11715-CBM-074A SH-001 / D6	Standard	CK	SA	16	2	C	Active	O	C	NA	FW
DESCRIPTION: "B" MAIN FEEDWATER HEADER TO "B" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-14			
							CVO	NPO	CSV-14 : TP-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--93	11715-CBM-074A SH-001 / B6	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AFW "3B" MOV HEADER, 1-FW-MOV-100B OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	CS	CSV-15

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--94	11715-CBM-074A SH-001 / B6	Standard	GA	MA	3	3	B	Active	LO	OC	NA	FW
DESCRIPTION: AFW "3B" MOV HEADER, 1-FW-MOV-100B OUTLET ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--95	11715-CBM-074A SH-001 / B6	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AFW "3A" HCV HEADER, 1-FW-HCV-100B OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CSV-15
CVO	CS	CSV-15

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW--96	11715-CBM-074A SH-001 / B6	Standard	GA	MA	3	3	B	Active	LC	OC	NA	FW
DESCRIPTION: AFW "3A" HCV HEADER, 1-FW-HCV-100B OUTLET ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-HCV-100A	11715-CBM-074A SH-001 / B5	Standard	GL	AO	3	3	B	Active	C	O	O	FW
DESCRIPTION: AFW HCV HEADER TO A S/G												
								TEST	FREQUENCY	Notes		
								FSO	CS	CSV-12 : TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-HCV-100B	11715-CBM-074A SH-001 / B6	Standard	GL	AO	3	3	B	Active	C	O	O	FW
DESCRIPTION: AFW HCV HEADER TO B S/G												
								TEST	FREQUENCY	Notes		
								FSO	CS	CSV-12 : TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-HCV-100C	11715-CBM-074A SH-001 / B7	Standard	GL	AO	3	3	B	Active	O	O	O	FW
DESCRIPTION: AFW HCV HEADER TO C S/G												
								TEST	FREQUENCY	Notes		
								FSO	CS	CSV-12 : TP-03		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-100A	11715-CBM-074A SH-001 / B5	Standard	GL	MOL	3	3	B	Active	C	OC	NA	FW
DESCRIPTION: AFW MOV HEADER TO A S/G												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-100B	11715-CBM-074A SH-001 / B6	Standard	GL	MO	3	3	B	Active	O	OC	NA	FW
DESCRIPTION: AFW MOV HEADER TO B S/G												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-100C	11715-CBM-074A SH-001 / B7	Standard	GL	MOL	3	3	B	Active	C	OC	NA	FW
DESCRIPTION: AFW MOV HEADER TO C S/G												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-100D	11715-CBM-074A SH-003 / E8	Standard	GL	MO	3	3	B	Active	O	OC	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP TO A S/G												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-PCV-159A	11715-CBM-074A SH-003 / F8	Standard	GL	AO	4	3	B	Active	C	O	O	FW
DESCRIPTION: AFW PUMPS TO MOV HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSO	CS	CSV-13 : TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-PCV-159B	11715-CBM-074A SH-003 / E8	Standard	GL	AO	4	3	B	Active	C	O	O	FW
DESCRIPTION: AFW PUMPS TO HCV HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSO	CS	CSV-13 : TP-03			

NORTH ANNA UNIT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-RV-100	11715-CBM-074A SH-003 / D8	Standard	RV	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AUXILIARY FEED PUMP FEEDWATER DISCHARGE RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC--14	11715-CBM-106A SH-001 / E8	Standard	CK	SA	2	2	AC	Active	C	C	NA	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER/ANALYZER RETURN TO UNIT 1, INSIDE CONT ISOLATION CHECK VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			
								CVC	RR	RRV-04		
								CVO	RR	RRV-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC--18	11715-CBM-106A SH-002 / E6	Standard	CK	SA	2	2	AC	Active	C	C	NA	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER/ANALYZER RETURN TO UNIT 1, INSIDE CONT ISOLATION CHECK VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			
								CVC	RR	RRV-04		
								CVO	RR	RRV-04		

NORTH ANNA UNIT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-100A	11715-CBM-106A SH-001 / E8	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 SAMPLE LINE TO UNIT 1 HYDROGEN ANALYZER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-100B	11715-CBM-106A SH-001 / E7	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 SAMPLE LINE TO UNIT 1 HYDROGEN ANALYZER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-101A	11715-CBM-106A SH-001 / D7	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 HYDROGEN ANALYZER RETURN TO UNIT 1 CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-101B	11715-CBM-106A SH-001 / D7	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 HYDROGEN ANALYZER RETURN TO UNIT 1 CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-102A	11715-CBM-106A SH-002 / E6	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 SAMPLE LINE TO UNIT 2 HYDROGEN ANALYZER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-102B	11715-CBM-106A SH-002 / E7	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 SAMPLE LINE TO UNIT 2 HYDROGEN ANALYZER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-103A	11715-CBM-106A SH-002 / D7	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 HYDROGEN ANALYZER RETURN TO UNIT 1 CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-103B	11715-CBM-106A SH-002 / D7	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 HYDROGEN ANALYZER RETURN TO UNIT 1 CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-104A	11715-CBM-106A SH-004 / F6	Standard	GL	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER/PURGE BLOWER SUPPLY FROM UNIT 1, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-104B	11715-CBM-106A SH-004 / F6	Standard	GL	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER/PURGE BLOWER SUPPLY FROM UNIT 1, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-105A	11715-CBM-106A SH-001 / E6	Standard	GL	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER RETURN TO UNIT 1, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-105B	11715-CBM-106A SH-001 / E6	Standard	GL	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER RETURN TO UNIT 1, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-106A	11715-CBM-106A SH-004 / F7	Standard	GL	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER/PURGE BLOWER SUPPLY FROM UNIT 1, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-106B	11715-CBM-106A SH-004 / F8	Standard	GL	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER/PURGE BLOWER SUPPLY FROM UNIT 1, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-107A	11715-CBM-106A SH-002 / E7	Standard	GL	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER RETURN TO UNIT 1, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-107B	11715-CBM-106A SH-002 / E8	Standard	GL	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER RETURN TO UNIT 1, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-108A	11715-CBM-106A SH-003 / E8	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 HRSS SUPPLY SAMPLE LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HC-TV-108B	11715-CBM-106A SH-003 / E7	Standard	GL	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 HRSS SUPPLY SAMPLE LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-100A	11715-CBB-006A SH-001 / D7	Standard	BF	MO	36	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE SUPPLY, INSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-100B	11715-CBB-006A SH-001 / D7	Standard	BF	MO	36	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-100C	11715-CBB-006A SH-001 / C7	Standard	BF	MO	36	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE EXHAUST, INSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-100D	11715-CBB-006A SH-001 / C7	Standard	BF	MO	36	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE EXHAUST, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-101	11715-CBB-006A SH-001 / C7	Standard	BF	MO	8	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE EXHAUST BYPASS, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-102	11715-CBB-006A SH-001 / D7	Standard	BF	MO	18	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PRESSURE EQUALIZING VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-111A	11715-CBB-040C SH-001 / E8	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER “4A” CD OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-111B	11715-CBB-040C SH-001 / C8	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER “4B” CD OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-111C	11715-CBB-040C SH-001 / D8	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER “4C” CD OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-113A	11715-CBB-040D SH-001 / E3	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER “4A” SW OUTLET HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-113B	11715-CBB-040D SH-001 / B3	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER “4B” SW OUTLET HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-MOV-113C	11715-CBB-040D SH-001 / C3	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER “4C” SW OUTLET HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-PCV-1235A1	11715-CBB-040D SH-001 / E6	Standard	GL	AO	3	3	B	Active	O	C	C	HV
DESCRIPTION: CONTROL ROOM CHILLER "4A" SW RECIRC HEADER PRESSURE CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSC	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-PCV-1235A2	11715-CBB-040D SH-001 / E3	Standard	GL	AO	2.5	3	B	Active	O	O	O	HV
DESCRIPTION: CONTROL ROOM CHILLER "4A" SW OUTLET HEADER PRESSURE CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-PCV-1235B1	11715-CBB-040D SH-001 / A6	Standard	GL	AO	3	3	B	Active	O	C	C	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" SW RECIRC HEADER PRESSURE CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSC	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-PCV-1235B2	11715-CBB-040D SH-001 / B3	Standard	GL	AO	2.5	3	B	Active	O	O	O	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" SW OUTLET HEADER PRESSURE CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-PCV-1235C1	11715-CBB-040D SH-001 / C6	Standard	GL	AO	3	3	B	Active	O	C	C	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" SW RECIRC HEADER PRESSURE CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSC	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-PCV-1235C2	11715-CBB-040D SH-001 / C3	Standard	GL	AO	2.5	3	B	Active	O	O	O	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" SW OUTLET HEADER PRESSURE CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-RV-1200	11715-CBB-040C SH-001 / E4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLED WATER HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-RV-1201	11715-CBB-040C SH-001 / C3	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLED WATER HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-RV-1202A	11715-CBB-040C SH-001 / E7	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4A" CD OUTLET RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-RV-1202B	11715-CBB-040C SH-001 / D7	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" CD OUTLET RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-RV-1202C	11715-CBB-040C SH-001 / C7	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" CD OUTLET RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-RV-1205A	11715-CBB-040D SH-001 / E4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4A" SW OUTLET HEADER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-RV-1205B	11715-CBB-040D SH-001 / B4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" SW OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-RV-1205C	11715-CBB-040D SH-001 / D4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" SW OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-HV-SOV-1200B	11715-CBB-040D SH-001 / B7	Standard	GA	SO	0.5	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER CONDENSER PUMP "22B" SW SEAL WATER SUPPLY ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								STO	3M			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--149	11715-CBM-082N SH-003 / C4	Standard	CK	SA	1	2	AC	Active	O	C	NA	IA
DESCRIPTION: CONTAINMENT RAD MONITOR RETURN HEADER, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-05			
							CVO	RR	RRV-05 : TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--55	11715-CBM-082A SH-001 / F5	Standard	CK	SA	2	2	AC	Active	OC	C	NA	IA
DESCRIPTION: INSTRUMENT AIR SUPPLY TO CONTAINMENT, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-05			
							CVO	RR	RRV-05 : TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-TV-102A	11715-CBM-082N SH-001 / D3	Standard	GL	AO	2	2	B	Active	O	C	C	IA
DESCRIPTION: CONTAINMENT INSTRUMENT AIR SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-18			
							STC	CS	CSV-18			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-TV-102B	11715-CBM-082N SH-001 / D3	Standard	GL	AO	2	2	A	Active	O	C	C	IA
DESCRIPTION: CONTAINMENT INSTRUMENT AIR SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-18			
							STC	CS	CSV-18			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-100A	11715-CBM-092A SH-001 / E7	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-100B	11715-CBM-092A SH-001 / E6	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-100C	11715-CBM-092A SH-001 / E6	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-100D	11715-CBM-092A SH-001 / E5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-100E	11715-CBM-092A SH-001 / F6	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-100F	11715-CBM-092A SH-001 / F5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-100G	11715-CBM-092A SH-001 / E7	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-100H	11715-CBM-092A SH-001 / E6	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-101A	11715-CBM-092A SH-001 / D5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING SEALED SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-101B	11715-CBM-092A SH-001 / D5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING SEALED SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-101C	11715-CBM-092A SH-001 / D5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING SEALED SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-31			
							STC	RR	RRV-31			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-LM-TV-101D	11715-CBM-092A SH-001 / D4	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING SEALED SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	
FSC	RR	RRV-31
STC	RR	RRV-31

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS--119	11715-CBM-070A SH-003 / E7	Standard	CK	SA	3	3	C	Active	C	OC	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-32

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS--122	11715-CBM-070A SH-003 / F7	Standard	CK	SA	3	3	C	Active	C	OC	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-32
CVO	3M	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS--124	11715-CBM-070A SH-003 / F7	Standard	CK	SA	3	3	C	Active	C	OC	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-32
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS--18	11715-CBM-070B SH-001 / C6	Standard	GA	MA	3	2	B	Active	O	OC	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS--57	11715-CBM-070B SH-002 / B6	Standard	GA	MA	3	2	B	Active	O	OC	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	Manual Exercise

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS--95	11715-CBM-070B SH-003 / C6	Standard	GA	MA	3	2	B	Active	O	OC	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-NRV-101A	11715-CBM-070B SH-001 / D3	Standard	CK	SA	32	2	C	Active	O	C	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER NON-RETURN VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			
								CVC	CS	CSV-04		
								CVO	NPO	CSV-04 : TP-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-NRV-101B	11715-CBM-070B SH-002 / D3	Standard	CK	SA	32	2	C	Active	O	C	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER NON-RETURN VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			
								CVC	CS	CSV-04		
								CVO	NPO	CSV-04 : TP-01		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-NRV-101C	11715-CBM-070B SH-003 / D3	Standard	CK	SA	32	2	C	Active	O	C	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER NON-RETURN VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
CVC	CS	CSV-04
CVO	NPO	CSV-04 : TP-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-PCV-101A	11715-CBM-070B SH-001 / E5	Standard	ANG	AO	6	2	B	Active	C	C	C	MS
DESCRIPTION: "A" S/G POWER OPERATED RELIEF VALVE												

TEST	FREQUENCY	Notes
FSC	RR	RRV-25 : TP-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-PCV-101B	11715-CBM-070B SH-002 / E6	Standard	ANG	AO	6	2	B	Active	C	C	C	MS
DESCRIPTION: "B" S/G POWER OPERATED RELIEF VALVE												

TEST	FREQUENCY	Notes
FSC	RR	RRV-25 : TP-03

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-PCV-101C	11715-CBM-070B SH-003 / E5	Standard	ANG	AO	6	2	B	Active	C	C	C	MS
DESCRIPTION: "C" S/G POWER OPERATED RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							FSC	RR	RRV-25 : TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-101A	11715-CBM-070B SH-001 / E6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-101B	11715-CBM-070B SH-002 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-101C	11715-CBM-070B SH-003 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-102A	11715-CBM-070B SH-001 / E5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	60M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-102B	11715-CBM-070B SH-002 / D5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	60M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-102C	11715-CBM-070B SH-003 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	60M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-103A	11715-CBM-070B SH-001 / E6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	60M			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-103B	11715-CBM-070B SH-002 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	60M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-103C	11715-CBM-070B SH-003 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	60M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-104A	11715-CBM-070B SH-001 / E6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	60M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-104B	11715-CBM-070B SH-002 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	60M			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-104C	11715-CBM-070B SH-003 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-105A	11715-CBM-070B SH-001 / E5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-105B	11715-CBM-070B SH-002 / D5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-SV-105C	11715-CBM-070B SH-003 / D5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-101A	11715-CBM-070B SH-001 / D4	Standard	CK	AO	32	2	BC	Active	O	C	C	MS
DESCRIPTION: "A" MAIN STEAM HEADER TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-06			
							FSC	CS	CSV-06			
							STC	CS	CSV-06			
							CVO	NPO	CSV-06			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-101B	11715-CBM-070B SH-002 / C4	Standard	CK	AO	32	2	BC	Active	O	C	C	MS
DESCRIPTION: "B" MAIN STEAM HEADER TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-06			
							FSC	CS	CSV-06			
							STC	CS	CSV-06			
							CVO	NPO	CSV-06			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-101C	11715-CBM-070B SH-003 / C4	Standard	CK	AO	32	2	BC	Active	O	C	C	MS
DESCRIPTION: "C" MAIN STEAM HEADER TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-06			
							FSC	CS	CSV-06			
							STC	CS	CSV-06			
							CVO	NPO	CSV-06			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-109	11715-CBM-070A SH-001 / A8	Standard	GL	AO	3	3	B	Active	O	C	C	MS
DESCRIPTION: MAIN STEAM HIGH PRESSURE DRAIN ISOLATION TO CONDENSER												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-05			
							STC	CS	CSV-05			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-111A	11715-CBM-070A SH-003 / E5	Standard	GL	AO	3	3	B	Active	C	OC	O	MS
DESCRIPTION: MAIN STEAM SUPPLY TRIP VALVE TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSO	3M				
							STC	3M				
							STO	3M				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-111B	11715-CBM-070A SH-003 / E4	Standard	GL	AO	3	3	B	Active	C	OC	O	MS
DESCRIPTION: MAIN STEAM SUPPLY TRIP VALVE TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSO	3M				
							STC	3M				
							STO	3M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-113A	11715-CBM-070B SH-001 / D4	Standard	GL	AO	3	2	B	Active	C	C	C	MS
DESCRIPTION: "A" MAIN STEAM TRIP BYPASS VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-08			
							STC	CS	CSV-08			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-113B	11715-CBM-070B SH-002 / D4	Standard	GL	AO	3	2	B	Active	C	C	C	MS
DESCRIPTION: "B" MAIN STEAM TRIP BYPASS VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-08			
							STC	CS	CSV-08			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-113C	11715-CBM-070B SH-003 / D4	Standard	GL	AO	3	2	B	Active	C	C	C	MS
DESCRIPTION: "C" MAIN STEAM TRIP BYPASS VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-08			
							STC	CS	CSV-08			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS--11	11715-CBM-091A SH-002 / D6	Standard	CK	WL	8	2	AC	Active	C	OC	NA	QS
DESCRIPTION: "1A" QUENCH SPRAY PUMP INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-17			
							CVO	RR	RRV-17			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS--147	11715-CBM-091A SH-002 / B6	Standard	CK	SA	2	2	AC	Active	C	OC	NA	QS
DESCRIPTION: QUENCH SPRAY BLEED LINE ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-30			
							CVO	RR	RRV-30			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS--150	11715-CBM-091A SH-002 / B6	Standard	CK	SA	2	2	AC	Active	C	OC	NA	QS
DESCRIPTION: QUENCH SPRAY BLEED LINE ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-30			
							CVO	RR	RRV-30			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS--19	11715-CBM-091A SH-002 / E6	Standard	CK	WL	8	2	AC	Active	C	OC	NA	QS
DESCRIPTION: "1B" QUENCH SPRAY PUMP INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-17
CVO	RR	RRV-17

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS-MOV-100A	11715-CBM-091A SH-002 / A3	Standard	GA	MO	10	2	B	Passive	O	O	NA	QS
DESCRIPTION: "1A" QUENCH SPRAY PUMP SUCTION ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS-MOV-100B	11715-CBM-091A SH-002 / A3	Standard	GA	MO	10	2	B	Passive	O	O	NA	QS
DESCRIPTION: "1B" QUENCH SPRAY PUMP SUCTION ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS-MOV-101A	11715-CBM-091A SH-002 / D5	Standard	GA	MOL	8	2	A	Active	C	OC	NA	QS
DESCRIPTION: "1A" QS PUMP DISCHARGE ISOLATION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				
							LTJ	J				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS-MOV-101B	11715-CBM-091A SH-002 / E5	Standard	GA	MOL	8	2	A	Active	C	OC	NA	QS
DESCRIPTION: "1B" QS PUMP DISCHARGE ISOLATION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS-MOV-102A	11715-CBM-091A SH-001 / D5	Standard	GA	MOL	6	2	B	Active	C	O	NA	QS
DESCRIPTION: CHEMICAL ADDITION TANK DISCHARGE ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-QS-MOV-102B	11715-CBM-091A SH-001 / D6	Standard	GA	MOL	6	2	B	Active	C	O	NA	QS
DESCRIPTION: CHEMICAL ADDITION TANK DISCHARGE ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC--149	11715-CBM-093B SH-002 / D7	Standard	CK	SA	3	2	AC	Active	C	C	NA	RC
DESCRIPTION: CONTAINMENT PRIMARY GRADE WATER SUPPLY, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-06
CVO	RR	RRV-06

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC--176	11715-CBM-093B SH-001 / A4	Standard	GA	MA	0.125	1	A	Passive	C	C	NA	RC
DESCRIPTION: PRESSURIZER PRESSURE DEAD WEIGHT TESTER, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC--178	11715-CBM-093B SH-001 / A3	Standard	GA	MA	0.125	1	A	Passive	C	C	NA	RC
DESCRIPTION: PRESSURIZER PRESSURE DEAD WEIGHT TESTER, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-MOV-1535	11715-CBM-093B SH-001 / E4	Standard	GA	MO	3	1	B	Active	O	OC	NA	RC
DESCRIPTION: 1-RC-PCV-1456 PORV BLOCK VALVE												
								TEST	FREQUENCY	Notes		
								FCE	18M	TP-06		
								DIAG	III			
								PIT	III			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-MOV-1536	11715-CBM-093B SH-001 / D4	Standard	GA	MO	3	1	B	Active	O	OC	NA	RC
DESCRIPTION: 1-RC-PCV-1455C PORV BLOCK VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-PCV-1455C	11715-CBM-093B SH-001 / D3	Standard	GL	AO	3	1	BL	Active	C	OC	C	RC
DESCRIPTION: PRESSURIZER POWER OPERATED RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-09			
							STC	CS	CSV-09			
							STO	CS	CSV-09			
							LT	RR				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-PCV-1456	11715-CBM-093B SH-001 / E3	Standard	GL	AO	3	1	BL	Active	C	OC	C	RC
DESCRIPTION: PRESSURIZER POWER OPERATED RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-09			
							STC	CS	CSV-09			
							STO	CS	CSV-09			
							LT	RR				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-SOV-101A1	11715-CBM-093A SH-003 / B5	Standard	GL	SO	1	1	B	Active	C	OC	C	RC
DESCRIPTION: REACTOR VESSEL HEAD VENT SOLENOID OPERATED VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-11			
							STC	CS	CSV-11			
							STO	CS	CSV-11			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-SOV-101A2	11715-CBM-093A SH-003 / A5	Standard	GL	SO	1	1	B	Active	C	OC	C	RC
DESCRIPTION: REACTOR VESSEL HEAD VENT SOLENOID OPERATED VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-11			
							STC	CS	CSV-11			
							STO	CS	CSV-11			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-SOV-101B1	11715-CBM-093A SH-003 / B5	Standard	GL	SO	1	1	B	Active	C	OC	C	RC
DESCRIPTION: REACTOR VESSEL HEAD VENT SOLENOID OPERATED VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-11			
							STC	CS	CSV-11			
							STO	CS	CSV-11			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-SOV-101B2	11715-CBM-093A SH-003 / A5	Standard	GL	SO	1	1	B	Active	C	OC	C	RC
DESCRIPTION: REACTOR VESSEL HEAD VENT SOLENOID OPERATED VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-11			
							STC	CS	CSV-11			
							STO	CS	CSV-11			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-SV-1551A	11715-CBM-093B SH-001 / F5	Standard	SV	SA	6	1	C	Active	C	O	NA	RC
DESCRIPTION: PRESSURIZER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-SV-1551B	11715-CBM-093B SH-001 / F5	Standard	SV	SA	6	1	C	Active	C	O	NA	RC
DESCRIPTION: PRESSURIZER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-SV-1551C	11715-CBM-093B SH-001 / F6	Standard	SV	SA	6	1	C	Active	C	O	NA	RC
DESCRIPTION: PRESSURIZER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RC-TV-1519A	11715-CBM-093B SH-002 / D8	Standard	DIA	AO	3	2	A	Active	C	C	C	RC
DESCRIPTION: CONTAINMENT PRIMARY GRADE WATER SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH--15	11715-CBM-094A SH-001 / E7	Standard	CK	SA	10	2	C	Active	C	OC	NA	RH
DESCRIPTION: "1A" RHR PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-10			
							CVO	CS	CSV-10			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH--36	11715-CBM-094A SH-002 / C3	Standard	GA	MA	6	2	A	Passive	LC	C	NA	RH
DESCRIPTION: RESIDUAL HEAT REMOVAL TO RWST, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH--37	11715-CBM-094A SH-002 / E3	Standard	GA	MA	6	2	A	Passive	LC	C	NA	RH
DESCRIPTION: RESIDUAL HEAT REMOVAL TO RWST, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH--7	11715-CBM-094A SH-001 / E5	Standard	CK	SA	10	2	C	Active	C	OC	NA	RH
DESCRIPTION: "1B" RHR PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-10			
							CVO	CS	CSV-10			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH-MOV-1700	11715-CBM-094A SH-001 / A5	Standard	GA	MO	14	1	B	Active	C	O	NA	RH
DESCRIPTION: RHR PUMP SUPPLY ISOLATION FROM "A" HOT LEG, INSIDE MISSILE BARRIER												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH-MOV-1701	11715-CBM-094A SH-001 / A4	Standard	GA	MO	14	1	B	Active	C	O	NA	RH
DESCRIPTION: RHR PUMP SUPPLY ISOLATION FROM "A" HOT LEG, OUTSIDE MISSILE BARRIER												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH-MOV-1720A	11715-CBM-094A SH-002 / C3	Standard	GA	MO	10	1	B	Active	C	O	NA	RH
DESCRIPTION: RHR RETURN ISOLATION TO "B" ACCUMULATOR DISCHARGE LINE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH-MOV-1720B	11715-CBM-094A SH-002 / B3	Standard	GA	MO	10	1	B	Active	C	O	NA	RH
DESCRIPTION: RHR RETURN ISOLATION TO "C" ACCUMULATOR DISCHARGE LINE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH-RV-1721A	11715-CBM-094A SH-001 / E6	Standard	RV	SA	3	2	C	Active	C	O	NA	RH
DESCRIPTION: "1A" RHR PUMP SUCTION RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH-RV-1721B	11715-CBM-094A SH-001 / E3	Standard	RV	SA	3	2	C	Active	C	O	NA	RH
DESCRIPTION: "1B" RHR PUMP SUCTION RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RM-TV-100A	11715-CBM-082N SH-003 / C5	Standard	GL	AO	1	2	A	Active	O	C	C	RM
DESCRIPTION: CONTAINMENT RADIATION MONITOR RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RM-TV-100B	11715-CBM-082N SH-003 / D5	Standard	GL	AO	1	2	A	Active	O	C	C	RM
DESCRIPTION: CONTAINMENT RADIATION MONITOR SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RM-TV-100C	11715-CBM-082N SH-003 / D4	Standard	GL	AO	1	2	A	Active	O	C	C	RM

DESCRIPTION: CONTAINMENT RADIATION MONITOR SUPPLY, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RM-TV-100D	11715-CBM-082N SH-003 / C5	Standard	GL	AO	1	2	B	Active	O	C	C	RM

DESCRIPTION: CONTAINMENT RADIATION MONITOR RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RP--26	11715-CBM-088A SH-002 / C4	Standard	DIA	MA	6	2	A	Passive	LC	C	NA	RP

DESCRIPTION: REFUELING PURIFICATION FROM RP PUMPS TO REACTOR CAVITY, OUTSIDE CONT ISOLATION VALVE

TEST	FREQUENCY	Notes
LTJ	J	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RP--28	11715-CBM-088A SH-002 / D5	Standard	DIA	MA	6	2	A	Passive	LC	C	NA	RP
DESCRIPTION: REFUELING PURIFICATION FROM RP PUMPS TO REACTOR CAVITY, INSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							L TJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RP--6	11715-CBM-088A SH-002 / C6	Standard	DIA	MA	6	2	A	Passive	LC	C	NA	RP
DESCRIPTION: REFUELING PURIFICATION FROM REACTOR CAVITY TO RP PUMPS, INSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							L TJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RP--8	11715-CBM-088A SH-002 / C4	Standard	DIA	MA	6	2	A	Passive	LC	C	NA	RP
DESCRIPTION: REFUELING PURIFICATION FROM REACTOR CAVITY TO RP PUMPS, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							L TJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS--123	11715-CBM-091B SH-001 / E7	Standard	CK	SA	8	2	C	Active	C	O	NA	RS
DESCRIPTION: "3A" CASING COOLING PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-01
CVO	CM	CM-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS--138	11715-CBM-091B SH-001 / F7	Standard	CK	SA	8	2	C	Active	C	O	NA	RS
DESCRIPTION: "3B" CASING COOLING PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-01
CVO	CM	CM-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS--18	11715-CBM-091A SH-004 / D6	Standard	CK	WL	10	2	C	Active	C	OC	NA	RS
DESCRIPTION: "2A" OUTSIDE RECIRC SPRAY PUMP INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-17
CVO	RR	RRV-17

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS--27	11715-CBM-091A SH-004 / D6	Standard	CK	WL	10	2	C	Active	C	OC	NA	RS
DESCRIPTION: "2B" OUTSIDE RECIRC SPRAY PUMP INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-17
CVO	RR	RRV-17

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS-MOV-100A	11715-CBM-091B SH-001 / E7	Standard	GA	MOL	8	2	B	Active	C	OC	NA	RS
DESCRIPTION: "3A" CASING COOLING PUMP DISCHARGE ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS-MOV-100B	11715-CBM-091B SH-001 / F7	Standard	GA	MOL	6	2	B	Active	C	OC	NA	RS
DESCRIPTION: "3B" CASING COOLING PUMP DISCHARGE ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS-MOV-101A	11715-CBM-091B SH-001 / E7	Standard	GA	MOL	6	3	B	Active	O	OC	NA	RS
DESCRIPTION: "3A" CASING COOLING PUMP DISCHARGE ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS-MOV-101B	11715-CBM-091B SH-001 / F7	Standard	GA	MOL	6	3	B	Active	O	OC	NA	RS
DESCRIPTION: "3B" CASING COOLING PUMP DISCHARGE ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS-MOV-155A	11715-CBM-091A SH-004 / B6	Standard	GA	MOL	12	2	B	Active	O	OC	NA	RS
DESCRIPTION: "2A" OUTSIDE RECIRC SPRAY PUMP SUCTION, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS-MOV-155B	11715-CBM-091A SH-004 / A6	Standard	GA	MOL	12	2	B	Active	O	OC	NA	RS
DESCRIPTION: "2B" OUTSIDE RECIRC SPRAY PUMP SUCTION, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS-MOV-156A	11715-CBM-091A SH-004 / D5	Standard	GA	MOL	10	2	B	Active	O	OC	NA	RS
DESCRIPTION: "2A" OUTSIDE RECIRC SPRAY PUMP DISCHARGE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RS-MOV-156B	11715-CBM-091A SH-004 / D5	Standard	GA	MOL	10	2	B	Active	O	OC	NA	RS
DESCRIPTION: "2B" OUTSIDE RECIRC SPRAY PUMP DISCHARGE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNIT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SA--2	11715-CBM-082F SH-001 / C7	Standard	GA	MA	2	2	A	Passive	LC	C	NA	SA
DESCRIPTION: SERVICE AIR SUPPLY TO UNIT 1 CONTAINMENT, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							L TJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SA--29	11715-CBM-082F SH-001 / B7	Standard	GL	MA	2	2	A	Passive	LC	C	NA	SA
DESCRIPTION: SERVICE AIR SUPPLY TO UNIT 1 CONTAINMENT, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							L TJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--1	11715-CBM-096A SH-001 / B7	Standard	CK	SA	12	2	C	Active	C	O	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP SUCTION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-03			
							CVO	CM	CM-03			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--103	11715-CBM-096B SH-004 / B8	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "C" RCS HOT LEG SI CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-06
CVO	CM	CM-06

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--106	11715-CBM-096B SH-001 / F4	Standard	CK	SA	1	2	AC	Active	C	C	NA	SI
DESCRIPTION: SI ACCUMULATORS NITROGEN HEADER, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
L TJ	J	
CVC	RR	RRV-09
CVO	RR	RRV-09 : TP-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--110	11715-CBM-096B SH-001 / D4	Standard	CK	SA	1	2	AC	Active	C	C	NA	SI
DESCRIPTION: SI ACCUMULATORS MAKE UP LINE, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
L TJ	J	
CVC	RR	RRV-09
CVO	RR	RRV-09 : TP-01

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--12	11715-CBM-096A SH-002 / B5	Standard	CK	SA	2	2	C	Active	C	O	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	RR	RRV-07			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--125	11715-CBM-096B SH-001 / B7	Standard	CK	SA	12	1	C	Active	C	OC	NA	SI
DESCRIPTION: "1A" SI ACCUMULATOR DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-05			
							CVO	CM	CM-05			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--127	11715-CBM-096B SH-001 / A8	Standard	CK	SA	12	1	C	Active	C	OC	NA	SI
DESCRIPTION: "1A" SI ACCUMULATOR COLD LEG CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-05			
							CVO	CM	CM-05			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--142	11715-CBM-096B SH-002 / B5	Standard	CK	SA	12	1	C	Active	C	OC	NA	SI
DESCRIPTION: "1B" SI ACCUMULATOR DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-05
CVO	CM	CM-05

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--144	11715-CBM-096B SH-002 / B7	Standard	CK	SA	12	1	C	Active	C	OC	NA	SI
DESCRIPTION: "1B" SI ACCUMULATOR COLD LEG CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-05
CVO	CM	CM-05

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--159	11715-CBM-096B SH-003 / B5	Standard	CK	SA	12	1	C	Active	C	OC	NA	SI
DESCRIPTION: "1C" SI ACCUMULATOR DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-05
CVO	CM	CM-05

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--16	11715-CBM-096A SH-001 / B5	Standard	CK	SA	12	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP SUCTION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-03			
							CVO	CM	CM-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--161	11715-CBM-096B SH-003 / B7	Standard	CK	SA	12	1	C	Active	C	OC	NA	SI
DESCRIPTION: "1C" SI ACCUMULATOR COLD LEG CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-05			
							CVO	CM	CM-05			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--18	11715-CBM-096A SH-001 / B3	Standard	CK	SA	12	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP SUCTION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-02			
							CVO	CM	CM-02			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--185	11715-CBM-096B SH-004 / F3	Standard	CK	SA	3	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO RCS COLD LEGS (BIT BYPASS), INSIDE CONTANMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-33			
							CVO	RR	RRV-33			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--190	11715-CBM-096B SH-004 / F7	Standard	CK	SA	2	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO "A" RCS COLD LEG, INSIDE MISSILE BARRIER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-10			
							CVO	RR	RRV-10			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--192	11715-CBM-096B SH-004 / E7	Standard	CK	SA	2	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO "B" RCS COLD LEG, INSIDE MISSILE BARRIER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-10			
							CVO	RR	RRV-10			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--194	11715-CBM-096B SH-004 / D7	Standard	CK	SA	2	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO "C" RCS COLD LEG, INSIDE MISSILE BARRIER CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-10
CVO	RR	RRV-10

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--195	11715-CBM-096B SH-004 / F6	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SI TO "A" RCS COLD LEG, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-04
CVO	CM	CM-04

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--197	11715-CBM-096B SH-004 / E6	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SI TO "B" RCS COLD LEG, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-04
CVO	CM	CM-04

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--199	11715-CBM-096B SH-004 / D6	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SI TO "C" RCS COLD LEG, INSIDE CONTAINMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-04
CVO	CM	CM-04

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--201	11715-CBM-096B SH-004 / D3	Standard	CK	SA	3	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO RCS HOT LEGS, INSIDE CONT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-33
CVO	RR	RRV-33

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--206	11715-CBM-096B SH-004 / B3	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "1A" LHSI PUMP TO RCS HOT LEGS, INSIDE CONTANMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-33
CVO	RR	RRV-33

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--207	11715-CBM-096B SH-004 / B3	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "1B" LHSI PUMP TO RCS HOT LEGS, INSIDE CONTANMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-33
CVO	RR	RRV-33

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--209	11715-CBM-096B SH-004 / C7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SAFETY INJECTION TO "A" RCS HOT LEG CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-06
CVO	CM	CM-06

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--21	11715-CBM-096A SH-001 / C5	Standard	CK	SA	0.75	2	AC	Active	C	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP SEAL WATER SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
LT	24M	
CVC	RR	RRV-14
CVO	RR	RRV-14

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--211	11715-CBM-096B SH-004 / C7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SAFETY INJECTION TO "B" RCS HOT LEG CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-06
CVO	CM	CM-06

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--213	11715-CBM-096B SH-004 / B7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SAFETY INJECTION TO "C" RCS HOT LEG CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-06
CVO	CM	CM-06

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--26	11715-CBM-096A SH-002 / B4	Standard	CK	SA	10	2	C	Active	C	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-07
CVO	RR	RRV-07

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--29	11715-CBM-096A SH-002 / B4	Standard	CK	SA	2	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-07

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--4	11715-CBM-096A SH-001 / C7	Standard	CK	SA	0.75	2	AC	Active	C	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP SEAL WATER SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
LT	24M	
CVC	RR	RRV-14
CVO	RR	RRV-14

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--47	11715-CBM-096A SH-001 / E5	Standard	CK	SA	8	2	AC	Active	C	OC	NA	SI
DESCRIPTION: RWST TO CHARGING PUMP SUCTION HEADER CHECK VALVE												

TEST	FREQUENCY	Notes
LT	24M	TP-08
CVC	RR	RRV-08
CVO	RR	RRV-08

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--58	11715-CBM-096A SH-001 / E7	Standard	GL	MA	1	2	A	Passive	LC	C	NA	SI
DESCRIPTION: SI ACCUMULATOR MAKEUP LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--66	11715-CBM-096A SH-003 / D4	Standard	CK	SA	1	2	C	Active	O	C	NA	SI
DESCRIPTION: BORON INJECTION TANK INLET RECIRC HEADER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	NPO	RRV-20			
							CVC	RR	RRV-20			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--79	11715-CBM-096B SH-004 / E3	Standard	CK	SA	3	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO RCS COLD LEGS (BIT), INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-33			
							CVO	RR	RRV-33			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--83	11715-CBM-096B SH-004 / F8	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: "A" RCS COLD LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	CM	CM-04			
							CVO	CM	CM-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--86	11715-CBM-096B SH-004 / E8	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: "B" RCS COLD LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	CM	CM-04			
							CVO	CM	CM-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--89	11715-CBM-096B SH-004 / D8	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: "C" RCS COLD LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	CM	CM-04			
							CVO	CM	CM-04			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--9	11715-CBM-096A SH-002 / B6	Standard	CK	SA	10	2	C	Active	C	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-07
CVO	RR	RRV-07

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--90	11715-CBM-096B SH-004 / C3	Standard	CK	SA	3	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO RCS HOT LEGS, INSIDE CONTANMENT ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-33
CVO	RR	RRV-33

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--95	11715-CBM-096B SH-004 / D8	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "B" RCS HOT LEG SI CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CM	CM-06
CVO	CM	CM-06

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI--99	11715-CBM-096B SH-004 / C8	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "A" RCS HOT LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-06			
							CVO	CM	CM-06			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-HCV-1853A	11715-CBM-096B SH-001 / E5	Standard	GA	AO	1	2	B	Passive	C	C	C	SI
DESCRIPTION: SI Accumulator Nitrogen Supply/Vent Valves												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-HCV-1853B	11715-CBM-096B SH-001 / E5	Standard	GA	AO	1	2	B	Passive	C	C	C	SI
DESCRIPTION: SI Accumulator Nitrogen Supply/Vent Valves												
							TEST	FREQUENCY	Notes			
							PIT	24M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-HCV-1853C	11715-CBM-096B SH-001 / E5	Standard	GA	AO	1	2	B	Passive	C	C	C	SI
DESCRIPTION: SI Accumulator Nitrogen Supply/Vent Valves												
								TEST	FREQUENCY	Notes		
								PIT	24M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-HCV-1936	11715-CBM-096B SH-001 / E5	Standard	GA	AO	1	2	A	Active	C	C	C	SI
DESCRIPTION: SI ACCUMULATORS N2 VENT TO CHARCOAL FILTERS HAND CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			
								FSC	3M	TP-03		
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1836	11715-CBM-096A SH-003 / C8	Standard	GA	MOL	3	1	B	Active	C	OC	NA	SI
DESCRIPTION: ALTERNATE HIGH HEAD SI TO RCS COLD LEGS, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M			
								DIAG	III			
								PIT	III			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1860A	11715-CBM-096A SH-001 / B7	Standard	GA	MO	12	2	B	Active	C	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP SUCTION ISOLATION FROM CONTAINMENT SUMP												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1860B	11715-CBM-096A SH-001 / B5	Standard	GA	MO	12	2	B	Active	C	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP SUCTION ISOLATION FROM CONTAINMENT SUMP												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1862A	11715-CBM-096A SH-001 / A3	Standard	GA	MO	12	2	B	Active	O	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP SUCTION FROM RWST												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1862B	11715-CBM-096A SH-001 / B3	Standard	GA	MO	12	2	B	Active	O	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP SUCTION FROM RWST												

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1863A	11715-CBM-096A SH-002 / C5	Standard	GA	MO	8	2	B	Active	C	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SAFETY INJECTION PUMP SUPPLY ISOLATION TO CHARGING PUMPS												

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1863B	11715-CBM-096A SH-002 / D4	Standard	GA	MO	8	2	B	Active	C	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SAFETY INJECTION PUMP SUPPLY ISOLATION TO CHARGING PUMPS												

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1864A	11715-CBM-096A SH-002 / C7	Standard	GA	MOL	10	2	B	Active	O	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP COLD LEG DISCHARGE VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1864B	11715-CBM-096A SH-002 / C6	Standard	GA	MOL	10	2	B	Active	O	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP COLD LEG DISCHARGE VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1865A	11715-CBM-096B SH-001 / B7	Standard	GA	MO	12	2	B	Passive	O	O	NA	SI
DESCRIPTION: "1A" SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG												
							TEST	FREQUENCY	Notes			
							PIT	24M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1865B	11715-CBM-096B SH-002 / C5	Standard	GA	MO	12	2	B	Passive	O	O	NA	SI
DESCRIPTION: "1B" SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG												
								TEST	FREQUENCY	Notes		
								PIT	24M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1865C	11715-CBM-096B SH-003 / C5	Standard	GA	MO	12	2	B	Passive	O	O	NA	SI
DESCRIPTION: "1C" SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG												
								TEST	FREQUENCY	Notes		
								PIT	24M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1867A	11715-CBM-096A SH-003 / D3	Standard	GA	MO	3	2	B	Active	C	OC	NA	SI
DESCRIPTION: BORON INJECTION TANK HIGH HEAD SI INLET ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	18M	TP-06		
								DIAG	III			
								PIT	III			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1867B	11715-CBM-096A SH-003 / D4	Standard	GA	MO	3	2	B	Active	C	OC	NA	SI
DESCRIPTION: BORON INJECTION TANK HIGH HEAD SI INLET ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1867C	11715-CBM-096A SH-003 / E7	Standard	GA	MO	3	1	B	Active	C	OC	NA	SI
DESCRIPTION: BORON INJECTION TANK OUTLET TO RCS COLD LEG, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1867D	11715-CBM-096A SH-003 / D7	Standard	GA	MO	3	1	B	Active	C	OC	NA	SI
DESCRIPTION: BORON INJECTION TANK OUTLET TO RCS COLD LEG, OUTSIDE CONTAINMENT ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1869A	11715-CBM-096A SH-003 / C8	Standard	GA	MOL	3	1	B	Active	C	OC	NA	SI
DESCRIPTION: ALTERNATE HIGH HEAD SI TO RCS HOT LEGS, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1869B	11715-CBM-096A SH-003 / B8	Standard	GA	MOL	3	1	B	Active	C	OC	NA	SI
DESCRIPTION: NORMAL HIGH HEAD SI TO RCS HOT LEGS, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1885A	11715-CBM-096A SH-002 / C3	Standard	GA	MOL	2	2	A	Active	O	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1885B	11715-CBM-096A SH-002 / B3	Standard	GA	MOL	2	2	A	Active	O	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1885C	11715-CBM-096A SH-002 / D3	Standard	GA	MOL	2	2	A	Active	O	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1885D	11715-CBM-096A SH-002 / B3	Standard	GA	MOL	2	2	A	Active	O	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1890A	11715-CBM-096A SH-002 / D7	Standard	GA	MOL	10	1	B	Active	C	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP HOT LEG DISCHARGE VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1890B	11715-CBM-096A SH-002 / D7	Standard	GA	MOL	10	1	B	Active	C	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP HOT LEG DISCHARGE VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1890C	11715-CBM-096A SH-002 / C8	Standard	GA	MOL	10	1	B	Active	O	OC	NA	SI
DESCRIPTION: LOW HEAD SI PUMPS COLD LEG DISCHARGE VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-MOV-1890D	11715-CBM-096A SH-002 / C7	Standard	GA	MOL	10	1	B	Active	O	OC	NA	SI

DESCRIPTION: LOW HEAD SI PUMPS COLD LEG DISCHARGE VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-RV-1845A	11715-CBM-096A SH-002 / D6	Standard	RV	SA	0.75	2	C	Active	C	O	NA	SI

DESCRIPTION: "1A" LOW HEAD SI PUMP DISCHARGE RELIEF VALVE

TEST	FREQUENCY	Notes
SP	120M	V-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-RV-1845B	11715-CBM-096A SH-002 / B7	Standard	RV	SA	0.75	2	C	Active	C	O	NA	SI

DESCRIPTION: LOW HEAD SI HEADER TO COLD LEG RELIEF VALVE

TEST	FREQUENCY	Notes
SP	120M	V-01

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-RV-1845C	11715-CBM-096A SH-002 / C6	Standard	RV	SA	0.75	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP DISCHARGE RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-RV-1857	11715-CBM-096A SH-003 / D7	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SI
DESCRIPTION: BORON INJECTION TANK RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-RV-1858A	11715-CBM-096B SH-001 / D7	Standard	RV	SA	1	2	C	Active	C	O	NA	SI
DESCRIPTION: "1A" SI ACCUMULATOR RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-RV-1858B	11715-CBM-096B SH-002 / E5	Standard	RV	SA	1	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" SI ACCUMULATOR RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	V-01		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-RV-1858C	11715-CBM-096B SH-003 / E5	Standard	RV	SA	1	2	C	Active	C	O	NA	SI
DESCRIPTION: "1C" SI ACCUMULATOR RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-TV-100	11715-CBM-096B SH-001 / F3	Standard	GA	AO	1	2	A	Active	O	C	C	SI
DESCRIPTION: NITROGEN SUPPLY TO SI ACCUMULATORS, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			
								FSC	3M			
								STC	3M			
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-TV-101	11715-CBM-096B SH-001 / E4	Standard	GA	AO	1	2	A	Active	C	C	C	SI
DESCRIPTION: SI ACCUMULATORS N2 VENT TO WASTE GAS, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			
								FSC	3M			
								STC	3M			
								LTJ	J			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-TV-1842	11715-CBM-096B SH-001 / D4	Standard	GA	AO	0.75	2	A	Active	C	C	C	SI
DESCRIPTION: SI ACCUMULATORS TEST LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-TV-1859	11715-CBM-096A SH-002 / F7	Standard	GL	AO	0.75	2	A	Active	C	C	C	SI
DESCRIPTION: SI ACCUMULATORS TEST LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-TV-1884A	11715-CBM-096A SH-003 / E4	Standard	GA	AO	1	2	B	Active	O	C	C	SI
DESCRIPTION: BORON INJECTION TANK RECIRC RETURN ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-TV-1884B	11715-CBM-096A SH-003 / E4	Standard	GA	AO	1	2	B	Active	O	C	C	SI
DESCRIPTION: BORON INJECTION TANK RECIRC RETURN ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SI-TV-1884C	11715-CBM-096A SH-003 / D4	Standard	GA	AO	1	3	B	Active	O	C	C	SI
DESCRIPTION: BORON INJECTION TANK RECIRC SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-100A	11715-CBM-089D SH-001 / F6	Standard	GL	AO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER LIQUID SPACE SAMPLE LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-100B	11715-CBM-089D SH-001 / F5	Standard	GL	AO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER LIQUID SPACE SAMPLE LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-101A	11715-CBM-089D SH-001 / E6	Standard	GL	AO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER VAPOR SPACE SAMPLE LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-101B	11715-CBM-089D SH-001 / E5	Standard	GL	AO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER VAPOR SPACE SAMPLE LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-102A	11715-CBM-089D SH-001 / D6	Standard	GL	SO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: REACTOR COOLANT COLD LEGS SAMPLE HEADER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-102B	11715-CBM-089D SH-001 / D5	Standard	GL	SO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: REACTOR COOLANT COLD LEGS SAMPLE HEADER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-103A	11715-CBM-089D SH-001 / F6	Standard	GL	SO	0.375	2	A	Passive	C	C	NA	SS
DESCRIPTION: RHR SAMPLE HEADER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-103B	11715-CBM-089D SH-001 / F5	Standard	GL	SO	0.375	2	A	Passive	C	C	NA	SS
DESCRIPTION: RHR SAMPLE HEADER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-104A	11715-CBM-089D SH-001 / C6	Standard	GL	AO	0.375	2	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER RELIEF TANK GAS SPACE SAMPLE LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-104B	11715-CBM-089D SH-001 / C5	Standard	GL	AO	0.375	2	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER RELIEF TANK GAS SPACE SAMPLE LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-106A	11715-CBM-089D SH-001 / E6	Standard	GL	SO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: REACTOR COOLANT HOT LEGS SAMPLE HEADER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-106B	11715-CBM-089D SH-001 / E5	Standard	GL	SO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: REACTOR COOLANT HOT LEGS SAMPLE HEADER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-112A	11715-CBM-089B SH-003 / D3	Standard	GL	AO	0.375	2	A	Active	C	C	C	SS
DESCRIPTION: STEAM GENERATORS SAMPLE HEADER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SS-TV-112B	11715-CBM-089B SH-003 / C3	Standard	GL	AO	0.375	2	A	Active	C	C	C	SS
DESCRIPTION: STEAM GENERATORS SAMPLE HEADER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SV-TV-102-1	11715-CBM-072A SH-002 / C3	Standard	GL	AO	6	2	B	Active	C	C	C	SV
DESCRIPTION: CONDENSER AIR REMOVAL DISCHARGE TO CONTAINMENT, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SV-TV-103	11715-CBM-072A SH-002 / D3	Standard	GL	AO	6	2	A	Active	C	C	C	SV
DESCRIPTION: CONDENSER AIR REMOVAL DISCHARGE TO CONTAINMENT, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--10	11715-CBM-078A SH-003 / D6	Standard	CK	SA	20	3	C	Active	OC	OC	NA	SW
DESCRIPTION: UNIT 1 "1B" SERVICE WATER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--1067	11715-CBM-078A SH-003 / E7	Standard	BA	MA	1.5	3	B	Active	O	C	NA	SW
DESCRIPTION: CHEM FEED TO SERVICE WATER SUPPLY HDR NO 1 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--1070	11715-CBM-078A SH-003 / E7	Standard	BA	MA	1.5	3	B	Active	O	C	NA	SW
DESCRIPTION: CHEM FEED TO SERVICE WATER SUPPLY HDR NO 2 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--1139	11715-CBM-078A SH-003 / E7	Standard	GA	MA	1.5	3	B	Active	O	C	NA	SW
DESCRIPTION: SERVICE WATER CHEM ADDITION SYSTEM MANUAL ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--114	11715-CBM-078B SH-001 / F8	Standard	CK	SA	24	3	C	Active	C	OC	NA	SW
DESCRIPTION: "A" SERVICE WATER HEADER SUPPLY CHECK VALVE TO RECIRC SPRAY HX												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-11			
							CVO	RR	RRV-11			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--116	11715-CBM-078B SH-001 / F8	Standard	CK	SA	24	3	C	Active	C	OC	NA	SW
DESCRIPTION: "B" SERVICE WATER HEADER SUPPLY CHECK VALVE TO RECIRC SPRAY HX												

TEST	FREQUENCY	Notes
CVC	RR	RRV-11
CVO	RR	RRV-11

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--120	11715-CBM-078B SH-001 / E3	Standard	CK	SA	16	2	C	Active	C	O	NA	SW
DESCRIPTION: "1A" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-11
CVO	RR	RRV-11

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--130	11715-CBM-078B SH-001 / E4	Standard	CK	SA	16	2	C	Active	C	O	NA	SW
DESCRIPTION: "1B" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-11
CVO	RR	RRV-11

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--1366	11715-CBM-078C SH-002 / F6	Standard	CK	SA	2	3	C	Active	C	C	NA	SW
DESCRIPTION: INSTRUMENT AIR HEAT EXCHANGERS SW SUPPLY HEADER NO 1 CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--1367	11715-CBM-078C SH-002 / F7	Standard	CK	SA	2	3	C	Active	O	C	NA	SW
DESCRIPTION: INSTRUMENT AIR HEAT EXCHANGERS SW SUPPLY HEADER NO 2 CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--140	11715-CBM-078B SH-001 / E6	Standard	CK	SA	16	2	C	Active	C	O	NA	SW
DESCRIPTION: "1C" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-11
CVO	RR	RRV-11

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--150	11715-CBM-078B SH-001 / E7	Standard	CK	SA	16	2	C	Active	C	O	NA	SW
DESCRIPTION: "1D" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	RR	RRV-11
CVO	RR	RRV-11

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--3	11715-CBM-078A SH-003 / D7	Standard	CK	SA	20	3	C	Active	OC	OC	NA	SW
DESCRIPTION: UNIT 1 "1A" SERVICE WATER PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--641	11715-CBM-078G SH-001 / E6	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1C" CHP GEAR BOX COOLER SW SUPPLY HDR NO 2 INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--644	11715-CBM-078G SH-001 / E7	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1C" CHP GEAR BOX COOLER SW SUPPLY HDR NO 1 INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--658	11715-CBM-078G SH-001 / E5	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1B" CHP GEAR BOX COOLER SW SUPPLY HDR NO 2 INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--661	11715-CBM-078G SH-001 / E5	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1B" CHP GEAR BOX COOLER SW SUPPLY HDR NO 1 INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--686	11715-CBM-078G SH-001 / E4	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1A" CHP GEAR BOX COOLER SW SUPPLY HDR NO 2 INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW--689	11715-CBM-078G SH-001 / E4	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1A" CHP GEAR BOX COOLER SW SUPPLY HDR NO 1 INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-101A	11715-CBM-078A SH-004 / B3	Standard	BF	MO	24	3	B	Active	C	O	NA	SW
DESCRIPTION: "A" SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS												

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-101B	11715-CBM-078A SH-004 / B3	Standard	BF	MO	24	3	B	Active	C	O	NA	SW
DESCRIPTION: "A" SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-101C	11715-CBM-078A SH-004 / B3	Standard	BF	MO	24	3	B	Active	C	O	NA	SW
DESCRIPTION: "B" SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-101D	11715-CBM-078A SH-004 / C3	Standard	BF	MO	24	3	B	Active	C	O	NA	SW
DESCRIPTION: "B" SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-102A	11715-CBM-078B SH-001 / F8	Standard	BF	MOL	24	3	B	Active	O	C	NA	SW
DESCRIPTION: SERVICE WATER SUPPLY CROSS CONNECT TO RECIRC SPRAY HEAT EXCHANGERS												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-102B	11715-CBM-078B SH-001 / F8	Standard	BF	MOL	24	3	B	Active	O	C	NA	SW
DESCRIPTION: SERVICE WATER SUPPLY CROSS CONNECT TO RECIRC SPRAY HEAT EXCHANGERS												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-103A	11715-CBM-078B SH-001 / E3	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "A" RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-103B	11715-CBM-078B SH-001 / E4	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "B" RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-103C	11715-CBM-078B SH-001 / E6	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "C" RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-103D	11715-CBM-078B SH-001 / E7	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "D" RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-104A	11715-CBM-078B SH-001 / C3	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "A" RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-104B	11715-CBM-078B SH-001 / C5	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "B" RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-104C	11715-CBM-078B SH-001 / C6	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "C" RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-104D	11715-CBM-078B SH-001 / C7	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "D" RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-105A	11715-CBM-078A SH-004 / C3	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "B" SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-105B	11715-CBM-078A SH-004 / C3	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "B" SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-105C	11715-CBM-078A SH-004 / C3	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "A" SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-105D	11715-CBM-078A SH-004 / C3	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "A" SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-106A	11715-CBM-078B SH-001 / B8	Standard	BF	MOL	24	3	B	Active	O	C	NA	SW

DESCRIPTION: SERVICE WATER RETURN CROSS CONNECT FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-106B	11715-CBM-078B SH-001 / A8	Standard	BF	MOL	24	3	B	Active	O	C	NA	SW

DESCRIPTION: SERVICE WATER RETURN CROSS CONNECT FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-108A	11715-CBM-078C SH-001 / B3	Standard	BF	MO	24	3	B	Active	O	OC	NA	SW
DESCRIPTION: "A" SERVICE WATER SUPPLY HEADER ISOLATION TO COMPONENT COOLING HEAT EXCHANGERS												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-108B	11715-CBM-078C SH-001 / B3	Standard	BF	MO	24	3	B	Active	O	OC	NA	SW
DESCRIPTION: "A" SERVICE WATER SUPPLY HEADER ISOLATION TO COMPONENT COOLING HEAT EXCHANGERS												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-110A	11715-CBM-078A SH-004 / D4	Standard	BF	MOL	8	3	B	Active	C	C	NA	SW
DESCRIPTION: RECIRC AIR COOLERS SUPPLY HEADER NO 2 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-110B	11715-CBM-078A SH-004 / D4	Standard	BF	MOL	8	3	B	Active	C	C	NA	SW
DESCRIPTION: RECIRC AIR COOLERS SUPPLY HEADER NO 1 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-113A	11715-CBM-078A SH-004 / B7	Standard	BF	MO	10	3	B	Passive	LC	C	NA	SW
DESCRIPTION: FUEL PIT COOLERS SW RETURN HEADER NO 3 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-113B	11715-CBM-078A SH-004 / B5	Standard	BF	MO	10	3	B	Passive	LC	C	NA	SW
DESCRIPTION: FUEL PIT COOLERS SW SUPPLY HEADER NO 1 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-114A	11715-CBM-078A SH-004 / D4	Standard	BF	MOL	8	3	B	Active	C	C	NA	SW
DESCRIPTION: RECIRC AIR COOLERS SW RETURN HEADER NO 3 ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-114B	11715-CBM-078A SH-004 / D4	Standard	BF	MOL	8	3	B	Active	C	C	NA	SW
DESCRIPTION: RECIRC AIR COOLERS SW RETURN HEADER NO 4 ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-115A	11715-CBM-078A SH-001 / E6	Standard	BF	MO	24	3	B	Passive	C	C	NA	SW
DESCRIPTION: UNIT 1 AUX SERVICE WATER PUMP TO SUPPLY HEADER NO 1 ISOLATION VALVE												

TEST	FREQUENCY	Notes
PIT	24M	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-115B	11715-CBM-078A SH-001 / E7	Standard	BF	MO	24	3	B	Passive	C	C	NA	SW
DESCRIPTION: UNIT 2 AUX SERVICE WATER PUMP TO SUPPLY HEADER NO 2 ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-117	11715-CBM-078A SH-001 / C5	Standard	BF	MO	24	3	B	Passive	C	C	NA	SW
DESCRIPTION: UNIT 1 AUXILIARY SERVICE WATER PUMP DISCHARGE ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-118	11715-CBM-078A SH-001 / D4	Standard	BF	MO	24	3	B	Passive	C	C	NA	SW
DESCRIPTION: AUXILIARY SERVICE WATER SUPPLY HEADER CROSS CONNECT VALVE												
								TEST	FREQUENCY	Notes		
								PIT	24M			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-119	11715-CBM-078A SH-001 / C4	Standard	BF	MOL	8	3	B	Active	O	C	NA	SW

DESCRIPTION: SCREEN WASH PUMPS MAKE-UP TO SERVICE WATER SUPPLY HDR NO 1 ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-121A	11715-CBM-078H SH-001 / C5	Standard	BF	MOL	18	3	B	Active	OC	O	NA	SW

DESCRIPTION: SERVICE WATER RETURN HEADER NO 4 TO SPRAY ARRAY 1A1 ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-121B	11715-CBM-078H SH-001 / C7	Standard	BF	MOL	18	3	B	Active	OC	O	NA	SW

DESCRIPTION: SERVICE WATER RETURN HEADER NO 3 TO SPRAY ARRAY 1B1 ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-122A	11715-CBM-078H SH-001 / C5	Standard	BF	MOL	18	3	B	Active	OC	O	NA	SW
DESCRIPTION: SERVICE WATER RETURN HEADER NO 4 TO SPRAY ARRAY 1A2 ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-122B	11715-CBM-078H SH-001 / C6	Standard	BF	MOL	18	3	B	Active	OC	O	NA	SW
DESCRIPTION: SERVICE WATER RETURN HEADER NO 3 TO SPRAY ARRAY 1B2 ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-123A	11715-CBM-078H SH-001 / E4	Standard	BF	MOL	24	3	B	Active	OC	C	NA	SW
DESCRIPTION: SERVICE WATER RETURN HEADER NO 4 BYPASS TO RESERVOIR ISOLATION VALVE												

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-MOV-123B	11715-CBM-078H SH-001 / E8	Standard	BF	MOL	24	3	B	Active	OC	C	NA	SW

DESCRIPTION: SERVICE WATER RETURN HEADER NO 3 BYPASS TO RESERVOIR ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-RV-100A	11715-CBM-078B SH-001 / E3	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SW

DESCRIPTION: "A" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER RELIEF VALVE

TEST	FREQUENCY	Notes
TSP	120M	V-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-RV-100B	11715-CBM-078B SH-001 / E4	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SW

DESCRIPTION: "B" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER RELIEF VALVE

TEST	FREQUENCY	Notes
TSP	120M	V-01

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-RV-100C	11715-CBM-078B SH-001 / E6	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SW
DESCRIPTION: "C" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-RV-100D	11715-CBM-078B SH-001 / E7	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SW
DESCRIPTION: "D" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-RV-101A	11715-CBM-078C SH-001 / F5	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	SW
DESCRIPTION: UNIT 1 "A" COMPONENT COOLING HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-RV-101B	11715-CBM-078C SH-001 / F6	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	SW
DESCRIPTION: UNIT 1 "B" COMPONENT COOLING HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-TCV-102A	11715-FM-078G SH-001 / C4	Standard	GL	AO	2	3	B	Active	TH	O	O	SW
DESCRIPTION: "1A" CHP LUBE OIL COOLER SERVICE WATER OUTLET TEMP CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-TCV-102B	11715-FM-078G SH-001 / C6	Standard	GL	AO	2	3	B	Active	TH	O	O	SW
DESCRIPTION: "1B" CHP LUBE OIL COOLER SERVICE WATER OUTLET TEMP CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SW-TCV-102C	11715-FM-078G SH-001 / C8	Standard	GL	AO	2	3	B	Active	TH	O	O	SW
DESCRIPTION: "1C" CHP LUBE OIL COOLER SERVICE WATER OUTLET TEMP CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-VG-TV-100A	11715-CBM-090C SH-001 / F3	Standard	GL	AO	1.5	2	A	Active	C	C	C	VG
DESCRIPTION: PRIMARY DRAINS TRANSFER TANK VENT LINE TO GAS STRIPPERS, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-VG-TV-100B	11715-CBM-090C SH-001 / D3	Standard	GL	AO	1.5	2	A	Active	C	C	C	VG
DESCRIPTION: PRIMARY DRAINS TRANSFER TANK VENT LINE TO GAS STRIPPERS, INSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-VP--12	11715-CBM-072A SH-002 / D3	Standard	CK	SA	6	2	AC	Active	C	C	NA	VP
DESCRIPTION: CONDENSER AIR REMOVAL DISCHARGE TO CONTAINMENT INSIDE CONT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-12			
							CVO	RR	RRV-12			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--38	11715-CBM-102A SH-002 / F7	Standard	CK	SA	0.75	2	C	Active	C	C	NA	WT
DESCRIPTION: "A" STEAM GENERATOR CHEMICAL FEED SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M	TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--465	13075-CBM-102C SH-001 / E6	Standard	GA	MA	3	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "A" STEAM GENERATOR, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--468	13075-CBM-102C SH-001 / E5	Standard	GA	MA	3	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "A" STEAM GENERATOR, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--488	13075-CBM-102C SH-001 / D6	Standard	GA	MA	3	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "B" STEAM GENERATOR, INSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--491	13075-CBM-102C SH-001 / D5	Standard	GA	MA	3	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "B" STEAM GENERATOR, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--50	11715-CBM-102A SH-002 / E7	Standard	CK	SA	0.75	2	C	Active	C	C	NA	WT
DESCRIPTION: "B" STEAM GENERATOR CHEMICAL FEED SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M	TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--511	13075-CBM-102C SH-001 / B6	Standard	GA	MA	3	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "C" STEAM GENERATOR, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--514	13075-CBM-102C SH-001 / B5	Standard	GA	MA	3	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "C" STEAM GENERATOR, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-WT--66	11715-CBM-102A SH-002 / D7	Standard	CK	SA	0.75	2	C	Active	C	C	NA	WT
DESCRIPTION: "C" STEAM GENERATOR CHEMICAL FEED SUPPLY CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	TP-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-AS-FCV-100A	11715-CBM-072A SH-002 / E5	Augmented	GA	AO	1.5	NC	B	Active	O	C	C	AS
DESCRIPTION: Auxiliary Steam Supply To Condenser Air Ejectors												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-AS-FCV-100B	11715-CBM-072A SH-002 / E5	Augmented	GA	AO	1.5	NC	B	Active	O	C	C	AS
DESCRIPTION: Auxiliary Steam Supply To Condenser Air Ejectors												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-104A	11715-CBM-079D SH-004 / E5	Augmented	TRV	SA	0.75	NC	C	Active	C	O	NA	CC
DESCRIPTION: "2A" RECIRC AIR COOLER CW OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-104B	11715-CBM-079D SH-004 / D5	Augmented	TRV	SA	0.75	NC	C	Active	C	O	NA	CC
DESCRIPTION: "2B" RECIRC AIR COOLER CW OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CC-RV-104C	11715-CBM-079D SH-004 / C5	Augmented	TRV	SA	0.75	NC	C	Active	C	O	NA	CC
DESCRIPTION: "2C" RECIRC AIR COOLER CW OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH-FCV-1114A	11715-CBM-095B SH-001 / D4	Augmented	GL	AO	2	NC	B	Active	C	C	C	CH
DESCRIPTION: Primary Grade Water to Blender System Flow Control Valve												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	TP-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EB--15	11715-FM-107A SH-001 / E5	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EB
DESCRIPTION: 1HA AIR RECIEVER TO 1H EDG STARTING AIR INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-24
CVO	18M	RRV-24

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EB--34	11715-FM-107A SH-003 / E5	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EB
DESCRIPTION: 1JA AIR RECIEVER TO 1J EDG STARING AIR INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-24
CVO	18M	RRV-24

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EB--41	11715-FM-107A SH-001 / D5	Augmented	CK	SA	0.75	NC	AC	Active	C	C	NA	EB
DESCRIPTION: 1HA AIR DRYER OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	3M				
							CVO	3M	TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EB--53	11715-FM-107A SH-003 / D5	Augmented	CK	SA	0.75	NC	AC	Active	C	C	NA	EB
DESCRIPTION: 1JA AIR DRYER OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	3M				
							CVO	3M	TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EB--65	11715-FM-107A SH-002 / E6	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EB
DESCRIPTION: 1HB AIR RECIEVER TO 1H EDG STARTING AIR INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	18M	RRV-24			
							CVO	18M	RRV-24			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EB--72	11715-FM-107A SH-002 / D6	Augmented	CK	SA	0.75	NC	AC	Active	C	C	NA	EB
DESCRIPTION: 1HB AIR DRYER OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	3M				
							CVO	3M	TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EB--84	11715-FM-107A SH-004 / E6	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EB
DESCRIPTION: 1JB AIR RECIEVER TO 1J EDG STARTING AIR INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	18M	RRV-24			
							CVO	18M	RRV-24			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EB--91	11715-FM-107A SH-004 / D6	Augmented	CK	SA	0.75	NC	AC	Active	C	C	NA	EB
DESCRIPTION: 1JB AIR DRYER OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	3M				
							CVO	3M	TP-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG--254	11715-FB-035A SH-002 / B7	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 1HA EDG FUEL OIL TRANSFER PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-28
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG--266	11715-FB-035A SH-002 / D7	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 1JA EDG FUEL OIL TRANSFER PUMP TRANSFER DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-28
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG--278	11715-FB-035A SH-002 / B6	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 1HB EDG FUEL OIL TRANSFER PUMP TRANSFER DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-28
CVO	3M	

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG--295	11715-FB-035A SH-002 / D6	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 1JB EDG FUEL OIL TRANSFER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	18M	RRV-28			
							CVO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-RV-103A	11715-FB-035A SH-002 / B7	Augmented	RV	SA	1	NC	C	Active	C	OC	NA	EG
DESCRIPTION: 1HA EDG FUEL OIL TRANSFER PUMP DISCHARGE RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-03 : VNC-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-RV-103B	11715-FB-035A SH-002 / B6	Augmented	RV	SA	1	NC	C	Active	C	OC	NA	EG
DESCRIPTION: 1HB EDG FUEL OIL TRANSFER PUMP DISCHARGE RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-03 : VNC-04			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-RV-105A	11715-FB-035A SH-002 / E7	Augmented	RV	SA	1	NC	C	Active	C	OC	NA	EG
DESCRIPTION: 1JA EDG FUEL OIL TRANSFER PUMP DISCHARGE RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-03 : VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-RV-105B	11715-FB-035A SH-002 / E6	Augmented	RV	SA	1	NC	C	Active	C	OC	NA	EG
DESCRIPTION: 1JB EDG FUEL OIL TRANSFER PUMP DISCHARGE RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-03 : VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-RV-602HA	11715-FM-107A SH-001 / E3	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 1HA AIR RECEIVER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-RV-602HB	11715-FM-107A SH-002 / E4	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 1HB AIR RECEIVER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-RV-602JA	11715-FM-107A SH-003 / E3	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 1JA AIR RECEIVER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-RV-602JB	11715-FM-107A SH-004 / E4	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 1JB AIR RECEIVER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-SOV-600HA	11715-FM-107A SH-001 / E6	Augmented	GA	SO	1.5	NC	B	Active	C	O	NA	EG
DESCRIPTION: 1H EMERGENCY DIESEL GEN STARTING AIR SOV												
								TEST	FREQUENCY	Notes		
								STO	3M	VNC-02		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-SOV-600HB	11715-FM-107A SH-002 / E6	Augmented	GA	SO	1.5	NC	B	Active	C	O	NA	EG
DESCRIPTION: 1H EMERGENCY DIESEL GEN STARTING AIR SOV												
								TEST	FREQUENCY	Notes		
								STO	3M	VNC-02		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-SOV-600JA	11715-FM-107A SH-003 / E5	Augmented	GA	SO	1.5	NC	B	Active	C	O	NA	EG
DESCRIPTION: 1J EMERGENCY DIESEL GEN STARTING AIR SOV												
								TEST	FREQUENCY	Notes		
								STO	3M	VNC-02		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-SOV-600JB	11715-FM-107A SH-004 / E6	Augmented	GA	SO	1.5	NC	B	Active	C	O	NA	EG
DESCRIPTION: 1J EMERGENCY DIESEL GEN STARTING AIR SOV												
								TEST	FREQUENCY	Notes		
								STO	3M	VNC-02		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-SOV-601HA	11715-FM-107A SH-001 / E6	Augmented	GA	SO	0.25	NC	B	Active	O	O	NA	EG
DESCRIPTION: 1H EMERGENCY DIESEL GEN STARTING AIR VENT SOV												
								TEST	FREQUENCY	Notes		
								STO	3M	VNC-02		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-EG-SOV-607JA	11715-FM-107A SH-003 / E6	Augmented	GA	SO	0.25	NC	B	Active	O	O	NA	EG
DESCRIPTION: 1J EMERGENCY DIESEL GEN STARTING AIR VENT SOV												
								TEST	FREQUENCY	Notes		
								STO	3M	VNC-02		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-FCV-1478	11715-CBM-074A SH-001 / E4	Augmented	GA	AO	16	NC	B	Active	TH	C	C	FW
DESCRIPTION: "A" MAIN FEEDWATER REG VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-03
STC	CS	CSV-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-FCV-1479	11715-CBM-074A SH-001 / F4	Augmented	GL	AO	6	NC	B	Active	C	C	C	FW
DESCRIPTION: "A" MAIN FEEDWATER REG BYPASS VALVE												

TEST	FREQUENCY	Notes
FSC	CS	CSV-03
STC	CS	CSV-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-FCV-1488	11715-CBM-074A SH-001 / D4	Augmented	GA	AO	16	NC	B	Active	TH	C	C	FW
DESCRIPTION: "B" MAIN FEEDWATER REG VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-03
STC	CS	CSV-03

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-FCV-1489	11715-CBM-074A SH-001 / D4	Augmented	GL	AO	6	NC	B	Active	C	C	C	FW
DESCRIPTION: "B" MAIN FEEDWATER REG BYPASS VALVE												

TEST	FREQUENCY	Notes
FSC	CS	CSV-03
STC	CS	CSV-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-FCV-1498	11715-CBM-074A SH-001 / B4	Augmented	GA	AO	16	NC	B	Active	O	C	C	FW
DESCRIPTION: "C" MAIN FEEDWATER REG VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-03
STC	CS	CSV-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-FCV-1499	11715-CBM-074A SH-001 / C4	Augmented	GL	AO	6	NC	B	Active	C	C	C	FW
DESCRIPTION: "C" MAIN FEEDWATER REG BYPASS VALVE												

TEST	FREQUENCY	Notes
FSC	CS	CSV-03
STC	CS	CSV-03

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-150A	11715-FM-074A SH-002 /	Augmented	GA	MOL		NC	B	Active	O	C	NA	FW
DESCRIPTION: Main Feedwater Pump Discharge Isolation Valves												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-150B	11715-FM-074A SH-002 /	Augmented	GA	MOL		NC	B	Active		C	NA	FW
DESCRIPTION: Main Feedwater Pump Discharge Isolation Valves												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-150C	11715-FM-074A SH-002 /	Augmented	GA	MOL		NC	B	Active		C	NA	FW
DESCRIPTION: Main Feedwater Pump Discharge Isolation Valves												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-154A	11715-CBM-074A SH-001 / E3	Augmented	GA	MOL	16	NC	B	Active	O	C	NA	FW
DESCRIPTION: "A" MAIN FEEDWATER SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-154B	11715-CBM-074A SH-001 / D3	Augmented	GA	MOL	16	NC	B	Active	O	C	NA	FW
DESCRIPTION: "B" MAIN FEEDWATER SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-FW-MOV-154C	11715-CBM-074A SH-001 / B3	Augmented	GA	MOL	16	NC	B	Active	O	C	NA	FW
DESCRIPTION: "C" MAIN FEEDWATER SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-GN--225	11715-FM-105A SH-001 / E4	Augmented	CK	SA	0.5	NC	AC	Active	C	C	NA	GN
DESCRIPTION: "1B" N2 RESERVE TANK N2 SUPPLY HEADER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-21			
							CVO	RR	RRV-21			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-GN--229	11715-FM-105A SH-001 / E6	Augmented	CK	SA	0.5	NC	AC	Active	C	C	NA	GN
DESCRIPTION: "1A" N2 RESERVE TANK N2 SUPPLY HEADER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-21			
							CVO	RR	RRV-21			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-GN-RV-108A-1	11715-FM-105A SH-001 / E7	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1A" NITROGEN RESERVE TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-GN-RV-108A-2	11715-FM-105A SH-001 / F6	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1A" NITROGEN RESERVE TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-04			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-GN-RV-108A-3	11715-FM-105A SH-001 / E6	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1A" NITROGEN RESERVE TANK RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-GN-RV-108B-1	11715-FM-105A SH-001 / E3	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1B" NITROGEN RESERVE TANK RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-GN-RV-108B-2	11715-FM-105A SH-001 / F5	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1B" NITROGEN RESERVE TANK RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-GN-RV-108B-3	11715-FM-105A SH-001 / E5	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1B" NITROGEN RESERVE TANK RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--2152	11715-FM-082A SH-002 / F7	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: 1-RC-PCV-1455C INSTRUMENT AIR CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-21			
							CVO	RR	RRV-21			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--2153	11715-FM-082A SH-002 / F8	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: 1-RC-PCV-1455C INSTRUMENT AIR CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-21			
							CVO	RR	RRV-21			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--2154	11715-FM-082A SH-002 / F7	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: 1-RC-PCV-1456 INSTRUMENT AIR CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-21			
							CVO	RR	RRV-21			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--2155	11715-FM-082A SH-002 / F8	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: 1-RC-PCV-1456 INSTRUMENT AIR CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-21			
							CVO	RR	RRV-21			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--2429	11715-FM-082C SH-002 / C4	Augmented	CK	SA	0.25	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: UNIT 1 SAFEGUARDS EXHAUST VENT RELIEF DAMPER AIR RECEIVER ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	18M	RRV-22			
							CVO	18M	RRV-22			
							LT	18M	RRV-22			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--944	11715-FM-082M SH-001 / F3	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4A" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--948	11715-FM-082M SH-001 / F4	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4B" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--952	11715-FM-082M SH-001 / F5	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4C" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--959	11715-FM-082M SH-001 / C4	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4D" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--963	11715-FM-082M SH-001 / C5	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4E" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--967	11715-FM-082M SH-001 / C6	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4H" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--971	11715-FM-082M SH-001 / C7	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4F" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA--975	11715-FM-082M SH-001 / C7	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4G" INLET ISOLATION CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	CS	CSV-07, VNC-01
CVO	CS	CSV-07, VNC-01
LT	CS	VNC-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-RV-110	11715-FM-082A SH-002 / F8	Augmented	RV	SA	0.25	NC	C	Active	C	O	NA	IA
DESCRIPTION: 1-RC-PCV-1455C INSTRUMENT AIR SUPPLY RELIEF VALVE												

TEST	FREQUENCY	Notes
SP	120M	VNC-04

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-RV-111	11715-FM-082A SH-002 / F8	Augmented	RV	SA	0.25	NC	C	Active	C	O	NA	IA
DESCRIPTION: 1-RC-PCV-1456 INSTRUMENT AIR SUPPLY RELIEF VALVE												

TEST	FREQUENCY	Notes
SP	120M	VNC-04

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-SV-105A	11715-FM-082M SH-001 / E3	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4A" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-SV-105B	11715-FM-082M SH-001 / E4	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4B" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-SV-105C	11715-FM-082M SH-001 / E4	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4C" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-SV-105D	11715-FM-082M SH-001 / A4	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4D" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-SV-105E	11715-FM-082M SH-001 / A4	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4E" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-SV-105F	11715-FM-082M SH-001 / A7	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4F" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-SV-105G	11715-FM-082M SH-001 / A7	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4G" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-IA-SV-105H	11715-FM-082M SH-001 / A5	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4H" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

NORTH ANNA UNT 1
FIFTH INSERVICE TEST INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-MS-TV-110	11715-CBM-070B SH-003 / A4	Augmented	GL	AO	1.5	NC	B	Active	C	C	C	MS
DESCRIPTION: MAIN STEAM HIGH PRESSURE DRAIN HEADER ISOLATION TO S/G BLOWDOWN SYSTEM												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH-FCV-1605	11715-CBM-094A SH-002 / C7	Augmented	BF	AO	12	2	B	Active	O	C	C	RH
DESCRIPTION: RHR Heat Exchanger Bypass Flow Control Valves												

TEST	FREQUENCY	Notes
FSC	RR	RRV-27 : TP-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RH-HCV-1758	11715-CBM-094A SH-002 / C5	Augmented	BF	AO	12	2	B	Active	C	O	O	RH
DESCRIPTION: RHR Heat Exchanger Discharge Flow Control Valves												

TEST	FREQUENCY	Notes
FSO	RR	RRV-27 : TP-03

NORTH ANNA UNT 1

FIFTH INSERVICE TEST INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-SV-TV-102-2	11715-CBM-072A SH-002 / B3	Augmented	GA	AO	6	NC	B	Active	O	C	C	SV
DESCRIPTION: Condenser Air Removal Discharge To Vent Stack Isolation Valves												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

4.5 VALVE TEST PROGRAM RELIEF REQUESTS

Relief requests identify those ISTC Code requirements considered to be impractical or for which an alternative testing method is proposed.

Relief Request Number	Description
V-01	Eliminate 5 Minute Hold Time When Testing Certain Relief Valves

RELIEF REQUEST V-01
TO BE INSERTED HERE UPON APPROVAL

4.6 VALVE TEST PROGRAM COLD SHUTDOWN JUSTIFICATIONS

ISTC-3521 and ISTC-3522 allow for the full stroke exercising of valves during Cold Shutdown (but not more frequently than every three months) if it is not practical to exercise the valves during normal operation. Therefore, no request for relief from testing every three months is necessary.

However, ISTC-9200 requires that these valves be specifically identified by the owner. The cold shutdown justifications identify and provide the technical basis for valves exercised during cold shutdown but not during normal operation.

Cold Shutdown Justification Index	
CSV-01	Reactor Coolant Pump CC Supply and Return Containment Isolation Valves
CSV-02	RCS Letdown Line Isolation Valves
CSV-03	Main Feedwater Regulating, Bypass and Isolation Valves, MFP Discharge Isolation Valves
CSV-04	Main Steam Header Non-Return Valves
CSV-05	Main Steam High Pressure Drain to Condenser Isolation Valve
CSV-06	Main Steam Header Trip Valves
CSV-07	Air Accumulator Isolation Check Valves
CSV-08	Main Steam Trip Bypass Valves
CSV-09	Pressurizer Power Operated Pressure Control Valves
CSV-10	RHR Pump Discharge Check Valves
CSV-11	Reactor Vessel Vent Line Isolation Valves
CSV-12	Standby Auxiliary Feedwater Supply Valves
CSV-13	Auxiliary Feedwater Pressure Control Valves
CSV-14	Main Feedwater Supply Isolation Check Valves
CSV-15	Auxiliary Feedwater Header Check Valves
CSV-16	Auxiliary Feedwater Header Check Valves
CSV-17	Auxiliary Feedwater Pump Discharge Check Valves
CSV-18	Instrument Air Supply to Containment Isolation Valves
CSV-19	Boric Acid Transfer Pump Discharge Check Valves

COLD SHUTDOWN JUSTIFICATION CSV-01

System: Component Cooling

Valve(s): 1-CC-TV-101A	1-CC-TV-102E
1-CC-TV-101B	1-CC-TV-102F
1-CC-TV-102A	1-CC-TV-104A
1-CC-TV-102B	1-CC-TV-104B
1-CC-TV-102C	1-CC-TV-104C
1-CC-TV-102D	

Category: A

Class: 2

Function: Reactor Coolant Pump CC Supply and Return Containment Isolation Valves

Cold Shutdown Justification

Testing these trip valves to the closed position interrupts component cooling (CC) flow to the Reactor Coolant Pumps (RCPs) thermal barriers, lube oil, stator and/or shroud coolers. The motor for each RCP is vulnerable to loss of CC flow. If a CC trip valve fails closed during testing and CC flow is lost, damage to the operating RCP will result in approximately 10 minutes. In this case, the RCP will be tripped before damage occurs. The increased level of safety gained from exercising these valves while the RCPs are operating during normal operation or cold shutdowns does not justify the operational consequences should they fail in the closed position. The valve controllers do not allow for a part-stroke exercise test.

Testing Frequency

These valves will be full stroke exercised tested every cold shutdown when the RCPs are secured but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-02

System: Chemical & Volume Control System

Valve(s): 1-CH-TV-1204A 1-CH-LCV-1460A
 1-CH-TV-1204B 1-CH-LCV-1460B

Category: B for 1-CH-LCV-1460A and B
 A for 1-CH-TV-1204A and B

Class: 1 for 1-CH-LCV-1460A and B
 2 for 1-CH-TV-1204A and B

Function: RCS Letdown Line Isolation Valves

Cold Shutdown Justification

Exercising these valves during power operation interrupts letdown flow from the reactor coolant system (RCS) to the volume control tank. If the valves should fail closed, reactor coolant inventory control would be lost.

The pressurizer level control program controls reactor coolant inventory by regulating the operation of the charging flow control valve so that the charging input flow to the RCS and reactor coolant pump seal injection flow into the RCS matches letdown flow.

Also, exercising these valves during normal operation will interrupt letdown flow through the regenerative heat exchanger. This flow interruption would allow a slug of relatively cool charging water to thermal shock the nozzle connecting the 3" charging line to the 27" loop 2 cold leg injection line. The valve controllers do not allow for a part stroke exercise test.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-03

System: Feedwater

Valve(s): 1-FW-FCV-1478	1-FW-MOV-150A
1-FW-FCV-1479	1-FW-MOV-150B
1-FW-FCV-1488	1-FW-MOV-150C
1-FW-FCV-1489	1-FW-MOV-154A
1-FW-FCV-1498	1-FW-MOV-154B
1-FW-FCV-1499	1-FW-MOV-154C

Category: B

Class: NC

Function: Main Feedwater Regulating, Bypass and Isolation Valves, MFP Discharge Isolation Valves

Cold Shutdown Justification

These valves are in positions required to sustain power operation. Full stroke exercising the valves would result in a reactor trip. The main feedwater regulating valves, and bypass valves, move during normal operation (startup for bypass valves) as they perform their regulating function. NUREG-1482, Rev 2, Section 2.4.5 states that performing testing that has a high potential to cause a reactor trip during normal plant operations is justification for deferral to cold shutdown. These valves also must meet their TS required stroke time limits in SR 3.7.3.1.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-04

System: Main Steam
Valve(s): 1-MS-NRV-101A
 1-MS-NRV-101B
 1-MS-NRV-101C
Category: C
Class: 2
Function: Main Steam Header Non-Return Valves

Cold Shutdown Justification

Valve Description

The main steam non-return valves (NRVs) at North Anna Power Station are located in the main steam valve house and are a globe type stop check design. The valves measure approximately 16 feet from the bottom of the valve body to the top of the hand wheel and weigh almost 24,000 lbs. The disk is welded to a hollow piston and the whole assembly is free to move about 25 vertical inches within the valve body cylinder. The disk measures 25.5 inches across and the disk and piston assembly weighs approximately 1,200 lbs. When the main steam system is not inservice, a motor operator is used to run the valve stem down onto the disk to secure the main steam line.

The valves open to allow steam to the turbine. For accident conditions, the non-return valves in conjunction with the main steam trip valves prevent the blow down of more than one steam generator for any break location, even if one valve fails to close. For example, for a break upstream of the trip valve in one line, the closure of either the non-return valve in that line or the trip valves in the other lines prevents the blow down of the other steam generators.

Method of Testing

The piping downstream of each non-return valve leads to a common distribution manifold and cannot be isolated. Therefore, performing a back-seat test using flow is not practical. Also, valve disassembly and inspection are not practical alternatives due to the size of the valve and the weight of the disk.

However, an alternative exists to verify that the disk moved to the valve seat during reactor coolant system (RCS) cool down. When the RCS temperature is between 350 °F and 195 °F during the cool down process, the main steam trip valves are closed. Then the main steam non-return valves close in response to the loss of steam flow.

COLD SHUTDOWN JUSTIFICATION CSV-04 (Cont.)

After the main steam trip valve is closed, diagnostic test equipment can be used to determine the position of the disk of the NRV. After the main steam flow is stopped, the non-return valve stem is run down onto the disk after the disk returns to the seat. A change in the running force within the normal travel of the stem indicates a resistance to stem movement (i.e., a stuck disk). Verifying that the stem travels to the seated disk with nominal changes in the running force indicates that the disk is on the seat. The test requires that the cool down process be delayed between one to two hours to setup the instrumentation and to perform the test on each of three valves.

The diagnostic test equipment provides two methods for detecting changes in the running force. The test can be performed either at the valve by monitoring the yoke strain using a permanently mounted force sensor or at the motor control center (MCC) by monitoring motor current. The first method converts yoke strain directly to stem load. A signature is generated that will show any changes in the stem load which would indicate a stuck or binding valve disk. The second and more sensitive method monitors a single phase of the motor current. The motor current information is used to generate motor power and power factor signatures which are very sensitive to changes in stem load. Changes in motor load would again indicate a stuck or binding valve disk. In both methods, the valve switch probes are monitored to determine the status of the torque and limit switches, and the open and closed bypass switches in the motor operator control circuit over the course of stem travel. The second method is preferred.

Testing Frequency Discussion

Full stroke or part stroke exercising of these valves during power operation would result in a turbine and reactor trip. Plant cool down procedures require that the NRV stem be run down onto the disk to isolate the main steam system after main steam flow is stopped. The diagnostic testing must be performed when the NRVs are initially closed during the cool down to accurately assess the piston-disk assembly's as-found position. As indicated above, the diagnostic test will delay the cool down process from between one to two hours. Some cold shutdown outages are forced outages that result from exceeding a Technical Specification limit such as unidentified RCS leakage. The emphasis in a forced outage cool down is to reach cold shutdown as rapidly as possible and to mitigate the cause of the forced outage. Stopping this process to perform the diagnostic test would complicate the operator's task to secure the plant and may reduce plant safety. However, during planned cold shutdowns where there are no mitigating circumstances, there is adequate time to notify the test personnel, carry the equipment into the field and perform the test.

There is no evidence in the valve history that a valve has stuck in the partial open position. The piston-disk assembly is not attached to any other internal part, the 1,200 lb piston-disk assembly is maintained parallel within the valve body cylinder and the main steam system is very clean. Consequently, there is no mechanism to prevent the disk from dropping from the full open position

COLD SHUTDOWN JUSTIFICATION CSV-04 (Cont.)

to the valve seat.

Testing Frequency

The diagnostic test described above will be performed on each main steam non-return valve during the cool down process going into each planned cold shutdown. This test will not be performed more often than once every three months. The valves are verified open during normal plant operation.

COLD SHUTDOWN JUSTIFICATION CSV-05

System: Main Steam

Valve(s): 1-MS-TV-109

Category: B

Class: 3

Function: Main Steam High Pressure Drain to Condenser Isolation Valve

Cold Shutdown Justification

Full or part-stroke exercising this valve during power operation would cause undesirable pressure transients in the High Pressure Secondary Drains System. Also, the valve controller does not allow for a part-stroke exercise test. The increased level of safety gained from exercising this valve during power operation does not justify the operational consequences of these pressure variations.

Testing Frequency

This valve will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-06

System: Main Steam

Valve(s): 1-MS-TV-101A

1-MS-TV-101B

1-MS-TV-101C

Category: BC

Class: 2

Function: Main Steam Header Trip Valves

Cold Shutdown Justification

These valves are air operated check valves installed counter to the normal steam flow direction and in positions required to sustain power operation. Full or part-stroke exercising these valves during normal operation would result in a reactor trip and safety injection. Also, the valve controllers do not allow for a part-stroke exercise test.

The valves fail closed and must close in ≤ 5 seconds per SR 3.7.2.1. The fail-safe test verifies closure of the swing check by venting air off of the operator.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-07

System: Instrument Air

Valve(s): 1-IA-944	1-IA-963
1-IA-948	1-IA-967
1-IA-952	1-IA-971
1-IA-959	1-IA-975

Category: AC

Class: NC

Function: Air Accumulator Isolation Check Valves

Cold Shutdown Justification

Check valves 1-IA-944, 948 and 952 isolate the normal instrument air supply from the backup bottled air supply for the main steam pressure control valves 1-MS-PCV-101A, B and C. Valves 1-IA-959, 963 and 971 isolate the normal instrument air supply to the auxiliary feedwater valves 1-FW-HCV-100A, B and C. Valves 1-IA-967 and 975 isolate the normal instrument air supply to the auxiliary feedwater valves 1-FW-PCV-159A and B.

To back seat test check valves 1-IA-944, 948 and 952, the instrument air system must be isolated to all three main steam pressure control valves and the lines vented. To back seat test check valves 1-IA-959, 963, 967, 971 and 975, the instrument air system must be isolated to all five auxiliary feedwater valves and the lines vented. Isolating this many valves that are important to safety during normal operation would degrade the safety of the plant and be disruptive to plant operation.

Testing Frequency

These check valves will be exercised open and closed during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-08

System: Main Steam

Valve(s): 1-MS-TV-113A

1-MS-TV-113B

1-MS-TV-113C

Category: B

Class: 2

Function: Main Steam Trip Bypass Valves

Cold Shutdown Justification

These trip valves are opened only during plant startup to provide flow paths for steam from each of the steam generators to equalize pressure across the main steam trip valves. They remain closed during normal operation to prevent the unrestricted release of steam from multiple steam generators in the event of a downstream steam line rupture and to isolate the steam generators (automatically close on steam line or IHH isolation) in the event of a LOCA or steam generator tube rupture. When closed, they provide isolation of the unaffected steam generators thus ensuring an adequate supply of steam for AFW pump turbine operation. They are designated as containment isolation valves (non-leak tested). There is a remote possibility that these valves would have to close during plant startup; therefore, they are considered active to the closed position only during plant startup. They will be tested prior to startup to ensure operability.

Testing Frequency

These valves will be full stroke exercised during cold shutdown prior to startup but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-09

System: Reactor Coolant

Valve(s): 1-RC-PCV-1455C
1-RC-PCV-1456

Category: BL

Class: 1

Function: Pressurizer Power Operated Pressure Control Valves

Cold Shutdown Justification

Full or part-stroke exercising these valves during power operations would cause high differential pressure across the PCV Block Valves. Although these valves are designed to accommodate this differential pressure, cycling would eventually degrade the block valves seating capability, thus decreasing plant safety. Also, the valve controllers do not allow for a part-stroke exercise test.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-10

System: Residual Heat Removal

Valve(s): 1-RH-7
1-RH-15

Category: C

Class: 2

Function: RHR Pump Discharge Check Valves

Cold Shutdown Justification

These RHR pump discharge check valves can only be exercised to the open position and verified closed when the RHR pumps 1-RH-P-1A and 1-RH-P-1B are running. The low pressure pumps take suction from and discharge to the reactor coolant system which operates at 2235 psig. This pressure is well above the operating pressure of the pumps; therefore, testing during normal operation is not practical.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-11

System: Reactor Coolant

Valve(s): 1-RC-SOV-101A-1
1-RC-SOV-101A-2
1-RC-SOV-101B-1
1-RC-SOV-101B-2

Category: B

Class: 1

Function: Reactor Vessel Vent Line Isolation Valves

Cold Shutdown Justification

These valves are the Reactor Vessel Head Vent Valves. Full or part-stroke exercising these valves at power could release reactor coolant into the reactor vessel refueling cavity. Stroking of these valves has been performed while the Reactor Coolant System (RCS) was pressurized. This test revealed that when the upstream valve was stroked, the downstream valve tended to lift and then reseat due to the motive force of the steam. As long as these valves remain closed under RCS pressure, they are an effective isolation boundary. However, these valves should not be stroked while the RCS is fully pressurized, because a valve could develop a leak across the seat during the exercise test due to the high differential pressures and exposure to steam. These valves will be exercised during each cold shutdown when the RCS is at a reduced pressure. Testing at a reduced RCS pressure allows the valves to seat properly and maintain RCS boundary integrity.

Testing Frequency

Exercise for operability during cold shutdown when the Reactor Coolant System is at a reduced pressure but not more frequently than once per three months.

COLD SHUTDOWN JUSTIFICATION CSV-12

System: Auxiliary Feedwater

Valve(s): 1-FW-HCV-100A
1-FW-HCV-100B
1-FW-HCV-100C

Category: B

Class: 3

Function: Standby Auxiliary Feedwater Supply Valves

Cold Shutdown Justification

Valve position is controlled by turning a knob on a potentiometer. Several turns of the knob are necessary to full stroke the valve, which would not simulate a fail-safe test. Isolating instrument air and electrical power to the valve is the only valid method for performing a fail-safe test and full stroke exercising these valves. The fail-safe test cannot be performed during normal operation because these valves must be available in the event of a reactor trip.

These valves are power operated control valves and are included in Technical Position TP-03.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-13

System: Auxiliary Feedwater

Valve(s): 1-FW-PCV-159A
1-FW-PCV-159B

Category: B

Class: 3

Function: Auxiliary Feedwater Pressure Control Valves

Cold Shutdown Justification

During normal operation, these valves control auxiliary feedwater header pressure and cannot be full stroked. Isolating instrument air and electrical power to the valves is the only valid method for performing a fail-safe test and full stroke exercising these valves. The fail-safe test cannot be performed during normal operation because these valves must be in service.

These valves are power operated control valves and are included in Technical Position TP-03.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-14

System: Feedwater

Valve(s): 1-FW-47
1-FW-79
1-FW-111

Category: C

Class: 2

Function: Main Feedwater Supply Isolation Check Valves

Cold Shutdown Justification

These check valves must seat upon reversal of flow to fulfill their safety functions. The only method to verify this actuation is to perform a back pressure test. Since the valves must be open to sustain power operation, they cannot be tested every three months.

Testing Frequency

These check valves will be tested in the closed position during cold shutdown but not more frequently than once every three months. Normal operation of the main feedwater system verifies these valves open.

COLD SHUTDOWN JUSTIFICATION CSV-15

System: Auxiliary Feedwater

Valve(s): 1-FW-61	1-FW-150	1-FW-93
1-FW-63	1-FW-167	1-FW-127
1-FW-95	1-FW-185	1-FW-279
1-FW-125		

Category: C

Class: 3

Function: Auxiliary Feedwater Header Check Valves

Cold Shutdown Justification

These valves can be back seat tested with auxiliary feedwater flow. However, the back seat test involves extended periods of auxiliary feedwater flow to the steam generators. Extended periods of relatively cold auxiliary feedwater flow to the steam generators when the plant is at power causes reactivity transients. Therefore, the back seat tests should be performed during cold shutdowns.

Testing Frequency

Valves 1-FW-93, 127 and 279 are in dedicated flow paths and are full flow tested every three months. Valves 1-FW-150, 167 and 185 are on the minimum flow recirculation lines and are full flow tested every three months. The remaining valves will be full flow tested during cold shutdown but not more frequently than once every three months. These valves will be exercised closed during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-16

System: Auxiliary Feedwater

Valve(s): 1-FW-68
1-FW-100
1-FW-132

Category: C

Class: 2

Function: Auxiliary Feedwater Header Check Valves

Cold Shutdown Justification

The close position for these valves is the non-safety position because other boundaries upstream serve the reverse flow safety function. The valves are located near the main feedwater system header and cannot be isolated from the header. The only way to verify the closed position using flow is to perform a back seat test using main feedwater header pressure. To perform the test, pressure gauges must be installed upstream of the valves and the piping upstream must be partially drained and vented. The upstream piping is then isolated and the differential pressure across the check valve is measured and compared to an acceptance criterion. The valves will be exercised only during cold shutdowns and refueling outages because the small increase in safety gained by testing every three months does not justify the burden of setting up test equipment, draining lines and performing the back seat tests. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be full stroke exercised open every three months and closed during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-17

System: Auxiliary Feedwater

Valve(s): 1-FW-148

1-FW-165

1-FW-183

Category: C

Class: 3

Function: Auxiliary Feedwater Pump Discharge Check Valves

Cold Shutdown Justification

These valves can be back seat tested with auxiliary feedwater flow. However, the back seat test involves extended periods of auxiliary feedwater flow to the steam generators. Extended periods of relatively cold auxiliary feedwater flow to the steam generators when the plant is at power causes reactivity transients. Therefore, the back seat tests should be performed during cold shutdowns.

Testing Frequency

These valves will be full stroke exercised open every three months and closed during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-18

System: Instrument Air

Valve(s): 1-IA-TV-102A
1-IA-TV-102B

Category: B for 1-IA-TV-102A
A for 1-IA-TV-102B

Class: 2

Function: Instrument Air Supply to Containment Isolation Valves

Cold Shutdown Justification

Testing these trip valves to the closed position interrupts the instrument air (IA) supply to containment including IA supply to the component cooling (CC) trip valves that isolate flow to the Reactor Coolant Pumps (RCPs) thermal barriers, lube oil, stator and/or shroud coolers. The IA trip valves are in series. If one of these valves failed closed, instrument air to containment may be interrupted for an extended period. In this case, the CC trip valves would be maintained open only by the compressed air system inside containment. The non-safety related compressed air system may not be able to sustain plant operation for an extended period. Therefore, to avoid challenging plant operation, the IA trip valves should only be exercised during cold shutdown when the RCPs are secured.

Testing Frequency

These valves will be full stroke exercised during cold shutdown when the RCPs are secured but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-19

System: Charging

Valve(s): 1-CH-84
1-CH-102

Category: C

Class: 3

Function: Boric Acid Transfer Pump Discharge Check Valves

Cold Shutdown Justification

To achieve full flow through these check valves, a flow path must be established to the reactor coolant system. This test would allow the injection of boric acid into the reactor coolant system which would upset the boron concentration in the primary plant water.

Testing Frequency

These valves will be full stroke exercised open and closed during cold shutdown but not more frequently than once every three months.

4.7 VALVE TEST PROGRAM REACTOR REFUELING JUSTIFICATIONS

ISTC-3521 and ISTC-3522 allow for the full stroke exercising of valves during reactor refueling (but not more frequently than every three months) if it is not practical to exercise the valves during normal operation or cold shutdown. Therefore, no request for relief from testing every three months or every cold shutdown is necessary.

However, ISTC-9200 does require that these valves be specifically identified by the owner. The reactor refueling justifications identify and provide the technical basis for valves exercised during reactor refueling outages.

Reactor Refueling Justification Index	
RRV-01	CC Supply to Reactor Coolant Pump Containment Isolation Check Valve
RRV-02	Charging Supply Inside Containment Isolation Check Valves (1-CH-322, 330), RC Pump Seal Water Supply Isolation Check Valves (1-CH-336, 358 and 380), and RC Pump Seal Water Return Containment Isolation Check Valve (1-CH-402)
RRV-03	Fire Protection System Supply Containment Isolation Check Valve
RRV-04	Hydrogen Analyzer/Recombiner Containment Isolation Check Valves
RRV-05	Instrument Air Supply Containment Isolation Check Valves
RRV-06	Primary Grade Water Supply Containment Isolation Check Valves
RRV-07	Low Head SI Pump Suction and Discharge Check Valves
RRV-08	RWST Supply to Charging Pump Suction Header Check Valves
RRV-09	Nitrogen and Makeup Supply to Accumulators Containment Isolation Check Valves
RRV-10	High Head SI to RCS Cold Legs Check Valves
RRV-11	Recirculation Spray Heat Exchanger Service Water Supply Check Valves
RRV-12	Condenser Air Removal Discharge Containment Isolation Check Valve
RRV-13	Charging Pump Discharge Check Valves
RRV-14	Low Head SI Pump Seal Water Supply Check Valves
RRV-15	CC Water Supply to Containment Recirculation Air Coolers Containment Isolation Check Valves
RRV-16	CC Supply to RC Pump Thermal Barrier Cooler Isolation Check Valves
RRV-17	Quench Spray and Outside Recirculation Spray Containment Isolation Check Valves
RRV-18	CC Water Supply to the RHR Heat Exchangers Containment Isolation Check Valves
RRV-19	Charging Pump Supply from the VCT (1-CH-215) and Charging Pump Recirculation and Seal Water Return (1-CH-649) Containment Isolation

Reactor Refueling Justification Index	
	Check Valves
RRV-20	Boric Acid Recirculation Line Check Valve (1-SI-66)
RRV-21	Bottled Air System Supply to PORV Isolation Check Valves
RRV-22	Bottled Air Supply to Safeguards Exhaust Vent Relief Damper Isolation Valve
RRV-23	Control Room Chilled Water System Pump Discharge Check Valves
RRV-24	Emergency Diesel Air Receiver Tank Discharge Check Valves
RRV-25	Main Steam Header Discharge to Atmosphere Pressure Control Valves
RRV-26	Charging Pump Recirculation Line Check Valves
RRV-27	RHR Supply and Return Isolation Valves
RRV-28	Diesel Fuel Oil Pump Discharge Check Valves
RRV-29	Auxiliary Feedwater Pump Oil Cooler Check Valves
RRV-30	Quench Spray Bleed Line Isolation Check Valves
RRV-31	Provide Sensing Lines for Containment Pressure During Appendix J Type A Leakrate Testing
RRV-32	"A" Main Steam Header Supply Check Valve to Turbine Driven Auxiliary Feedwater (AFW) Pump
RRV-33	High Head SI to RCS Cold Legs Check Valves (1-SI-79 and 185), High Head SI to RCS Hot Legs Check Valves (1-SI-90 and 201), Low Head to RCS Hot Legs Check Valves (1-SI-206, 207)
RRV-34	Emergency Boration Line Check Valve

REACTOR REFUELING JUSTIFICATION RRV-01

System: Component Cooling

Valve(s): 1-CC-84
1-CC-119
1-CC-154

Category: AC

Class: 2

Function: CC Supply to Reactor Coolant Pump Containment Isolation Check Valve

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only exercise method to verify this actuation is to perform a leak rate test/back pressure test. Since the valves are located inside containment and their systems are required during power operation, they cannot be tested every three months. The valves will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining lines and performing leak rate tests in a subatmospheric containment. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be exercised closed each reactor refueling. The open position is verified during normal operation as component cooling water is supplied to the reactor coolant pumps.

REACTOR REFUELING JUSTIFICATION RRV-02

System: Chemical & Volume Control

Valve(s): 1-CH-322 1-CH-330
 1-CH-336 1-CH-402
 1-CH-358
 1-CH-380

Category: AC for 1-CH-402
 C for 1-CH-322, 330, 336, 358 and 380

Class: 1 for 1-CH-330, 322, 336, 358 and 380
 2 for 1-CH-402

Function: Charging Supply Inside Containment Isolation Check Valves (1-CH-322, 330), RC Pump Seal Water Supply Isolation Check Valves (1-CH-336, 358 and 380), and RC Pump Seal Water Return Containment Isolation Check Valve (1-CH-402)

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only method to verify this actuation is to perform a leak rate/back pressure test. Since the valves are located inside containment (subatmospheric) and their systems are required during power operation, they cannot be tested every three months. 1-CH-322 is in the normal charging line to the RCS. These lines cannot be drained during short cold shutdowns because charging flow is often maintained. 1-CH-336, 358, and 380 are in the RCP seal water supply lines, and 1-CH-402 is in the RCP seal water return line. Seal flow is maintained during cold shutdown to reduce RCS leakage and to float the RCP seals. 1-CH-330 is the charging supply to loop fill header, inside containment isolation valve. A local back seat test inside containment is required to verify closure for valve 1-CH-330. The valves will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining lines and performing leak rate tests in a subatmospheric containment.

Testing Frequency

These valves will be exercised closed each reactor refueling. Valve 1-CH-322 is in the normal charging supply line. The open position is verified during normal operation. Valves 1-CH-336, 358 and 380 are in the seal water supply lines to the reactor coolant pumps. The open position is verified during normal operation. Valve 1-CH-330 is in the charging supply line to the loop fill header and 1-CH-402 is in the RCP seal water return line. The open position is verified during RCS refill during refueling outages.

REACTOR REFUELING JUSTIFICATION RRV-03

System: Fire Protection

Valve(s): 1-FP-272

Category: AC

Class: 2

Function: Fire Protection System Supply Containment Isolation Check Valve

Reactor Refueling Justification

This check valve must seat upon reversal of flow in order to fulfill its safety function. The only method to verify this actuation is to perform a leak rate/back pressure test. Since the valve is located inside containment (subatmospheric), it cannot be tested every three months. 1-FP-272 is in the containment fire protection system. Testing this valve will render the fire protection system inoperable. It will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining the lines and performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

This valve will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-04

System: Post Accident Hydrogen Removal

Valve(s): 1-HC-14
1-HC-18

Category: AC

Class: 2

Function: Hydrogen Analyzer/Recombiner Containment Isolation Check Valves

Reactor Refueling Justification

Check valves 1-HC-14 and 18 open to sample hydrogen, which is a non-safety function. These valves also provide containment isolation and must seat upon reversal of flow in order to fulfill their safety functions. The only exercise method to verify closure is to perform a leakage/back pressure test.

Since the valves are located inside containment (subatmospheric), they cannot be tested every three months. Performing a leakage/back pressure test requires installing temporary leakage test equipment. Because of the effort involved, it is impractical to perform this test during cold shutdowns. These valves will be verified closed only during refueling outages. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

The ASME OM Code ISTC-3522(a) states in part that, "Open and close tests need only be performed at an interval when it is practicable to perform both tests." The close test can only be performed during the reactor refueling outages. Therefore, the interval for the open test can also be on a reactor refueling outage interval as allowed by ISTC-3522(a).

Testing Frequency

Check valves 1-HC-14 and 18 will be tested open and closed every reactor refueling outage.

REACTOR REFUELING JUSTIFICATION RRV-05

System: Instrument Air

Valve(s): 1-IA-55
1-IA-149

Category: AC

Class: 2

Function: Instrument Air Supply Containment Isolation Check Valves

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only method to verify this actuation is to perform a leak rate test. Since the valves are located inside containment (subatmospheric), they cannot be tested every three months. Valve 1-IA-55 is in the instrument air supply line to containment. Testing this valve renders the instruments and components supplied by instrument air inside containment inoperable.

They will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of performing leak rate tests. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-06

System: Reactor Coolant

Valve(s): 1-RC-149

Category: AC

Class: 2

Function: Primary Grade Water Supply Containment Isolation Check Valves

Reactor Refueling Justification

This check valve must seat upon reversal of flow in order to fulfill its safety function. The only method to verify this actuation is to perform a leak rate test. Since the valve is located inside containment (subatmospheric), it cannot be tested every three months. The valve will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining lines and performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

This valve will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-07

System: Safety Injection

Valve(s): 1-SI-9 1-SI-26
 1-SI-12 1-SI-29

Category: C

Class: 2

Function: Low Head SI Pump Suction and Discharge Check Valves

Reactor Refueling Justification

Check valves 1-SI-9 and 26 are on the discharge lines from the LHSI pumps and check valves 1-SI-12 and 29 are on the recirculation lines from the LHSI pumps. Valves 1-SI-9 and 26 cannot be full or partial stroked exercised during power operation because the LHSI pumps cannot overcome reactor coolant system pressure. During cold shutdown, the filled reactor coolant system still prevents full flow testing of the check valves. Therefore, these valves will be full flow tested every reactor refueling to verify the full open position.

To verify closure of valves 1-SI-9, 12, 26 and 29, the low head safety injection system must be isolated which can only be done at reactor refueling. By isolating the system, the test boundary is established to demonstrate adequate seat tightness for the discharge valves (1-SI-9 and 26) and discharge recirculation line valves (1-SI-12 and 29) to the non-running pump.

Testing Frequency

Valves 1-SI-12 and 29 will be full flow tested every three months. Valves 1-SI-9 and 26 will be full flow tested every reactor refueling. Valves 1-SI-9, 12, 26, and 29 will be exercised to the closed position every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-08

System: Safety Injection

Valve(s): 1-SI-47

Category: AC

Class: 2

Function: RWST Supply to Charging Pump Suction Header Check Valves

Reactor Refueling Justification

Exercising this valve during power operation would require charging pump suctions be aligned with the Refueling Water Storage Tank. This alignment would cause a sudden increase in Reactor Coolant System boron inventory. Full flow for the charging system can only be established during reactor refueling when the RCS is depressurized.

To verify valve closure, the refueling water storage tank must be isolated which requires the plant to enter a one hour LCO per Technical Specification 3.5.4.B.

The only method to verify closure other than disassembly and inspection is to perform a leak rate/back pressure test. This valve is also subject to leak testing, which is performed every reactor refueling. Verification of closure will be performed during the leak test every reactor refueling instead of every cold shutdown because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining the lines and performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

Exercise to the full open and closed positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-09

System: Safety Injection

Valve(s): 1-SI-106

1-SI-110

Category: AC

Class: 2

Function: Nitrogen and Makeup Supply to Accumulators Containment Isolation Check Valves

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only method to verify closure is to perform a leak rate/back pressure test. Since the valves are located inside containment (subatmospheric), they cannot be tested every three months. These valves will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-10

System: Safety Injection

Valve(s): 1-SI-190

1-SI-192

1-SI-194

Category: C

Class: 1

Function: High Head SI to RCS Cold Legs Check Valves

Reactor Refueling Justification

These Safety Injection check valves must open and close to fulfill their safety functions. They cannot be exercised to the open position during power operation because this would thermally shock the injection system and cause unnecessary plant transients.

During cold shutdown, the filled Reactor Coolant System still prevents full design flow. Also, a stroke test could cause an over pressurization of the Reactor Coolant System and force a safety system to function.

The only test methods which will individually back seat these valves are to perform leak tests or to use downstream pressure provided by the low head safety injection pump tests. Either test can only be performed during reactor refueling.

Testing Frequency

Exercise to the open position using flow and to the closed position every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-11

System: Service Water

Valve(s): 1-SW-114 1-SW-140
 1-SW-116 1-SW-150
 1-SW-120
 1-SW-130

Category: C

Class: 2 for 1-SW-120, 130, 140, 150
 3 for 1-SW-114, 116

Function: Recirculation Spray Heat Exchanger Service Water Supply Check Valves

Reactor Refueling Justification

Exercising these valves would flow service water into the recirculation spray heat exchangers. Per FSAR Section 6.2.2.2.5, in order to ensure long term reliability of the heat exchangers, following each periodic test the heat exchangers are drained, purged with air and maintained in dry lay-up. The logistics of this procedure make testing every three months or at cold shutdown impractical considering the small increase in system safety gained from exercising the valves.

Testing Frequency

These valves will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-12

System: Vacuum Priming

Valve(s): 1-VP-12

Category: AC

Class: 2

Function: Condenser Air Removal Discharge Containment Isolation Check Valve

Reactor Refueling Justification

This check valve must seat upon reversal of flow in order to fulfill its safety function. The only method to verify this actuation is to perform a leak rate test. Since the valve is located inside containment (subatmospheric), it cannot be tested every three months. The valve will be exercised during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

This valve will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-13

System: Charging

Valve(s): 1-CH-254

1-CH-267

1-CH-279

Category: C

Class: 2

Function: Charging Pump Discharge Check Valves

Reactor Refueling Justification

The only available flow path to test these valves to the full open position is into the reactor coolant system. During cold shutdown, exercising these valves could result in over pressurization of the reactor coolant system and could force a safety system to function.

Testing Frequency

Exercise closed every three months and full open every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-14

System: Safety Injection

Valve(s): 1-SI-4
1-SI-21

Category: AC

Class: 2

Function: Low Head SI Pump Seal Water Supply Check Valves

Reactor Refueling Justification

Due to the plant configuration, these valves cannot be verified closed using system flow. The only method to verify closure other than disassembly and inspection is to perform a back pressure test using a primary grade water supply as the pressure source. To perform the back pressure test on these 3/4" check valves, each LHSI pump must be removed from service for approximately two hours. With one ECCS train out of service, the plant must enter an action statement per Technical Specification LCO 3.5.2 and proceed to hot shutdown within 72 hours.

Including the preparation for the test which consists of connecting primary grade water to the test volume using supply hoses, the entire test for each valve takes several hours to perform. Also, the seal water line, which may contain contaminated water, must be drained and vented. Considering that one train of ECCS must be removed from service for an extended period of time which degrades the safety of the plant, and the difficulty in performing the back pressure test, testing these 3/4" check valves to the closed position every three months is not practical.

These valves are also subject to leak testing, which is performed every reactor refueling. A leak test provides more information concerning the condition of the valve seats than just a back pressure test. When compared to the Code requirements for a back seat test performed every cold shutdown, the performance of a leak test every refueling outage is an alternative that provides an acceptable level of quality and safety. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing." The open position is verified using flow every reactor refueling.

Testing Frequency

Exercise to the closed and open positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-15

System: Component Cooling

Valve(s): 1-CC-546

1-CC-559

1-CC-572

Category: AC

Class: 2

Function: CC Water Supply to Containment Recirculation Air Coolers Containment Isolation
Check Valves

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only exercise method to verify this actuation is to perform a leak rate test/back pressure test which would involve isolating the containment air cooling coils. The containment recirculation air cooling coils are required for normal operation to maintain containment temperature below the limit specified in Technical Specification LCO 3.6.5. Removing a cooler from service to perform the leak rate test/back pressure test may result in an increased containment temperature that could challenge the containment temperature limit. There is typically less margin to the temperature limit during the summer months. Therefore, these valves should not be tested every three months.

These valves are also subject to leak testing, which is performed every reactor refueling. A leak test provides more information concerning the condition of the valve seats than just a back pressure test. When compared to the Code requirements for a back seat test performed every cold shutdown, the performance of a leak test every refueling outage is an alternative that provides an acceptable level of quality and safety. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

Exercise to the closed position every reactor refueling. The open position is verified during normal system operation as cooling water is supplied to the containment recirculation coolers.

REACTOR REFUELING JUSTIFICATION RRV-16

System: Component Cooling

Valve(s): 1-CC-111

1-CC-146

1-CC-181

Category: C

Class: 3

Function: CC Supply to RC Pump Thermal Barrier Cooler Isolation Check Valves

Reactor Refueling Justification

These check valves must be locally back pressure tested to verify closure. Since the valves are located inside containment (subatmospheric), they cannot be back pressure tested during normal operation. The valves will be tested every refueling outage because the small increase in safety gained by testing during cold shutdown does not justify the burden of performing a back pressure test.

Testing Frequency

Exercise to the closed position every reactor refueling. The open position is verified during normal system operation as cooling water is supplied to the RC pump thermal barrier coolers.

REACTOR REFUELING JUSTIFICATION RRV-17

System: Recirculation Spray

Valve(s): 1-QS-11 1-RS-18
 1-QS-19 1-RS-27

Category: AC for 1-QS-11 and 19

 C for 1-RS-18 and 27

Class: 2

Function: Quench Spray and Outside Recirculation Spray Containment Isolation Check Valves

Reactor Refueling Justification

These valves must seat to maintain containment integrity and open to allow flow to the containment spray headers. Flow testing these valves would introduce water to the spray arrays and saturate containment. These valves can be mechanically exercised to the open and closed positions. However, the valves are located inside containment (subatmospheric) and require the construction of scaffolding before they can be exercised. The small increase in safety gained by exercising the valves during cold shutdown does not justify the burden of constructing the scaffolding.

Testing Frequency

These valves will be exercised to the open and closed positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-18

System: Component Cooling

Valve(s): 1-CC-193
1-CC-198

Category: AC

Class: 2

Function: CC Water Supply to the RHR Heat Exchangers Containment Isolation Check Valves

Reactor Refueling Justification

Valves 1-CC-193 and 1-CC-198 are check valves in the component cooling lines to the RHR heat exchangers and must close for isolation and open to allow CC cooling flow. The valves can only be exercised open when RHR is in service during shutdown conditions. The only exercise method to verify closure is to perform a leak rate test/back pressure test. These lines cannot be drained for back seat testing because the RHR system is needed during cold shutdown to control the RCS temperature.

The full flow open test will be performed at the same frequency as the close test (every refueling outage) as allowed by ISTC-3522(a) which states in part, "Each check valve exercise test shall include open and close tests. Open and close tests need only be performed at an interval when it is practicable to perform both tests."

Testing Frequency

Exercise for closure and full open every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-19

System: Chemical & Volume Control System

Valve(s): 1-CH-215
1-CH-649

Category: AC

Class: 2

Function: Charging Pump Supply from the VCT (1-CH-215) and Charging Pump Recirculation and Seal Water Return (1-CH-649) Containment Isolation Check Valves

Reactor Refueling Justification

Due to the plant configuration, these valves cannot be verified closed using flow. The only method to verify closure other than disassembly and inspection is to perform a leak rate/back pressure test on each valve.

During normal operation, these valves cannot be isolated to perform a back pressure test because normal letdown and charging flow, and reactor coolant pump seal flow would be interrupted. Also, if the valves were isolated during normal operation, the charging pumps would have to be secured.

These valves are also subject to leak testing, which is performed every reactor refueling. A leak test provides more information concerning the condition of the valve seats than just a back pressure test. When compared to the Code requirements for a back seat test performed every cold shutdown, the performance of a leak test every refueling outage is an alternative that provides an acceptable level of quality and safety. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be exercised closed every reactor refueling. Valve 1-CH-215 will be exercised full open every three months and valve 1-CH-649 will be exercised full open every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-20

System: Safety Injection

Valve(s): 1-SI-66

Category: C

Class: 2

Function: Boric Acid Recirculation Line Check Valve

Reactor Refueling Justification

In the past, the BIT recirculation line isolation check valve 1-SI-66 was back seat tested using charging system pressure to create a pressure differential across the valve disk. Leakage was collected at a point upstream of the check valve. This test was performed after the inlet isolation valves are opened. A hydraulic transient was avoided by disabling one of the inlet isolation valves and manually cracking the valve open so as to slowly pressurized the BIT. However, this method of testing disables the BIT inlet valves and presents the potential for causing a hydraulic transient if the inlet valve is opened too quickly. The preferred method for back seat testing the check valve is during reactor refuelings when the charging system is secured and a local back seat/leak test can be performed. According to NUREG-1482, Revision 2, Section 4.1.6, "The NRC staff has determined that the need to set up test equipment constitutes adequate justification to defer reverse flow testing of a check valve to a refueling outage."

Testing Frequency

1-SI-66 will be tested closed every reactor refueling and is verified open during normal operation because the contents of the BIT are continuously recirculated with the boric acid storage tank on service using the boric acid transfer pump.

REACTOR REFUELING JUSTIFICATION RRV-21

System: Service Air

Valve(s): 1-GN-225	1-IA-2152
1-GN-229	1-IA-2153
	1-IA-2154
	1-IA-2155

Category: AC

Class: NC

Function: Bottled Air System Supply to PORV Isolation Check Valves

Reactor Refueling Justification

Due to the plant configuration, these valves cannot be verified closed using flow.

The only method to verify closure other than disassembly and inspection is to perform a local leak rate/back pressure test. To perform the leak rate/back pressure test, the normal instrument air and nitrogen supplies to the PORVs must be isolated. The PORVs are required to be operable during normal operation. Also, these valves are located inside containment (subatmospheric) making it impractical to perform the test during normal operation.

These valves are also subject to leak testing, which is performed every reactor refueling. Verification of closure will be performed during the leak test every reactor refueling instead of every cold shutdown because the small increase in safety gained by testing during cold shutdown does not justify the burden of performing a back pressure test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

Exercise to the closed and open positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-22

System: Service Air

Valve(s): 1-IA-2429

Category: A

Class: NC

Function: Bottled Air Supply to Safeguards Exhaust Vent Relief Damper Isolation Valve

Reactor Refueling Justification

This non-Code check valve closes in the event of a loss of pressure in the respective instrument air supply header to prevent blow down of the air reserve volume tank which supplies the Unit 1 safeguards exhaust vent relief damper. Testing the check valve to the closed position requires that the instrument air supply be isolated to the Unit 1 and Unit 2 safeguards exhaust vent relief dampers, the Unit 2 containment personnel hatch, the Unit 1 ventilation vent multi-sampler particulate radiation monitor, 1-VG-RM-105, the Unit 1 multi-sampler off-line radio gas radiation monitor, 1-VG-RM-106, and the Unit 2 containment atmosphere particulate and gaseous radioactivity monitors, 2-RM-RMS-259 and 2-RM-RMS-260.

Disabling the containment atmosphere monitors, 2-RM-RMS-259 and 260, enters Unit 2 into an action statement per Technical Specification LCO 3.4.15 and violates Technical Requirements Manual TR 3.9.5. TR 3.9.5 applies only to Mode 6 and does not affect quarterly testing. LCO 3.4.15 applies to Modes 1, 2, 3 and 4 and requires that a RCS leak rate calculation be performed at least once per 24 hours until the monitors are restored to service.

In addition to entering an action statement per the LCO, isolating the instrument air supply to these systems every three months to perform the back-pressure test would be disruptive to normal plant operation. Also, disabling four radiation monitors reduces the ability of the operator to observe and possibly respond to changing plant conditions. Therefore, this valve should not be closure tested every three months.

The check valve is also subject to leak testing at least once every 18 months. The check valve will be closure tested at least once every 18 months during the leak test because the small increase in safety gained by performing the back pressure test every cold shutdown does not justify any disruption of normal operating activities of the opposite unit, or the added burden of performing the back-pressure test on a more frequent schedule.

REACTOR REFUELING JUSTIFICATION RRV-22 (Cont.)

Testing Frequency

Exercise the valve to the open and closed positions at least once every 18 months.

REACTOR REFUELING JUSTIFICATION RRV-23

System: Control Room Chilled Water System

Valve(s): 1-CD-161
1-CD-182
1-CD-209

Category: C

Class: 3

Function: Control Room Chilled Water System Pump Discharge Check Valves

Reactor Refueling Justification

Due to the plant configuration, these valves cannot be verified closed using flow. The downstream isolation motor operated valves (1-HV-MOV-111A, B and C) are interlocked with the associated upstream chilled water pumps (1-HV-P-20A, B and C). When the MOV is stroked open to allow a flow path to the check valve, the upstream pump starts. Therefore, the check valves cannot be tested closed using the discharge from another pump without disabling the interlock circuitry of the downstream MOV. Another way to perform a back pressure test is to isolate the upstream and downstream piping, vent and drain the upstream piping and use an external water source to pressurize the downstream piping. There is no external source of water such as a primary grade water supply or a domestic water supply that is available. Domestic water is hard piped to the chilled water system expansion tanks, but this source is not available for other use without a temporary modification to the piping system.

Another method to verify valve closure is disassembly and examination as allowed by ISTC-5221(c).

Testing Frequency

These valves will be flowed open every 3 months. These valves will be grouped together and one valve from this group will be disassembled and inspected every reactor refueling. A different valve will be disassembled every reactor refueling. This test frequency is in accordance with ISTC-5221(c). The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-23.

REACTOR REFUELING JUSTIFICATION RRV-23 (Cont.)

Table RRV-23

Valve Number	1-CD-161	1-CD-182	1-CD-209
Manufacturer	Anderson,	Anderson,	Anderson,
Design	Wafer	Wafer	Wafer
Service	Water	Water	Water
Size	3"	3"	3"
Body Material	CS	CS	CS
Orientation	Horizontal	Horizontal	Horizontal

REACTOR REFUELING JUSTIFICATION RRV-24

System: Emergency Diesel System

Valve(s): 1-EB-15

1-EB-34

1-EB-65

1-EB-84

Category: C

Class: NC

Function: Emergency Diesel Air Receiver Tank Discharge Check Valves

Reactor Refueling Justification

The system configuration does not allow for back seat testing with flow. These valves will be disassembled and inspected on a reactor refueling test frequency (nominally every 18 months but not to exceed 24 months) per the requirements of ISTC-5221(c) to verify the closed position.

Flow through these check valves cannot be measured because instrumentation is not installed. However, failure of these valves to promptly stroke to their proper positions will affect the starting time of the diesel when the diesel is started from just one air bank. A diesel alarm will activate if the starting time exceeds start failure requirements. Verification that the diesel starts without the start failure alarm constitutes a full stroke test for the check valves. The test to start the diesels on one air bank is performed on a rotating basis once every six months. Based on this rotation, each check valve will be full flow tested once every 18 months.

Testing Frequency

One valve in the group will be disassembled and inspected on a reactor refueling test frequency (nominally every 18 months but not to exceed 24 months) and on a rotating basis to verify the closed position per the requirements of ISTC-5221(c). The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-24.

REACTOR REFUELING JUSTIFICATION RRV-24 (Cont.)

Every 18 months, the check valves will be full stroke tested by discharging only one air bank to start the diesel. The failure of either the solenoid or check valves to open will promptly give a diesel alarm. Further investigation would identify problems with the operability of these valves. The diesel start time will be recorded and compared to a maximum allowable start time during this test.

Table. RRV-24

Valve Number	1-EB-15	1-EB-34	1-EB-65	1-EB-84
Manufacturer	Crane	Crane	Crane	Crane
Design	Lift	Lift	Lift	Lift
Service	Air	Air	Air	Air
Size	1.5"	1.5"	1.5"	1.5"
Body Material	Bronze, B61 Alloy 922	Bronze, B61 Alloy 922	Bronze, B61 Alloy 922	Bronze, B61 Alloy 922
Orientation	Horizontal	Horizontal	Horizontal	Horizontal

REACTOR REFUELING JUSTIFICATION RRV-25

System: Main Steam System

Valve(s): 1-MS-PCV-101A
1-MS-PCV-101B
1-MS-PCV-101C

Category: B

Class: 2

Function: Main Steam Header Discharge to Atmosphere Pressure Control Valves

Reactor Refueling Justification

These valves are located above the main steam lines on the top floor of the main steam valve house. The top floor of the main steam valve house is exposed to heat loads from the main steam lines and is a high temperature environment, particularly in the summer time.

If the plant is at power, upstream isolation valves must be closed manually. Then the pressure control valves must be stroked and observed locally when performing the fail-safe test. Given that test personnel must stand near the high temperature main steam lines and valves when manipulating the upstream manual isolation valves, and the high temperatures in the main steam valve house, this test presents a hazardous situation for the test personnel when performed under high temperature conditions. To ensure the safety of test personnel, this test should be performed during reactor refueling outages when the main steam lines and the main steam valve house are cooler.

These valves are designated as power operated control valves under Technical Position TP-03.

Testing Frequency

These valves will be exercised closed every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-26

System: Chemical and Volume Control

Valve(s): 1-CH-252
1-CH-264
1-CH-277

Category: C

Class: 2

Function: Charging Pump Recirculation Line Check Valves

Reactor Refueling Justification

These charging pump recirculation line check valves cannot be back seat tested with flow because each recirculation line has a pressure reducing orifice just downstream of each check valve. If one charging pump is running, the recirculation check valves on the non-running pumps will not receive an observable differential pressure to back seat the valves.

To back seat the valves, the recirculation lines between the check valves and the downstream motor operated isolation valve 1-CH-MOV-1373 must be isolated and the volume pressurized. All three charging pumps would be secured during the test. Securing all charging pumps can only be done during cold shutdown after the reactor coolant system is depressurized. Given the difficulty of performing the back seat test, the test should be performed during reactor refueling outages.

Testing Frequency

These valves will be exercised full open and closed every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-27

System: Residual Heat Removal

Valve(s): 1-RH-FCV-1605
1-RH-HCV-1758

Category: B

Class: 2

Function: RHR Heat Exchanger Flow Control Valves

Reactor Refueling Justification

Valves 1-RH-FCV-1605 and 1-RH-HCV-1758 are required to mitigate the consequences of an Appendix R (fire) event. According to ETE-NA-2013-0059, valve 1-RH-FCV-1605 is ranked as a Category 2A valve and valve 1-RH-HCV-1758 is ranked as a Category 1 valve, which are defined as active safety related/non-safety related valves with high or medium safety significance. As stated in Section 3.0 of IST Program basis document, "Pumps and valves whose only safety function is predicated on plant shutdown and recovery from a fire per commitments made as a result of 10 CFR 50, Appendix R are not included in the IST Program."

Although the only active safety function is related to an Appendix R event, these valves are included in the IST program as augmented IST valves. Doing so aligns the Category 1 and 2A valves from ETE-NA-2013-0059 with the IST program.

Valves 1-RH-FCV-1605 and 1-RH-HCV-1758 are required to mitigate the consequences of an Appendix R (fire) event. The valves do not have remote position indication and must be observed locally to verify stem movement. The valves cannot be exercised during normal operation because they are located inside containment.

These valves are required to be full cycle exercised every 18 months by TRM 3.7.8 and are considered power operated control valves in Technical Position TP-03.

Testing Frequency

These valves will be full stroke exercised every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-28

System: Diesel Fuel Oil System

Valve(s): 1-EG-254

1-EG-266

1-EG-278

1-EG-295

Category: C

Class: NC

Function: Diesel Fuel Oil Pump Discharge Check Valves

Reactor Refueling Justification

Each fuel oil supply line is a dedicated flow path with no cross connect line to the other fuel oil supply lines. Therefore, the check valves cannot be back seat tested with flow. Given the system configuration and the accessibility of the check valves, disassembly and inspection is the preferred method to verify valve closure.

Testing Frequency

These valves will be exercised full open every three months. One valve in the group will be disassembled and inspected on a reactor refueling test frequency (nominally every 18 months but not to exceed 24 months) and on a rotating basis to verify closure per the requirements of ISTC-5221(c). The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-28.

REACTOR REFUELING JUSTIFICATION RRV-28 (Cont.)

Table. RRV-28

Valve Number	1-EG-254	1-EG-266	1-EG-278	1-EG-295
Manufacturer	Henry Vogt	Henry Vogt	Henry Vogt	Henry Vogt
Design	Piston	Piston	Piston	Piston
Service	Fuel Oil	Fuel Oil	Fuel Oil	Fuel Oil
Size	1.5"	1.5"	1.5"	1.5"
Body Material	CS A105	CS A105	CS A105	CS A105
Orientation	Horizontal	Horizontal	Horizontal	Horizontal

REACTOR REFUELING JUSTIFICATION RRV-29

System: Feedwater

Valve(s): 1-FW-526
1-FW-527
1-FW-528

Category: C

Class: 3

Function: Auxiliary Feedwater Pump Oil Cooler Check Valves

Reactor Refueling Justification

The closed position for these check valves cannot be verified by flow because reverse flow may be blocked by a downstream sight glass. Specifically, the sight glass flow indicators contain a flapper to aid in determining flow. Although the Vendor Technical Manual describes the flapper as not having a tight seal capability and is not intended as a check valve, the question remains as to how much restriction the flapper creates. The manufacturer was not able to provide information to the expected leakage past the sight glass flapper. Since the restriction of flow through the sight glass indicator caused by the internal flapper cannot be quantified, there is no assurance that the check valve will actually be in the closed position if a back flow test is used. Given the system configuration, the best method to verify that the valves close properly is to disassemble and examine the valves.

Testing Frequency

To verify the close positions, valves 1-FW-526, 527, and 528 will be grouped together, and one valve from each group will be disassembled and examined every reactor refueling. A different valve from each group will be disassembled for each examination. The test method and frequency are in accordance with ISTC-5221(c). The valves are tested with flow to the open position every three months. The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-29.

REACTOR REFUELING JUSTIFICATION RRV-29 (Cont.)

Table RRV-29

Valve Number	1-FW-526	1-FW-527	1-FW-528
Manufacturer	Conval	Conval	Conval
Design	Piston	Piston	Piston
Service	Water	Water	Water
Size	1"	1"	1"
Body Material	SS, 316	SS, 316	SS, 316
Orientation	Horizontal	Horizontal	Horizontal

REACTOR REFUELING JUSTIFICATION RRV-30

System: Quench Spray

Valve(s): 1-QS-147
1-QS-150

Category: AC

Class: 2

Function: Quench Spray Bleed Line Isolation Check Valves

Reactor Refueling Justification

These check valves are located on the bleed lines that run from the quench spray (QS) supply lines inside containment to the containment sump strainer. With the current line configuration, the valves cannot be tested full open with flow. The valves are downstream from the portion of the QS system that is used to test the QS pumps. Flow cannot be established past the QS pump discharge line motor operated isolation valves without introducing spray to the containment. Given the system configuration, manual manipulation during disassembly and inspection is the only method to verify that the valves stroke to the full open position.

Also, these valves are located inside containment (subatmospheric) making it impractical to perform the test during normal operation. The valves are subject to leak testing once every 24 months. Due to the inaccessibility of the valves, the leak testing will be performed every reactor refueling outage. Verification of the closed position will be performed by the leak test.

Testing Frequency

The valves will be disassembled and inspected each reactor refueling outage on a rotating basis to verify that the valves stroke to the full open position per the requirements of ISTC-5221(c). The closed position for each valve will be verified by leak testing every reactor refueling outage. The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-30.

REACTOR REFUELING JUSTIFICATION RRV-30 (Cont.)

Table RRV-30

Valve Number	1-QS-147	1-QS-150
Manufacturer	Check-All	Check-All
Design	Inline Spring-Loaded Disc	Inline Spring-Loaded Disc
Service	Water	Water
Size	2"	2"
Body Material	SS, 316	SS, 316
Orientation	Vertical	Vertical

REACTOR REFUELING JUSTIFICATION RRV-31

System: Containment Leakage Monitoring

Valve(s): 1-LM-TV-100A	1-LM-TV-101A
1-LM-TV-100B	1-LM-TV-101B
1-LM-TV-100C	1-LM-TV-101C
1-LM-TV-100D	1-LM-TV-101D
1-LM-TV-100E	
1-LM-TV-100F	
1-LM-TV-100G	
1-LM-TV-100H	

Category: A

Class: 2

Function: Provide Sensing Lines for Containment Pressure During Appendix J Type A
Leakrate Testing

Reactor Refueling Justification

These valves are normally closed (fail closed) air-operated valves and must remain closed during normal operation and cold shutdowns to maintain containment integrity. Because the valves are passive and are not required to be exercised or stroke timed per the ASME OM Code, Table ISTC-3500-1, Inservice Test Requirements, the exercise and stroke time tests are considered augmented tests to the IST program.

These valves are required to close within 60 seconds per TRM Table 4.1-1 and verified per TS SR 3.6.3.3.

Testing Frequency

These valves will be full stroke exercised and stroke timed every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-32

System: Main Steam

Valve: 1-MS-119 1-MS-124
1-MS-122

Category: C

Class: 2

Function: "A" Main Steam Header Supply Check Valve to Turbine Driven Auxiliary Feedwater (AFW) Pump

Reactor Refueling Justification

A new style of valve (nozzle check valve) replaced the swing type check valve per DC-NA-15-00104 (for 1-MS-119) and DC-NA-18-00074 (for 1-MS-122/124). This check valve cannot be reverse-flow tested during normal operation, because the test would require venting excessive process steam while verifying the closed position.

Testing Frequency

To verify the close position, 1-MS-119 will be disassembled and examined every reactor refueling. The test frequency is in accordance with ISTC-5221(c). The valve will be full flow tested every three months.

Table RRV-32

Valve Number	1-MS-119	1-MS-122	1-MS-124
Manufacturer	Enertech (DRV-Z)	Enertech (DRV-Z)	Enertech (DRV-Z)
Design	Nozzle Check	Nozzle Check	Nozzle Check
Service	Steam	Steam	Steam
Size	3"	3"	3"
Body Material	Carbon Steel	Carbon Steel	Carbon Steel
Orientation	Vertical	Vertical	Vertical

REACTOR REFUELING JUSTIFICATION RRV-33

System: Safety Injection

Valve(s): 1-SI-79	1-SI-185
1-SI-90	1-SI-201
1-SI-206	1-SI-207

Category: C

Class: 1

Function: High Head SI to RCS Cold Legs Check Valves (1-SI-79 and 185), High Head SI to RCS Hot Legs Check Valves (1-SI-90 and 201), Low Head to RCS Hot Legs Check Valves (1-SI-206, 207)

Reactor Refueling Justification

These Safety Injection check valves must open and close to fulfill their safety functions. They cannot be exercised to the open position during power operation because this would cause safety injection flow into the Reactor Coolant System which would thermally shock the injection system and cause unnecessary plant transients. Flow cannot be established in the low head injection lines during normal plant operation.

During cold shutdown, the Reactor Coolant System pressure still prevents full design flow. Also, a stroke test could cause an over pressurization of the Reactor Coolant System and force a safety system to function.

These valves can only be tested to the closed position by a back seat leak test, which requires draining the lines and will be full flow tested using installed instrumentation.

Testing Frequency

Exercise to the closed and open positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-34

System: Chemical & Volume Control System

Valve(s): 1-CH-240

Category: C

Class: 3

Function: Emergency Boration Line Check Valve

Reactor Refueling Justification

With the current piping configuration, the check valve cannot be back seat tested with flow. Therefore, the valve will be disassembled and examined as allowed by ISTC-5221(c). As allowed by ISTC-3522(a), this check valve will be full stroked exercised on the same test interval as the close test, which is every reactor refueling.

Testing Frequency

This valve will be exercised to the full open position and disassembled and examined every reactor refueling.

4.8 ALTERNATIVE TESTING FOR NON-CODE VALVES

Paragraph (f)4 of 10 CFR 50.55a discusses non-Code Class components within the Scope of ISTA-1100 shall be testing IAW the IST program. When these non-Code Class components require alternatives from the Code approval from the regulator is not required, but the justification shall be included with the program plan and available for review.

Where the Code provisions cannot be met for non-Code components, alternative testing is performed that is adequate to ensure continued operability. The alternate testing is described in this section.

Alternative Testing for Non-Code Class Components	
VNC-01	Main Steam Pressure Control and Auxiliary Feedwater Valves Air Accumulators Isolation Check Valves
VNC-02	Diesel Air Start Solenoid Valves
VNC-03	Diesel Fuel Oil Pump Discharge Relief Valves
VNC-04	5 Minute Hold Time on Pressure Relief Valves

NON-CODE ALTERNATIVE TESTING VNC-01

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Valve(s):	1-IA-944	1-IA-963
	1-IA-948	1-IA-967
	1-IA-952	1-IA-971
	1-IA-959	1-IA-975

System: Instrument Air

Category: AC

Class: NC

Function: Main Steam Pressure Control and Auxiliary Feedwater Valves Air
Accumulators Isolation Check Valves

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

ISTC-3630 - Category A valves, which perform a function other than containment isolation, shall be seat leakage tested to verify their leak-tight integrity.

4.0 Reason for Alternative

Check valves 1-IA-944, 948 and 952 isolate the normal instrument air supply from the backup bottled air supply for the main steam pressure control valves 1-MS-PCV-101A, B and C. Valves 1-IA-959, 963 and 971 isolate the normal instrument air supply to the auxiliary feedwater valves 1-FW-HCV-100A, B and C. Valves 1-IA-967 and 975 isolate

NON-CODE ALTERNATIVE TESTING VNC-01 (Cont.)

the normal instrument air supply to the auxiliary feedwater valves 1-FW-PCV-159A and B.

The purpose of the bottled air supplies is to ensure that the main steam PCVs and the auxiliary feedwater valves can be remotely operated following an accident. The bottled air supplies must be able to cycle the main valves a specified number of times over a predetermined period in order to meet their design requirements. In lieu of a leakage test for the isolation check valves given above, the main valves will be cycled the required number of times over the required period with the normal air supply isolated and vented. This test provides verification that the isolation check valves are leak tight enough to allow the main valves to perform their safety functions.

5.0 Alternative

In lieu of a leakage test for the isolation check valves given above, the main valves will be cycled the required number of times over the required period as defined by their design requirements with the normal air supply isolated and vented every cold shutdown, but not more frequently than once every 3 months.

6.0 Duration of Alternative

The alternative described in Non-Code Alternative VNC-01 will be used for the North Anna Power Station Unit 1 Fifth Ten Year Inservice Testing Interval.

NON-CODE ALTERNATIVE TESTING VNC-02

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Valve(s): 1-EG-SOV-600HA1-EG-SOV-600JA
1-EG-SOV-601HA1-EG-SOV-607JA
1-EG-SOV-600HB1-EG-SOV-600JB

System: Emergency Diesel Air Services

Category: B

Class: NC

Function: Diesel Air Start Solenoid Valves

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

ISTC-5151(c) - Stroke time shall be measured to at least the nearest second.

4.0 Reason for Alternative

The solenoid valves have actuation times considerably under a second and there is no visual reference on the solenoid valve to determine when it has stroked. Therefore, the stroke time cannot be measured. The solenoid valves are activated every month to start the diesels. Both air banks are discharged when performing the monthly test. After the test, the air bank pressure is recorded to verify a decrease in pressure, which confirms that the air banks discharged properly.

NON-CODE ALTERNATIVE TESTING VNC-2 (Cont.)

5.0 Alternative

The solenoid valves will be full stroke exercised quarterly by observing that the valves perform their intended function (if the diesel starts, the air bank pressures decrease and the air supply manifold maintains its integrity, then the solenoid valves were stroked successfully).

6.0 Duration of Alternative

The alternative described in Non-Code Alternative VNC-02 will be used for the North Anna Power Station Unit 1 Fifth Ten Year Inservice Testing Interval.

NON-CODE ALTERNATIVE TESTING VNC-03

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Valve(s): 1-EG-RV-103A

1-EG-RV-103B

1-EG-RV-105A

1-EG-RV-105B

System: EG

Category: C

Class: NC

Function: Diesel Fuel Oil Pump Discharge Relief Valves

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

According to ASME OM Appendix I, I-8130(a), Test Media, valves shall be tested with the normal system operating fluid and temperature for which they are designed. Alternative liquids and different temperatures may be used, provided the requirements of I-8300 are met." The normal system operating fluid for the diesel fuel oil pump discharge relief valves is diesel fuel oil. The valves are tested with water.

4.0 Reason for Alternative

Safety and relief valves used in liquid service are certified by the manufacturers with water in accordance with the requirements of the National Board Inspection Code. This

NON-CODE ALTERNATIVE TESTING VNC-03 (Cont.)

certification process applies to valves used in diesel fuel oil service. Also, there is no correlation from water to diesel fuel oil provided by the manufacturer.

To test the relief valves with diesel fuel oil would require a separate set of test equipment. The current test equipment would be contaminated if fuel oil was used and would not be suitable for use with relief valves that are used in water service.

Testing the set point pressure of the diesel fuel oil pump discharge relief valves with water instead of diesel fuel oil is an industry accepted practice and provides adequate assurance that the relief valves will function properly and protect the diesel fuel oil pump discharge piping.

5.0 Alternative

The set pressure test for the diesel fuel oil pump discharge relief valves will be performed with water instead of diesel fuel oil.

6.0 Duration of Alternative

The alternative described in Non-Code Alternative VNC-03 will be used for the North Anna Power Station Unit 1 Fifth Ten Year Inservice Testing Interval.

NON-CODE ALTERNATIVE TESTING VNC-04

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Safety and relief valves listed in Table VNC-04.

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

ISTC Appendix I, I-8120, "Compressible Fluid Services Other Than Steam", I-8120(h) requires that a minimum of 5 minutes shall elapse between successive openings.

ISTC Appendix I, I-8120, "Liquid Service", I-8130(g) requires that a minimum of 5 minutes shall elapse between successive openings.

4.0 Reason for Alternative

The ASME OM Code requires a minimum of two consecutive valve actuations to establish the lift setpoint of safety and relief valves and that a minimum of 5 minutes elapse between successive tests. For the valves listed in Table VNC-04, the requirement for verifying temperature stability by waiting 5 minutes between successive lift setpoint tests is inappropriate and adds no value. Lift setpoint testing is conducted using water or nitrogen as the test medium, and the tests are performed when the valve and the test medium are at the same temperature. There is a negligible effect on lift setpoint due to minor temperature deviations that might occur during testing.

Eliminating the 5-minute wait time will minimize system outage times and radiation exposure. Numerous non-Code classed safety and relief valves associated with contaminated systems are bench tested in the hot shop, located within the RCA in the Auxiliary Building, to prevent contamination.

Entry into the hot shop testing facility requires full Anti-C's. During the test, personnel are exposed to background radiation levels present in the Auxiliary Building hot shop as well as the radiation levels associated with the specific valve being tested. The proposed elimination of the hold time between successive tests for non-Code classed safety/relief valves tested under ambient conditions using a test medium at ambient conditions reduces the duration of each test. Most importantly, reducing the hold times reduces the

NON-CODE ALTERNATIVE TESTING VNC-04 (Cont.)

length of time that the test personnel must spend in close proximity to the valve. As a result, personnel radiation exposure is reduced.

For all safety and relief valves, including those located in "clean areas" that are in-situ/bench-tested in the Mechanical Maintenance Shop, the proposed elimination of the hold time between successive tests will reduce the duration of each test. Since there are numerous safety/relief valve tests for both units and most require at least two people, the proposed elimination of the hold time between successive tests is expected to also result in a significant cumulative reduction in limited manpower resources.

5.0 Alternative

For non-Code classed safety and relief valves tested under ambient conditions using test medium at ambient conditions, the 5-minute hold requirement between successive openings will be deleted.

In accordance with 1-8120(a), and 1-8130(a), the test medium used will be the same as the normal system operating fluid and temperature for which the valves in Table VNC-04 were designed. For liquid service this will be water. For compressible fluid services other than steam, this will be nitrogen. In both cases, the test stand and surrounding environment ambient temperature conditions are relatively fixed with negligible changes occurring over the set pressure and seat tightness test determinations. There is a negligible effect on valve setpoint due to minor temperature deviations that might occur at these conditions.

6.0 Duration of Alternative

The alternative described in Non-Code Alternative VNC-04 will be used for the North Anna Power Station Unit 1 Fifth Ten Year Inservice Testing Interval.

NON-CODE ALTERNATIVE TESTING VNC-04 (Cont.)

Table VNC-04

Valve Number	System	ASME	Test	Component Protected
1-CC-RV-104A	Component Cooling	NC	Water	Containment penetration
1-CC-RV-104B	Component Cooling	NC	Water	Containment penetration
1-CC-RV-104C	Component Cooling	NC	Water	Containment penetration
1-EG-RV-103A	Emergency Diesel Generator	NC	Water ¹	Diesel fuel pump oil discharge pipe
1-EG-RV-103B	Emergency Diesel Generator	NC	Water ¹	Diesel fuel pump oil discharge pipe
1-EG-RV-105A	Emergency Diesel Generator	NC	Water ¹	Diesel fuel pump oil discharge pipe
1-EG-RV-105B	Emergency Diesel Generator	NC	Water ¹	Diesel fuel pump oil discharge pipe
1-EG-RV-602HA	Emergency Diesel Generator	NC	Nitrogen	Air receiver tank
1-EG-RV-602HB	Emergency Diesel Generator	NC	Nitrogen	Air receiver tank
1-EG-RV-602JA	Emergency Diesel Generator	NC	Nitrogen	Air receiver tank
1-EG-RV-602JB	Emergency Diesel Generator	NC	Nitrogen	Air receiver tank
1-GN-RV-108A-1	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
1-GN-RV-108A-2	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
1-GN-RV-108A-3	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
1-GN-RV-108B-1	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
1-GN-RV-108B-2	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
1-GN-RV-108B-3	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
1-IA-RV-110	Instrument Air Supply	NC	Nitrogen	Containment penetration
1-IA-RV-111	Instrument Air Supply	NC	Nitrogen	Containment penetration

Note 1 - refer to VNC-03 for change in liquid from fuel oil to water.

5.0 Code Case Application Summary

Code Case OMN-20, Inservice Testing Frequency **(incorporated by reference in 10 CFR 50.55a)**

Purpose

This Code Case allows grace to be applied to Inservice Testing that may not be covered by Technical Specifications.

Background

ASME OM, Division 1, Section IST and all earlier editions and addenda specify component test frequencies based either on elapsed time periods (e.g., quarterly, 2 yr, ect.) or the occurrence of plant conditions or events (e.g., cold shutdown, refueling outage, upon detection of a sample failure, following maintenance, etc.).

- a) Components whose test frequencies are based on elapsed time periods shall be tested at the frequencies specified in Section IST with a specified time period between tests as shown in Table 1. The specified time period between tests may be reduced or extended as follows:
 - 1) For periods specified as fewer than 2 yr, the period may be extended by up to 25% for any given test.
 - 2) For periods specified as greater than or equal to 2 yr, the period may be extended by up to 6 months for any given test.
 - 3) All periods specified may be reduced at the discretion of the owner (i.e., there is no minimum period requirement).

Period extension is to facilitate test scheduling and considers plant operating conditions that may not be suitable for performance of the required testing (e.g., performance of the test would cause an unacceptable increase in the plant risk profile due to transient conditions or other ongoing surveillance, test, or maintenance activities). Period extensions are NOT intended to be used repeatedly merely as an operational convenience to extend test intervals beyond those specified.

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

- b) Components whose test frequencies are based on the occurrence of plant conditions or events may not have their period between tests extended except as allowed by the OM Code.

Table 1: Specified Test Frequencies.

Frequency	Specified Time Period Between Tests
Quarterly (every 3 months)	92 Days
Semiannually (every 6 months)	184 Days
Annually (every year)	366 Days
X Years	X calendar years where X is a whole number of years ≥ 2

Position

North Anna Inservice Testing will utilize either the Grace prescribed under the Technical Specifications or this Code Case as applicable, but not for convenience.

OMN-16, Revision 1, Use of a Pump Curve for Testing

Purpose

Code Case OMN-16 is advantageous when a pump is in operation and difficult to adjust a flow rate to a specific reference point due to system conditions. Under these conditions a range of flows can be used rather than a specific reference point to reduce the burden of manipulating system parameters.

Background

16 – 2100 Definitions

Maximum Pump Curve Range: The maximum potential flow or differential pressure range for the pump curve, from shutoff conditions to maximum required flow rate.

Reference Curve: A range of values of a test parameter versus flow or differential pressure, for a centrifugal or vertical line shaft pump, measured or determined when the pump is known to be operating acceptably.

16-3300 Establishing Reference Curves

Reference curves shall be obtained as follows:

- a) Initial reference curves shall be determined from the results of testing meeting the requirements of para. ISTB-3100, Preservice Testing, or from the results of testing performed in conjunction with the first inservice test.
- b) New or expanded reference curves shall be established as required by para. 16-3310, 16-3320, or subparagraph 16-6200(c).
- c) Reference curves shall only be established when the pump is known to be operating acceptably.
- d) The range of the reference curve shall be sufficient to bound the points of operation expected during subsequent tests. The reference curve shall be established within $\pm 20\%$ of pump design flow rate for the comprehensive pump test.
- e) A reference curve shall be established from a minimum of three data points and have at least one data point for each 20% of the maximum pump curve range for the portion of the maximum pump curve established by the reference curve.
 - 1) A reference curve shall be established with the independent variable on the x-axis and the dependent variable on the y-axis. Alternatively, the curve may be represented by an equation.
 - 2) If vibration is relatively unaffected by changing differential pressure of flow over the reference curve range, a single reference value may be used for that test quantity, provided it is at the minimum of the measured data.

- f) All subsequent test results shall be compared with the initial reference curves or new reference curves established in accordance with paragraph 16-3310, 16-3320, or subparagraph 16-6200(c).
- g) Related conditions that can significantly influence the measurement or determination of the data points used to establish the reference curve shall be analyzed in accordance with paragraph ISTB-6400.

If reference curves are used, the reasons for doing so and suitability of the methods used to develop the reference curves and acceptance criteria shall be justified and documented in the record of tests (see section ISTB-9000).

16-3310, Effect of Pump Replacement, Repair, and Maintenance on Reference Curves

When a reference curve(s) may have been affected by repair, replacement, or routine servicing of a pump, a new reference curve shall be determined in accordance with paragraph 16-3300 or the previous curve(s) reconfirmed by comprehensive or Group A test run before declaring the pump operable. The Owner shall determine whether the requirements of paragraph ISTB-3100, to reestablish reference curves, apply. Deviations between the previous and new reference curves shall be placed in the record of tests (see section ISTB-9000).

16-3320, Establishment of Expanded Reference Curves or Additional Reference Curves

If it is necessary or desirable, for some reason other than stated in paragraph 16-3310, to extend the current pump curve or establish an additional reference curve, an inservice test shall be run at the conditions of an existing set of reference values, or within the range of existing reference curves, and the results analyzed. If operation is acceptable, a second test run at the new reference conditions shall follow as soon as practicable. The results of this test shall establish the additional reference curves or be used to extend the range of the current reference curves. Whenever an additional set of reference curves, or extension of existing reference curves, is established, the reasons for so doing shall be justified and documented in the record of tests (see section ISTB-9000). The requirements of paragraph 16-3300 apply.

16-5120 / 16-5220, Inservice Test Procedure

An inservice test shall be conducted with the pump operating at the specified test conditions. The test parameters shown in Table ISTB-3000-1 shall be determined and recorded as directed in this paragraph. The test shall be conducted as follows:

- a) The pump shall be operated at nominal motor speed for constant speed drives and at a speed adjusted to the reference speed ($\pm 1\%$) for variable speed drives.
- b) Differential pressure, flow rate, and vibration (displacement or velocity, for Comprehensive or Group A tests) shall be determined and compared with the associated reference values from the reference curves. All deviations from the associated reference values shall be compared with the limits given in Table ISTB-5121-1 or ISTB-5221-1 and Figure ISTB-

5223-1 and corrective action taken as specified in paragraph 16-6200, Comparison may be done graphically as shown in Examples 1 and 2 of Figure 1.

- c) Vibration measurements shall be per the requirements of subparagraphs ISTB-5121(d), ISTB-5123(d), ISTB-5221(d), or ISTB-5223(d).

16-6200 Corrective Action

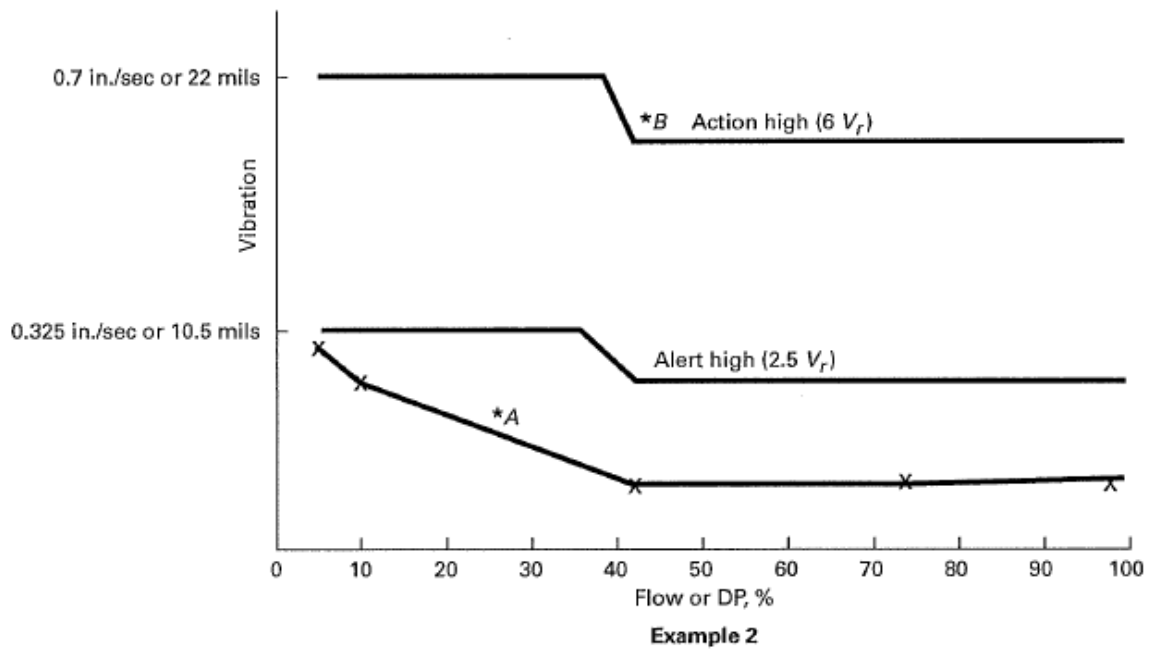
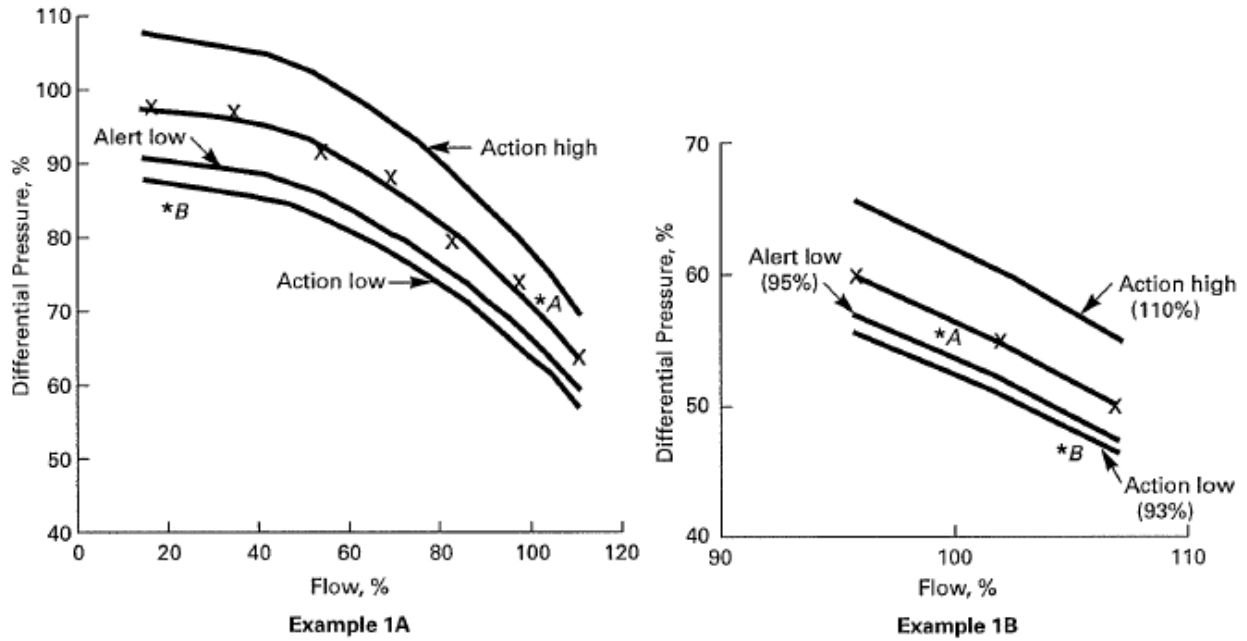
When using reference curves, determination of the values falling in the alert or required action ranges may be done graphically, as shown in Examples 1 and 2 of Figure 1.

- a) Alert Range. If the measured test parameter values fall within the alert range of Table ISTB-5121-1 or ISTV-5221-1, as applicable, the frequency of the testing specified in paragraph ISTB-3400 shall be doubled until the cause of the deviation is determined and the condition corrected.
- b) Required Action Range. If the measured test parameter values fall within the required action range of Table ISTB-5121-1 or ISTB-5221-1, as applicable, the pump shall be declared inoperable until either the cause of the deviation has been determined and the condition corrected, or an analysis of the pump is performed and new reference values are established in accordance with subparagraph ITB-6200(c).
- c) New Reference Curves. In cases where the pump's test parameters are within either the alert or required action ranges of Table ISTB-5121-1 or ISTB-5221-1, as applicable, and the pump's continued use at the changed values is supported by an analysis, a new set of reference curves may be established. This analysis shall include verification of the pump's operational readiness. The analysis shall include both a pump and system level evaluation of operational readiness, the cause of the change in pump performance, and an evaluation of all trends indicated by available data. The results of this analysis shall be documented in the record of tests (see section ISB-9000).

16-9500 Documentation of Code Case Usage

Use of this Code Case shall be documented in the test plans per paragraph ISTA-3100.

Figure 1. Examples of Graphical Evaluation of Tests Using Reference Curves



A = acceptable operation
B = required action
X = data points used to establish reference curve

Position

The pump tests in the below table will utilize a pump curve for testing in lieu of a reference point. Past vibration data for the subject pumps have been reviewed and it has been determined that pump vibration does not vary significantly with flow rate over the range of test flow rates.

Pump	Name	ASME Class	Pump Test
1-CC-P-1A 1-CC-P-1B	Component Cooling	3	Group A and Comprehensive
1-CH-P-1A 1-CH-P-1B 1-CH-P-1C	Charging Pump	2	Group A
1-SW-P-1A 1-SW-P-1B	Service Water Pump	3	Group A and Comprehensive

6.0 STATION TECHNICAL POSITIONS

Technical Position No.	Description
TP-01	Use of Normal Plant Operations to Verify Non-Safety Direction on Check Valves
TP-02	Fail Safe Testing of Valves
TP-03	Testing of Power Operated Control Valves
TP-04	Obturator Verification
TP-05	Technical Specification Required Stroke-Timing of Motor Operated Valves
TP-06	Motor Operated Valve Risk-Informed Exercise Test Frequency
TP-07	Valve Limiting Stroke Times
TP-08	RWST Isolation Valves

**Technical Position TP-01:
Use of Normal Plant Operations to Verify Non-Safety Direction on Check Valves**

Purpose

The purpose of this Technical Position is to establish the station position for the verification of the non-safety direction exercise testing of check valves by normal plant operations. This position applies to those check valves listed in Table TP-01 that are required to be tested in accordance with Subsection ISTC. This Technical Position does not apply to testing of the safety function (direction) of check valves included in the Inservice Testing Program.

Background

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

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

Section ISTC-3510 requires that check valves shall be exercised nominally every 3 months with exceptions (for extended periods) referenced. Extended test periods are identified as CSVs or RRVs in this Program Plan.

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

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

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

"Check valves that have a safety function in only the close direction shall be exercised by initiating flow and observing that the obturator has traveled [to] at least the partially open position, and verify that on cessation or reversal of flow, the obturator has traveled to the seat."

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

Normal or expected system flow may vary with plant configuration and alignment; however, the open "safety function" of a check valve typically requires a specified design accident flow rate or some other means to verify that the valve strokes to the full open position. Since the North Anna Operations staff is trained in recognizing normal plant conditions, Operator judgment is acceptable in determining the check valve non-safety direction by obtaining normal or expected flow rates for the plant operating condition.

Position

North Anna will verify the non-safety position of check valves included in the Inservice Testing Program. In lieu of a dedicated surveillance to perform the non-safety direction testing, the following alternate verification methods may be performed as follows:

1. Observation of plant processes that a check valve is satisfying its non-safety direction function may be used. One example is a check valve that has a safety function only in the closed direction and normally provides a flow path to maintain plant operations. If the check valve is not open to pass flow, an alarm or indication would identify a problem to the operator. The operator would respond to take appropriate actions. A Condition Report would then be generated for the abnormal plant condition which would identify the check valve failure.
2. Observation of plant logs and other records satisfied by Operator or Engineering reviews may be an acceptable method for verifying a check valves non-safety direction during normal plant operations.

The open or closed non-safety function shall be recorded at a frequency required by ISTC-3510, nominally every 3 months, with exceptions as provided as CSVs or RRVs, in plant records such as North Anna Operator Logs, chart recorders, station procedures, etc. The test frequencies given in Table TP-01 for the non-safety position are based on the frequency for the safety function position as allowed by ISTC-3522(a). According to ISTC-3522(a), "Open and close tests need only be performed at an interval when it is practicable to perform both tests."

Justification

This Technical Position requires that the method of determining the non-safety position be established and documented in the IST Program Plan. The plant systems and operator actions provide for the observations that the valve is satisfying its non-safety function. Additionally, the recording of parameters which demonstrate valve position is at a frequency in accordance with ISTC-3510. These actions collectively demonstrate the non-safety position of Inservice Testing Program check valves in regular use as required by ISTC-3550.

Table TP-01

Valve Number	System	ASME Class	Non-Safety Direction	Test Freq¹	Normal Operational Function	Alternate Position Verification Record
1-CC-84	Component Cooling	2	Open	RR	main CC supply to "A" RC pump coolers	Operator Log
1-CC-111	Component Cooling	3	Open	RR	CC supply to "A" RC pump thermal barrier cooler	Operator Log
1-CC-119	Component Cooling	2	Open	RR	main CC supply to "B" RC pump coolers	Operator Log
1-CC-146	Component Cooling	3	Open	RR	CC supply to "B" RC pump thermal barrier cooler	Operator Log
1-CC-154	Component Cooling	2	Open	RR	main CC supply to "C" RC pump coolers	Operator Log
1-CC-181	Component Cooling	3	Open	RR	CC supply to "C" RC pump thermal barrier cooler	Operator Log
1-CC-546	Component Cooling	2	Open	RR	CC supply to containment air coolers	Operator Log
1-CC-559	Component Cooling	2	Open	RR	CC supply to containment air coolers	Operator Log
1-CC-572	Component Cooling	2	Open	RR	CC supply to containment air coolers	Operator Log
1-CH-322	Chemical and Volume Control	1	Open	RR	main charging supply header	Operator Log

Valve Number	System	ASME Class	Non-Safety Direction	Test Freq ¹	Normal Operational Function	Alternate Position Verification Record
1-CH-336	Chemical and Volume Control	1	Open	RR	"A" RC pump seal water supply	Operator Log
1-CH-358	Chemical and Volume Control	1	Open	RR	"B" RC pump seal water supply	Operator Log
1-CH-380	Chemical and Volume Control	1	Open	RR	"C" RC pump seal water supply	Operator Log
1-EB-41	EDG Air System	NC	Open	03	1HA Air Dryer discharge check valve	Operator Log
1-EB-53	EDG Air System	NC	Open	03	1JA Air Dryer discharge check valve	Operator Log
1-EB-72	EDG Air System	NC	Open	03	1HB Air Dryer discharge check valve	Operator Log
1-EB-91	EDG Air System	NC	Open	03	1JB Air Dryer discharge check valve	Operator Log
1-FW-47	Feedwater	2	Open	CS	"A" main feedwater supply	Operator Log
1-FW-79	Feedwater	2	Open	CS	"B" main feedwater supply	Operator Log
1-FW-111	Feedwater	2	Open	CS	"C" main feedwater supply	Operator Log
1-IA-55	Instrument Air	2	Open	RR	main instrument air supply to containment	1-OP-46.3

Valve Number	System	ASME Class	Non-Safety Direction	Test Freq ¹	Normal Operational Function	Alternate Position Verification Record
1-IA-149	Instrument Air	2	Open	RR	radiation monitor system return to containment	1-OP-62.2
1-MS-NRV-101A	Main Steam	2	Open	CS	"A" main steam supply header	Operator Log
1-MS-NRV-101B	Main Steam	2	Open	CS	"B" main steam supply header	Operator Log
1-MS-NRV-101C	Main Steam	2	Open	CS	"C" main steam supply header	Operator Log
1-SI-66	Safety Injection	2	Open	RR	supply to boron injection tank	Operator Log
1-SI-106	Safety Injection	2	Open	RR	nitrogen supply to SI accumulators	1-OP-7.3
1-SI-110	Safety Injection	2	Open	RR	SI accumulator makeup supply	1-OP-7.3
1-WT-38	SG Chemical Feed	2	Open	03	"A" SG chemical feed supply	CH-12.914 CH-12.915 CH-12.916
1-WT-50	SG Chemical Feed	2	Open	03	"B" SG chemical feed supply	CH-12.914 CH-12.915 CH-12.916
1-WT-66	SG Chemical Feed	2	Open	03	"C" SG chemical feed supply	CH-12.914 CH-12.915 CH-12.916

¹ Test frequencies are based on the frequency of the safety direction test

Technical Position TP-02: Fail-Safe Testing of Valves

Purpose

The purpose of this Technical Position is to establish North Anna's position for fail-safe testing of valves in conjunction with stroke time exercising or position indication testing and applies to valves with fail-safe actuators required to be tested in accordance with ISTC-3560.

Background

The 2012 edition of the ASME OM Code section ISTC-3560 requires:

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

Paragraph ISTC-3510 States:

Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months...

Position

For valves with fail-safe actuators required to be tested in accordance with ISTC-3560 where normal valve operator action moves the valve to the open or closed position by de-energizing the operator electrically, by venting air, or both, the exercise test will satisfy the fail-safe test requirements and an additional test specific for fail-safe testing will not be performed.

Justification

Valves that fail open or closed upon loss of actuator power use the fail-safe mechanism to stroke the valve to its safety position. For example, an air operated valve that fails closed may use air to open the valve against spring force. When the actuator control switch is placed in the closed position, air is vented from the diaphragm and the spring moves the obturator to the closed position.

Technical Position TP-03: Testing of Power Operated Control Valves

Purpose

The purpose of this Technical Position is to identify power operated control valves that have only a fail-safe safety function.

Background

Code Case OMN-8 has been incorporated into the ASME OM Code in paragraph ISTC-5100:

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

Position

No stroke time testing is required for these valves since this function is excluded from testing based on ISTC-5100. The fail-safe function of these valves will be tested in accordance with the ASME OM Code requirements of ISTC-3560. The power operated control valves that have only a fail-safe safety function are identified in Table 1.

Justification

2012 edition of the ASME OM Code, paragraph ISTC-5100

Table 1. Power Operated Control Valves That Have Only a Fail-Safe Safety Function

Component ID	Description	OM Category	ASME Code Class
1-CH-FCV-1113A	Boric Acid to Blender System Flow Control Valve	B	3
1-CH-FCV-1114A	Primary Grade Water to Blender Flow Control Valve	B	NC
1-FW-HCV-100A 1-FW-HCV-100B 1-FW-HCV-100C	Standby Auxiliary Feedwater Supply Hand Control Valves	B	3
1-FW-PCV-159A 1-FW-PCV-159B	Auxiliary Feedwater Pressure Control Valves	B	3
1-HV-PCV-1235A1 1-HV-PCV-1235B1 1-HV-PCV-1235C1	Control Room Condenser Water Bypass Line Pressure Control Valves	B	3
1-HV-PCV-1235A2 1-HV-PCV-1235B2 1-HV-PCV-1235C2	Control Room Condenser Water Line Pressure Control Valves	B	3
1-MS-PCV-101A 1-MS-PCV-101B 1-MS-PCV-101C	Main Steam Header Discharge to Atmosphere Pressure Control Valves	B	2
1-RH-HCV-1758 1-RH-FCV-1605	RHR Heat Exchanger Flow Control Valves	B	2
1-SI-HCV-1936	Waste Gas from Accumulators to Charcoal Filter Line Hand Control Valve	A	2
1-SW-TCV-102A 1-SW-TCV-102B 1-SW-TCV-102C	Service Water from Charging Pump Lube Oil Cooler Temperature Control Valves	B	3

**Technical Position TP-04:
Obturator Verification 10 CFR 50.55a(b)(3)(xi)**

Purpose

To document the IST program position and process for verifying valve obturator position during position verification testing.

Background

The requirements for obturator verification are currently in flux and expected to change prior to the start of the fifth interval. Current requirements are driven by ISTC-3700, ISTC-3530, and 10 CFR 50.55a(b)(3)(xi). Dominion's position is documented here based on what is expected by future rulemaking that will take place after Dominion's submittal to the NRC, but prior to the start of the fifth interval. Current requirements to the OM Code are shown below:

1) ISTC-3530 Valve Obturator Movement:

The necessary valve obturator movement shall be determined by exercising the valve while observing an appropriate indicator, such as indicating lights that signal the required changes of obturator position, or by observing other evidence, such as changes in system pressure, flow rate, level, or temperature, that reflects change of obturator position.

2) ISTC-3700 Position Verification Testing:

Valves with remote position indicators shall be observed locally at least once every 2 yr to verify that valve operation is accurately indicated. Where practicable, this local observation should be supplemented by other indications such as use of flow meters or other suitable instrumentation to verify obturator position. These observations need not be concurrent. Where local observation is not possible, other indication shall be used for verification of valve operation.

Position verification for active MOVs shall be tested in accordance with Mandatory Appendix III of this Division.

3) 10 CFR 50.55a(b)(3)(xi) OM condition – Valve Position Indication:

When implementing paragraph ISTC-3700, "Position Verification Testing," in the ASME OM Code, 2012 Edition through the latest edition and addenda of the ASME OM Code incorporated by reference in paragraph (a)(1)(iv) of this section, licensees shall verify that valve operation is accurately indicated by supplementing valve position indicating lights with other indications, such as flow meters or other suitable instrumentation, or NRC-approved testing programs where justified with an acceptable interval to verify obturator position, to provide assurance of proper obturator position for valves with remote position indication within the scope of Subsection ISTC including its mandatory appendices and their verification methods and frequencies.

Position

Obturator verification is required on all active valves in the IST program and passive valves that have indicating lights on the main control board. The obturator verification test only needs to prove that the stem-disk integrity is intact. If the test requires that the valve needs to be tested in the open and closed direction the tests do not need to be concurrent. When a test is controlled by other regulatory approved test methods such as the Appendix J program, the test(s) can be performed on the frequency of the performance-based test method. The test can rely on changes to systems and components during normal plant operation provided that the change is documented with a plant record such as an operator log.

**Technical Specification TP-05:
Technical Specification Stroke Timing of Motor-Operated Valves**

Purpose

This Technical Position documents the Technical Specification requirements associated with stroke timing Motor-Operated Valves (MOV) for Unit 1 in the fifth IST interval for convenience.

Background

The 2012 edition of the ASME OM Code contains new Mandatory Appendix III for MOVs in the fifth IST interval. Stroke timing of MOVs is no longer a requirement due to the inherent nature of MOVs to not produce a degrading trend from stroke time testing. The NRC has placed a condition on Mandatory Appendix III as shown below:

- 1) 10 CFR 50.55a(b)(3)(ii)(D) Stroke Time:

When applying Paragraph III-3600, "MOV Exercising Requirements," of Appendix III to the ASME OM Code, licensees shall verify that the stroke time of MOVs specified in plant technical specifications satisfies the assumptions in the plant's safety analyses.

Position

Stroke timing on MOVs will be performed on the MOVs shown in Table 1 at a frequency that will coincide with the full cycle exercise (FCE) test. The stroke time test only needs to surpass the required stroke time listed in the site's technical specifications or licensing document and does not require trending. Stroke timing on an MOV is only required if there is a specific surveillance requirement in the site's Technical Specifications and there is a specific stroke time associated with the MOV in the site's licensing documents (UFSAR, TRM). The stroke time, and references associated with it, are listed in Table 1.

Table 1. MOVs Requiring Stroke Time Testing

Component ID	Required Stroke Time (seconds)	Open / Closed	TS Surveillance Requirement	Stroke Time Reference
01-CH-MOV-1380	25	Closed	3.6.3	TRM Table 4.1-1
01-CH-MOV-1381	25	Closed	3.6.3	TRM Table 4.1-1
01-FW-MOV-150A	60	Closed	3.7.3.1	TS SR 3.7.3.1
01-FW-MOV-150B	60	Closed	3.7.3.1	TS SR 3.7.3.1
01-FW-MOV-150C	60	Closed	3.7.3.1	TS SR 3.7.3.1
01-FW-MOV-154A	6.98	Closed	3.7.3.1	TS SR 3.7.3.1
01-FW-MOV-154B	6.98	Closed	3.7.3.1	TS SR 3.7.3.1
01-FW-MOV-154C	6.98	Closed	3.7.3.1	TS SR 3.7.3.1

Technical Position TP-06:
Motor Operated Valve Risk-Informed Full Cycle Exercise Test Frequency

Purpose

This Technical Position provides the background and basis for extending the Full Cycle Exercise (FCE) test required of Motor Operated Valves (MOV) from quarterly to either 18 months or 24 months.

Background

Mandatory Appendix III in the 2012 edition of the ASME OM Code allows Owners to implement a risk-informed testing program for motor operated valves per the requirements in section III-3700 and 10 CFR 50.55a(b)(3)(ii)(B).

Position

The 2012 edition of the ASME OM Code requires that LSSC MOVs receive a FCE test every 24M and HSSC receive the FCE test every 3M. If the Owner chooses to use a risk-informed approach the HSSC MOV FCE test can be extended out to as infrequent as every 24M if it is determined that the risk associated with CDF and LERF is acceptably small when extending exercise test intervals beyond a quarterly frequency.

With the implementation and merger of the MOV program with the IST program, the risk rankings assigned from the MOV program contain three tiers (high, medium, and low). The guidance for the FCE test in the ASME OM Code only allows for two tiers (high and low), so the high and medium classifications from the MOV program have all been grouped into the high category when making testing determinations for the FCE test.

With this guidance, and input from PRA, the risk associated with CDF and LERF was analyzed and determined to be acceptably small when extending the HSSC MOV FCE frequency from 3M to 18M for all of the HSSC MOV population. Since MSPI analysis is typically limited to within a fuel cycle the test interval frequency extension was also limited to the 18M fuel cycle rather than the Code allowed 24M. This analysis is documented in NOTEBK-PRA-NAPS-RA.047 and the applicable HSSC MOVs are listed in Table 1.

Justification

The FCE test frequency extension described in this Technical Position has been performed in accordance with III-3700 and 10 CFR 50.55a(b)(3)(ii)(B).

Table 1. HSSC Active MOVs

Component ID	Description	Valve Category	ASME Code Class
01-CH-MOV-1115B	CHARGING PUMP SUPPLY ISOLATION VALVE FROM REFUELING WATER STORAGE TANK	A	2
01-CH-MOV-1115C	CHARGING PUMP SUPPLY ISOLATION FROM VOLUME CONTROL TANK	B	2
01-CH-MOV-1115D	CHARGING PUMP SUPPLY ISOLATION VALVE FROM REFUELING WATER STORAGE TANK	A	2
01-CH-MOV-1115E	CHARGING PUMP SUPPLY ISOLATION VALVE FROM VOLUME CONTROL TANK	B	2
01-FW-MOV-100B	AFW MOV HEADER TO B S/G	B	3
01-FW-MOV-100D	TURBINE DRIVEN AFW PUMP TO A S/G	B	3
01-RC-MOV-1535	1-RC-PCV-1456 PORV BLOCK VALVE	B	1
01-RC-MOV-1536	1-RC-PCV-1455C PORV BLOCK VALVE	B	1
01-RH-MOV-1700	RHR PUMP SUPPLY ISOLATION FROM "A" HOT LEG, INSIDE MISSILE BARRIER	B	1
01-RH-MOV-1701	RHR PUMP SUPPLY ISOLATION FROM "A" HOT LEG, OUTSIDE MISSILE BARRIER	B	1
01-RH-MOV-1720A	RHR RETURN ISOLATION TO "B" ACCUMULATOR DISCHARGE LINE	B	1
01-RH-MOV-1720B	RHR RETURN ISOLATION TO "C" ACCUMULATOR DISCHARGE LINE	B	1
01-SI-MOV-1860A	1A LOW HEAD SI PUMP SUCTION ISOLATION FROM CONTAINMENT SUMP	B	2
01-SI-MOV-1860B	1B LOW HEAD SI PUMP SUCTION ISOLATION FROM CONTAINMENT SUMP	B	2
01-SI-MOV-1862A	1A LOW HEAD SI PUMP SUCTION FROM RWST	B	2
01-SI-MOV-1862B	1B LOW HEAD SI PUMP SUCTION FROM RWST	B	2

Component ID	Description	Valve Category	ASME Code Class
01-SI-MOV-1863A	1A LOW HEAD SAFETY INJECTION PUMP SUPPLY ISOLATION TO CHARGING PUMPS	B	2
01-SI-MOV-1863B	1B LOW HEAD SAFETY INJECTION PUMP SUPPLY ISOLATION TO CHARGING PUMPS	B	2
01-SI-MOV-1865A	1A SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG	B	2
01-SI-MOV-1865B	1B SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG	B	2
01-SI-MOV-1865C	1C SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG	B	2
01-SI-MOV-1867A	BORON INJECTION TANK HIGH HEAD SI INLET ISOLATION VALVE	B	2
01-SI-MOV-1867B	BORON INJECTION TANK HIGH HEAD SI INLET ISOLATION VALVE	B	2
01-SI-MOV-1867C	BORON INJECTION TANK OUTLET TO RCS COLD LEG, OUTSIDE CONTAINMENT ISOLATION VALVE	B	1
01-SI-MOV-1867D	BORON INJECTION TANK OUTLET TO RCS COLD LEG, OUTSIDE CONTAINMENT ISOLATION VALVE	B	1
01-SW-MOV-101A	A SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS	B	3
01-SW-MOV-101B	A SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS	B	3
01-SW-MOV-101C	B SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS	B	3
01-SW-MOV-101D	B SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS	B	3
01-SW-MOV-103A	A RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE	A	2

Component ID	Description	Valve Category	ASME Code Class
01-SW-MOV-103B	B RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
01-SW-MOV-103C	C RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
01-SW-MOV-103D	D RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
01-SW-MOV-104A	A RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
01-SW-MOV-104B	B RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
01-SW-MOV-104C	C RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
01-SW-MOV-104D	D RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
01-SW-MOV-105A	B SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS	B	3
01-SW-MOV-105B	B SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS	B	3
01-SW-MOV-105C	A SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS	B	3
01-SW-MOV-105D	A SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS	B	3
01-SW-MOV-108A	A SERVICE WATER SUPPLY HEADER ISOLATION TO COMPONENT COOLING HEAT EXCHANGERS	B	3
01-SW-MOV-108B	A SERVICE WATER SUPPLY HEADER ISOLATION TO COMPONENT COOLING HEAT EXCHANGERS	B	3

Technical Position TP-07: Stroke Time Limiting Values

Purpose

To document North Anna's position when utilizing limiting values associated with power operated valve stroke times.

Background

Subsection ISTC states that the limiting value(s) of full stroke time of each power operated valve shall be specified by the Owner. Stroke times that exceed this limiting value shall be immediately declared inoperable.

Position

When a valve does not have a specific design or licensing basis stroke time limit and has been assigned a limiting value based of this Technical Position the limiting values in Table 1 shall be applied.

A stroke time that falls within the 'normal' acceptance criteria and the limiting value shall be immediately retested or declared inoperable. If the second set of data meets the acceptance criteria, the cause of the initial deviation shall be analyzed, and the results documented in the record of tests. If the second set of data does not meet the acceptance criteria the valve should be declared inoperable.

Justification

Consistent with industry practice, Table 1 identifies the limiting stroke time values that should be applied to power operated valves that do not have more conservative criteria in their design or licensing basis as allowed by the OM Code.

Table 1. Stroke Time Limiting Values

Actuator Type	Reference Stroke Time (ST_r) Range	Limiting Stroke Time
Power Operated ¹	≤ 10.0 Seconds	2.0 x ST _r
Power Operated ¹	> 10.0 Seconds	1.5 x ST _r
Rapid Acting Valves	≤ 2.0 Seconds	≤ 2.0 Seconds

¹ Limiting stroke time values should not be applied to motor-operated valves

Technical Position TP-08: RWST Isolation Valves

Purpose

This Technical Position identifies those valves whose safety function includes providing isolation of the RWST and preventing the consequences of leakage from the containment sump from reaching the atmosphere through the RWST vent.

Background

During recirculation mode transfer, the RWST is isolated and the low head SI pumps recirculate highly contaminated water from the containment sump to the reactor vessel.

Position

According to ISTC-3630(f), valves or valve combinations with leakage rates exceeding the values specified by the Owner in ISTC-3630(e) shall be declared inoperable and be either repaired or replaced.

The RWST isolation valves listed in Table 1 work as a system of valves to protect the RWST from the contaminated sump water. Permissible valve leakage rates are based on each valve's possible contribution to the total allowable leakage rate to the RWST. When the leakages from each valve have been measured and summed, an individual valve's permissible leakage rate may have been exceeded, but the overall allowable leakage to the RWST may not have been exceeded. In these cases, a repair or replacement may not be necessary because the system of isolation valves has been verified to be performing adequately.

In addition to the repair or replacement as corrective actions, an evaluation can be performed which demonstrates that even if a valve has exceeded its permissible leakage rate, the overall leakage rate to the RWST will be maintained below the overall allowable RWST leakage rate hence the system function is satisfied. This evaluation should provide a high level of assurance that delaying the repair or replacement will not result in exceeding the overall limit before the next leak rate test. The evaluation should include a determination of the cause for the individual valve leakage. The evaluation should also address the effect of the degradation mechanism for the valve on the ability of the valve group to maintain overall leakage to the RWST below the overall allowable leakage rate during the subsequent 24-month test interval. Evaluations will be documented and retained in plant records and are available for subsequent review.

Justification

In addition to repair or replacement as corrective actions, an evaluation can be performed which demonstrates that even if a valve has exceeded its permissible leakage rate, the overall leakage

rate to the RWST will be maintained below the overall allowable RWST leakage rate.

Table 1. RWST Isolation Valves

Component ID	Description	OM Category	ASME Code Class
1-CH-MOV-1115B 1-CH-MOV-1115D	Charging Pump Supply Isolation Valve From Refueling Water Storage Tank	A	2
1-SI-47	RWST To Charging Pump Suction Header Check Valve	AC	2
1-SI-MOV-1885A 1-SI-MOV-1885B 1-SI-MOV-1885C 1-SI-MOV-1885D	Low Head SI Pump Minimum Flow/Test Line Isolation Valve	A	2

7.0 REPORTING OF INSERVICE TEST RESULTS

7.1 PUMP INSERVICE TESTING PROGRAM

A record of each pump will be maintained in accordance with ISTB-9100 that includes the following:

- 1) The manufacturer and the manufacturer's model and serial or other identification number,
- 2) A copy or summary of the manufacturer's acceptance test report if available,
- 3) A copy of the pump manufacturer's operating limits.

In addition to the requirements of ISTA-3120 and 3160, a record of inservice test plans and procedures will be maintained in accordance with ISTB-9200 that includes the following:

- 1) The identification of the pumps subject to testing,
- 2) The category of each pump,
- 3) The hydraulic circuit to be used,
- 4) The location and type of measurement for the required test parameters,
- 5) The method of determining test parameter values which are not directly measured by instrumentation.

A record of test results will be maintained in accordance with ISTA-9200.

A record of corrective action will be maintained in accordance with ISTA-9240 that includes a summary of the corrections made, the subsequent inservice tests and confirmation of operation adequacy, and the printed or typed name and signature of the individual responsible for the corrective action and verification of results.

The Pump Inservice Test Program, associated surveillance test procedures and results will be kept at North Anna Power Station. They will be available for audit by the NRC.

7.2 VALVE INSERVICE TESTING PROGRAM

A record of each valve will be maintained in accordance with ISTC-9110 that includes the following:

- 1) The manufacturer and the manufacturer's model and serial or other unique identification number,
- 2) A copy or summary of the manufacturer' acceptance test report if available,
- 3) Preservice test results and
- 4) Limiting value of full stroke time.

This IST Program Plan meets the requirements of ISTC-9200, Test Plans.

A record of test results will be maintained in accordance with ISTA-9230.

A record of corrective action will be maintained in accordance with ISTA-9240 that includes a summary of the corrections made, the subsequent inservice tests and confirmation of operation adequacy, and the printed or typed name and signature of the individual responsible for the corrective action and verification of results.

The Valve Inservice Test Program, associated surveillance test procedures and results will be kept at North Anna Power Station. They will be available for audit by NRC.

8.0 QUALITY ASSURANCE PROGRAM

The Pump and Valve Inservice Test Program activities will be conducted in accordance with the Technical Specifications for North Anna Power Station.

ENCLOSURE

Attachment 4

**Unit 2 Inservice Testing Program Plan for Pumps and Valves,
Fifth 10-Year Interval**

**Virginia Electric and Power Company
(Dominion Energy Virginia)
North Anna Power Station Unit 2**

DOMINION ENERGY

NORTH ANNA POWER STATION UNIT 2

INSERVICE TESTING PROGRAM PLAN

FOR PUMPS AND VALVES

FIFTH INSERVICE TESTING INTERVAL

DECEMBER 15, 2020 - DECEMBER 14, 2030

REVISION 0

COMMERCIAL OPERATION: DECEMBER, 1980

ADDRESSES:

DOMINION ENERGY
P.O. BOX 26666
RICHMOND, VIRGINIA 23261

NORTH ANNA POWER STATION
P. O. BOX 402
MINERAL, VIRGINIA 23117

DOCUMENT NUMBER – PLAN: U2 IST PROGRAM PLAN INTERVAL 5

TABLE OF CONTENTS

INSERVICE TESTING PROGRAM PLAN FOR PUMPS AND VALVES

1.0	INTRODUCTION
2.0	GENERAL PROGRAM DEVELOPMENT
2.1	Program Scope
2.2	Program Update
3.0	PUMP INSERVICE TEST PROGRAM DESCRIPTION
3.1	Program Development Philosophy
3.2	Program Implementation
3.3	Program Administration
3.4	Pump Reference List
3.5	Pump Inservice Test Table
3.6	Pump Test Program Relief Requests
3.7	Alternative Testing for Non-Code Pumps
4.0	VALVE INSERVICE TEST PROGRAM DESCRIPTION
4.1	Program Development Philosophy
4.2	Program Implementation
4.3	Program Administration
4.4	Valve Inservice Test Table
4.5	Valve Test Program Relief Requests
4.6	Valve Test Program Cold Shutdown Justifications
4.7	Valve Test Program Reactor Refueling Justifications
4.8	Alternative Testing for Non-Code Valves
5.0	CODE CASE APPLICATION SUMMARY
6.0	TECHNICAL POSITIONS
7.0	REPORTING OF INSERVICE TEST RESULTS
7.1	Pump Inservice Test Program
7.2	Valve Inservice Test Program
8.0	QUALITY ASSURANCE PROGRAM

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES

1.0	INTRODUCTION
-----	--------------

This Pump and Valve Inservice Test (IST) Program Plan is applicable to the North Anna Power Station Unit 2 which received its construction permit on February 19, 1971 and began commercial operation in December 1980. North Anna Power Station Unit 2 is a Pressurized Water Reactor located on Lake Anna in Louisa County, Virginia. The plant employs a Westinghouse Electric Corp. Nuclear Steam System.

The IST Program Plan is comprised of three subprograms – the IST Program for Pumps, the IST Program for Valves and the IST Program for Dynamic Restraints (Snubbers). The Snubber Program Plan is not included in this document. The development, implementation and administration of these programs are detailed in subsequent sections. This IST Program Plan applies to the fifth 10-year IST interval for North Anna Power Station Unit 2 which starts on December 15, 2020 and ends on December 14, 2030.

2.0 GENERAL PROGRAM DEVELOPMENT

The Code of Federal Regulations, paragraph 10 CFR 50.55a(f) describes the inservice testing requirements for pumps and valves which are within the scope of ISTA-1100. Paragraph 10 CFR 50.55a(f)(4)(ii) states that,

“Inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during successive 120-month intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (a)(1)(iv) of this section 12 months before the start of the 120-month interval (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147 or NRC Regulatory Guide 1.192 as incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section, respectively), subject to the conditions listed in paragraph (b) of this section.”

The Code of Federal Regulations, paragraph 10 CFR 50.55a(b)(3) refers to the ASME Code for Operation and Maintenance (OM) of Nuclear Power Plants and includes the 2012 Edition. The Code reference became effective on August 17, 2017 and applies to the fifth IST interval for North Anna Unit 2. The IST Program for the fifth IST interval complies with this edition.

The ASME OM Code requires that the owner of each nuclear power plant prepare a "plan" for testing and inspection of systems and components under the jurisdiction of 10 CFR 50.55a. The Code, Subsection ISTA, General Requirements, Subsection ISTB, Inservice Testing of Pumps, Subsection ISTC, Inservice Testing of Valves, Subsection ISTD, Preservice and Inservice Examination and Testing of Dynamic Restraints along with Appendix I, Inservice Testing of Pressure Relief Devices, Appendix II, Check Valve Condition Monitoring Program, Appendix III, Preservice and Inservice Testing of Active Electric Motor Operated Valve Assemblies and Appendix V, Pump Periodic Verification Test Program all apply to the IST program. Subsections ISTA, ISTB, ISTC and ISTD establish the IST program scope with the provision that the rules apply to ASME Code Classes 1, 2 and 3 and as well as Non-Code Class components as stated in the Code of Federal Regulations.

In accordance with ASME OM Code, the following are required to be included in the testing program:

- 1) Certain centrifugal pumps, centrifugal pumps with vertical line shafts and positive displacement pumps which are provided with an emergency power source and required to perform 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.
- 2) Certain valves and pressure relief devices (and their actuating and position indicating systems) which are required to perform 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.
- 3) Certain dynamic restraints (snubbers, pin to pin, inclusive) which are required to

perform a specific function in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition or mitigating the consequences of an accident.

In addition to the general Code requirements outlined above, there are other interpretations and positions that have come about as a result of past regulatory and licensee actions including Generic Letter 89-04 and NUREG-1482, Guidelines for Inservice Testing at Nuclear Power Plants. Other than these guides, there is no specific guidance for developing the IST Program scope of testing. Therefore, a process was established by which the scope of the North Anna ASME IST Program is determined including components that are to be included and the extent and type of testing required for each. Based on this process, the philosophy and assumptions used in determining the test requirements for selected pumps and valves were documented.

2.1 PROGRAM SCOPE

In the course of developing the program scope, each of the significant safety systems included within the ASME Code Class boundaries and certain safety systems outside of the ASME Code Class boundaries (such as the emergency diesel fuel oil transfer system) were evaluated with respect to the function of each component and the need for its operability as it relates to the scope of the ASME OM Code. Supporting documents used include,

- Final Safety Analysis Report (FSAR),
- Technical Specifications,
- USNRC Regulatory Guide 1.26, Revision 3,
- Past program correspondence,
- Operating Procedures (normal, emergency and abnormal) and
- Plant System Descriptions.

The sequence used during the development effort was as follows.

- 1) Each of the plant systems was subjected to an overview to determine any potential active safety function as described in the scope statement. Those systems with no safety functions related to the ASME OM Code scope were excluded from further consideration. Plant documents as well as operating staff comments were utilized in this phase.
- 2) For the remaining systems, flow diagrams were studied and components that could have an active or passive safety function (other than simply maintaining the pressure boundary) were identified for further evaluation.
- 3) The function of components identified from the flow diagrams was determined based on available documentation, staff review or general experience of the evaluator. Component test requirements were derived based on the component function(s) and Code requirements.

- 4) Available documents were reviewed and specific or implied component operational requirements were compared to the component functions.
- 5) The results of the steps described above were reviewed by several knowledgeable members of the plant staff and evaluated for accuracy and consistency and compiled in an IST basis document. Based on this review, the final program scope was derived and the IST Program Plan developed.

2.2 PROGRAM UPDATE

During the fifth IST interval, it is expected that the scope of the IST Program will occasionally be modified in response to activities including, but not limited to:

- 1) Plant design changes,
- 2) Changes in operating conditions (e.g. normal valve lineup),
- 3) Changes in accident mitigating procedure philosophy and
- 4) Later editions and addenda to the ASME OM Code.

As a result, it is expected that the IST Program will be revised to ensure continued compliance with the Code requirements relating to the scope of the test program. The IST Program Owner is provided copies of plant modifications that are designated by engineering to have a potential IST impact. Should a change require a program revision, the site IST Program owners would then implement the change to the program plan and the appropriate test procedure(s) in a timely manner.

3.0 PUMP INSERVICE TEST PROGRAM DESCRIPTION

3.1 PROGRAM DEVELOPMENT PHILOSOPHY

North Anna Technical Specification 5.5.7 describes the surveillance requirements that apply to the inservice testing of ASME Code Class 1, 2 and 3 pumps. The North Anna Unit 2 Inservice Testing (IST) Program for Pumps has been established to meet the requirements of 10 CFR 50, the ASME OM Code, Subsection ISTB, Mandatory Appendix V and Technical Specifications.

The scope of the program includes ASME Code Class 1, 2 and 3, and certain non-Code class pumps that are required to perform a specific function in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition or mitigating the consequences of an accident.

ISTB defines the rules and requirements of inservice testing of Code Class 1, 2, and 3 pumps and states that each pump to be tested by the rules of this subsection shall be identified by the owner and listed in the plant records.

The purpose of the IST Program Plan is to identify the pumps that are considered by Virginia Electric and Power Company (Dominion) as having a safety function and are therefore subject to the testing requirements of ISTB. The intent of the Code is to assess operational readiness and detect potentially adverse changes in the mechanical condition of these pumps. The relief requests for the IST Program Plan identify Code requirements considered to be impractical or for which an alternate testing method is proposed, provide technical basis for the request and propose alternate testing when warranted.

3.2 PROGRAM IMPLEMENTATION

Surveillance testing is performed to detect equipment malfunction or degradation and to initiate corrective action. The North Anna Power Station Unit 2 IST Program provides a schedule for testing safety-grade pumps and is implemented as part of normal periodic surveillance testing.

Reference data is gathered during initial surveillance tests. With the ASME OM Code, these initial reference tests can be a preservice test in accordance with ISTB-3100 or the first inservice test in accordance with ISTB-3200.

The ASME Code, ISTB-2000 defines pumps as either Group A pumps or Group B pumps. Group A pumps are pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operations. Group B pumps are pumps in standby systems that are not operated routinely except for testing.

The Code describes Group A and Group B testing requirements specific to Group A and Group B pumps. The Code also describes comprehensive test requirements. Comprehensive tests apply to both Group A and B pumps and

require more accurate pressure instrumentation (0.5% versus 2% for the Group A and B tests) but are performed on a less frequent basis.

The Group A test parameters include differential pressure (or discharge pressure for positive displacement pumps), flow rate, vibration and speed for variable speed pumps. The Group B test parameters include differential pressure for pumps other than positive displacement pumps, flow rate and speed for variable speed pumps. Differential pressure need not be measured for positive displacement pumps. The Group A and B test parameters are typically measured with normal plant instrumentation. Comprehensive test parameters include differential pressure (or discharge pressure for positive displacement pumps), flow rate, vibration and speed for variable speed pumps. The comprehensive test shall be performed at the comprehensive test flow rate. This reference value is defined as the flow rate established by the Owner that is effective for detecting mechanical and hydraulic degradation during subsequent testing. The best efficiency point, system flow rates, and any other plant-specific flow rates are considered. If practicable, Group A and B tests shall be performed at the comprehensive test flow rate. If not practicable, these tests shall be performed at the highest practical flow rate.

Group A and B inservice tests shall be performed every three months as required by Table ISTB-3400-1. Any deviation from this test frequency requires a request for relief from Code provisions. During subsequent surveillance tests, flow rate is normally selected as the independent test parameter and is set to match the reference flow rate. Other hydraulic and mechanical performance parameters are measured and evaluated against the appropriate reference values. The results of such evaluations determine whether or not corrective action is warranted. Comprehensive tests are performed at frequencies no greater than every two years in a manner similar to the Group A and B inservice tests.

Each pump in the IST Program is tested according to a detailed test procedure. The procedure includes, as a minimum:

- 1) References: This section identifies references applicable to Technical Specifications and other materials such as drawings needed to define the hydraulic circuit to be used for the test.
- 2) Purpose: This section identifies test objectives.
- 3) Initial Conditions: Each procedure should identify those independent actions or procedures which shall be completed and station conditions which shall exist prior to use.
- 4) Precautions: Precautions should be established to alert the individual performing the task to those situations in which important measures should be taken early or where extreme care should be used to protect equipment and personnel. Cautionary notes applicable to specific steps in the procedure should be included in the main body of the procedure as appropriate and should be identified as such.

- 5) Instructions: The main body of a procedure should contain step by step instructions in the degree of detail necessary for performing a required test. Included in this section is the location and type of measurement for the required test parameters and the method of determining test parameter values that are not directly measured by instrumentation.
- 6) Acceptance Criteria: The ranges within which test data are considered acceptable are established and included in the test procedure. In the event that data fall outside the acceptable range, operator action is governed by approved station procedures.

Finally, it is recognized that the IST Program for Pumps sets forth minimum testing requirements. Additional testing is performed, as required, after pump maintenance or as determined necessary by personnel at North Anna Power Station.

3.3 PROGRAM ADMINISTRATION

The engineering staff at North Anna is responsible for the administration of the IST Program for Pumps. The operations staff is responsible for performing the periodic tests as required by this program. The IST Program for Pumps is implemented by station periodic test procedures.

3.4 PUMP REFERENCE LIST

This list gives a brief description of each pump identified in the Pump IST Program.

1-CH-P-2C	Boric Acid Transfer Pumps
1-CH-P-2D	Drawing: 11715-CBM-095A, Sh 1 of 4

Description: These centrifugal pumps are used to supply concentrated boric acid to the blender; recirculate the contents of the boric acid storage tanks; recirculate the contents of the BIT, and for emergency boration. The boric acid transfer pumps operate at two constant speeds. The low speed is used when recirculating the contents of the boric acid storage tanks and BIT. The high speed (approximately double the low speed) is used during blended makeups and when the pumps discharge to the charging pump suction header during emergency boration events. The tests are conducted with the pumps on high speed. The pumps operate routinely during normal operation and are defined as Group A pumps.

2-CC-P-1A	Component Cooling Water Pumps
2-CC-P-1B	Drawing: 11715-CBM-079A, Sh 2 of 3

Description: These centrifugal pumps supply cooling water to transfer heat from heat exchangers containing reactor coolant or other radioactive fluids. The component cooling water pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

2-CH-P-1A High Head Safety Injection/Charging Pumps

2-CH-P-1B Drawing: 12050-CBM-095B, Sh 2 of 2

2-CH-P-1C

Description: These centrifugal pumps supply high pressure borated water to the reactor coolant system following a safety injection signal, and to provide normal charging to the reactor coolant system. The high head safety injection/charging pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance during the Group A test and fixed resistance during Comprehensive testing.

2-CH-P-2A Boric Acid Transfer Pumps

2-CH-P-2B Drawing: 12050-CBM-095A, Sh 1 of 4

Description: These centrifugal pumps are used to supply concentrated boric acid to the blender; recirculate the contents of the boric acid storage tanks; recirculate the contents of the BIT, and for emergency boration. The boric acid transfer pumps operate at two constant speeds. The low speed is used when recirculating the contents of the boric acid storage tanks and BIT. The high speed (approximately double the low speed) is used during blended makeups and when the pumps discharge to the charging pump suction header during emergency boration events. The tests are conducted with the pumps on high speed. These pumps operate routinely during normal operation and are defined as Group A pumps. For the purposes of quarterly testing, the flow path through the recirculation loop is characterized as a fixed resistance system. Comprehensive testing is performed every refueling outage through a variable resistance flow path.

2-EG-P-1HA Emergency Diesel Generator Fuel Oil Transfer Pumps

2-EG-P-1HB Drawing: 11715-FB-35A, Sh 2 of 2

2-EG-P-1JA

2-EG-P-1JB

Description: These positive displacement pumps supply fuel oil to the emergency

diesel generator fuel oil day tank which directly supplies the emergency diesel generator. The emergency diesel generator fuel oil pumps are in a standby system and are defined as Group B pumps and are included in the augmented IST program. The pumps are constant speed pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance. The pumps have one bearing housing located on the driver side of the rotor. There is no thrust bearing. Measurements will be taken in a plane approximately perpendicular to the rotating shaft in two approximately orthogonal directions on the one pump bearing housing.

2-FW-P-2	Auxiliary Feedwater Pumps
2-FW-P-3A	Drawing: 12050-CBM-074A, Sh 3 of 5
2-FW-P-3B	

Description: These centrifugal pumps supply auxiliary feedwater to the steam generators following a loss of normal feedwater flow. The auxiliary feedwater pumps are in a standby system and are defined as Group B pumps. The steam driven pump 1-FW-P-2 is a variable speed pump, and the motor driven pumps 1-FW-P-3A and 3B are constant speed pumps. Pump testing is performed through a test loop characterized as variable resistance.

2-HV-P-20A	Control and Relay Room Chilled Water Pumps
2-HV-P-20B	Drawing: 11715-CBB-040C, Sh 2 of 3
2-HV-P-20C	

Description: These centrifugal pumps circulate chilled water for the control and relay room cooling coils. The control and relay room chilled water pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

2-HV-P-22A	Control and Relay Room Condenser Water Pumps
2-HV-P-22B	Drawing: 11715-CBB-040D, Sh 2 of 3
2-HV-P-22C	

Description: These centrifugal pumps supply service water to the control and relay room air conditioning condenser water system. The control and relay room condenser water pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

2-QS-P-1A Quench Spray Pumps

2-QS-P-1B Drawing: 12050-CBM-091A, Sh 2 of 4

Description: These centrifugal pumps supply a borated, chemically treated spray to cool, remove iodine from, and depressurize the containment atmosphere following a containment depressurization actuation signal. The quench spray pumps are in a standby system and are defined as Group B pumps. The pumps are constant speed pumps. Pump testing is performed through a recirculation flow path characterized as fixed resistance.

2-RH-P-1A Residual Heat Removal Pumps

2-RH-P-1B Drawing: 12050-CBM-094A, Sh 1 of 2

Description: These centrifugal pumps remove decay heat from the reactor core and the reactor coolant system during plant cool down. The residual heat removal pumps are constant speed pumps that operate routinely during cold shutdowns and reactor refuelings and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

2-RS-P-1A Inside Recirculation Spray Pumps

2-RS-P-1B Drawing: 12050-CBM-091A, Sh 3 of 4

Description: These vertical line shaft centrifugal pumps supply a borated spray to cool and depressurize the containment atmosphere following a containment depressurization actuation signal and maintain containment subatmospheric following an accident. The inside recirculation spray pumps are in a standby system and are defined as Group B pumps. According to ISTB-3430, they require a comprehensive test at least once every two years and the Group B test is not required. Because the pumps are inside containment, they will receive the comprehensive test during reactor refueling outages. The pumps are constant speed pumps. Pump testing is performed through a test loop characterized as variable resistance.

2-RS-P-2A Outside Recirculation Spray Pumps

2-RS-P-2B Drawing: 12050-CBM-091A, Sh 4 of 4

Description: These vertical line shaft centrifugal pumps supply borated spray to cool and depressurize the containment atmosphere following a containment depressurization actuation signal and maintain containment subatmospheric following an accident. The outside recirculation spray pumps are in a standby

system and are defined as Group B pumps. According to ISTB-3430, they require a comprehensive test at least once every two years and the Group B test is not required. The pumps are constant speed pumps. Pump testing is performed through a test loop characterized as variable resistance.

2-RS-P-3A Casing Cooling Pumps

2-RS-P-3B Drawing: 12050-CBM-091B, Sh 1 of 1

Description: These centrifugal pumps supply cool borated water to the outside recirculation spray pumps to increase the net positive suction head of these pumps. The casing cooling pumps are in a standby system and are defined as Group B pumps. The pumps are constant speed pumps. Pump testing is performed through a recirculation loop, characterized as variable resistance.

2-SI-P-1A Low Head Safety Injection Pumps

2-SI-P-1B Drawing: 12050-CBM-096A, Sh 1 of 3

Description: These vertical line shaft centrifugal pumps supply low pressure borated water to the reactor coolant system following a safety injection signal. The low head safety injection pumps are in a standby system and are defined as Group B pumps. The pumps are constant speed pumps. The Group B test is performed through a recirculation loop and is characterized as fixed resistance. The comprehensive pump test is performed through the normal discharge flow path, characterized as variable resistance.

2-SW-P-1A Service Water Pumps

2-SW-P-1B Drawing: 11715-CBM-078A, Sh 3 of 5

Description: These vertical line shaft centrifugal pumps supply cooling water to the component cooling and recirculation spray heat exchangers as well as other safety related components. The service water pumps are constant speed pumps that operate routinely during normal operation and are defined as Group A pumps. Pump testing is performed through the normal discharge flow path, characterized as variable resistance.

3.5 PUMP INSERVICE TEST TABLE

The Pump Inservice Test Table identifies the pumps to be tested, code classes, required test quantities and frequencies. Relief from test requirements is requested in cases where test requirements are determined to be impractical. Where relief is requested, technical justification is provided along with alternative test methods when applicable. Relief requests are contained in Section 3.6.

Non-Code pumps are characterized as 'Augmented' within the IST Program. For non-Code class pumps, a request for relief is not necessary when provisions of the Code are determined to be impractical provided the basis for deviations from the ASME OM Code demonstrates an acceptable level of quality and safety, or that implementing the Code provisions would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Section 3.7 contains a discussion of the testing requirements for non-Code pumps and descriptions of alternative testing in cases where the provisions of the Code are not met.

To aid the reader in interpreting the Pump Inservice Test Table, brief explanations of the table headings and abbreviations are provided below.

<u>Pump Description</u>	Descriptive name of the pump.	
<u>Pump No.</u>	Unique pump identification number.	
<u>Drawing No. / COOR.</u>	Piping and Instrumentation Drawing (Flow Diagram) on which the pump is represented along with the P&ID Coordinate location.	
<u>Class</u>	ASME Code Class for the pump per RG 1.16.	
	1	Class 1
	2	Class 2
	3	Class 3
	NC	Non-Code Class
<u>Pump Type</u>	Pump type.	
	C-H	Centrifugal Horizontal
	C-V	Centrifugal Vertical
	VLS	Vertical Line Shaft Centrifugal
	PD	Positive Displacement

Pump Driver

Pump driver type.

MTR	Motor driven
TURB	Steam turbine driven
ENG	Engine Driven

Group

Pump Group as defined in ISTB-2000

A	Continuous/routinely operated pumps
B	Standby pumps not operated routinely except for testing

Test Type

Measured pump test parameters

DP	Differential Pressure
N	Speed
Q	Flow Rate
V	Vibration
PD	Discharge Pressure
C	Denotes a Comprehensive Pump Test

Test Freq

Frequencies for performing the specified inservice test:

3M	Quarterly (92 Days)
24M	Biennially (2 Years)
CS	Cold Shutdown
RR	Refueling Outage

Program

IST Program Type

Standard:	Requires a relief request to deviate from Code requirements
Augmented:	Is NOT a Code Class component

Relief Request

A relief request number, prefaced with a “P” is listed in the Notes column of the pump tables when a specific code requirement is determined to be impracticable. Relief requests are presented in Section 3.6.

Non-Code Alter Test

Non-Code alternative tests apply to pumps that are not ASME Code Class 1, 2 or 3. These tests are alternatives to Code tests and are described in Section 3.7 and are prefaced with “PNC” in the test tables.

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CH-P-2C	12050-CBM-095A SH-001 / B6	Standard	A	C-H	MTR	3	No	CH
DESCRIPTION: "2C" BORIC ACID TRANSFER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	P-03
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
01-CH-P-2D	12050-CBM-095A SH-001 / B6	Standard	A	C-H	MTR	3	No	CH
DESCRIPTION: "2D" BORIC ACID TRANSFER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	P-03
V	3M	P-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-CC-P-1A	11715-CBM-079A SH-002 / E6	Standard	A	C-H	MTR	3	No	CC
DESCRIPTION: "1A" COMPONENT COOLING PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-CC-P-1B	11715-CBM-079A SH-002 / C6	Standard	A	C-H	MTR	3	No	CC
DESCRIPTION: "1B" COMPONENT COOLING PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-CH-P-1A	12050-CBM-095B SH-002 / C4	Standard	A	C-H	MTR	2	No	CH
DESCRIPTION: "1A" CHARGING PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	
DP	3M	
Q	3M	
V	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-CH-P-1B	12050-CBM-095B SH-002 / C6	Standard	A	C-H	MTR	2	No	CH
DESCRIPTION: "1B" CHARGING PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-CH-P-1C	12050-CBM-095B SH-002 / C7	Standard	A	C-H	MTR	2	No	CH
DESCRIPTION: "1C" CHARGING PUMP								
				TEST	FREQUENCY		NOTES	
				C-DP	24M			
				C-Q	24M			
				C-V	24M			
				DP	3M			
				Q	3M			
				V	3M			

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-FW-P-2	12050-CBM-074A SH-003 / B8	Standard	B	C-H	TURB	3	Yes	FW
DESCRIPTION: TURBINE DRIVEN AUXILIARY FEEDWATER PUMP								
				TEST	FREQUENCY		NOTES	
				C-DP	24M			
				C-Q	24M			
				C-S	24M			
				C-V	24M			
				DP	3M			
				Q	3M			
				S	3M			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-FW-P-3A	12050-CBM-074A SH-003 / B6	Standard	B	C-H	MTR	3	No	FW
DESCRIPTION: " 3A" MOTOR DRIVEN AUX FEEDWATER PUMP								
				TEST	FREQUENCY		NOTES	
				C-DP	24M			
				C-Q	24M			
				C-V	24M			
				DP	3M			
				Q	3M			

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-FW-P-3B	12050-CBM-074A SH-003 / B5	Standard	B	C-H	MTR	3	No	FW
DESCRIPTION: " 3B" MOTOR DRIVEN AUX FEEDWATER PUMP								
				TEST	FREQUENCY		NOTES	
				C-DP	24M			
				C-Q	24M			
				C-V	24M			
				DP	3M			
				Q	3M			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-HV-P-20A	11715-CBB-040C SH-002 / E6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "20A" CONTROL ROOM CHILLER CHILL WATER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-HV-P-20B	11715-CBB-040C SH-002 / C4	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "20B" CONTROL ROOM CHILLER CHILL WATER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-HV-P-20C	11715-CBB-040C SH-002 / D6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "20C" CONTROL ROOM CHILLER CHILL WATER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-HV-P-22A	11715-CBB-040D SH-002 / E6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "22A" CONTROL ROOM CHILLER CONDENSER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-HV-P-22B	11715-CBB-040D SH-002 / B6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "22B" CONTROL ROOM CHILLER CONDENSER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-HV-P-22C	11715-CBB-040D SH-002 / D6	Standard	A	C-V	MTR	3	No	HV
DESCRIPTION: "22C" CONTROL ROOM CHILLER CONDENSER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-QS-P-1A	12050-CBM-091A SH-002 / B5	Standard	B	C-H	MTR	2	No	QS

DESCRIPTION: "1A" QUENCH SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	P-05
C-V	24M	
DP	3M	
Q	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-QS-P-1B	12050-CBM-091A SH-002 / B4	Standard	B	C-H	MTR	2	No	QS

DESCRIPTION: "1B" QUENCH SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	P-05
C-V	24M	
DP	3M	
Q	3M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-RH-P-1A	12050-CBM-094A SH-001 / D7	Standard	A	C-V	MTR	2	No	RH

DESCRIPTION: "1A" RESIDUAL HEAT REMOVAL PUMP

TEST	FREQUENCY	NOTES
C-DP	CS	P-02
C-Q	CS	P-02
C-V	CS	P-02 : P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-RH-P-1B	12050-CBM-094A SH-001 / D4	Standard	A	C-V	MTR	2	No	RH

DESCRIPTION: "1B" RESIDUAL HEAT REMOVAL PUMP

TEST	FREQUENCY	NOTES
C-DP	CS	P-02
C-Q	CS	P-02
C-V	CS	P-02 : P-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-RS-P-1A	12050-CBM-091A SH-003 / B7	Standard	B	VLS	MTR	2	No	RS

DESCRIPTION: "1A" INSIDE RECIRCULATION SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-RS-P-1B	12050-CBM-091A SH-003 / B4	Standard	B	VLS	MTR	2	No	RS

DESCRIPTION: "1B" INSIDE RECIRCULATION SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-RS-P-2A	12050-CBM-091A SH-004 / B4	Standard	B	VLS	MTR	2	No	RS

DESCRIPTION: "2A" OUTSIDE RECIRCULATION SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	P-04
C-V	24M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-RS-P-2B	12050-CBM-091A SH-004 / B3	Standard	B	VLS	MTR	2	No	RS

DESCRIPTION: "2B" OUTSIDE RECIRCULATION SPRAY PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	P-04
C-V	24M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-RS-P-3A	12050-CBM-091B SH-001 / B6	Standard	B	C-H	MTR	3	No	RS

DESCRIPTION: "3A" CASING COOLING PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-RS-P-3B	12050-CBM-091B SH-001 / B6	Standard	B	C-H	MTR	3	No	RS

DESCRIPTION: "3B" CASING COOLING PUMP

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-SI-P-1A	12050-CBM-096A SH-001 / C6	Standard	B	VLS	MTR	2	No	SI
DESCRIPTION: "1A" LOW HEAD SAFETY INJECTION PUMP								
				TEST	FREQUENCY		NOTES	
				C-DP	24M			
				C-Q	24M			
				C-V	24M			
				DP	3M			
				Q	3M			

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-SI-P-1B	12050-CBM-096A SH-001 / C4	Standard	B	VLS	MTR	2	No	SI
DESCRIPTION: "1B" LOW HEAD SAFETY INJECTION PUMP								
				TEST	FREQUENCY		NOTES	
				C-DP	24M			
				C-Q	24M			
				C-V	24M			
				DP	3M			
				Q	3M			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-SW-P-1A	11715-CBM-078A SH-003 / D4	Standard	A	VLS	MTR	3	No	SW
DESCRIPTION: "1A" SERVICE WATER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	
DP	3M	
Q	3M	
V	3M	

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-SW-P-1B	11715-CBM-078A SH-003 / D3	Standard	A	VLS	MTR	3	No	SW
DESCRIPTION: "1B" SERVICE WATER PUMP								

TEST	FREQUENCY	NOTES
C-DP	24M	
C-Q	24M	
C-V	24M	P-01
DP	3M	
Q	3M	
V	3M	P-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-EG-P-2HA	11715-FB-035A SH-002 / C8	Augmented	B	PD	MTR	NC	No	EG
DESCRIPTION: " 2HA" EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP								

TEST	FREQUENCY	NOTES
C-PD	24M	PNC-01
C-Q	24M	PNC-01
C-V	24M	PNC-01
PD	3M	PNC-01
Q	3M	PNC-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-EG-P-2HB	11715-FB-035A SH-002 / C6	Augmented	B	PD	MTR	NC	No	EG
DESCRIPTION: " 2HB" EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP								

TEST	FREQUENCY	NOTES
C-PD	24M	PNC-01
C-Q	24M	PNC-01
C-V	24M	PNC-01
PD	3M	PNC-01
Q	3M	PNC-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
PUMP INSERVICE TEST TABLE**

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-EG-P-2JA	11715-FB-035A SH-002 / F8	Augmented	B	PD	MTR	NC	No	EG
DESCRIPTION: " 2JA" EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP								

TEST	FREQUENCY	NOTES
C-PD	24M	PNC-01
C-Q	24M	PNC-01
C-V	24M	PNC-01
PD	3M	PNC-01
Q	3M	PNC-01

PUMP NO.	DRAWING NO./COOR.	PROGRAM	GROUP	TYPE	DRIVER	CLASS	VARIABLE SPEED	SYSTEM
02-EG-P-2JB	11715-FB-035A SH-002 / F6	Augmented	B	PD	MTR	NC	No	EG
DESCRIPTION: " 2JB" EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMP								

TEST	FREQUENCY	NOTES
C-PD	24M	PNC-01
C-Q	24M	PNC-01
C-V	24M	PNC-01
PD	3M	PNC-01
Q	3M	PNC-01

3.6 PUMP TEST PROGRAM RELIEF REQUESTS

Relief requests identify those ISTB Code requirements considered to be impractical or for which an alternative testing method is proposed. The basis for the relief request and the alternate testing to be performed is given.

Relief Request Number	Description
P-01	Smooth Running Pumps ($V_r \leq 0.50$ ips), OMN-22
P-02	RHR Pump Quarterly Testing
P-03	Boric Acid Transfer Pump Unmonitored Flow During Quarterly Testing
P-04	Outside Recirc Spray Pump PPV Flow Rate
P-05	Quench Spray Pump PPV Flow Rate

RELIEF REQUESTS TO BE INSERTED UPON APPROVAL

3.7 ALTERNATIVE TESTING FOR NON-CODE PUMPS

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

North Anna Power Station has elected to include certain non-Code components in the ASME IST program. Where the Code provisions are not met for non-Code components, alternative testing is performed that is adequate to ensure continued operability. The alternate testing is described in this section. There may be other deviations from Code provisions that are not described in this section. For these cases, documentation is available at the plant site.

NON-CODE ALTERNATIVE TESTING PNC-1

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Pump(s): 2-EG-P-2HA 2-EG-P-2JA
 2-EG-P-2HB 2-EG-P-2JB

System: Fuel Oil

Group: B

Class: NC

Function: These positive displacement pumps supply fuel oil to the emergency diesel generator fuel oil day tank which directly supplies the emergency diesel generator.

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

ISTB-3300, "Reference Values"

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

ISTB-3300(d) requires that reference values shall be established at a point(s) of operation (reference point) readily duplicated during subsequent tests.

ISTB-3300(f) requires that all subsequent test results shall be compared to these initial reference values or to new reference values established in accordance with ISTB-3310, ISTB-3320, or ISTB-6200(c).

NON-CODE ALTERNATIVE TESTING PNC-1 (Cont.)

ISTB-5320, "Inservice Testing" (Positive Displacement Pumps)

ISTB-5321(e) and ISTB-5323(e), "Group A Test Procedure and Comprehensive Test Procedure", require that all deviations from the reference values shall be compared with the ranges of Table ISTB-5321-1 and corrective action taken as specified in ISTB-6200. Vibration measurements shall be compared to both the relative and absolute criteria shown in the alert and required action ranges of Table ISTB-5321-1.

Table ISTB-3510-1 requires that pressure be measured with instruments accurate to within $\pm 0.5\%$ of full scale.

ISTB-3100 requires that before implementing inservice testing an initial set of reference values shall be established for each pump.

ISTB-3400 requires that a comprehensive pump test be run on each pump biennially as specified in Table ISTB-3400-1.

ISTB-5321 for positive displacement pumps requires that test quantities be measured after the pump has been running for at least two minutes.

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

4.0 Reason for Alternative

ISTB-3300 and ISTB-5320

The diesel fuel oil transfer pump groups listed in Section 1.0 tend to be smooth running pumps. Pumps 2-EG-P-1HA, 2-EG-P-1HB and 2-EG-P-1JB have at least one vibration reference value (V_r) that is currently less than 0.05 inches per second (ips). Small values for V_r produce small acceptable ranges for pump operation. The acceptable ranges are defined in Table ISTB-5300-1 as less than or equal to $2.5V_r$. Based on a small acceptable range, a smooth running pump could be subject to unnecessary corrective action.

For very small reference values, hydraulic noise and instrument error can be a significant portion of the reading and affect the repeatability of subsequent measurements. Also, experience gathered from the North Anna preventive maintenance program has shown that changes in vibration levels in the range of 0.05 ips do not normally indicate significant degradation in pump performance.

NON-CODE ALTERNATIVE TESTING PNC-1 (Cont.)

To avoid unnecessary corrective action, a minimum value for V_r of 0.05 ips has been established for velocity measurements. This minimum value will be applied to individual vibration locations for Pumps 2-EG-P-1HA, 2-EG-P-1HB, 2-EG-P-1JA and 2-EG-P-1JB where the measured reference value is less than 0.05 ips.

When new reference values are established per ISTB-3310, ISTB-3320 or ISTB-6200(c), the measured parameters will be evaluated for each location to determine if the provisions of this non-Code alternative test description still apply. If the measured V_r is greater than 0.05 ips, the requirements of ISTB-3300 will be applied. Conversely, if the measured V_r is less than 0.05 ips, a minimum value of 0.05 ips will be used for V_r even if the previous reference value was above 0.05 ips. This process will be applied to all of the EG pumps.

Table ISTB-3510-1

To comply with the pressure instrument accuracy requirement of $\pm 0.5\%$ for the preservice and comprehensive pump tests described in Table ISTB-3510-1, temporary pressure instrumentation must be installed. The permanently installed instruments do not meet the $\pm 0.5\%$ accuracy requirement. Using more accurate temporary pressure instruments with the diesel fuel oil supply system presents a hardship in that the diesel fuel oil contaminates the instruments. These instruments must then be dedicated for use with the diesel fuel oil transfer pumps and cannot be used with water systems.

ISTB-3500

The installed pressure instruments do meet the accuracy requirements of the Group A test which is $\pm 2\%$ of full scale. The Group A test requires the measurement of vibration as do the preservice test and the comprehensive test. Therefore, for the diesel fuel oil transfer pumps, the Group A test will provide a similar level of safety as the preservice and comprehensive tests.

ISTB-3510(b)(1)

The discharge pressure gauges have a full-scale range of 0 to 30 psig. Discharge pressure reference values range from 7.5 to 8.5 psig, less than the required 1/3 of full-scale or 10 psig. Test results show that the data is repeatable. Therefore, even though the reference values are less than 1/3 full-scale, the accuracy of the instruments provides acceptable results.

NON-CODE ALTERNATIVE TESTING PNC-1 (Cont.)

ISTB-5300(a)(1)

The pump operating time is limited due to operational restraints. While the diesels are running, these pumps start automatically when the fuel oil level in the day tank reaches the low level switch and stop when the level reaches the high level switch. The pump run time can vary depending upon the diesel load and the resulting fuel consumption rate. If the pumps are allowed to run for two minutes prior to measuring the test quantities and the fuel consumption rate is low, not enough time is available to gather all of the required ISTB test data.

5.0 Alternative

ISTB-3500 and Table ISTB-3510-1

The installed pressure instruments meet the accuracy requirements of the Group A test which is $\pm 2\%$ of full scale. The Group A test requires the measurement of vibration as does the preservice test and the comprehensive test. The current testing for the diesel fuel oil transfer pumps is performed at approximately 8 gpm which exceeds the system design required flow of 6.0 gpm. Application of criteria prescribed in Table ISTB 5321-1 establishes required action range pump performance thresholds that will ensure these pumps will continue meet system design flow requirements with adequate margin. Therefore, for the diesel fuel oil transfer pumps, the Group A test will provide a similar level of safety as the preservice and comprehensive tests.

As an alternative to performing the preservice tests, the diesel fuel oil transfer pumps will be subject to the requirements of the Group A test as described in ISTB-5321. As an alternative to performing the biennial comprehensive tests, the diesel fuel oil transfer pumps will be subject to biennial Group A tests as described in ISTB-5321.

ISTB-3510(b)(1)

Discharge pressure measurements will be performed with reference values slightly below the 1/3 full-scale requirement. Test results show that the data is repeatable. Therefore, even though the reference values are less than 1/3 full-scale, the accuracy of the instruments provides acceptable results.

Reference value = 8.0 psig
Full scale range = 30 psig
Instrument tolerance = ± 0.6 psig (± 2 percent x 30 psig)

Indicated accuracy at 1/3 full scale requirement is:
 ± 0.6 psig / 10 psig x 100 percent = 6.0 percent

Indicated accuracy at 8.0 psig is:
 ± 0.6 psig / 8 psig x 100 percent = 7.9 percent

NUREG-1482 Revision 2 Section 5.5.1 states "the staff may grant relief when the combination of the range and accuracy yields a reading that is at least equivalent to that achieved using instruments that meet the Code requirements (i.e., up to ± 6 percent for Group A and B tests". While the resulting indicated accuracy exceeds this ± 6 percent value, the accuracy of the instruments provides acceptable results.

ISTB-5300(a)(1)

As an alternative to performing the preservice tests, the diesel fuel oil transfer pumps will be subject to the requirements of the Group A test as described in ISTB-5321. As an alternative to performing the biennial comprehensive tests, the diesel fuel oil transfer pumps will be subject to biennial Group A tests as described in ISTB-5321. The Group A tests will be performed within 20% of the design flow rate.

The measurement of ISTB quantities will begin when the pump automatically starts on a low tank level signal.

6.0 Duration of Alternative

The alternative described in PNC-1 will be used for the North Anna Power Station Unit 2 Fifth Ten Year Inservice Testing Interval.

4.0 VALVE INSERVICE TESTING PROGRAM DESCRIPTION

4.1 PROGRAM DEVELOPMENT PHILOSOPHY

North Anna Technical Specification 5.5.7 describes the surveillance requirements that apply to the inservice testing of ASME Code Class 1, 2 and 3 valves. The North Anna Unit 2 Inservice Testing (IST) Program for Valves has been established to meet the requirements of 10 CFR 50, the ASME OM Code, Subsection ISTC, Mandatory Appendices I, II and III, and Technical Specifications.

The scope of the program includes ASME Class 1, 2 and 3, and certain non-Code class valves that are required to perform a specific function in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition or mitigating the consequences of an accident.

ISTC defines the rules and requirements of inservice testing of Code Class 1, 2, and 3 valves and states that each valve to be tested by the rules of this subsection shall be identified by the owner and listed in the plant records.

The purpose of the IST Program Plan is to identify the valves that are considered by Virginia Electric and Power (Dominion Energy) Company as having a safety function and are therefore subject to the testing requirements of ISTC. The intent of the Code is to assess operational readiness and detect potentially adverse changes in the mechanical condition of these valves. The relief requests for the IST Program Plan identify Code requirements considered to be impractical or for which an alternate testing method is proposed, provide technical basis for the request and propose alternate testing when warranted. The relief requests are presented in Section 4.5

North Anna Unit 2 is committed to meeting the leak rate testing requirements of:

- 1) 10 CFR 50, Appendix J, Option B for containment isolation valves and
- 2) ISTC for other valves for which seat leakage is limited to a specific maximum amount (i.e. pressure isolation valves) unless relief is specifically requested from ISTC requirements.

4.2 PROGRAM IMPLEMENTATION

The Valve Inservice Test Program is executed as part of the normal plant surveillance routine. Three types of tests are conducted as part of the Valve Test Program:

- 1) valve exercise tests
- 2) valve leakage tests and
- 3) safety valve tests

The exercise tests verify that:

- 1) the valve strokes properly,
 - 2) the valve responds to control commands,
 - 3) the valve stroke time is within specific limits and
 - 4) remote position indication accurately reflects the observed valve position.
- Remote valve position indication will be verified every two years.

Fail safe valves are tested by observing the valve operation upon loss of actuating power. In most cases, this can be accomplished using normal control circuits.

Obturator verification is accomplished exercising the valve while observing a variety of indicators, as permitted by section ISTC.

Power operated valves which are scheduled to be exercised during cold shutdown are subject to the requirements of ISTC-3521(g) which states that:

“valve exercising during cold shutdown shall commence within 48 hr of achieving cold shutdown and continue until all testing is complete or the plant is ready to return to operation at power. For extended outages, testing need not be commenced in 48 hr, provided all valves required to be tested during cold shutdown will be tested before or as part of plant startup.

Check valves which are scheduled to be exercised during cold shutdown are subject to the requirements of ISTC-3522(e) which is similar to ISTC-3521(g).

Relief and Safety valves are required to be tested to the requirements of ISTC, Appendix I.

Certain valves cannot be full stroke exercised during normal operation following maintenance. These valves are described in the cold shutdown justifications (refer to Section 4.6) and reactor refueling justifications (refer to Section 4.7). If maintenance cannot be deferred to a shutdown condition, then an engineering evaluation must be performed prior to the maintenance to determine the effect of the maintenance on valve performance. If the evaluation shows that performance will not be affected, then no post maintenance testing is required.

To test check valves to the full open position, the maximum required accident condition flow must be measured through the valve. In certain cases, this flow

cannot be practically established or verified. Per ISTC-5221(c), disassembly and inspection of the check valves on a sampling basis is an acceptable alternative testing method.

4.3 PROGRAM ADMINISTRATION

The engineering staff at North Anna is responsible for the administration of the IST Program for Valves. The operations staff is responsible for performing the periodic tests as required by this program. The IST Program for Valves is implemented by station periodic test procedures.

4.4 VALVE INSERVICE TEST TABLE

The Valve Inservice Test Tables provide the vehicle within the IST Valve Program by which the requirements of section ISTC and associated Mandatory Appendix I, Mandatory Appendix II and Mandatory Appendix III are met. Exceptions to those requirements outlined in associated relief requests presented in section 4.5 are reflected in the table as well. Where frequency requirements for valve testing have been determined to be impracticable, Alternate (Cold Shutdown, Reactor Refueling) Test Justifications have been developed and presented in sections 4.6 and 4.7.

For non-Code valves, a request for relief is not necessary when provisions of the Code are not met. Section 4.8 contains a discussion of the testing requirements for non-Code valves and descriptions of alternative testing in cases where the provisions of the Code are not met.

To aid the reader in the interpretation of the tables, brief explanations of the table headings and abbreviations are provided.

<u>Valve Description</u>	Descriptive name of the valve
<u>Valve No.</u>	A unique identifier for the valve
<u>Drawing No./COOR.</u>	Piping and Instrumentation Drawing (Flow Diagram) on which the valve is represented and the coordinate location
<u>Program</u>	Standard or Augmented IST Program component

Type

The valve body style abbreviation.

AN	Angle
BF	Butterfly
BA	Ball
CK	Check
DIA	Diaphragm
GA	Gate
GL	Globe
PLG	Plug
RV	Relief
SV	Safety

Actuator

The valve actuator type abbreviation.

AO	Air Operated
HO	Hydraulic Operated
MA	Manually Operated
MO	Motor Operated
MOL	Motor Operated – Low Risk
SA	Self Actuated
SO	Solenoid Operated

Size

The nominal pipe size of the valve, in inches.

Class

The Code Class abbreviations per RG 1.26.

1	Class 1
2	Class 2
3	Class 3

NA or NC

Non-Code Class

Category

The ASME OM Code category (or categories) as defined in ISTC-1300.

A	Seat Leakage Limited
B	Seat Leakage Not Required
C	Self-Actuating Valves
D	Single Use Valves
AC	Both Categories A and C
BC	Both Categories B and C
BL	PORV

ACT/PASS

Active or Passive function determination for the valve in accordance with ISTC-2000.

A	Active
P	Passive

NP

The Normal Position abbreviation. This refers to the valve's position during normal power operation. If the system does not operate during power operation, then the normal position is the position of the valve when the system is not operating.

C	Closed
LC	Locked Closed
LO	Locked Open
LT	Locked Throttled
O	Open
O/C	Open or Closed
SYS	System Condition Dependent

SP

The Safety Position(s) for the valve required to perform its function. For valves that perform safety functions in the open and closed positions more than one safety function position may be specified.

C	Closed
NA	Not Applicable
O	Open
O/C	Open and Closed

FP

The abbreviation for Fail Position.

C	Closed
FAI	Fails As Is
NA	Not Applicable
O	Open

Test

The test type abbreviation.

CVC	Check Valve Test Closed
CVO	Check Valve Test Open
DIAG	MOV Diagnostic Test
FCE	Full Cycle Exercise – full stroke of the valve from and back to its initial position
FSC	Fail-Safe Test - Closed
FSO	Fail-Safe Test - Open
LT	Category A Seat Leakage Test
LTJ	Appendix J Leak Test
LT5112	PORV Seat Leakage Test
PIT	Position Indication Test
RD	Rupture Disk Test
SP	Set Pressure Relief Valve Test
STC	Full-Stroke Exercise with Stroke Time Closed
STO	Full-Stroke Exercise with Stroke Time Open
TSP	Set Pressure Test for Thermal Relief Valve

Test Freq.

The required test frequency abbreviation.

3M	Quarterly
6M	Every 6 Months
24M	Every 2 Years
CM	Condition Monitoring
CS	Cold Shutdown
III	Per Mandatory Appendix III
J	Per Appendix J Program
OR	Every Other Refueling Outage
RR	Refueling Outage
NPO	Normal Plant Operation
60M	Every 5 Years
120M	Every 10 Years

Notes

The Notes section will provide information for a components test where an alternate frequency is established as allowed by the Code, or by an approved relief request. This area may also have other references such as a Technical Position.

Relief Request

A Relief Request number is listed when a specific code requirement is determined to be impracticable. Attachment 4.4 contains an index of the valve relief requests included in Attachment 4.5 and that are prefixed with a "V".

CSV

This lists the applicable Alternate Test Justification. This section refers to Cold Shutdown Justifications, justifications that differ from the ASME OM Code required testing frequency. Alternate Test Justifications at a Cold Shutdown frequency are provided in section 4.6.

RRV

This lists the applicable Alternate Test Justification. This section refers to Refueling Outage Justifications, justifications that differ from the ASME OM Code required testing frequency. Alternate Test Justifications at a refueling frequency are provided in section 4.7.

TP

A Technical Position number is listed when the requirements of the code are not easily interpreted or clarifying information is needed. The technical position is used to document how Code requirements are being implemented at the station. Technical Positions are prefixed with "TP". Technical positions are provided in section 6.0.

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--118	11715-CBM-095A SH-001 / C6	Standard	CK	SA	2	3	C	Active	OC	O	NA	CH
DESCRIPTION: "2C" BORIC ACID TRANSFER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-19			
							CVO	CS	CSV-19			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-CH--133	11715-CBM-095A SH-001 / C7	Standard	CK	SA	2	3	C	Active	OC	O	NA	CH
DESCRIPTION: "2D" BORIC ACID TRANSFER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-19			
							CVO	CS	CSV-19			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RP--50	11715-CBM-088A SH-003 / C7	Standard	DIA	MA	6	2	A	Passive	LC	C	NA	RP
DESCRIPTION: REFUELING PURIFICATION FROM REACTOR CAVITY TO RP PUMPS, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
01-RP--84	11715-CBM-088A SH-003 / D7	Standard	DIA	MA	6	2	A	Passive	LC	C	NA	RP
DESCRIPTION: REFUELING PURIFICATION FROM RP PUMPS TO REACTOR CAVITY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200A	12050-CBM-098A SH-002 / C6	Standard	GL	AO	3	2	A	Active	O	C	C	BD
DESCRIPTION: "A" STEAM GENERATOR BLOWDOWN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200B	12050-CBM-098A SH-002 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD
DESCRIPTION: "A" STEAM GENERATOR BLOWDOWN, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200C	12050-CBM-098A SH-003 / C6	Standard	GL	AO	3	2	A	Active	O	C	C	BD
DESCRIPTION: "B" STEAM GENERATOR BLOWDOWN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200D	12050-CBM-098A SH-003 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD
DESCRIPTION: "B" STEAM GENERATOR BLOWDOWN, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200E	12050-CBM-098A SH-004 / C6	Standard	GL	AO	3	2	A	Active	O	C	C	BD

DESCRIPTION: "C" STEAM GENERATOR BLOWDOWN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200F	12050-CBM-098A SH-004 / C5	Standard	GL	AO	3	2	A	Active	O	C	C	BD

DESCRIPTION: "C" STEAM GENERATOR BLOWDOWN, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200G	12050-CBM-098A SH-002 / C4	Standard	GL	AO	3	2	B	Active	O	C	C	BD

DESCRIPTION: "A" STEAM GENERATOR BLOWDOWN, HIGH FLOW TRIP VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200H	12050-CBM-098A SH-003 / C4	Standard	GL	AO	3	2	B	Active	O	C	C	BD
DESCRIPTION: "B" STEAM GENERATOR BLOWDOWN, HIGH FLOW TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-BD-TV-200J	12050-CBM-098A SH-004 / C4	Standard	GL	AO	3	2	B	Active	O	C	C	BD
DESCRIPTION: "C" STEAM GENERATOR BLOWDOWN, HIGH FLOW TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--10	11715-CBM-079A SH-002 / E6	Standard	CK	SA	18	3	C	Active	OC	OC	NA	CC
DESCRIPTION: "1A" COMPONENT COOLING PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--107	12050-CBM-079A SH-002 / C7	Standard	CK	SA	3	3	C	Active	O	C	NA	CC
DESCRIPTION: "1A" RC PUMP THERMAL BARRIER CC SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	NPO	RRV-17 : TP-01			
							CVC	RR	RRV-17			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--115	12050-CBM-079A SH-003 / F7	Standard	CK	SA	6	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1B" RC PUMP COMPONENT COOLING SUPPLY, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-01 : TP-01			
							CVC	RR	RRV-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--144	12050-CBM-079A SH-003 / C7	Standard	CK	SA	3	3	C	Active	O	C	NA	CC
DESCRIPTION: "1B" RC PUMP THERMAL BARRIER CC SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	NPO	RRV-17 : TP-01			
							CVC	RR	RRV-17			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--152	12050-CBM-079A SH-004 / F7	Standard	CK	SA	6	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1C" RC PUMP COMPONENT COOLING SUPPLY, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-01 : TP-01			
							CVC	RR	RRV-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--181	12050-CBM-079A SH-004 / C7	Standard	CK	SA	3	3	C	Active	O	C	NA	CC
DESCRIPTION: "1B" RC PUMP THERMAL BARRIER CC SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	NPO	RRV-17 : TP-01			
							CVC	RR	RRV-17			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--194	12050-CBM-079A SH-001 / F7	Standard	CK	SA	18	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1A" RHR HEAT EXCHANGER CC SUPPLY HEADER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-19			
							CVO	RR	RRV-19			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--199	12050-CBM-079A SH-001 / F7	Standard	CK	SA	18	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1B" RHR HEAT EXCHANGER CC SUPPLY HEADER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-19			
							CVO	RR	RRV-19			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--27	11715-CBM-079A SH-002 / D6	Standard	CK	SA	18	3	C	Active	OC	OC	NA	CC
DESCRIPTION: "1B" COMPONENT COOLING PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--276	12050-CBM-079B SH-003 / E8	Standard	CK	SA	6	2	AC	Active	O	C	NA	CC
DESCRIPTION: "2A" RECIRC AIR COOLER, CW SUPPLY OUTSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-16 : TP-01			
							CVC	RR	RRV-16			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--289	12050-CBM-079B SH-003 / D8	Standard	CK	SA	6	2	AC	Active	O	C	NA	CC
DESCRIPTION: "2B" RECIRC AIR COOLER, CW SUPPLY OUTSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-16 : TP-01			
							CVC	RR	RRV-16			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--302	12050-CBM-079B SH-003 / C8	Standard	CK	SA	6	2	AC	Active	O	C	NA	CC
DESCRIPTION: "2C" RECIRC AIR COOLER, CW SUPPLY OUTSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-16 : TP-01			
							CVC	RR	RRV-16			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC--78	12050-CBM-079A SH-002 / F7	Standard	CK	SA	6	2	AC	Active	O	OC	NA	CC
DESCRIPTION: "1A" RC PUMP COMPONENT COOLING SUPPLY, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVO	NPO	RRV-01 : TP-01			
							CVC	RR	RRV-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-MOV-200A	12050-CBM-079A SH-001 / A3	Standard	BF	MO	18	3	B	Passive	TH	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER RETURN THROTTLING VALVE FROM "1A" RHR HEAT EXCHANGER												
								TEST	FREQUENCY	Notes		
								PIT	24M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-MOV-200B	12050-CBM-079A SH-001 / B3	Standard	BF	MO	18	3	B	Passive	TH	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER RETURN THROTTLING VALVE FROM "1B" RHR HEAT EXCHANGER												
								TEST	FREQUENCY	Notes		
								PIT	24M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-224A	12050-CBM-079A SH-002 / F6	Standard	TRV	SA	3	3	C	Active	C	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER TO REACTOR SHROUD COOLERS RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-224B	12050-CBM-079A SH-003 / F6	Standard	TRV	SA	3	3	C	Active	C	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER TO REACTOR SHROUD COOLERS RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-224C	12050-CBM-079A SH-004 / F6	Standard	TRV	SA	3	3	C	Active	C	O	NA	CC
DESCRIPTION: COMPONENT COOLING WATER TO REACTOR SHROUD COOLERS RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-225A	12050-CBM-079A SH-002 / C6	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1A" RC PUMP THERMAL BARRIER CC INLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-225B	12050-CBM-079A SH-003 / C6	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1B" RC PUMP THERMAL BARRIER CC INLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-225C	12050-CBM-079A SH-004 / C6	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1C" RC PUMP THERMAL BARRIER CC INLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-226	12050-CBM-079A SH-005 / C6	Standard	TRV	SA	1	3	C	Active	C	O	NA	CC
DESCRIPTION: EXCESS LETDOWN HEAT EXCHANGER CC OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-228A	12050-CBM-079A SH-001 / E3	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1A" RHR HEAT EXCHANGER COMPONENT COOLING RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-228B	12050-CBM-079A SH-001 / D3	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1B" RHR HEAT EXCHANGER COMPONENT COOLING RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-231A	12050-CBM-079A SH-005 / C4	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1A" RHR PUMP SEAL COOLER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-231B	12050-CBM-079A SH-005 / B4	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	CC
DESCRIPTION: "1B" RHR PUMP SEAL COOLER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-200A	12050-CBM-079B SH-003 / E3	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2A" RECIRC AIR COOLER CW RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-200B	12050-CBM-079B SH-003 / D4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2B" RECIRC AIR COOLER CW RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-200C	12050-CBM-079B SH-003 / C4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2C" RECIRC AIR COOLER CW RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-201A	12050-CBM-079A SH-001 / D7	Standard	GL	AO	4	2	A	Active	O	C	C	CC
DESCRIPTION: RC PUMPS THERMAL BARRIERS CC RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-01			
							STC	CS	CSV-01			
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-201B	12050-CBM-079A SH-001 / D6	Standard	GL	AO	4	2	A	Active	O	C	C	CC

DESCRIPTION: RC PUMPS THERMAL BARRIERS CC RETURN, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-202A	12050-CBM-079A SH-004 / A5	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1C" RC PUMP COMPONENT COOLING RETURN, OUTSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-202B	12050-CBM-079A SH-004 / A3	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1C" RC PUMP COMPONENT COOLING RETURN, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-202C	12050-CBM-079A SH-003 / A5	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1B" RC PUMP COMPONENT COOLING RETURN, OUTSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-202D	12050-CBM-079A SH-003 / A3	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1B" RC PUMP COMPONENT COOLING RETURN, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-202E	12050-CBM-079A SH-002 / A5	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1A" RC PUMP COMPONENT COOLING RETURN, OUTSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-202F	12050-CBM-079A SH-002 / A3	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1A" RC PUMP COMPONENT COOLING RETURN, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-203A	12050-CBM-079A SH-001 / A7	Standard	BF	AO	18	2	A	Active	O	OC	C	CC

DESCRIPTION: "1A" RHR HEAT EXCHANGER CC RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
STO	3M	
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-203B	12050-CBM-079A SH-001 / B7	Standard	BF	AO	18	2	A	Active	O	OC	C	CC

DESCRIPTION: "1B" RHR HEAT EXCHANGER CC RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
STO	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-204A	12050-CBM-079A SH-002 / E8	Standard	BF	AO	8	2	A	Active	O	C	C	CC

DESCRIPTION: "1A" RC PUMP COMPONENT COOLING SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-01
STC	CS	CSV-01
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-204B	12050-CBM-079A SH-003 / E8	Standard	BF	AO	8	2	A	Active	O	C	C	CC
DESCRIPTION: "1B" RC PUMP COMPONENT COOLING SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-01			
							STC	CS	CSV-01			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-204C	12050-CBM-079A SH-004 / E8	Standard	BF	AO	8	2	A	Active	O	C	C	CC
DESCRIPTION: "1C" RC PUMP COMPONENT COOLING SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-01			
							STC	CS	CSV-01			
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-205A	12050-CBM-079B SH-003 / E4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2A" RECIRC AIR COOLER CW RETURN INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-205B	12050-CBM-079B SH-003 / D4	Standard	BF	AO	6	2	A	Active	O	C	C	CC
DESCRIPTION: "2B" RECIRC AIR COOLER CC RETURN INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-TV-205C	12050-CBM-079B SH-003 / C4	Standard	BF	AO	6	2	A	Active	O	C	C	CC

DESCRIPTION: "2C" RECIRC AIR COOLER CC RETURN INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CD--163	11715-CBB-040C SH-002 / E6	Standard	CK	SA	3	3	C	Active	OC	O	NA	CD

DESCRIPTION: CONTROL ROOM CHILLED WATER SYSTEM PUMP 20A DISCHARGE CHECK VALVE

TEST	FREQUENCY	Notes
CVC	RR	RRV-25
CVO	RR	RRV-25

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CD--187	11715-CBB-040C SH-002 / D6	Standard	CK	SA	3	3	C	Active	OC	O	NA	CD

DESCRIPTION: CONTROL ROOM CHILLED WATER SYSTEM PUMP 20C DISCHARGE CHECK VALVE

TEST	FREQUENCY	Notes
CVC	RR	RRV-25
CVO	RR	RRV-25

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CD--211	11715-CBB-040C SH-002 / C4	Standard	CK	SA	3	3	C	Active	OC	O	NA	CD
DESCRIPTION: CONTROL ROOM CHILLED WATER SYSTEM PUMP 20B DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-25			
							CVO	RR	RRV-25			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--153	12050-CBM-095B SH-001 / B6	Standard	CK	SA	4	2	AC	Active	O	OC	NA	CH
DESCRIPTION: CHARGING PUMP SUPPLY FROM VOLUME CONTROL TANK ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVO	3M	RRV-20			
							CVC	RR	RRV-20			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--155	12050-CBM-095B SH-001 / C3	Standard	CK	SA	1	3	C	Active	C	O	NA	CH
DESCRIPTION: 2-CH-FCV-2113A OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-26			
							CVO	RR	RRV-26			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--156	12050-CBM-095B SH-001 / B4	Standard	DIA	MA	1	2	B	Active	C	O	NA	CH
DESCRIPTION: MANUAL EMERGENCY BORATION LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--157	12050-CBM-095B SH-001 / B4	Standard	CK	SA	1	2	C	Active	C	O	NA	CH
DESCRIPTION: MANUAL EMERGENCY BORATION LINE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-07			
							CVO	CM	CM-07			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--159	12050-CBM-095B SH-001 / B5	Standard	CK	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: EMERGENCY BORATION LINE TO CHARGING PUMP SUCTION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-07			
							CVO	CM	CM-07			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--176	12050-CBM-095B SH-002 / D4	Standard	CK	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: "1A" CHARGING PUMP DISCHARGE RECIRC LINE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-29			
							CVO	RR	RRV-29			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--178	12050-CBM-095B SH-002 / D4	Standard	CK	SA	3	2	C	Active	OC	OC	NA	CH
DESCRIPTION: "1A" CHARGING PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	RR	RRV-14			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--191	12050-CBM-095B SH-002 / D6	Standard	CK	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: "1B" CHARGING PUMP DISCHARGE RECIRC LINE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-29			
							CVO	RR	RRV-29			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--193	12050-CBM-095B SH-002 / D6	Standard	CK	SA	3	2	C	Active	OC	OC	NA	CH
DESCRIPTION: "1B" CHARGING PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	RR	RRV-14			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--206	12050-CBM-095B SH-002 / D7	Standard	CK	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: "1C" CHARGING PUMP DISCHARGE RECIRC LINE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-29			
							CVO	RR	RRV-29			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--208	12050-CBM-095B SH-002 / D7	Standard	CK	SA	3	2	C	Active	OC	OC	NA	CH
DESCRIPTION: "1C" CHARGING PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	RR	RRV-14			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--260	12050-CBM-095C SH-002 / B8	Standard	CK	SA	2	1	C	Active	O	C	NA	CH
DESCRIPTION: "1A" RC PUMP SEAL INJECTION, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	NPO	RRV-02 : TP-01			
							CVC	RR	RRV-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--284	12050-CBM-095C SH-002 / B7	Standard	CK	SA	2	1	C	Active	O	C	NA	CH
DESCRIPTION: "1B" RC PUMP SEAL INJECTION, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	NPO	RRV-02 : TP-01			
							CVC	RR	RRV-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--308	12050-CBM-095C SH-002 / B5	Standard	CK	SA	2	1	C	Active	O	C	NA	CH
DESCRIPTION: "1C" RC PUMP SEAL INJECTION, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	NPO	RRV-02 : TP-01			
							CVC	RR	RRV-02			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--331	12050-CBM-095C SH-002 / F4	Standard	CK	SA	0.75	2	AC	Active	C	OC	NA	CH

DESCRIPTION: RC PUMP SEAL WATER RETURN, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVO	NPO	RRV-02
CVC	RR	RRV-02

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--332	12050-CBM-095C SH-001 / A5	Standard	CK	SA	2	1	C	Active	C	C	NA	CH

DESCRIPTION: LOOP FILL HEADER, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
CVC	RR	RRV-02
CVO	RR	RRV-02

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--335	12050-CBM-095C SH-001 / D4	Standard	CK	SA	3	1	C	Active	C	OC	NA	CH

DESCRIPTION: NORMAL CHARGING SUPPLY HEADER, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
CVO	NPO	RRV-02 : TP-01
CVC	RR	RRV-02

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--408	12050-CBM-095B SH-002 / E4	Standard	GA	MA	4	2	B	Active	C	O	NA	CH
DESCRIPTION: CHARGING PUMP CROSS CONNECT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH--495	12050-CBM-095B SH-001 / B6	Standard	CK	SA	2	2	AC	Active	O	OC	NA	CH
DESCRIPTION: CHARGING PUMP RECIRC AND RCP SEAL WATER RETURN LINE ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-20			
							CVO	RR	RRV-20			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-FCV-2113A	12050-CBM-095B SH-001 / C3	Standard	GL	AO	1	3	B	Active	C	O	O	CH
DESCRIPTION: Boric Acid to Blender System Flow Control Valve												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSO	3M	TP-03			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-LCV-2460A	12050-CBM-095C SH-001 / F7	Standard	GL	AO	3	1	B	Active	O	C	C	CH
DESCRIPTION: LETDOWN ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-02			
							STC	CS	CSV-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-LCV-2460B	12050-CBM-095C SH-001 / F7	Standard	GL	AO	3	1	B	Active	O	C	C	CH
DESCRIPTION: LETDOWN ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-02			
							STC	CS	CSV-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2115B	12050-CBM-095B SH-002 / B8	Standard	GA	MO	8	2	A	Active	C	OC	NA	CH
DESCRIPTION: CHARGING PUMP SUPPLY ISOLATION VALVE FROM REFUELING WATER STORAGE TANK												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2115C	12050-CBM-095B SH-001 / C6	Standard	GA	MO	4	2	B	Active	O	C	NA	CH

DESCRIPTION: CHARGING PUMP SUPPLY ISOLATION FROM VOLUME CONTROL TANK

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2115D	12050-CBM-095B SH-002 / B8	Standard	GA	MO	8	2	A	Active	C	OC	NA	CH

DESCRIPTION: CHARGING PUMP SUPPLY ISOLATION VALVE FROM REFUELING WATER STORAGE TANK

TEST	FREQUENCY	Notes
FCE	18M	TP-06
LT	24M	TP-08
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2115E	12050-CBM-095B SH-001 / C6	Standard	GA	MO	4	2	B	Active	O	C	NA	CH

DESCRIPTION: CHARGING PUMP SUPPLY ISOLATION VALVE FROM VOLUME CONTROL TANK

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2267A	12050-CBM-095B SH-002 / C3	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1A" CHARGING PUMP NORMAL SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2267B	12050-CBM-095B SH-002 / C3	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1A" CHARGING PUMP ALTERNATE SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2269A	12050-CBM-095B SH-002 / C5	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1B" CHARGING PUMP NORMAL SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2269B	12050-CBM-095B SH-002 / C5	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1B" CHARGING PUMP ALTERNATE SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2270A	12050-CBM-095B SH-002 / C7	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1C" CHARGING PUMP NORMAL SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2270B	12050-CBM-095B SH-002 / C7	Standard	GA	MO	6	2	B	Passive	O	O	NA	CH
DESCRIPTION: "1C" CHARGING PUMP ALTERNATE SUCTION HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2275A	12050-CBM-095B SH-002 / D4	Standard	GL	MOL	2	2	B	Active	O	OC	NA	CH
DESCRIPTION: "1A" CHARGING PUMP MINIMUM RECIRCULATION ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2275B	12050-CBM-095B SH-002 / D5	Standard	GL	MOL	2	2	B	Active	O	OC	NA	CH

DESCRIPTION: "1B" CHARGING PUMP MINIMUM RECIRCULATION ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2275C	12050-CBM-095B SH-002 / D7	Standard	GL	MOL	2	2	B	Active	O	OC	NA	CH

DESCRIPTION: "1C" CHARGING PUMP MINIMUM RECIRCULATION ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2286A	12050-CBM-095B SH-002 / E4	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH

DESCRIPTION: "1A" CHARGING PUMP NORMAL DISCHARGE HEADER ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2286B	12050-CBM-095B SH-002 / E6	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH

DESCRIPTION: "1B" CHARGING PUMP NORMAL DISCHARGE HEADER ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2286C	12050-CBM-095B SH-002 / E7	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH

DESCRIPTION: "1C" CHARGING PUMP NORMAL DISCHARGE HEADER ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2287A	12050-CBM-095B SH-002 / D4	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH

DESCRIPTION: "1A" CHARGING PUMP ALTERNATE DISCHARGE HEADER ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2287B	12050-CBM-095B SH-002 / D6	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH

DESCRIPTION: "1B" CHARGING PUMP ALTERNATE DISCHARGE HEADER ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2287C	12050-CBM-095B SH-002 / D7	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH

DESCRIPTION: "1C" CHARGING PUMP ALTERNATE DISCHARGE HEADER ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2289A	12050-CBM-095C SH-001 / C4	Standard	GL	MOL	3	1	B	Active	O	C	NA	CH

DESCRIPTION: NORMAL CHARGING HEADER ISOLATION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2289B	12050-CBM-095C SH-001 / B3	Standard	GL	MOL	3	2	B	Active	O	C	NA	CH

DESCRIPTION: NORMAL CHARGING HEADER ISOLATION VALVE, OUTSIDE CONTAINMENT

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2350	12050-CBM-095B SH-001 / B5	Standard	GA	MOL	2	3	B	Active	C	O	NA	CH

DESCRIPTION: EMERGENCY BORATE VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2373	12050-CBM-095B SH-001 / A8	Standard	GA	MOL	3	2	B	Active	O	OC	NA	CH

DESCRIPTION: CHARGING PUMP RECIRCULATION HEADER ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2380	12050-CBM-095C SH-002 / F4	Standard	GA	MOL	3	2	A	Active	O	C	NA	CH

DESCRIPTION: REACTOR COOLANT PUMPS SEAL WATER RETURN, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
STC	18M	TP-05
FCE	24M	
DIAG	III	
PIT	III	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-MOV-2381	12050-CBM-095B SH-001 / C8	Standard	GA	MOL	3	2	A	Active	O	C	NA	CH

DESCRIPTION: REACTOR COOLANT PUMPS SEAL WATER RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
STC	18M	TP-05
FCE	24M	
DIAG	III	
PIT	III	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-RV-2203	12050-CBM-095C SH-001 / F3	Standard	RV	SA	2	2	C	Active	C	O	NA	CH

DESCRIPTION: REGEN HEAT EXCHANGER LETDOWN HEADER RELIEF VALVE

TEST	FREQUENCY	Notes
SP	120M	V-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-RV-2382A	12050-CBM-095C SH-002 / F5	Standard	RV	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: REACTOR COOLANT PUMPS SEAL LEAKOFF HEADER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-RV-2382B	12050-CBM-095B SH-001 / C7	Standard	RV	SA	2	2	C	Active	C	O	NA	CH
DESCRIPTION: SEAL WATER HEAT EXCHANGER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-TV-2204A	12050-CBM-095C SH-001 / E3	Standard	GL	AO	2	2	A	Active	O	C	C	CH
DESCRIPTION: LETDOWN ISOL VALVE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-02			
							STC	CS	CSV-02			
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-TV-2204B	12050-CBM-095A SH-002 / C3	Standard	GL	AO	3	2	A	Active	O	C	C	CH

DESCRIPTION: LETDOWN ISOL VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-02
STC	CS	CSV-02
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CV--4	12050-CBM-092A SH-002 / A5	Standard	GA	MA	8	2	A	Passive	LC	C	NA	CV

DESCRIPTION: CONTAINMENT VACUUM AIR EJECTOR, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CV-TV-200	12050-CBM-092A SH-002 / A3	Standard	BF	AO	8	2	A	Passive	C	C	C	CV

DESCRIPTION: CONTAINMENT VACUUM AIR EJECTOR, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CV-TV-250A	12050-CBM-092A SH-002 / B4	Standard	GL	AO	2	2	A	Active	C	C	C	CV
DESCRIPTION: "A" CONTAINMENT VACUUM PUMP SUCTION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CV-TV-250B	12050-CBM-092A SH-002 / B5	Standard	GL	AO	2	2	A	Active	C	C	C	CV
DESCRIPTION: "A" CONTAINMENT VACUUM PUMP SUCTION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CV-TV-250C	12050-CBM-092A SH-002 / C4	Standard	GL	AO	2	2	A	Active	C	C	C	CV

DESCRIPTION: "B" CONTAINMENT VACUUM PUMP SUCTION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CV-TV-250D	12050-CBM-092A SH-002 / C5	Standard	GL	AO	2	2	A	Active	C	C	C	CV

DESCRIPTION: "B" CONTAINMENT VACUUM PUMP SUCTION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-DA--7	12050-CBM-090A SH-003 / D3	Standard	DIA	MA	2	2	A	Passive	C	C	NA	DA

DESCRIPTION: VENT LINE FROM PRIMARY VENT POT, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-DA--9	12050-CBM-090A SH-003 / E3	Standard	DIA	MA	2	2	A	Passive	C	C	NA	DA
DESCRIPTION: VENT LINE FROM PRIMARY VENT POT, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-DA-TV-200A	12050-CBM-090B SH-001 / F7	Standard	GL	AO	2	2	A	Active	C	C	C	DA
DESCRIPTION: REACTOR CONTAINMENT SUMP PUMPS DISCHARGE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-DA-TV-200B	12050-CBM-090A SH-003 / C3	Standard	GL	AO	2	2	A	Active	C	C	C	DA
DESCRIPTION: REACTOR CONTAINMENT SUMP PUMPS DISCHARGE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-DA-TV-203A	12050-CBM-090A SH-003 / B7	Standard	GL	AO	2	2	A	Active	C	C	C	DA
DESCRIPTION: POST ACCIDENT SAMPLE SYSTEM RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-DA-TV-203B	12050-CBM-090A SH-003 / B8	Standard	GL	AO	2	2	A	Active	C	C	C	DA
DESCRIPTION: POST ACCIDENT SAMPLE SYSTEM RETURN, OUTSIDE CONTAINMENT TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-DG-TV-200A	12050-CBM-090A SH-001 / B8	Standard	GL	AO	2	2	A	Active	C	C	C	DG

DESCRIPTION: PRIMARY DRAIN TRANSFER PUMPS DISCHARGE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-DG-TV-200B	12050-CBM-090A SH-001 / B7	Standard	GL	AO	2	2	A	Active	C	C	C	DG

DESCRIPTION: PRIMARY DRAIN TRANSFER PUMPS DISCHARGE, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FP--79	12050-CBB-104A SH-001 / A7	Standard	CK	SA	4	2	AC	Active	C	C	NA	FP

DESCRIPTION: FIRE PROTECTION SUPPLY TO CONTAINMENT, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-03
CVO	RR	RRV-03

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FP--81	12050-CBB-104A SH-001 / A6	Standard	GA	MA	4	2	A	Passive	LC	C	NA	FP
DESCRIPTION: FIRE PROTECTION SUPPLY TO CONTAINMENT, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--102	12050-CBM-074A SH-001 / C6	Standard	CK	SA	3	2	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER TO "B" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-16			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--126	12050-CBM-074A SH-001 / B6	Standard	CK	SA	16	2	C	Active	O	C	NA	FW
DESCRIPTION: "C" MAIN FEEDWATER HEADER TO "C" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-14			
							CVO	NPO	CSV-14 : TP-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--127	12050-CBM-074A SH-001 / B7	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER "C" S/G MOV HEADER OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-15			
							CVO	CS	CSV-15			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--128	12050-CBM-074A SH-001 / B7	Standard	GA	MA	3	3	B	Active	LC	OC	NA	FW
DESCRIPTION: AUX FEEDWATER "C" S/G MOV HEADER OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--129	12050-CBM-074A SH-001 / B7	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER "C" S/G HCV HEADER OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-15			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--130	12050-CBM-074A SH-001 / B7	Standard	GA	MA	3	3	B	Active	LO	OC	NA	FW
DESCRIPTION: AUX FEEDWATER "C" S/G HCV HEADER OUTLET ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--134	12050-CBM-074A SH-001 / B7	Standard	CK	SA	3	2	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER TO "C" S/G INLET CHECK VALVE												
								TEST	FREQUENCY	Notes		
								CVO	3M			
								CVC	CS	CSV-16		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--147	12050-CBM-074A SH-003 / B7	Standard	GA	MA	6	3	B	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP ALTERNATE SUCTION ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--150	12050-CBM-074A SH-003 / D7	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AUXILIARY FEEDWATER PUMP RECIRC LINE CHECK VALVE												
								TEST	FREQUENCY	Notes		
								CVO	3M			
								CVC	CS	CSV-15		

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--156	12050-CBM-074A SH-003 / D8	Standard	CK	SA	6	3	C	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AUXILIARY FEEDWATER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-17			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--157	12050-CBM-074A SH-003 / E7	Standard	GA	MA	6	3	B	Active	LC	OC	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP TO HCV HEADER OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--164	12050-CBM-074A SH-003 / B6	Standard	GA	MA	4	3	B	Active	C	O	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP ALTERNATE SUCTION ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--167	12050-CBM-074A SH-003 / D6	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AUXILIARY FEEDWATER PUMP RECIRC LINE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-15			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--172	12050-CBM-074A SH-003 / D6	Standard	CK	SA	4	3	C	Active	C	O	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AUXILIARY FEEDWATER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-17			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--173	12050-CBM-074A SH-003 / E6	Standard	GA	MA	4	3	B	Active	LC	OC	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP TO MOV HEADER DISCHARGE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--174	12050-CBM-074A SH-003 / E6	Standard	GA	MA	4	3	B	Active	LO	OC	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP TO HCV HEADER INLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--182	12050-CBM-074A SH-003 / B5	Standard	GA	MA	4	3	B	Active	C	O	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AFW PUMP ALTERNATE SUCTION ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--185	12050-CBM-074A SH-003 / D5	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AUXILIARY FEEDWATER PUMP RECIRC LINE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-15			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--192	12050-CBM-074A SH-003 / D5	Standard	CK	SA	4	3	C	Active	C	O	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AUXILIARY FEEDWATER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-17			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--193	12050-CBM-074A SH-003 / E5	Standard	GA	MA	4	3	B	Active	LO	OC	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AFW PUMP TO MOV HEADER DISCHARGE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--194	12050-CBM-074A SH-003 / E5	Standard	GA	MA	4	3	B	Active	LC	OC	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN AFW PUMP PP TO HCV HEADER INLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--202	12050-CBM-074A SH-003 / A7	Standard	GA	MA	6	3	B	Active	LC	O	NA	FW
DESCRIPTION: SERVICE WATER TO AFW ALTERNATE SUCTION HEADER ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--279	12050-CBM-074A SH-003 / D8	Standard	CK	SA	4	3	C	Active	C	O	NA	FW
DESCRIPTION: 2-FW-MOV-200D OUTLET CHECK VALVE												
								TEST	FREQUENCY	Notes		
								CVO	3M			
								CVC	CS	CSV-15		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--317	12050-CBM-074A SH-003 / E8	Standard	GA	MA	6	3	B	Active	LC	OC	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP TO MOV HEADER DISCHARGE ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--609	12050-CBM-074A SH-003 / D7	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP LUBE OIL COOLER INLET CHECK VALVE												
								TEST	FREQUENCY	Notes		
								CVO	3M			
								CVC	RR	RRV-32		

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--610	12050-CBM-074A SH-003 / E6	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: "3A" MOTOR DRIVEN AFW PUMP LUBE OIL COOLER INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	RR	RRV-32			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--611	12050-CBM-074A SH-003 / E6	Standard	CK	SA	1	3	C	Active	C	O	NA	FW
DESCRIPTION: "3B" MOTOR DRIVEN PUMP LUBE OIL COOLER FLOW INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	RR	RRV-32			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--62	12050-CBM-074A SH-001 / E6	Standard	CK	SA	16	2	C	Active	O	C	NA	FW
DESCRIPTION: "A" MAIN FEEDWATER HEADER TO "A" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-14			
							CVO	NPO	CSV-14 : TP-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--63	12050-CBM-074A SH-001 / B5	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AFW "3B" MOV HEADER, 2-FW-MOV-200A OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-15			
							CVO	CS	CSV-15			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--64	12050-CBM-074A SH-001 / B5	Standard	GA	MA	3	3	B	Active	LC	OC	NA	FW
DESCRIPTION: AFW "3B" MOV HEADER, 2-FW-MOV-200A OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--65	12050-CBM-074A SH-001 / B6	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AFW "3A" HCV HEADER, 2-FW-HCV-200A OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-15			
							CVO	CS	CSV-15			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--66	12050-CBM-074A SH-001 / B6	Standard	GA	MA	3	3	B	Active	LC	OC	NA	FW
DESCRIPTION: AFW "3A" HCV HEADER, 2-FW-HCV-200A OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--70	12050-CBM-074A SH-001 / D6	Standard	CK	SA	3	2	C	Active	C	O	NA	FW
DESCRIPTION: AUX FEEDWATER TO "A" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-16			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--94	12050-CBM-074A SH-001 / D6	Standard	CK	SA	16	2	C	Active	O	C	NA	FW
DESCRIPTION: "B" MAIN FEEDWATER HEADER TO "B" S/G INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-14			
							CVO	NPO	CSV-14 : TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--95	12050-CBM-074A SH-001 / B6	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AFW "3B" MOV HEADER, 2-FW-MOV-200B OUTLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	CS	CSV-15			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--96	12050-CBM-074A SH-001 / B6	Standard	GA	MA	3	3	B	Active	LO	OC	NA	FW
DESCRIPTION: AFW "3B" MOV HEADER, 2-FW-MOV-200B OUTLET ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--97	12050-CBM-074A SH-001 / B6	Standard	CK	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: AFW "3A" HCV HEADER, 2-FW-HCV-200A OUTLET CHECK VALVE												
								TEST	FREQUENCY	Notes		
								CVC	CS	CSV-15		
								CVO	CS	CSV-15		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW--98	12050-CBM-074A SH-001 / B6	Standard	GA	MA	3	3	B	Active	LC	OC	NA	FW
DESCRIPTION: AFW "3A" HCV HEADER, 2-FW-HCV-200A OUTLET ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								FCE	24M	Manual Exercise		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-HCV-200A	12050-CBM-074A SH-001 / A6	Standard	GL	AO	3	3	B	Active	C	O	O	FW
DESCRIPTION: AFW HCV HEADER TO A S/G												
								TEST	FREQUENCY	Notes		
								FSO	CS	CSV-12 : TP-03		

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-HCV-200B	12050-CBM-074A SH-001 / A6	Standard	GL	AO	3	3	B	Active	C	O	O	FW
DESCRIPTION: AFW HCV HEADER TO B S/G												
							TEST	FREQUENCY	Notes			
							FSO	CS	CSV-12 : TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-HCV-200C	12050-CBM-074A SH-001 / A7	Standard	GL	AO	3	3	B	Active	O	O	O	FW
DESCRIPTION: AFW HCV HEADER TO C S/G												
							TEST	FREQUENCY	Notes			
							FSO	CS	CSV-12 : TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-200A	12050-CBM-074A SH-001 / A5	Standard	GL	MOL	3	3	B	Active	C	OC	NA	FW
DESCRIPTION: AFW MOV HEADER TO A S/G												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-200B	12050-CBM-074A SH-001 / A6	Standard	GL	MO	3	3	B	Active	O	OC	NA	FW
DESCRIPTION: AFW MOV HEADER TO B S/G												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-200C	12050-CBM-074A SH-001 / A7	Standard	GL	MOL	3	3	B	Active	C	OC	NA	FW
DESCRIPTION: AFW MOV HEADER TO C S/G												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-200D	12050-CBM-074A SH-003 / E8	Standard	GL	MO	3	3	B	Active	O	OC	NA	FW
DESCRIPTION: TURBINE DRIVEN AFW PUMP TO A S/G												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-PCV-259A	12050-CBM-074A SH-003 / F8	Standard	GL	AO	4	3	B	Active	C	O	O	FW
DESCRIPTION: AFW PUMPS TO MOV HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSO	CS	CSV-13 : TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-PCV-259B	12050-CBM-074A SH-003 / E8	Standard	GL	AO	4	3	B	Active	C	O	O	FW
DESCRIPTION: AFW PUMPS TO HCV HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSO	CS	CSV-13 : TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-RV-200	12050-CBM-074A SH-003 / D8	Standard	RV	SA	3	3	C	Active	C	O	NA	FW
DESCRIPTION: TURBINE DRIVEN AUXILIARY FEED PUMP FEEDWATER DISCHARGE RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC--15	11715-CBM-106A SH-001 / E3	Standard	CK	SA	2	2	AC	Active	C	C	NA	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER/ANALYZER RETURN TO UNIT 2, INSIDE CONT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-04			
							CVO	RR	RRV-04			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC--20	11715-CBM-106A SH-002 / E4	Standard	CK	SA	2	2	AC	Active	C	C	NA	HC

DESCRIPTION: UNIT 2 H2 RECOMBINER/ANALYZER RETURN TO UNIT 2, INSIDE CONT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-04
CVO	RR	RRV-04

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-200A	11715-CBM-106A SH-001 / E3	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC

DESCRIPTION: UNIT 2 SAMPLE LINE TO UNIT 1 HYDROGEN ANALYZER, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-200B	11715-CBM-106A SH-001 / E4	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC

DESCRIPTION: UNIT 2 SAMPLE LINE TO UNIT 1 HYDROGEN ANALYZER, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-201A	11715-CBM-106A SH-001 / D4	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 HYDROGEN ANALYZER RETURN TO UNIT 2 CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-201B	11715-CBM-106A SH-001 / D4	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 HYDROGEN ANALYZER RETURN TO UNIT 2 CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-202A	11715-CBM-106A SH-002 / E4	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 SAMPLE LINE TO UNIT 2 HYDROGEN ANALYZER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-202B	11715-CBM-106A SH-002 / E3	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 SAMPLE LINE TO UNIT 2 HYDROGEN ANALYZER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-203A	11715-CBM-106A SH-002 / D3	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 HYDROGEN ANALYZER RETURN TO UNIT 2 CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-203B	11715-CBM-106A SH-002 / D3	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 HYDROGEN ANALYZER RETURN TO UNIT 2 CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-204A	11715-CBM-106A SH-004 / F4	Standard	GA	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER/PURGE BLOWER SUPPLY FROM UNIT 2, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-204B	11715-CBM-106A SH-004 / F5	Standard	GA	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER/PURGE BLOWER SUPPLY FROM UNIT 2, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-205A	11715-CBM-106A SH-001 / E4	Standard	GA	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER RETURN TO UNIT 2, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-205B	11715-CBM-106A SH-001 / E5	Standard	GA	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 1 H2 RECOMBINER RETURN TO UNIT 2, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-206A	11715-CBM-106A SH-004 / F3	Standard	GA	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER/PURGE BLOWER SUPPLY FROM UNIT 2, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-206B	11715-CBM-106A SH-004 / F3	Standard	GA	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER/PURGE BLOWER SUPPLY FROM UNIT 2, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-207A	11715-CBM-106A SH-002 / E3	Standard	GA	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER RETURN TO UNIT 2, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-207B	11715-CBM-106A SH-002 / E3	Standard	GA	AO	2.5	2	A	Active	C	C	C	HC
DESCRIPTION: UNIT 2 H2 RECOMBINER RETURN TO UNIT 2, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-208A	11715-CBM-106A SH-003 / E3	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC

DESCRIPTION: UNIT 2 HRSS SUPPLY SAMPLE LINE, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HC-TV-208B	11715-CBM-106A SH-003 / E4	Standard	GA	SO	0.375	2	A	Active	C	C	C	HC

DESCRIPTION: UNIT 2 HRSS SUPPLY SAMPLE LINE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-200A	11715-CBB-006A SH-002 / D3	Standard	BF	MO	36	2	A	Passive	C	C	NA	HV

DESCRIPTION: CONTAINMENT PURGE SUPPLY, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-200B	11715-CBB-006A SH-002 / D3	Standard	BF	MO	36	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-200C	11715-CBB-006A SH-002 / C4	Standard	BF	MO	36	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE EXHAUST, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-200D	11715-CBB-006A SH-002 / C3	Standard	BF	MO	36	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE EXHAUST, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-201	11715-CBB-006A SH-002 / C3	Standard	BF	MO	8	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PURGE EXHAUST BYPASS, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-202	11715-CBB-006A SH-002 / D3	Standard	BF	MO	18	2	A	Passive	C	C	NA	HV
DESCRIPTION: CONTAINMENT PRESSURE EQUALIZING VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-211A	11715-CBB-040C SH-002 / E8	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4A" CD OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-211B	11715-CBB-040C SH-002 / C6	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" CD OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-211C	11715-CBB-040C SH-002 / D8	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" CD OUTLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-213A	11715-CBB-040D SH-002 / E3	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4A" SW OUTLET HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-213B	11715-CBB-040D SH-002 / B3	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER “4B” SW OUTLET HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-MOV-213C	11715-CBB-040D SH-002 / C3	Standard	GA	MOL	4	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER “4C” SW OUTLET HEADER ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-PCV-2235A1	11715-CBB-040D SH-002 / E6	Standard	GL	AO	3	3	B	Active	O	C	C	HV
DESCRIPTION: CONTROL ROOM CHILLER “4A” SW RECIRC HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSC	3M	TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-PCV-2235A2	11715-CBB-040D SH-002 / E3	Standard	GL	AO	2.5	3	B	Active	O	O	O	HV
DESCRIPTION: CONTROL ROOM CHILLER “4A” SW OUTLET HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSO	3M	TP-03			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-PCV-2235B1	11715-CBB-040D SH-002 / A6	Standard	GL	AO	3	3	B	Active	O	C	C	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" SW RECIRC HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSC	3M	TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-PCV-2235B2	11715-CBB-040D SH-002 / B3	Standard	GL	AO	2.5	3	B	Active	O	O	O	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" SW OUTLET HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSO	3M	TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-PCV-2235C1	11715-CBB-040D SH-002 / C6	Standard	GL	AO	3	3	B	Active	O	C	C	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" SW RECIRC HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSC	3M	TP-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-PCV-2235C2	11715-CBB-040D SH-002 / C3	Standard	GL	AO	2.5	3	B	Active	O	O	O	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" SW OUTLET HEADER PRESSURE CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							FSO	3M	TP-03			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-RV-2200	11715-CBB-040C SH-002 / D4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLED WATER HEADER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-RV-2201	11715-CBB-040C SH-002 / C4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLED WATER HEADER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-RV-2202A	11715-CBB-040C SH-002 / E7	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4A" CD OUTLET RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-RV-2202B	11715-CBB-040C SH-002 / C5	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" CD OUTLET RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-RV-2202C	11715-CBB-040C SH-002 / D8	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" CD OUTLET RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-RV-2205A	11715-CBB-040D SH-002 / E4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4A" SW OUTLET HEADER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-RV-2205B	11715-CBB-040D SH-002 / B4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4B" SW OUTLET HEADER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-RV-2205C	11715-CBB-040D SH-002 / D4	Standard	TRV	SA	0.5	3	C	Active	C	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER "4C" SW OUTLET HEADER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-SOV-2200B	11715-CBB-040D SH-002 / B7	Standard	GA	SO	0.5	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER CONDENSER PUMP "22B" SW SEAL WATER SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							STO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-HV-SOV-2200C	11715-CBB-040D SH-002 / D7	Standard	GA	SO	0.5	3	B	Active	OC	O	NA	HV
DESCRIPTION: CONTROL ROOM CHILLER CONDENSER PUMP "22C" SW SEAL WATER SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							STO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--250	12050-CBM-082A SH-001 / F3	Standard	CK	SA	2	2	AC	Active	OC	C	NA	IA
DESCRIPTION: INSTRUMENT AIR SUPPLY TO CONTAINMENT, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-05			
							CVO	RR	RRV-05 : TP-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--428	12050-CBM-082B SH-002 / C7	Standard	CK	SA	1	2	AC	Active	O	C	NA	IA
DESCRIPTION: CONTAINMENT RAD MONITOR RETURN HEADER, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				
							CVC	RR	RRV-05			
							CVO	RR	RRV-05 : TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-TV-201A	12050-CBM-082C SH-002 / F7	Standard	GL	AO	3	2	A	Passive	C	C	C	IA
DESCRIPTION: INSTRUMENT AIR CONTAINMENT(SPARE), INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-TV-201B	12050-CBM-082C SH-002 / F8	Standard	GL	AO	3	2	A	Passive	C	C	C	IA
DESCRIPTION: INSTRUMENT AIR CONTAINMENT(SPARE), OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-TV-202A	12050-CBM-082B SH-001 / D7	Standard	GL	AO	3	2	A	Active	O	C	C	IA

DESCRIPTION: CONTAINMENT INSTRUMENT AIR SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-18
STC	CS	CSV-18
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-TV-202B	12050-CBM-082B SH-001 / D7	Standard	GL	AO	3	2	B	Active	O	C	C	IA

DESCRIPTION: CONTAINMENT INSTRUMENT AIR SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-18
STC	CS	CSV-18

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-200A	12050-CBM-092A SH-001 / E7	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM

DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	
FSC	RR	RRV-35
STC	RR	RRV-35

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-200B	12050-CBM-092A SH-001 / E6	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-200C	12050-CBM-092A SH-001 / E6	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-200D	12050-CBM-092A SH-001 / E5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-200E	12050-CBM-092A SH-001 / F6	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-200F	12050-CBM-092A SH-001 / F5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-200G	12050-CBM-092A SH-001 / E7	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-200H	12050-CBM-092A SH-001 / E6	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING OPEN SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-201A	12050-CBM-092A SH-001 / D5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING SEALED SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-201B	12050-CBM-092A SH-001 / D5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING SEALED SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-201C	12050-CBM-092A SH-001 / D5	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM
DESCRIPTION: CONTAINMENT LEAKAGE MONITORING SEALED SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				
							FSC	RR	RRV-35			
							STC	RR	RRV-35			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-LM-TV-201D	12050-CBM-092A SH-001 / D4	Standard	GL	AO	0.375	2	A	Passive	C	C	C	LM

DESCRIPTION: CONTAINMENT LEAKAGE MONITORING SEALED SYSTEM SUPPLY, OUTSIDE CONT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	
FSC	RR	RRV-35
STC	RR	RRV-35

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS--117	12050-CBM-070A SH-003 / E7	Standard	CK	SA	3	3	C	Active	C	OC	NA	MS

DESCRIPTION: "A" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP CHECK VALVE

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-34

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS--119	12050-CBM-070A SH-003 / F7	Standard	CK	SA	3	3	C	Active	C	OC	NA	MS

DESCRIPTION: "B" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP CHECK VALVE

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-34

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS--121	12050-CBM-070A SH-003 / E7	Standard	CK	SA	3	3	C	Active	C	OC	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M				
							CVC	RR	RRV-34			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS--18	12050-CBM-070B SH-001 / B7	Standard	GA	MA	3	2	B	Active	O	OC	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS--57	12050-CBM-070B SH-002 / C7	Standard	GA	MA	3	2	B	Active	O	OC	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS--95	12050-CBM-070B SH-003 / B7	Standard	GA	MA	3	2	B	Active	O	OC	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M	Manual Exercise			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-NRV-201A	12050-CBM-070B SH-001 / D3	Standard	CK	SA	32	2	C	Active	O	C	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER NON-RETURN VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-04			
							CVO	CS	CSV-04 : TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-NRV-201B	12050-CBM-070B SH-002 / D3	Standard	CK	SA	32	2	C	Active	O	C	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER NON-RETURN VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-04			
							CVO	CS	CSV-04 : TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-NRV-201C	12050-CBM-070B SH-003 / D3	Standard	CK	SA	32	2	C	Active	O	C	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER NON-RETURN VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-04			
							CVO	CS	CSV-04 : TP-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-PCV-201A	12050-CBM-070B SH-001 / E5	Standard	ANG	AO	6	2	B	Active	C	C	C	MS
DESCRIPTION: "A" S/G POWER OPERATED RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							FSC	RR	RRV-28			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-PCV-201B	12050-CBM-070B SH-002 / E6	Standard	ANG	AO	6	2	B	Active	C	C	C	MS
DESCRIPTION: "B" S/G POWER OPERATED RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							FSC	RR	RRV-28			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-PCV-201C	12050-CBM-070B SH-003 / E5	Standard	ANG	AO	6	2	B	Active	C	C	C	MS
DESCRIPTION: "C" S/G POWER OPERATED RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							FSC	RR	RRV-28			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-201A	12050-CBM-070B SH-001 / E6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-201B	12050-CBM-070B SH-002 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-201C	12050-CBM-070B SH-003 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-202A	12050-CBM-070B SH-001 / E5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-202B	12050-CBM-070B SH-002 / D5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-202C	12050-CBM-070B SH-003 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-203A	12050-CBM-070B SH-001 / E6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-203B	12050-CBM-070B SH-002 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-203C	12050-CBM-070B SH-003 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-204A	12050-CBM-070B SH-001 / E6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-204B	12050-CBM-070B SH-002 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-204C	12050-CBM-070B SH-003 / D6	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-205A	12050-CBM-070B SH-001 / E5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "A" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-205B	12050-CBM-070B SH-002 / D5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "B" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-SV-205C	12050-CBM-070B SH-003 / D5	Standard	SV	SA	6	2	C	Active	C	O	NA	MS
DESCRIPTION: "C" MAIN STEAM HEADER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-201A	12050-CBM-070B SH-001 / D4	Standard	CK	AO	32	2	BC	Active	O	C	C	MS
DESCRIPTION: "A" MAIN STEAM HEADER TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-06			
							FSC	CS	CSV-06			
							STC	CS	CSV-06			
							CVO	NPO	CSV-06			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-201B	12050-CBM-070B SH-002 / C4	Standard	CK	AO	32	2	BC	Active	O	C	C	MS
DESCRIPTION: "B" MAIN STEAM HEADER TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-06			
							FSC	CS	CSV-06			
							STC	CS	CSV-06			
							CVO	NPO	CSV-06			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-201C	12050-CBM-070B SH-003 / C4	Standard	CK	AO	32	2	BC	Active	O	C	C	MS
DESCRIPTION: "C" MAIN STEAM HEADER TRIP VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							CVC	CS	CSV-06			
							FSC	CS	CSV-06			
							STC	CS	CSV-06			
							CVO	NPO	CSV-06			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-209	12050-CBM-070A SH-003 / D3	Standard	GL	AO	3	3	B	Active	O	C	C	MS

DESCRIPTION: MAIN STEAM HIGH PRESSURE DRAIN ISOLATION TO CONDENSER

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-05
STC	CS	CSV-05

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-211A	12050-CBM-070A SH-003 / E5	Standard	GL	AO	3	2	B	Active	C	OC	O	MS

DESCRIPTION: MAIN STEAM SUPPLY TRIP VALVE TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP

TEST	FREQUENCY	Notes
PIT	24M	
FSO	3M	
STC	3M	
STO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-211B	12050-CBM-070A SH-003 / E4	Standard	GL	AO	3	3	B	Active	C	OC	O	MS

DESCRIPTION: MAIN STEAM SUPPLY TRIP VALVE TO TURBINE DRIVEN AUXILIARY FEEDWATER PUMP

TEST	FREQUENCY	Notes
PIT	24M	
FSO	3M	
STC	3M	
STO	3M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-213A	12050-CBM-070B SH-001 / D4	Standard	GL	AO	3	2	B	Active	C	C	C	MS
DESCRIPTION: "A" MAIN STEAM TRIP BYPASS VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-08			
							STC	CS	CSV-08			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-213B	12050-CBM-070B SH-002 / D4	Standard	GL	AO	3	2	B	Active	C	C	C	MS
DESCRIPTION: "B" MAIN STEAM TRIP BYPASS VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-08			
							STC	CS	CSV-08			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-213C	12050-CBM-070B SH-003 / D4	Standard	GL	AO	3	2	B	Active	C	C	C	MS
DESCRIPTION: "C" MAIN STEAM TRIP BYPASS VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-08			
							STC	CS	CSV-08			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS--11	12050-CBM-091A SH-002 / D6	Standard	CK	WL	8	2	AC	Active	C	OC	NA	QS

DESCRIPTION: "1A" QUENCH SPRAY PUMP INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-18
CVO	RR	RRV-18

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS--147	12050-CBM-091A SH-002 / B7	Standard	CK	SA	2	2	AC	Active	C	OC	NA	QS

DESCRIPTION: QUENCH SPRAY BLEED LINE ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LT	24M	
CVC	RR	RRV-33
CVO	RR	RRV-33

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS--150	12050-CBM-091A SH-002 / B6	Standard	CK	SA	2	2	AC	Active	C	OC	NA	QS

DESCRIPTION: QUENCH SPRAY BLEED LINE ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LT	24M	
CVC	RR	RRV-33
CVO	RR	RRV-33

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS--22	12050-CBM-091A SH-002 / E6	Standard	CK	WL	8	2	AC	Active	C	OC	NA	QS

DESCRIPTION: "1B" QUENCH SPRAY PUMP INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-18
CVO	RR	RRV-18

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS-MOV-200A	12050-CBM-091A SH-002 / A3	Standard	GA	MO	10	2	B	Passive	O	O	NA	QS

DESCRIPTION: "1A" QUENCH SPRAY PUMP SUCTION ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS-MOV-200B	12050-CBM-091A SH-002 / A3	Standard	GA	MO	10	2	B	Passive	O	O	NA	QS

DESCRIPTION: "1B" QUENCH SPRAY PUMP SUCTION ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS-MOV-201A	12050-CBM-091A SH-002 / D5	Standard	GA	MOL	8	2	A	Active	C	OC	NA	QS
DESCRIPTION: "1A" QS PUMP DISCHARGE ISOLATION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS-MOV-201B	12050-CBM-091A SH-002 / E5	Standard	GA	MOL	8	2	A	Active	C	OC	NA	QS
DESCRIPTION: "1B" QS PUMP DISCHARGE ISOLATION VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS-MOV-202A	12050-CBM-091A SH-001 / D5	Standard	GA	MOL	6	2	B	Active	C	O	NA	QS
DESCRIPTION: CHEMICAL ADDITION TANK DISCHARGE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-QS-MOV-202B	12050-CBM-091A SH-001 / D6	Standard	GA	MOL	6	2	B	Active	C	O	NA	QS

DESCRIPTION: CHEMICAL ADDITION TANK DISCHARGE ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC--143	12050-CBM-093B SH-001 / A4	Standard	GA	MA	0.125	1	A	Passive	C	C	NA	RC

DESCRIPTION: PRESSURIZER PRESSURE DEAD WEIGHT TESTER, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC--145	12050-CBM-093B SH-001 / A3	Standard	GA	MA	0.125	1	A	Passive	C	C	NA	RC

DESCRIPTION: PRESSURIZER PRESSURE DEAD WEIGHT TESTER, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC--162	12050-CBM-093B SH-002 / D7	Standard	CK	SA	3	2	AC	Active	C	C	NA	RC

DESCRIPTION: CONTAINMENT PRIMARY GRADE WATER SUPPLY, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-06
CVO	RR	RRV-06

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-MOV-2535	12050-CBM-093B SH-001 / E4	Standard	GA	MO	3	1	B	Active	O	OC	NA	RC

DESCRIPTION: 2-RC-PCV-2456 PORV BLOCK VALVE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-MOV-2536	12050-CBM-093B SH-001 / D4	Standard	GA	MO	3	1	B	Active	O	OC	NA	RC

DESCRIPTION: 2-RC-PCV-2455C PORV BLOCK VALVE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-PCV-2455C	12050-CBM-093B SH-001 / D3	Standard	GL	AO	3	1	BL	Active	C	OC	C	RC
DESCRIPTION: PRESSURIZER POWER OPERATED RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-09			
							STC	CS	CSV-09			
							STO	CS	CSV-09			
							LT	RR				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-PCV-2456	12050-CBM-093B SH-001 / E3	Standard	GL	AO	3	1	BL	Active	C	OC	C	RC
DESCRIPTION: PRESSURIZER POWER OPERATED RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-09			
							STC	CS	CSV-09			
							STO	CS	CSV-09			
							LT	RR				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-SOV-201A1	12050-CBM-093A SH-003 / B5	Standard	GL	SO	1	1	B	Active	C	OC	C	RC
DESCRIPTION: REACTOR VESSEL HEAD VENT SOLENOID OPERATED VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-11			
							STC	CS	CSV-11			
							STO	CS	CSV-11			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-SOV-201A2	12050-CBM-093A SH-003 / A5	Standard	GL	SO	1	1	B	Active	C	OC	C	RC
DESCRIPTION: REACTOR VESSEL HEAD VENT SOLENOID OPERATED VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	CS	CSV-11			
							STC	CS	CSV-11			
							STO	CS	CSV-11			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-SOV-201B1	12050-CBM-093A SH-003 / B5	Standard	GL	SO	1	1	B	Active	C	OC	C	RC

DESCRIPTION: REACTOR VESSEL HEAD VENT SOLENOID OPERATED VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-11
STC	CS	CSV-11
STO	CS	CSV-11

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-SOV-201B2	12050-CBM-093A SH-003 / A5	Standard	GL	SO	1	1	B	Active	C	OC	C	RC

DESCRIPTION: REACTOR VESSEL HEAD VENT SOLENOID OPERATED VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-11
STC	CS	CSV-11
STO	CS	CSV-11

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-SV-2551A	12050-CBM-093B SH-001 / E5	Standard	SV	SA	6	1	C	Active	C	O	NA	RC

DESCRIPTION: PRESSURIZER SAFETY VALVE

TEST	FREQUENCY	Notes
SP	60M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-SV-2551B	12050-CBM-093B SH-001 / E5	Standard	SV	SA	6	1	C	Active	C	O	NA	RC
DESCRIPTION: PRESSURIZER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-SV-2551C	12050-CBM-093B SH-001 / E6	Standard	SV	SA	6	1	C	Active	C	O	NA	RC
DESCRIPTION: PRESSURIZER SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	60M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RC-TV-2519A	12050-CBM-093B SH-002 / D8	Standard	DIA	AO	3	2	A	Active	C	C	C	RC
DESCRIPTION: CONTAINMENT PRIMARY GRADE WATER SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH--15	12050-CBM-094A SH-001 / E5	Standard	CK	SA	10	2	C	Active	C	OC	NA	RH
DESCRIPTION: "1B" RHR PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-10			
							CVO	CS	CSV-10			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH--37	12050-CBM-094A SH-002 / C3	Standard	GA	MA	6	2	A	Passive	LC	C	NA	RH
DESCRIPTION: RESIDUAL HEAT REMOVAL TO RWST, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH--38	12050-CBM-094A SH-002 / D3	Standard	GA	MA	6	2	A	Passive	LC	C	NA	RH
DESCRIPTION: RESIDUAL HEAT REMOVAL TO RWST, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH--7	12050-CBM-094A SH-001 / E7	Standard	CK	SA	10	2	C	Active	C	OC	NA	RH
DESCRIPTION: "1A" RHR PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-10			
							CVO	CS	CSV-10			

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH-MOV-2700	12050-CBM-094A SH-001 / A5	Standard	GA	MO	14	1	A	Active	C	O	NA	RH
DESCRIPTION: RHR PUMP SUPPLY ISOLATION FROM "A" HOT LEG, INSIDE MISSILE BARRIER												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							LTP	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH-MOV-2701	12050-CBM-094A SH-001 / A4	Standard	GA	MO	14	1	A	Active	C	O	NA	RH
DESCRIPTION: RHR PUMP SUPPLY ISOLATION FROM "A" HOT LEG, OUTSIDE MISSILE BARRIER												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							LTP	24M				
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH-MOV-2720A	12050-CBM-094A SH-002 / C3	Standard	GA	MO	10	1	A	Active	C	O	NA	RH

DESCRIPTION: RHR RETURN ISOLATION TO "B" ACCUMULATOR DISCHARGE LINE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
LTP	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH-MOV-2720B	12050-CBM-094A SH-002 / B3	Standard	GA	MO	10	1	A	Active	C	O	NA	RH

DESCRIPTION: RHR RETURN ISOLATION TO "C" ACCUMULATOR DISCHARGE LINE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
LTP	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH-RV-2721A	12050-CBM-094A SH-001 / E6	Standard	RV	SA	3	2	C	Active	C	O	NA	RH

DESCRIPTION: "1A" RHR PUMP SUCTION RELIEF VALVE

TEST	FREQUENCY	Notes
SP	120M	V-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH-RV-2721B	12050-CBM-094A SH-001 / E3	Standard	RV	SA	3	2	C	Active	C	O	NA	RH
DESCRIPTION: "1B" RHR PUMP SUCTION RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RM-TV-200A	12050-CBM-082B SH-002 / C7	Standard	GL	AO	1	2	A	Active	O	C	C	RM
DESCRIPTION: CONTAINMENT RADIATION MONITOR RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RM-TV-200B	12050-CBM-082B SH-002 / D7	Standard	GL	AO	1	2	A	Active	O	C	C	RM
DESCRIPTION: CONTAINMENT RADIATION MONITOR SUPPLY, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RM-TV-200C	12050-CBM-082B SH-002 / D8	Standard	GL	AO	1	2	A	Active	O	C	C	RM

DESCRIPTION: CONTAINMENT RADIATION MONITOR SUPPLY, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RM-TV-200D	12050-CBM-082B SH-002 / C7	Standard	GL	AO	1	2	B	Active	O	C	C	RM

DESCRIPTION: CONTAINMENT RADIATION MONITOR RETURN, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RP--6	11715-CBM-088A SH-003 / C5	Standard	DIA	MA	6	2	A	Passive	LC	C	NA	RP

DESCRIPTION: REFUELING PURIFICATION FROM REACTOR CAVITY TO RP PUMPS, INSIDE CONT ISOLATION VALVE

TEST	FREQUENCY	Notes
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RP--7	11715-CBM-088A SH-003 / D5	Standard	DIA	MA	6	2	A	Passive	LC	C	NA	RP
DESCRIPTION: REFUELING PURIFICATION FROM RP PUMPS TO REACTOR CAVITY, INSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS--103	12050-CBM-091B SH-001 / E7	Standard	CK	SA	8	2	C	Active	C	O	NA	RS
DESCRIPTION: "3A" CASING COOLING PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-01			
							CVO	CM	CM-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS--118	12050-CBM-091B SH-001 / F7	Standard	CK	SA	8	2	C	Active	C	O	NA	RS
DESCRIPTION: "3B" CASING COOLING PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-01			
							CVO	CM	CM-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS--20	12050-CBM-091A SH-004 / D6	Standard	CK	WL	10	2	C	Active	C	OC	NA	RS
DESCRIPTION: "2A" OUTSIDE RECIRC SPRAY PUMP INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-18			
							CVO	RR	RRV-18			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS--30	12050-CBM-091A SH-004 / D6	Standard	CK	WL	10	2	C	Active	C	OC	NA	RS
DESCRIPTION: "2B" OUTSIDE RECIRC SPRAY PUMP INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-18			
							CVO	RR	RRV-18			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS-MOV-200A	12050-CBM-091B SH-001 / E7	Standard	GA	MOL	8	2	B	Active	C	OC	NA	RS
DESCRIPTION: "3A" CASING COOLING PUMP DISCHARGE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS-MOV-200B	12050-CBM-091B SH-001 / F7	Standard	GA	MOL	6	2	B	Active	C	OC	NA	RS

DESCRIPTION: "3B" CASING COOLING PUMP DISCHARGE ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS-MOV-201A	12050-CBM-091B SH-001 / E7	Standard	GA	MOL	6	3	B	Active	O	OC	NA	RS

DESCRIPTION: "3A" CASING COOLING PUMP DISCHARGE ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS-MOV-201B	12050-CBM-091B SH-001 / F7	Standard	GA	MOL	6	3	B	Active	O	OC	NA	RS

DESCRIPTION: "3B" CASING COOLING PUMP DISCHARGE ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS-MOV-255A	12050-CBM-091A SH-004 / B5	Standard	GA	MOL	12	2	B	Active	O	OC	NA	RS

DESCRIPTION: "2A" OUTSIDE RECIRC SPRAY PUMP SUCTION, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS-MOV-255B	12050-CBM-091A SH-004 / A5	Standard	GA	MOL	12	2	B	Active	O	OC	NA	RS

DESCRIPTION: "2B" OUTSIDE RECIRC SPRAY PUMP SUCTION, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS-MOV-256A	12050-CBM-091A SH-004 / D5	Standard	GA	MOL	10	2	B	Active	O	OC	NA	RS

DESCRIPTION: "2A" OUTSIDE RECIRC SPRAY PUMP DISCHARGE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RS-MOV-256B	12050-CBM-091A SH-004 / D5	Standard	GA	MOL	10	2	B	Active	O	OC	NA	RS

DESCRIPTION: "2B" OUTSIDE RECIRC SPRAY PUMP DISCHARGE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SA--123	12050-CBM-082F SH-002 / D6	Standard	GA	MA	2	2	A	Passive	LC	C	NA	SA

DESCRIPTION: SERVICE AIR SUPPLY TO UNIT 2 CONTAINMENT, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SA--65	12050-CBM-082F SH-002 / B7	Standard	GA	MA	2	2	A	Passive	LC	C	NA	SA

DESCRIPTION: SERVICE AIR SUPPLY TO UNIT 2 CONTAINMENT, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--1	12050-CBM-096A SH-001 / B6	Standard	CK	SA	12	2	C	Active	C	O	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP SUCTION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-03			
							CVO	CM	CM-03			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--100	12050-CBM-096B SH-004 / E7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "B" RCS COLD LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-04			
							CVO	CM	CM-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--104	12050-CBM-096B SH-004 / D7	Standard	CK	SA	2	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO "C" RCS COLD LEG, INSIDE MISSILE BARRIER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-11			
							CVO	RR	RRV-11			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--105	12050-CBM-096B SH-004 / D6	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI

DESCRIPTION: LOW HEAD SI TO "C" RCS COLD LEG, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-04
CVO	CM	CM-04

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--106	12050-CBM-096B SH-004 / D7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI

DESCRIPTION: "C" RCS COLD LEG SI CHECK VALVE

TEST	FREQUENCY	Notes
CVC	CM	CM-04
CVO	CM	CM-04

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--107	12050-CBM-096B SH-004 / D3	Standard	CK	SA	3	1	AC	Active	C	OC	NA	SI

DESCRIPTION: HIGH HEAD SI TO RCS HOT LEGS, INSIDE CONTANMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	RR	RRV-10
CVO	RR	RRV-10

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--112	12050-CBM-096B SH-004 / C7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SAFETY INJECTION TO "C" RCS HOT LEG CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-06			
							CVO	CM	CM-06			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--113	12050-CBM-096B SH-004 / C7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "B" RCS HOT LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-06			
							CVO	CM	CM-06			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--117	12050-CBM-096B SH-004 / C7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SAFETY INJECTION TO "B" RCS HOT LEG CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-06			
							CVO	CM	CM-06			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--118	12050-CBM-096B SH-004 / B7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "A" RCS HOT LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-06			
							CVO	CM	CM-06			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--119	12050-CBM-096B SH-004 / C3	Standard	CK	SA	3	1	AC	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO RCS HOT LEGS, INSIDE CONTANMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	RR	RRV-10			
							CVO	RR	RRV-10			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--12	12050-CBM-096A SH-002 / B5	Standard	CK	SA	2	2	C	Active	C	O	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVO	3M	RRV-07			
							CVC	RR	RRV-07			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--124	12050-CBM-096B SH-004 / B7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SAFETY INJECTION TO "A" RCS HOT LEG CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-06			
							CVO	CM	CM-06			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--125	12050-CBM-096B SH-004 / D7	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "C" RCS HOT LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-06			
							CVO	CM	CM-06			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--126	12050-CBM-096B SH-004 / B3	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: "1A" LHSI PUMP TO RCS HOT LEGS, INSIDE CONTANMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	RR	RRV-10			
							CVO	RR	RRV-10			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--128	12050-CBM-096B SH-004 / B3	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI

DESCRIPTION: "1B" LHSI PUMP TO RCS HOT LEGS, INSIDE CONTANMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	RR	RRV-10
CVO	RR	RRV-10

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--132	12050-CBM-096B SH-001 / F4	Standard	CK	SA	1	2	AC	Active	C	C	NA	SI

DESCRIPTION: SI ACCUMULATORS NITROGEN HEADER , INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-09
CVO	RR	RRV-09 : TP-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--136	12050-CBM-096B SH-001 / D3	Standard	CK	SA	1	2	AC	Active	C	C	NA	SI

DESCRIPTION: SI ACCUMULATORS MAKE UP LINE, INSIDE CONTAINMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-09
CVO	RR	RRV-09 : TP-01

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--151	12050-CBM-096B SH-001 / B7	Standard	CK	SA	12	1	AC	Active	C	OC	NA	SI

DESCRIPTION: "1A" SI ACCUMULATOR DISCHARGE CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-05
CVO	CM	CM-05

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--153	12050-CBM-096B SH-001 / B8	Standard	CK	SA	12	1	AC	Active	C	OC	NA	SI

DESCRIPTION: "1A" SI ACCUMULATOR COLD LEG CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-05
CVO	CM	CM-05

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--168	12050-CBM-096B SH-002 / B5	Standard	CK	SA	12	1	AC	Active	C	OC	NA	SI

DESCRIPTION: "1B" SI ACCUMULATOR DISCHARGE CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-05
CVO	CM	CM-05

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--170	12050-CBM-096B SH-002 / B7	Standard	CK	SA	12	1	AC	Active	C	OC	NA	SI

DESCRIPTION: "1B" SI ACCUMULATOR COLD LEG CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-05
CVO	CM	CM-05

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--18	12050-CBM-096A SH-001 / E5	Standard	CK	SA	8	2	AC	Active	C	OC	NA	SI

DESCRIPTION: RWST TO CHARGING PUMP SUCTION HEADER CHECK VALVE

TEST	FREQUENCY	Notes
LT	24M	TP-08
CVC	RR	RRV-08
CVO	RR	RRV-08

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--185	12050-CBM-096B SH-003 / B5	Standard	CK	SA	12	1	AC	Active	C	OC	NA	SI

DESCRIPTION: "1C" SI ACCUMULATOR DISCHARGE CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	CM	CM-05
CVO	CM	CM-05

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--187	12050-CBM-096B SH-003 / B7	Standard	CK	SA	12	1	AC	Active	C	OC	NA	SI
DESCRIPTION: "1C" SI ACCUMULATOR COLD LEG CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	CM	CM-05			
							CVO	CM	CM-05			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--19	12050-CBM-096A SH-001 / B4	Standard	CK	SA	12	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP SUCTION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-02			
							CVO	CM	CM-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--21	12050-CBM-096A SH-001 / B4	Standard	CK	SA	12	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP SUCTION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-03			
							CVO	CM	CM-03			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--29	12050-CBM-096A SH-001 / C5	Standard	CK	SA	0.75	2	AC	Active	C	OC	NA	SI

DESCRIPTION: "1B" LOW HEAD SI PUMP SEAL WATER SUPPLY CHECK VALVE

TEST	FREQUENCY	Notes
LT	24M	
CVC	RR	RRV-15
CVO	RR	RRV-15

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--32	12050-CBM-096A SH-002 / B4	Standard	CK	SA	10	2	C	Active	C	OC	NA	SI

DESCRIPTION: "1B" LOW HEAD SI PUMP DISCHARGE CHECK VALVE

TEST	FREQUENCY	Notes
CVC	RR	RRV-07
CVO	RR	RRV-07

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--35	12050-CBM-096A SH-002 / B4	Standard	CK	SA	2	2	C	Active	C	O	NA	SI

DESCRIPTION: "1B" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE CHECK VALVE

TEST	FREQUENCY	Notes
CVO	3M	RRV-07
CVC	RR	RRV-07

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--47	12050-CBM-096A SH-001 / E7	Standard	GL	MA	1	2	A	Passive	LC	C	NA	SI
DESCRIPTION: ACCUMULATOR MAKEUP LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--6	12050-CBM-096A SH-001 / C7	Standard	CK	SA	0.75	2	AC	Active	C	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP SEAL WATER SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M				
							CVC	RR	RRV-15			
							CVO	RR	RRV-15			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--70	12050-CBM-096A SH-003 / D4	Standard	CK	SA	1	2	C	Active	O	C	NA	SI
DESCRIPTION: BORON INJECTION TANK INLET RECIRC HEADER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-21			
							CVO	RR	RRV-21 : TP-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--85	12050-CBM-096B SH-004 / F3	Standard	CK	SA	3	1	AC	Active	C	OC	NA	SI

DESCRIPTION: HIGH HEAD SI TO RCS COLD LEGS (BIT BYPASS), INSIDE CONTANMENT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTP	24M	
CVC	RR	RRV-10
CVO	RR	RRV-10

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--9	12050-CBM-096A SH-002 / B6	Standard	CK	SA	10	2	C	Active	C	OC	NA	SI

DESCRIPTION: "1A" LOW HEAD SI PUMP DISCHARGE CHECK VALVE

TEST	FREQUENCY	Notes
CVC	RR	RRV-07
CVO	RR	RRV-07

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--90	12050-CBM-096B SH-004 / F7	Standard	CK	SA	2	1	C	Active	C	OC	NA	SI

DESCRIPTION: HIGH HEAD SI TO "A" RCS COLD LEG, INSIDE MISSILE BARRIER CHECK VALVE

TEST	FREQUENCY	Notes
CVC	RR	RRV-11
CVO	RR	RRV-11

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--91	12050-CBM-096B SH-004 / F6	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SI TO "A" RCS COLD LEG, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	CM	CM-04			
							CVO	CM	CM-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--92	12050-CBM-096B SH-004 / F8	Standard	CK	SA	6	1	C	Active	C	OC	NA	SI
DESCRIPTION: "A" RCS COLD LEG SI CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CM	CM-04			
							CVO	CM	CM-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--93	12050-CBM-096B SH-004 / E3	Standard	CK	SA	3	1	AC	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO RCS COLD LEGS (BIT), INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	RR	RRV-10			
							CVO	RR	RRV-10			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--98	12050-CBM-096B SH-004 / E7	Standard	CK	SA	2	1	C	Active	C	OC	NA	SI
DESCRIPTION: HIGH HEAD SI TO "B" RCS COLD LEG, INSIDE MISSILE BARRIER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-11			
							CVO	RR	RRV-11			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI--99	12050-CBM-096B SH-004 / E6	Standard	CK	SA	6	1	AC	Active	C	OC	NA	SI
DESCRIPTION: LOW HEAD SI TO "B" RCS COLD LEG, INSIDE CONTAINMENT ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LTP	24M				
							CVC	CM	CM-04			
							CVO	CM	CM-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-HCV-2936	12050-CBM-096B SH-001 / E5	Standard	GA	AO	1	2	A	Active	C	C	C	SI
DESCRIPTION: SI ACCUMULATORS N2 VENT TO CHARCOAL FILTERS HAND CONTROL VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M	TP-03			
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2836	12050-CBM-096A SH-003 / C7	Standard	GA	MOL	3	1	A	Active	C	OC	NA	SI

DESCRIPTION: ALTERNATE HIGH HEAD SI TO RCS COLD LEGS, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
LTP	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2860A	12050-CBM-096A SH-001 / B7	Standard	GA	MO	12	2	B	Active	C	OC	NA	SI

DESCRIPTION: "1A" LOW HEAD SI PUMP SUCTION ISOLATION FROM CONTAINMENT SUMP

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2860B	12050-CBM-096A SH-001 / B5	Standard	GA	MO	12	2	B	Active	C	OC	NA	SI

DESCRIPTION: "1B" LOW HEAD SI PUMP SUCTION ISOLATION FROM CONTAINMENT SUMP

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2862A	12050-CBM-096A SH-001 / A3	Standard	GA	MO	10	2	B	Active	O	OC	NA	SI

DESCRIPTION: "1A" LOW HEAD SI PUMP SUCTION FROM RWST

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2862B	12050-CBM-096A SH-001 / B3	Standard	GA	MO	10	2	B	Active	O	OC	NA	SI

DESCRIPTION: "1B" LOW HEAD SI PUMP SUCTION FROM RWST

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2863A	12050-CBM-096A SH-002 / C5	Standard	GA	MO	8	2	B	Active	C	OC	NA	SI

DESCRIPTION: "1A" LOW HEAD SAFETY INJECTION PUMP SUPPLY ISOLATION TO CHARGING PUMPS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2863B	12050-CBM-096A SH-002 / D3	Standard	GA	MO	8	2	B	Active	C	OC	NA	SI

DESCRIPTION: "1B" LOW HEAD SAFETY INJECTION PUMP SUPPLY ISOLATION TO CHARGING PUMPS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2864A	12050-CBM-096A SH-002 / C7	Standard	GA	MOL	8	2	B	Active	O	OC	NA	SI

DESCRIPTION: "1A" LOW HEAD SI PUMP COLD LEG DISCHARGE VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2864B	12050-CBM-096A SH-002 / C6	Standard	GA	MOL	8	2	B	Active	O	OC	NA	SI

DESCRIPTION: "1B" LOW HEAD SI PUMP COLD LEG DISCHARGE VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2865A	12050-CBM-096B SH-001 / C7	Standard	GA	MO	12	2	B	Passive	O	O	NA	SI
DESCRIPTION: "1A" SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2865B	12050-CBM-096B SH-002 / C5	Standard	GA	MO	12	2	B	Passive	O	O	NA	SI
DESCRIPTION: "1B" SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2865C	12050-CBM-096B SH-003 / C5	Standard	GA	MO	12	2	B	Passive	O	O	NA	SI
DESCRIPTION: "1C" SI ACCUMULATOR DISCHARGE ISOLATION VALVE TO RCS COLD LEG												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2867A	12050-CBM-096A SH-003 / D3	Standard	GA	MO	3	2	B	Active	C	OC	NA	SI
DESCRIPTION: BORON INJECTION TANK HIGH HEAD SI INLET ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2867B	12050-CBM-096A SH-003 / D4	Standard	GA	MO	3	2	B	Active	C	OC	NA	SI

DESCRIPTION: BORON INJECTION TANK HIGH HEAD SI INLET ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2867C	12050-CBM-096A SH-003 / E7	Standard	GA	MO	3	1	A	Active	C	OC	NA	SI

DESCRIPTION: BORON INJECTION TANK OUTLET TO RCS COLD LEG, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
LTP	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2867D	12050-CBM-096A SH-003 / D7	Standard	GA	MO	3	1	A	Active	C	OC	NA	SI

DESCRIPTION: BORON INJECTION TANK OUTLET TO RCS COLD LEG, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
LTP	24M	
DIAG	III	
PIT	III	

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2869A	12050-CBM-096A SH-003 / C8	Standard	GA	MOL	3	1	A	Active	C	OC	NA	SI
DESCRIPTION: ALTERNATE HIGH HEAD SI TO RCS HOT LEGS, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LTP	24M				
							DIAG	III				
							PIT	III				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2869B	12050-CBM-096A SH-003 / B8	Standard	GA	MOL	3	1	A	Active	C	OC	NA	SI
DESCRIPTION: NORMAL HIGH HEAD SI TO RCS HOT LEGS, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LTP	24M				
							DIAG	III				
							PIT	III				

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2885A	12050-CBM-096A SH-002 / C3	Standard	GA	MOL	2	2	A	Active	O	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2885B	12050-CBM-096A SH-002 / B3	Standard	GA	MOL	2	2	A	Active	O	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2885C	12050-CBM-096A SH-002 / D3	Standard	GA	MOL	2	2	A	Active	O	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2885D	12050-CBM-096A SH-002 / B3	Standard	GA	MOL	2	2	A	Active	O	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP MINIMUM FLOW/TEST LINE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LT	24M	TP-08			
							DIAG	III				
							PIT	III				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2890A	12050-CBM-096A SH-002 / D7	Standard	GA	MOL	10	1	A	Active	C	OC	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP HOT LEG DISCHARGE VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LTP	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2890B	12050-CBM-096A SH-002 / D7	Standard	GA	MOL	10	1	A	Active	C	OC	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP HOT LEG DISCHARGE VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LTP	24M				
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2890C	12050-CBM-096A SH-002 / C8	Standard	GA	MOL	10	1	A	Active	O	OC	NA	SI
DESCRIPTION: LOW HEAD SI PUMPS COLD LEG DISCHARGE VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LTP	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-MOV-2890D	12050-CBM-096A SH-002 / C7	Standard	GA	MOL	10	1	A	Active	O	OC	NA	SI
DESCRIPTION: LOW HEAD SI PUMPS COLD LEG DISCHARGE VALVE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							LTP	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-RV-2845A	12050-CBM-096A SH-002 / D6	Standard	RV	SA	0.75	2	C	Active	C	O	NA	SI
DESCRIPTION: "1A" LOW HEAD SI PUMP DISCHARGE RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-RV-2845B	12050-CBM-096A SH-002 / B7	Standard	RV	SA	0.75	2	C	Active	C	O	NA	SI
DESCRIPTION: LOW HEAD SI HEADER TO COLD LEG RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-RV-2845C	12050-CBM-096A SH-002 / E7	Standard	RV	SA	0.75	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" LOW HEAD SI PUMP DISCHARGE RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-RV-2857B	12050-CBM-096A SH-003 / E7	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SI
DESCRIPTION: BORON INJECTION TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-RV-2858A	12050-CBM-096B SH-001 / E7	Standard	RV	SA	1	2	C	Active	C	O	NA	SI
DESCRIPTION: "1A" SI ACCUMULATOR RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-RV-2858B	12050-CBM-096B SH-002 / E5	Standard	RV	SA	1	2	C	Active	C	O	NA	SI
DESCRIPTION: "1B" SI ACCUMULATOR RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-RV-2858C	12050-CBM-096B SH-003 / E5	Standard	RV	SA	1	2	C	Active	C	O	NA	SI
DESCRIPTION: "1C" SI ACCUMULATOR RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	V-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-TV-200	12050-CBM-096B SH-001 / F3	Standard	GA	AO	1	2	A	Active	O	C	C	SI
DESCRIPTION: NITROGEN SUPPLY TO SI ACCUMULATORS, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-TV-201	12050-CBM-096B SH-001 / E4	Standard	GA	AO	1	2	A	Active	C	C	C	SI
DESCRIPTION: SI ACCUMULATORS N2 VENT TO WASTE GAS, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-TV-2842	12050-CBM-096B SH-001 / D4	Standard	GA	AO	0.75	2	A	Active	C	C	C	SI
DESCRIPTION: SI ACCUMULATORS TEST LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-TV-2859	12050-CBM-096A SH-002 / F7	Standard	GL	AO	0.75	2	A	Active	C	C	C	SI

DESCRIPTION: SI ACCUMULATORS TEST LINE, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-TV-2884A	12050-CBM-096A SH-003 / E4	Standard	GA	AO	1	2	B	Active	O	C	C	SI

DESCRIPTION: BORON INJECTION TANK RECIRC RETURN ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-TV-2884B	12050-CBM-096A SH-003 / E4	Standard	GA	AO	1	2	B	Active	O	C	C	SI

DESCRIPTION: BORON INJECTION TANK RECIRC RETURN ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SI-TV-2884C	12050-CBM-096A SH-003 / D4	Standard	GA	AO	1	3	B	Active	O	C	C	SI
DESCRIPTION: BORON INJECTION TANK RECIRC SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-200A	12050-CBM-089B SH-001 / F6	Standard	GL	AO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER LIQUID SPACE SAMPLE LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-200B	12050-CBM-089B SH-001 / F6	Standard	GL	AO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER LIQUID SPACE SAMPLE LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-201A	12050-CBM-089B SH-001 / E6	Standard	GL	AO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER VAPOR SPACE SAMPLE LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-201B	12050-CBM-089B SH-001 / E6	Standard	GL	AO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER VAPOR SPACE SAMPLE LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-202A	12050-CBM-089B SH-001 / D6	Standard	GL	SO	0.375	1	A	Active	C	C	C	SS

DESCRIPTION: REACTOR COOLANT COLD LEGS SAMPLE HEADER, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-202B	12050-CBM-089B SH-001 / D6	Standard	GL	SO	0.375	1	A	Active	C	C	C	SS

DESCRIPTION: REACTOR COOLANT COLD LEGS SAMPLE HEADER, OUTSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-203A	12050-CBM-089B SH-001 / F6	Standard	GL	SO	0.375	2	A	Passive	C	C	NA	SS

DESCRIPTION: RHR SAMPLE HEADER, INSIDE CONTAINMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
LTJ	J	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-203B	12050-CBM-089B SH-001 / F6	Standard	GL	SO	0.375	2	A	Passive	C	C	NA	SS
DESCRIPTION: RHR SAMPLE HEADER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-204A	12050-CBM-089B SH-001 / C6	Standard	GL	AO	0.375	2	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER RELIEF TANK GAS SPACE SAMPLE LINE, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-204B	12050-CBM-089B SH-001 / C6	Standard	GL	AO	0.375	2	A	Active	C	C	C	SS
DESCRIPTION: PRESSURIZER RELIEF TANK GAS SPACE SAMPLE LINE, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-206A	12050-CBM-089B SH-001 / E6	Standard	GL	SO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: REACTOR COOLANT HOT LEGS SAMPLE HEADER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-206B	12050-CBM-089B SH-001 / E6	Standard	GL	SO	0.375	1	A	Active	C	C	C	SS
DESCRIPTION: REACTOR COOLANT HOT LEGS SAMPLE HEADER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-212A	12050-CBM-089A SH-003 / D3	Standard	GL	AO	0.375	2	A	Active	C	C	C	SS
DESCRIPTION: STEAM GENERATORS SAMPLE HEADER, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SS-TV-212B	12050-CBM-089A SH-003 / C3	Standard	GL	AO	0.375	2	A	Active	C	C	C	SS
DESCRIPTION: STEAM GENERATORS SAMPLE HEADER, OUTSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SV-TV-202-1	12050-CBM-072A SH-002 / C3	Standard	GL	AO	6	2	B	Active	C	C	C	SV
DESCRIPTION: CONDENSER AIR REMOVAL DISCHARGE TO CONTAINMENT, OUTSIDE CONT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SV-TV-203	12050-CBM-072A SH-002 / D3	Standard	GL	AO	6	2	A	Active	C	C	C	SV

DESCRIPTION: CONDENSER AIR REMOVAL DISCHARGE TO CONTAINMENT, OUTSIDE CONT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--10	11715-CBM-078A SH-003 / D3	Standard	CK	SA	20	3	C	Active	OC	OC	NA	SW

DESCRIPTION: UNIT 2 "1B" SERVICE WATER PUMP DISCHARGE CHECK VALVE

TEST	FREQUENCY	Notes
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--104	11715-CBM-078B SH-003 / E3	Standard	CK	SA	16	2	C	Active	C	O	NA	SW

DESCRIPTION: "1D" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER SUPPLY CHECK VALVE

TEST	FREQUENCY	Notes
CVC	RR	RRV-12
CVO	RR	RRV-12

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--1165	11715-CBM-078C SH-002 / F4	Standard	CK	SA	2	3	C	Active	O	C	NA	SW
DESCRIPTION: INSTRUMENT AIR HEAT EXCHANGERS SW SUPPLY HEADER NO 1 CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--1166	11715-CBM-078C SH-002 / F3	Standard	CK	SA	2	3	C	Active	O	C	NA	SW
DESCRIPTION: INSTRUMENT AIR HEAT EXCHANGERS SW SUPPLY HEADER NO 2 CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--3	11715-CBM-078A SH-003 / D4	Standard	CK	SA	20	3	C	Active	OC	OC	NA	SW
DESCRIPTION: UNIT 2 "1A" SERVICE WATER PUMP DISCHARGE CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--591	11715-CBM-078G SH-002 / E6	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1C" CHP GEAR BOX COOLER SW SUPPLY HDR NO 2 INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--592	11715-CBM-078G SH-002 / E7	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1C" CHP GEAR BOX COOLER SW SUPPLY HDR NO 1 INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--608	11715-CBM-078G SH-002 / E5	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1B" CHP GEAR BOX COOLER SW SUPPLY HDR NO 2 INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--609	11715-CBM-078G SH-002 / E5	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1B" CHP GEAR BOX COOLER SW SUPPLY HDR NO 1 INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--626	11715-CBM-078G SH-002 / E3	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1A" CHP GEAR BOX COOLER SW SUPPLY HDR NO 2 INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--627	11715-CBM-078G SH-002 / E3	Standard	CK	SA	2	3	C	Active	OC	OC	NA	SW
DESCRIPTION: "1A" CHP GEAR BOX COOLER SW SUPPLY HDR NO 1 INLET CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--68	11715-CBM-078B SH-003 / F8	Standard	CK	SA	24	3	C	Active	C	OC	NA	SW
DESCRIPTION: "A" SERVICE WATER HEADER SUPPLY CHECK VALVE TO RECIRC SPRAY HX												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-12			
							CVO	RR	RRV-12			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--70	11715-CBM-078B SH-003 / F8	Standard	CK	SA	24	3	C	Active	C	OC	NA	SW
DESCRIPTION: "B" SERVICE WATER HEADER SUPPLY CHECK VALVE TO RECIRC SPRAY HX												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-12			
							CVO	RR	RRV-12			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--74	11715-CBM-078B SH-003 / E7	Standard	CK	SA	16	2	C	Active	C	O	NA	SW
DESCRIPTION: "1A" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-12			
							CVO	RR	RRV-12			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--84	11715-CBM-078B SH-003 / E6	Standard	CK	SA	16	2	C	Active	C	O	NA	SW
DESCRIPTION: "1B" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-12			
							CVO	RR	RRV-12			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW--94	11715-CBM-078B SH-003 / E4	Standard	CK	SA	16	2	C	Active	C	O	NA	SW
DESCRIPTION: "1C" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	RR	RRV-12			
							CVO	RR	RRV-12			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-201A	11715-CBM-078A SH-004 / E7	Standard	BF	MO	24	3	B	Active	C	O	NA	SW
DESCRIPTION: "A" SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-201B	11715-CBM-078A SH-004 / E7	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "A" SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-201C	11715-CBM-078A SH-004 / E7	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "B" SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-201D	11715-CBM-078A SH-004 / E7	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "B" SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-202A	11715-CBM-078B SH-003 / F8	Standard	BF	MOL	24	3	B	Active	O	C	NA	SW

DESCRIPTION: SERVICE WATER SUPPLY CROSS CONNECT TO RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-202B	11715-CBM-078B SH-003 / F8	Standard	BF	MOL	24	3	B	Active	O	C	NA	SW

DESCRIPTION: SERVICE WATER SUPPLY CROSS CONNECT TO RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-203A	11715-CBM-078B SH-003 / E7	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW

DESCRIPTION: "A" RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	
LTJ	J	

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-203B	11715-CBM-078B SH-003 / E6	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "B" RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-203C	11715-CBM-078B SH-003 / E4	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "C" RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-203D	11715-CBM-078B SH-003 / E3	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "D" RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-204A	11715-CBM-078B SH-003 / C7	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "A" RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-204B	11715-CBM-078B SH-003 / C6	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "B" RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-204C	11715-CBM-078B SH-003 / C5	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW
DESCRIPTION: "C" RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	18M	TP-06			
							DIAG	III				
							PIT	III				
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-204D	11715-CBM-078B SH-003 / C3	Standard	BF	MO	16	2	A	Active	C	OC	NA	SW

DESCRIPTION: "D" RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-205A	11715-CBM-078A SH-004 / E7	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "B" SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-205B	11715-CBM-078A SH-004 / E7	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "B" SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-205C	11715-CBM-078A SH-004 / E6	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "A" SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-205D	11715-CBM-078A SH-004 / E7	Standard	BF	MO	24	3	B	Active	C	O	NA	SW

DESCRIPTION: "A" SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-206A	11715-CBM-078B SH-003 / B3	Standard	BF	MOL	24	3	B	Active	O	C	NA	SW

DESCRIPTION: SERVICE WATER RETURN CROSS CONNECT FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-206B	11715-CBM-078B SH-003 / A3	Standard	BF	MOL	24	3	B	Active	O	C	NA	SW

DESCRIPTION: SERVICE WATER RETURN CROSS CONNECT FROM RECIRC SPRAY HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-208A	11715-CBM-078C SH-001 / B3	Standard	BF	MO	24	3	B	Active	O	OC	NA	SW

DESCRIPTION: "B" SERVICE WATER SUPPLY HEADER ISOLATION TO COMPONENT COOLING HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-208B	11715-CBM-078C SH-001 / B3	Standard	BF	MO	24	3	B	Active	O	OC	NA	SW

DESCRIPTION: "B" SERVICE WATER SUPPLY HEADER ISOLATION TO COMPONENT COOLING HEAT EXCHANGERS

TEST	FREQUENCY	Notes
FCE	18M	TP-06
DIAG	III	
PIT	III	

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-210A	11715-CBM-078A SH-004 / E8	Standard	BF	MOL	8	3	B	Active	C	C	NA	SW
DESCRIPTION: RECIRC AIR COOLERS SUPPLY HEADER NO 1 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-210B	11715-CBM-078A SH-004 / F8	Standard	BF	MOL	8	3	B	Active	C	C	NA	SW
DESCRIPTION: RECIRC AIR COOLERS SUPPLY HEADER NO 2 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-213A	11715-CBM-078A SH-004 / B7	Standard	BF	MO	10	3	B	Passive	LC	C	NA	SW
DESCRIPTION: FUEL PIT COOLERS SW RETURN HEADER NO 4 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-213B	11715-CBM-078A SH-004 / B5	Standard	BF	MO	10	3	B	Passive	LC	C	NA	SW
DESCRIPTION: FUEL PIT COOLERS SW SUPPLY HEADER NO 2 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-214A	11715-CBM-078A SH-004 / F8	Standard	BF	MOL	8	3	B	Active	C	C	NA	SW
DESCRIPTION: RECIRC AIR COOLERS SW RETURN HEADER NO 3 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-214B	11715-CBM-078A SH-004 / F8	Standard	BF	MOL	8	3	B	Active	C	C	NA	SW
DESCRIPTION: RECIRC AIR COOLERS SW RETURN HEADER NO 4 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-215A	11715-CBM-078A SH-001 / E7	Standard	BF	MO	24	3	B	Passive	C	C	NA	SW
DESCRIPTION: UNIT 2 AUX SERVICE WATER PUMP TO SUPPLY HEADER NO 2 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-215B	11715-CBM-078A SH-001 / E6	Standard	BF	MO	24	3	B	Passive	C	C	NA	SW
DESCRIPTION: UNIT 1 AUX SERVICE WATER PUMP TO SUPPLY HEADER NO 1 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-217	11715-CBM-078A SH-001 / C6	Standard	BF	MO	24	3	B	Passive	C	C	NA	SW
DESCRIPTION: UNIT 2 AUXILIARY SERVICE WATER PUMP DISCHARGE ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							PIT	24M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-219	11715-CBM-078A SH-001 / C5	Standard	BF	MOL	8	3	B	Active	O	C	NA	SW
DESCRIPTION: SCREEN WASH PUMPS MAKE-UP TO SERVICE WATER SUPPLY HDR NO 2 ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-220A	11715-CBM-078A SH-005 / E5	Standard	BF	MOL	24	3	B	Active	C	C	NA	SW

DESCRIPTION: AUXILIARY SERVICE WATER RETURN HEADER NO 4 ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-220B	11715-CBM-078A SH-005 / D5	Standard	BF	MO	24	3	B	Passive	C	C	NA	SW

DESCRIPTION: AUXILIARY SERVICE WATER RETURN HEADER NO 3 ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-221A	11715-CBM-078H SH-001 / C8	Standard	BF	MOL	18	3	B	Active	O	O	NA	SW

DESCRIPTION: SERVICE WATER RETURN HEADER NO 3 TO SPRAY ARRAY 2A1 ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-221B	11715-CBM-078H SH-001 / C4	Standard	BF	MOL	18	3	B	Active	O	O	NA	SW

DESCRIPTION: SERVICE WATER RETURN HEADER NO 4 TO SPRAY ARRAY 2B1 ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-222A	11715-CBM-078H SH-001 / C7	Standard	BF	MOL	18	3	B	Active	O	O	NA	SW

DESCRIPTION: SERVICE WATER RETURN HEADER NO 3 TO SPRAY ARRAY 2A2 ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-222B	11715-CBM-078H SH-001 / C4	Standard	BF	MOL	18	3	B	Active	O	O	NA	SW

DESCRIPTION: SERVICE WATER RETURN HEADER NO 4 TO SPRAY ARRAY 2B2 ISOLATION VALVE

TEST	FREQUENCY	Notes
FCE	24M	
DIAG	III	
PIT	III	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-223A	11715-CBM-078H SH-001 / D8	Standard	BF	MOL	24	3	B	Active	C	C	NA	SW
DESCRIPTION: SERVICE WATER RETURN HEADER NO 3 BYPASS TO RESERVOIR ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-MOV-223B	11715-CBM-078H SH-001 / D4	Standard	BF	MOL	24	3	B	Active	C	C	NA	SW
DESCRIPTION: SERVICE WATER RETURN HEADER NO 4 BYPASS TO RESERVOIR ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-RV-200A	11715-CBM-078B SH-003 / E7	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SW
DESCRIPTION: "A" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							TSP	120M	V-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-RV-200B	11715-CBM-078B SH-003 / E6	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SW
DESCRIPTION: "B" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-RV-200C	11715-CBM-078B SH-003 / E4	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SW
DESCRIPTION: "C" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-RV-200D	11715-CBM-078B SH-003 / E3	Standard	TRV	SA	0.75	2	C	Active	C	O	NA	SW
DESCRIPTION: "D" RECIRC SPRAY HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-RV-201A	11715-CBM-078C SH-001 / F7	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	SW
DESCRIPTION: UNIT 2 "A" COMPONENT COOLING HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-RV-201B	11715-CBM-078C SH-001 / F8	Standard	TRV	SA	0.75	3	C	Active	C	O	NA	SW
DESCRIPTION: UNIT 2 "B" COMPONENT COOLING HEAT EXCHANGER SERVICE WATER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								TSP	120M	V-01		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-TCV-202A	11715-FM-078G SH-002 / C4	Standard	GL	AO	2	3	B	Active	TH	O	O	SW
DESCRIPTION: "1A" CHP LUBE OIL COOLER SERVICE WATER OUTLET TEMP CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-TCV-202B	11715-FM-078G SH-002 / C6	Standard	GL	AO	2	3	B	Active	TH	O	O	SW
DESCRIPTION: "1B" CHP LUBE OIL COOLER SERVICE WATER OUTLET TEMP CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SW-TCV-202C	11715-FM-078G SH-002 / C8	Standard	GL	AO	2	3	B	Active	TH	O	O	SW
DESCRIPTION: "1C" CHP LUBE OIL COOLER SERVICE WATER OUTLET TEMP CONTROL VALVE												
								TEST	FREQUENCY	Notes		
								FSO	3M	TP-03		

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-VG-TV-200A	12050-CBM-090A SH-001 / F3	Standard	GL	AO	1.5	2	A	Active	C	C	C	VG

DESCRIPTION: PRIMARY DRAINS TRANSFER TANK VENT LINE TO GAS STRIPPERS, OUTSIDE CONT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-VG-TV-200B	12050-CBM-090A SH-001 / D3	Standard	GL	AO	1.5	2	A	Active	C	C	C	VG

DESCRIPTION: PRIMARY DRAINS TRANSFER TANK VENT LINE TO GAS STRIPPERS, INSIDE CONT ISOLATION VALVE

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	
STC	3M	
LTJ	J	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-VP--24	12050-CBM-072A SH-002 / E3	Standard	CK	SA	6	2	AC	Active	C	C	NA	VP

DESCRIPTION: CONDENSER AIR REMOVAL DISCHARGE TO CONTAINMENT INSIDE CONT ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
LTJ	J	
CVC	RR	RRV-13
CVO	RR	RRV-13

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--41	12050-CBM-102A SH-002 / F7	Standard	CK	SA	0.75	2	C	Active	C	C	NA	WT
DESCRIPTION: "A" STEAM GENERATOR CHEMICAL FEED SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M	TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--437	12050-CBM-102B SH-001 / E6	Standard	GA	MA	2	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "A" STEAM GENERATOR, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--438	12050-CBM-102B SH-001 / D6	Standard	GA	MA	2	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "B" STEAM GENERATOR, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--439	12050-CBM-102B SH-001 / B6	Standard	GA	MA	2	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "C" STEAM GENERATOR, INSIDE CONTAINMENT ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							LTJ	J				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--446	12050-CBM-102B SH-001 / E5	Standard	GA	MA	2	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "A" STEAM GENERATOR, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--447	12050-CBM-102B SH-001 / D5	Standard	GA	MA	2	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "B" STEAM GENERATOR, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--448	12050-CBM-102B SH-001 / B5	Standard	GA	MA	2	2	A	Passive	C	C	NA	WT
DESCRIPTION: WET LAY UP RETURN FROM "C" STEAM GENERATOR, OUTSIDE CONTAINMENT ISOLATION VALVE												
								TEST	FREQUENCY	Notes		
								LTJ	J			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--53	12050-CBM-102A SH-002 / E7	Standard	CK	SA	0.75	2	C	Active	C	C	NA	WT
DESCRIPTION: "B" STEAM GENERATOR CHEMICAL FEED SUPPLY CHECK VALVE												
								TEST	FREQUENCY	Notes		
								CVC	3M			
								CVO	3M	TP-01		

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-WT--69	12050-CBM-102A SH-002 / D7	Standard	CK	SA	0.75	2	C	Active	C	C	NA	WT
DESCRIPTION: "C" STEAM GENERATOR CHEMICAL FEED SUPPLY CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	3M				
							CVO	3M	TP-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-AS-FCV-200A	12050-CBM-072A SH-002 / E5	Augmented	GA	AO	1.5	NC	B	Active	O	C	C	AS
DESCRIPTION: Auxiliary Steam Supply To Condenser Air Ejectors												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-AS-FCV-200B	12050-CBM-072A SH-002 / E5	Augmented	GA	AO	1.5	NC	B	Active	O	C	C	AS
DESCRIPTION: Auxiliary Steam Supply To Condenser Air Ejectors												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-204A	12050-CBM-079B SH-003 / E5	Augmented	TRV	SA	0.75	NC	C	Active	C	O	NA	CC
DESCRIPTION: "2A" RECIRC AIR COOLER CW OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-204B	12050-CBM-079B SH-003 / D5	Augmented	TRV	SA	0.75	NC	C	Active	C	O	NA	CC
DESCRIPTION: "2B" RECIRC AIR COOLER CC OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CC-RV-204C	12050-CBM-079B SH-003 / B5	Augmented	TRV	SA	0.75	NC	C	Active	C	O	NA	CC
DESCRIPTION: "2C" RECIRC AIR COOLER CW OUTLET HEADER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-CH-FCV-2114A	12050-CBM-095B SH-001 / D4	Augmented	GL	AO	1	NC	B	Active	C	C	C	CH
DESCRIPTION: Primary Grade Water to Blender System Flow Control Valve												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	3M	TP-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EB--15	12050-FM-107A SH-001 / E5	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EB
DESCRIPTION: 2HA AIR RECIEVER TO 2H EDG STARTING AIR INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-27
CVO	18M	RRV-27

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EB--34	12050-FM-107A SH-003 / E5	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EB
DESCRIPTION: 2JA AIR RECIEVER TO 2J EDG STARING AIR INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-27
CVO	18M	RRV-27

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EB--41	12050-FM-107A SH-001 / D5	Augmented	CK	SA	0.75	NC	AC	Active	C	C	NA	EB
DESCRIPTION: 2HA AIR DRYER OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
LT	24M	
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EB--51	12050-FM-107A SH-003 / D5	Augmented	CK	SA	0.75	NC	AC	Active	C	C	NA	EB
DESCRIPTION: 2JA AIR DRYER OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
LT	24M	
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EB--61	12050-FM-107A SH-002 / E6	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EB
DESCRIPTION: 2HB AIR RCVR TO 2H EDG STARTING AIR INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-27
CVO	18M	RRV-27

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EB--68	12050-FM-107A SH-002 / D6	Augmented	CK	SA	0.75	NC	AC	Active	C	C	NA	EB
DESCRIPTION: 2HB AIR DRYER OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
LT	24M	
CVC	3M	
CVO	3M	

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EB--78	12050-FM-107A SH-004 / E6	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EB
DESCRIPTION: 2JB AIR RCVR TO 2J EDG STARTING AIR INLET CHECK VALVE												

TEST	FREQUENCY	Notes
CVC	18M	RRV-27
CVO	18M	RRV-27

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EB--85	12050-FM-107A SH-004 / D6	Augmented	CK	SA	0.75	NC	AC	Active	C	C	NA	EB
DESCRIPTION: 2JB AIR DRYER OUTLET CHECK VALVE												

TEST	FREQUENCY	Notes
LT	24M	
CVC	3M	
CVO	3M	

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG--260	11715-FB-035A SH-002 / C7	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 2HA EDG FUEL OIL TRANSFER PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-31

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG--272	11715-FB-035A SH-002 / F7	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 2JA EDG FUEL OIL TRANSFER PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-31

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG--284	11715-FB-035A SH-002 / F6	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 2JB EDG FUEL OIL TRANSFER PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-31

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG--289	11715-FB-035A SH-002 / C6	Augmented	CK	SA	1.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 2HB EDG FUEL OIL TRANSFER PUMP DISCHARGE CHECK VALVE												

TEST	FREQUENCY	Notes
CVO	3M	
CVC	RR	RRV-31

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-RV-204A	11715-FB-035A SH-002 / C7	Augmented	RV	SA	1	NC	C	Active	C	OC	NA	EG
DESCRIPTION: 2HA EDG FUEL OIL TRANSFER PUMP DISCHARGE RELIEF VALVE												

TEST	FREQUENCY	Notes
SP	120M	VNC-03 : VNC-04

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-RV-204B	11715-FB-035A SH-002 / C6	Augmented	RV	SA	1	NC	C	Active	C	OC	NA	EG
DESCRIPTION: 2HB EDG FUEL OIL TRANSFER PUMP DISCHARGE RELIEF VALVE												

TEST	FREQUENCY	Notes
SP	120M	VNC-03 : VNC-04

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-RV-206A	11715-FB-035A SH-002 / F7	Augmented	RV	SA	1	NC	C	Active	C	OC	NA	EG
DESCRIPTION: 2JA EDG FUEL OIL TRANSFER PUMP DISCHARGE RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-03 : VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-RV-206B	11715-FB-035A SH-002 / F6	Augmented	RV	SA	1	NC	C	Active	C	OC	NA	EG
DESCRIPTION: 2JB EDG FUEL OIL TRANSFER PUMP DISCHARGE RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-03 : VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-RV-702HA	12050-FM-107A SH-001 / E3	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 2HA AIR RECEIVER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-RV-702HB	12050-FM-107A SH-002 / E4	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 2HB AIR RECEIVER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-RV-702JA	12050-FM-107A SH-003 / E3	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 2JA AIR RECEIVER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-RV-702JB	12050-FM-107A SH-004 / E4	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	EG
DESCRIPTION: 2JB AIR RECEIVER RELIEF VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M	VNC-04		

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-SOV-700HA	12050-FM-107A SH-001 / E5	Augmented	GA	SO	1.5	NC	B	Active	C	O	NA	EG
DESCRIPTION: 2H EMERGENCY DIESEL GEN STARTING AIR SOV												
							TEST	FREQUENCY	Notes			
							STO	3M	VNC-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-SOV-700HB	12050-FM-107A SH-002 / E6	Augmented	GA	SO	1.5	NC	B	Active	C	O	NA	EG
DESCRIPTION: 2H EMERGENCY DIESEL GEN STARTING AIR SOV												
							TEST	FREQUENCY	Notes			
							STO	3M	VNC-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-SOV-700JA	12050-FM-107A SH-003 / E6	Augmented	GA	SO	1.5	NC	B	Active	C	O	NA	EG
DESCRIPTION: 2J EMERGENCY DIESEL GEN STARTING AIR SOV												
							TEST	FREQUENCY	Notes			
							STO	3M	VNC-02			

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-SOV-700JB	12050-FM-107A SH-004 / E6	Augmented	GA	SO	1.5	NC	B	Active	C	O	NA	EG
DESCRIPTION: 2J EMERGENCY DIESEL GEN STARTING AIR SOV												
							TEST	FREQUENCY	Notes			
							STO	3M	VNC-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-SOV-701HA	12050-FM-107A SH-001 / E6	Augmented	GA	SO	0.25	NC	B	Active	O	O	NA	EG
DESCRIPTION: 2H EMERGENCY DIESEL GEN STARTING AIR VENT SOV												
							TEST	FREQUENCY	Notes			
							STO	3M	VNC-02			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-EG-SOV-707JA	12050-FM-107A SH-003 / E6	Augmented	GA	SO	0.25	NC	B	Active	O	O	NA	EG
DESCRIPTION: 2J EMERGENCY DIESEL GEN STARTING AIR VENT SOV												
							TEST	FREQUENCY	Notes			
							STO	3M	VNC-02			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-FCV-2478	12050-CBM-074A SH-001 / E4	Augmented	GA	AO	16	NC	B	Active	O	C	C	FW
DESCRIPTION: "A" MAIN FEEDWATER REG VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-03
STC	CS	CSV-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-FCV-2479	12050-CBM-074A SH-001 / F4	Augmented	GL	AO	6	NC	B	Active	C	C	C	FW
DESCRIPTION: "A" MAIN FEEDWATER REG BYPASS VALVE												

TEST	FREQUENCY	Notes
FSC	CS	CSV-03
STC	CS	CSV-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-FCV-2488	12050-CBM-074A SH-001 / D4	Augmented	GA	AO	16	NC	B	Active	O	C	C	FW
DESCRIPTION: "B" MAIN FEEDWATER REG VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-03
STC	CS	CSV-03

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-FCV-2489	12050-CBM-074A SH-001 / D4	Augmented	GL	AO	6	NC	B	Active	C	C	C	FW
DESCRIPTION: "B" MAIN FEEDWATER REG BYPASS VALVE												

TEST	FREQUENCY	Notes
FSC	CS	CSV-03
STC	CS	CSV-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-FCV-2498	12050-CBM-074A SH-001 / B4	Augmented	GA	AO	16	NC	B	Active	O	C	C	FW
DESCRIPTION: "C" MAIN FEEDWATER REG VALVE												

TEST	FREQUENCY	Notes
PIT	24M	
FSC	CS	CSV-03
STC	CS	CSV-03

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-FCV-2499	12050-CBM-074A SH-001 / C4	Augmented	GL	AO	6	NC	B	Active	C	C	C	FW
DESCRIPTION: "C" MAIN FEEDWATER REG BYPASS VALVE												

TEST	FREQUENCY	Notes
FSC	CS	CSV-03
STC	CS	CSV-03

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-250A	12050-FM-074A SH-002 /	Augmented	GA	MOL		NC	B	Active		C	NA	FW
DESCRIPTION: Main Feedwater Pump Discharge Isolation Valves												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-250B	12050-FM-074A SH-002 /	Augmented	GA	MOL		NC	B	Active		C	NA	FW
DESCRIPTION: Main Feedwater Pump Discharge Isolation Valves												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-250C	12050-FM-074A SH-002 /	Augmented	GA	MOL		NC	B	Active		C	NA	FW
DESCRIPTION: Main Feedwater Pump Discharge Isolation Valves												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-254A	12050-CBM-074A SH-001 / E3	Augmented	GA	MOL	16	NC	B	Active	O	C	NA	FW
DESCRIPTION: "A" MAIN FEEDWATER SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-254B	12050-CBM-074A SH-001 / D3	Augmented	GA	MOL	16	NC	B	Active	O	C	NA	FW
DESCRIPTION: "B" MAIN FEEDWATER SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-FW-MOV-254C	12050-CBM-074A SH-001 / B3	Augmented	GA	MOL	16	NC	B	Active	O	C	NA	FW
DESCRIPTION: "C" MAIN FEEDWATER SUPPLY ISOLATION VALVE												
							TEST	FREQUENCY	Notes			
							FCE	24M				
							STC	CS	CSV-03 : TP-05			
							DIAG	III				
							PIT	III				

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-GN--101	11715-FM-105A SH-001 / B6	Augmented	CK	SA	0.5	NC	AC	Active	C	C	NA	GN
DESCRIPTION: "1B" N2 RESERVE TANK N2 SUPPLY HEADER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M	RRV-22			
							CVC	RR	RRV-22			
							CVO	RR	RRV-22			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-GN--102	11715-FM-105A SH-001 / B4	Augmented	CK	SA	0.5	NC	AC	Active	C	C	NA	GN
DESCRIPTION: "1A" N2 RESERVE TANK N2 SUPPLY HEADER CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M	RRV-22			
							CVC	RR	RRV-22			
							CVO	RR	RRV-22			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-GN-RV-208A-1	11715-FM-105A SH-001 / B4	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1A" NITROGEN RESERVE TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-04			

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-GN-RV-208A-2	11715-FM-105A SH-001 / C5	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1A" NITROGEN RESERVE TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-GN-RV-208A-3	11715-FM-105A SH-001 / C5	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1A" NITROGEN RESERVE TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-GN-RV-208B-1	11715-FM-105A SH-001 / B7	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1B" NITROGEN RESERVE TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-04			

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-GN-RV-208B-2	11715-FM-105A SH-001 / C6	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1B" NITROGEN RESERVE TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-GN-RV-208B-3	11715-FM-105A SH-001 / C6	Augmented	RV	SA	0.75	NC	C	Active	C	O	NA	GN
DESCRIPTION: "1B" NITROGEN RESERVE TANK RELIEF VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M	VNC-04			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--2130	12050-FM-082A SH-002 / E8	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: 2-RC-PCV-2455C INSTRUMENT AIR CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M	RRV-22			
							CVC	RR	RRV-22			
							CVO	RR	RRV-22			

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--2131	12050-FM-082A SH-002 / E8	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: 2-RC-PCV-2455C INSTRUMENT AIR CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M	RRV-22			
							CVC	RR	RRV-22			
							CVO	RR	RRV-22			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--2132	12050-FM-082A SH-002 / E8	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: 2-RC-PCV-2456 INSTRUMENT AIR CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M	RRV-22			
							CVC	RR	RRV-22			
							CVO	RR	RRV-22			

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--2133	12050-FM-082A SH-002 / E8	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: 2-RC-PCV-2456 INSTRUMENT AIR CHECK VALVE												
							TEST	FREQUENCY	Notes			
							LT	24M	RRV-22			
							CVC	RR	RRV-22			
							CVO	RR	RRV-22			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--2251	12050-FM-082B SH-002 / F6	Augmented	CK	SA	0.25	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: UNIT 2 SAFEGUARDS EXHAUST VENT RELIEF DAMPER AIR RECEIVER ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	24M	RRV-24			
							CVO	24M	RRV-24			
							LT	24M	RRV-24			

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--2591	11715-FM-082C SH-001 / D3	Augmented	CK	SA	0.5	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUX BUILDING CENTRAL EXHAUST VENT RELIEF DAMPER AIR RECEIVER ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	24M	RRV-24			
							CVO	24M	RRV-24			
							LT	24M	RRV-24			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--497	11715-FM-082C SH-001 / C7	Augmented	CK	SA	0.5	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: BOTTLED AIR SUPPLY TO HYDROGEN RECOMBINER VALVES ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	24M	RRV-23			
							CVO	24M	RRV-23 : TP-01			
							LT	24M	RRV-23			

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--499	11715-FM-082C SH-001 / C7	Augmented	CK	SA	0.5	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: BOTTLED AIR SUPPLY TO HYDROGEN RECOMBINER VALVES ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	24M	RRV-23			
							CVO	24M	RRV-23 : TP-01			
							LT	24M	RRV-23			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--504	12050-FM-082C SH-001 / E3	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4A" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--510	12050-FM-082C SH-001 / E4	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4B" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--516	12050-FM-082C SH-001 / E4	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4C" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--525	12050-FM-082C SH-001 / E6	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4E" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--531	12050-FM-082C SH-001 / E5	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4D" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--537	12050-FM-082C SH-001 / E6	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4F" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--543	12050-FM-082C SH-001 / E7	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4G" INLET ISOLATION CHECK VALVE												
							TEST	FREQUENCY	Notes			
							CVC	CS	CSV-07, VNC-01			
							CVO	CS	CSV-07, VNC-01			
							LT	CS	VNC-01			

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA--549	12050-FM-082C SH-001 / E8	Augmented	CK	SA	0.75	NC	AC	Active	OC	C	NA	IA

DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4H" INLET ISOLATION CHECK VALVE

TEST	FREQUENCY	Notes
CVC	CS	CSV-07, VNC-01
CVO	CS	CSV-07, VNC-01
LT	CS	VNC-01

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-RV-210	12050-FM-082A SH-002 / E8	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	IA

DESCRIPTION: 2-RC-PCV-2455C INSTRUMENT AIR SUPPLY RELIEF VALVE

TEST	FREQUENCY	Notes
SP	120M	VNC-04

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-RV-211	12050-FM-082A SH-002 / E8	Augmented	RV	SA	0.5	NC	C	Active	C	O	NA	IA

DESCRIPTION: 2-RC-PCV-2456 INSTRUMENT AIR SUPPLY RELIEF VALVE

TEST	FREQUENCY	Notes
SP	120M	VNC-04

NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-SV-205A	12050-FM-082C SH-001 / D3	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4A" SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-SV-205B	12050-FM-082C SH-001 / D4	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4B" SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-SV-205C	12050-FM-082C SH-001 / D4	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: MAIN STEAM SEISMIC AIR TANK "4C" SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M				

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-SV-205D	12050-FM-082C SH-001 / D5	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4D" SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-SV-205E	12050-FM-082C SH-001 / D6	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4E" SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M				

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-SV-205F	12050-FM-082C SH-001 / D7	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4F" SAFETY VALVE												
							TEST	FREQUENCY	Notes			
							SP	120M				

**NORTH ANNA UNIT 2
FIFTH INSERVICE TESTING INTERVAL
VALVE INSERVICE TEST TABLE**

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-SV-205G	12050-FM-082C SH-001 / D7	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4G" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-IA-SV-205H	12050-FM-082C SH-001 / D8	Augmented	RV	SA	1	NC	C	Active	C	O	NA	IA
DESCRIPTION: AUXILIARY FEEDWATER SEISMIC AIR TANK "4H" SAFETY VALVE												
								TEST	FREQUENCY	Notes		
								SP	120M			

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-MS-TV-210	12050-CBM-070B SH-003 / A4	Augmented	GL	AO	1.5	NC	B	Active	C	C	C	MS
DESCRIPTION: MAIN STEAM HIGH PRESSURE DRAIN HEADER ISOLATION TO S/G BLOWDOWN SYSTEM												
								TEST	FREQUENCY	Notes		
								PIT	24M			
								FSC	3M			
								STC	3M			

NORTH ANNA UNIT 2

FIFTH INSERVICE TESTING INTERVAL

VALVE INSERVICE TEST TABLE

VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH-FCV-2605	12050-CBM-094A SH-002 / C7	Augmented	BF	AO	12	2	B	Active		C	C	RH
DESCRIPTION: RHR Heat Exchanger Bypass Flow Control Valves												
							TEST	FREQUENCY	Notes			
							STC	3M				
							FSC	RR	RRV-30			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-RH-HCV-2758	12050-CBM-094A SH-002 / C5	Augmented	BF	AO	12	2	B	Active		O	O	RH
DESCRIPTION: RHR Heat Exchanger Discharge Flow Control Valves												
							TEST	FREQUENCY	Notes			
							STO	3M				
							FSO	RR	RRV-30			
VALVE NO.	DRAWING NO./ COOR.	PROGRAM	TYPE	ACTUATOR	SIZE	CLASS	CATEGORY	ACT/PASS	NP	SP	FP	SYSTEM
02-SV-TV-202-2	12050-CBM-072A SH-002 / B3	Augmented	GA	AO	6	NC	B	Active	O	C	C	SV
DESCRIPTION: Condenser Air Removal Discharge To Vent Stack Isolation Valves												
							TEST	FREQUENCY	Notes			
							PIT	24M				
							FSC	3M				
							STC	3M				

4.5 VALVE TEST PROGRAM RELIEF REQUESTS

Relief requests identify those ISTC Code requirements considered to be impractical or for which an alternative testing method is proposed.

Relief Request Number	Description
V-01	Eliminate 5 Minute Hold Time When Testing Certain Relief Valves

RELIEF REQUEST V-01
TO BE INSERTED HERE UPON APPROVAL

4.6 VALVE TEST PROGRAM COLD SHUTDOWN JUSTIFICATIONS

ISTC-3521 and ISTC-3522 allow for the full stroke exercising of valves during Cold Shutdown (but not more frequently than every three months) if it is not practical to exercise the valves during normal operation. Therefore, no request for relief from testing every three months is necessary.

However, ISTC-9200 requires that these valves be specifically identified by the owner. The cold shutdown justifications identify and provide the technical basis for valves exercised during cold shutdown but not during normal operation.

Cold Shutdown Justification Index	
CSV-01	Reactor Coolant Pump CC Supply and Return Containment Isolation Valves
CSV-02	Letdown Line Isolation Valves
CSV-03	Main Feedwater Regulating, Bypass and Isolation Valves, MFP Discharge Isolation Valves
CSV-04	Main Steam Header Non-return Valves
CSV-05	Main Steam High Pressure Drain to Condenser Isolation Valve
CSV-06	Main Steam Header Trip Valves
CSV-07	Air Accumulator Isolation Check Valves
CSV-08	Main Steam Trip Bypass Valves
CSV-09	Pressurizer Power Operated Pressure Control Valves
CSV-10	RHR Pump Discharge Check Valves
CSV-11	Reactor Vessel Vent Line Isolation Valves
CSV-12	Standby Auxiliary Feedwater Supply Valves
CSV-13	Auxiliary Feedwater Pressure Control Valves
CSV-14	Main Feedwater Supply Isolation Check Valves
CSV-15	Auxiliary Feedwater Header Check Valves
CSV-16	Auxiliary Feedwater Header Check Valves
CSV-17	Auxiliary Feedwater Pump Discharge Check Valves
CSV-18	Instrument Air Supply to Containment Isolation Valves
CSV-19	Boric Acid Transfer Pump Discharge Check Valves

COLD SHUTDOWN JUSTIFICATION CSV-01

System: Component Cooling

Valve(s): 2-CC-TV-201A	2-CC-TV-202E
2-CC-TV-201B	2-CC-TV-202F
2-CC-TV-202A	2-CC-TV-204A
2-CC-TV-202B	2-CC-TV-204B
2-CC-TV-202C	2-CC-TV-204C
2-CC-TV-202D	

Category: A

Class: 2

Function: Reactor Coolant Pump CC Supply and Return Containment Isolation Valves

Cold Shutdown Justification

Testing these trip valves to the closed position interrupts component cooling (CC) flow to the Reactor Coolant Pumps (RCPs) thermal barriers, lube oil, stator and/or shroud coolers. The motor for each RCP is vulnerable to loss of CC flow. If a CC trip valve fails closed during testing and CC flow is lost, damage to the operating RCP will result in approximately 10 minutes. In this case, the RCP will be tripped before damage occurs. The increased level of safety gained from exercising these valves while the RCPs are operating during normal operation or cold shutdowns does not justify the operational consequences should they fail in the closed position. The valve controllers do not allow for a part-stroke exercise test.

Testing Frequency

These valves will be full stroke exercised during cold shutdown when the RCPs are secured but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-02

System: Chemical & Volume Control System

Valve(s): 2-CH-TV-2204A 2-CH-LCV-2460A
 2-CH-TV-2204B 2-CH-LCV-2460B

Category: B for 2-CH-LCV-2460A and B
 A for 2-CH-TV-2204A and B

Class: 1 for 2-CH-LCV-2460A and B
 2 for 2-CH-TV-2204A and B

Function: Letdown Line Isolation Valves

Cold Shutdown Justification

Exercising these valves during power operation interrupts letdown flow from the reactor coolant system (RCS) to the volume control tank. If the valves should fail closed, reactor coolant inventory control would be lost.

The pressurizer level control program controls reactor coolant inventory by regulating the operation of the charging flow control valve so that the charging input flow to the RCS and reactor coolant pump seal injection flow into the RCS matches letdown flow.

Also, exercising these valves during normal operation will interrupt letdown flow through the regenerative heat exchanger. This flow interruption would allow a slug of relatively cool charging water to thermal shock the nozzle connecting the 3" charging line to the 27" loop cold leg injection line. The valve controllers do not allow for a part stroke exercise test.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-03

System: Feedwater

Valve(s): 2-FW-FCV-2478	2-FW-MOV-254A
2-FW-FCV-2479	2-FW-MOV-254B
2-FW-FCV-2488	2-FW-MOV-254C
2-FW-FCV-2489	2-FW-MOV-250A
2-FW-FCV-2498	2-FW-MOV-250B
2-FW-FCV-2499	2-FW-MOV-250C

Category: B

Class: NC

Function: Main Feedwater Regulating, Bypass and Isolation Valves, MFP Discharge Isolation Valves

Cold Shutdown Justification

These valves are in positions required to sustain power operation. Full stroke exercising the valves would result in a reactor trip. The main feedwater regulating valves, and bypass valves, move during normal operation (startup for bypass valves) as they perform their regulating function. NUREG-1482, Rev 2, Section 2.4.5 states that performing testing that has a high potential to cause a reactor trip during normal plant operations is justification for deferral to cold shutdown. These valves also must meet their TS required stroke time limits in SR 3.7.3.1.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-04

System: Main Steam

Valve(s): 2-MS-NRV-201A

2-MS-NRV-201B

2-MS-NRV-201C

Category: C

Class: 2

Function: Main Steam Header Non-return Valves

Cold Shutdown Justification

Valve Description

The main steam non-return valves (NRVs) at North Anna Power Station are located in the main steam valve house and are a globe type stop check design. The valves measure approximately 16 feet from the bottom of the valve body to the top of the hand wheel and weigh almost 24,000 lbs. The disk is welded to a hollow piston and the whole assembly is free to move about 25 vertical inches within the valve body cylinder. The disk measures 25.5 inches across and the disk and piston assembly weighs approximately 1,200 lbs. When the main steam system is not inservice, a motor operator is used to run the valve stem down onto the disk to secure the main steam line.

The valves open to allow steam to the turbine. For accident conditions, the non-return valves in conjunction with the main steam trip valves prevent the blow down of more than one steam generator for any break location, even if one valve fails to close. For example, for a break upstream of the trip valve in one line, the closure of either the non-return valve in that line or the trip valves in the other lines prevents the blow down of the other steam generators.

Method of Testing

The piping downstream of each non-return valve leads to a common distribution manifold and cannot be isolated. Therefore, performing a back seat test using flow is not practical. Also, valve disassembly and inspection are not practical alternatives due to the size of the valve and the weight of the disk.

COLD SHUTDOWN JUSTIFICATION CSV-04 (Cont.)

However, an alternative exists to verify that the disk moved to the valve seat during reactor coolant system (RCS) cool down. When the RCS temperature is between 350 °F and 195 °F during the cool down process, the main steam trip valves are closed. Then the main steam non-return valves close in response to the loss of steam flow.

After the main steam trip valve is closed, diagnostic test equipment can be used to determine the position of the disk of the NRV. After the main steam flow is stopped, the non-return valve stem is run down onto the disk after the disk returns to the seat. A change in the running force within the normal travel of the stem indicates a resistance to stem movement (i.e., a stuck disk). Verifying that the stem travels to the seated disk with nominal changes in the running force indicates that the disk is on the seat. The test requires that the cool down process be delayed between one to two hours to setup the instrumentation and to perform the test on each of three valves.

The diagnostic test equipment provides two methods for detecting changes in the running force. The test can be performed either at the valve by monitoring the yoke strain using a permanently mounted force sensor or at the motor control center (MCC) by monitoring motor current. The first method converts yoke strain directly to stem load. A signature is generated that will show any changes in the stem load which would indicate a stuck or binding valve disk. The second and more sensitive method monitors a single phase of the motor current. The motor current information is used to generate motor power and power factor signatures which are very sensitive to changes in stem load. Changes in motor load would again indicate a stuck or binding valve disk. In both methods, the valve switch probes are monitored to determine the status of the torque and limit switches, and the open and closed bypass switches in the motor operator control circuit over the course of stem travel. The second method is preferred.

Testing Frequency Discussion

Full stroke or part stroke exercising of these valves during power operation would result in a turbine and reactor trip. Plant cool down procedures require that the NRV stem be run down onto the disk to isolate the main steam system after main steam flow is stopped. The diagnostic testing must be performed when the NRVs are initially closed during the cool down to accurately assess the piston-disk assembly's as-found position. As indicated above, the diagnostic test will delay the cool down process from between one to two hours. Some cold shutdown outages are forced outages that result from exceeding a Technical Specification limit such as unidentified RCS leakage. The emphasis in a forced outage cool down is to reach cold shutdown as rapidly as possible and to mitigate the cause of the forced outage. Stopping this process to perform the diagnostic test would complicate the operator's task to secure the plant and may reduce plant safety. However, during planned cold shutdowns where there are no mitigating circumstances, there is adequate time to notify the test personnel, carry the equipment into the field and perform the test.

COLD SHUTDOWN JUSTIFICATION CSV-04 (Cont.)

There is no evidence in the valve history that a valve has stuck in the partial open position. The piston-disk assembly is not attached to any other internal part, the 1,200 lb piston-disk assembly is maintained parallel within the valve body cylinder and the main steam system is very clean. Consequently, there is no mechanism to prevent the disk from dropping from the full open position to the valve seat.

Testing Frequency

The diagnostic test described above will be performed on each main steam non-return valve during the cool down process going into each planned cold shutdown. This test will not be performed more often than once every three months. The valves are verified open during normal plant operation.

COLD SHUTDOWN JUSTIFICATION CSV-05

System: Main Steam

Valve(s): 2-MS-TV-209

Category: B

Class: 3

Function: Main Steam High Pressure Drain to Condenser Isolation Valve

Cold Shutdown Justification

Full or part-stroke exercising this valve during power operation would cause undesirable pressure transients in the High Pressure Secondary Drains System. Also, the valve controller does not allow for a part-stroke exercise test. The increased level of safety gained from exercising this valve during power operation does not justify the operational consequences of these pressure variations.

Testing Frequency

This valve will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-06

System: Main Steam
Valve(s): 2-MS-TV-201A
 2-MS-TV-201B
 2-MS-TV-201C
Category: BC
Class: 2
Function: Main Steam Header Trip Valves

Cold Shutdown Justification

These valves are air operated check valves installed counter to the normal steam flow direction and in positions required to sustain power operation. Full or part-stroke exercising these valves during normal operation would result in a reactor trip and safety injection. Also, the valve controllers do not allow for a part-stroke exercise test.

The valves fail closed and must close in ≤ 5 seconds per SR 3.7.2.1. The fail safe test verifies closure of the swing check by venting air off of the operator.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-07

System: Instrument Air

Valve(s):	2-IA-504	2-IA-531
	2-IA-510	2-IA-537
	2-IA-516	2-IA-543
	2-IA-525	2-IA-549

Category: AC

Class: NC

Function: Air Accumulator Isolation Check Valves

Cold Shutdown Justification

Check valves 2-IA-504, 510 and 516 isolate the normal instrument air supply from the backup bottled air supply for the main steam pressure control valves 2-MS-PCV-201A, B and C. Valves 2-IA-525, 531 and 537 isolate the normal instrument air supply to the auxiliary feedwater valves 2-FW-HCV-200A, B and C. Valves 2-IA-543 and 549 isolate the normal instrument air supply to the auxiliary feedwater valves 2-FW-PCV-259A and B.

To back seat test check valves 2-IA-504, 510 and 516, the instrument air system must be isolated to all three main steam pressure control valves and the lines vented. To back seat test check valves 2-IA-525, 531, 537, 543 and 549, the instrument air system must be isolated to all five auxiliary feedwater valves and the lines vented. Isolating this many valves that are important to safety during normal operation would degrade the safety of the plant and be disruptive to plant operation.

Testing Frequency

These check valves will be exercised open and closed during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-08

System: Main Steam

Valve(s): 2-MS-TV-213A

2-MS-TV-213B

2-MS-TV-213C

Category: B

Class: 2

Function: Main Steam Trip Bypass Valves

Cold Shutdown Justification

These trip valves are opened only during plant startup to provide flow paths for steam from each of the steam generators to equalize pressure across the main steam trip valves. They remain closed during normal operation to prevent the unrestricted release of steam from multiple steam generators in the event of a downstream steam line rupture and to isolate the steam generators (automatically close on steam line or IHH isolation) in the event of a LOCA or steam generator tube rupture. When closed, they provide isolation of the unaffected steam generators thus ensuring an adequate supply of steam for AFW pump turbine operation. They are designated as containment isolation valves (non-leak tested). There is a remote possibility that these valves would have to close during plant startup; therefore, they are considered active to the closed position only during plant startup. They will be tested prior to startup to ensure operability.

Testing Frequency

These valves will be full stroke exercised during cold shutdown prior to startup but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-09

System: Reactor Coolant
Valve(s): 2-RC-PCV-2455C
2-RC-PCV-2456
Category: BL
Class: 1
Function: Pressurizer Power Operated Pressure Control Valves

Cold Shutdown Justification

Full or part-stroke exercising these valves during power operations would cause high differential pressure across the PCV Block Valves. Although these valves are designed to accommodate this differential pressure, cycling would eventually degrade the block valves seating capability, thus decreasing plant safety. Also, the valve controllers do not allow for a part-stroke exercise test.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-10

System: Residual Heat Removal

Valve(s): 2-RH-7
2-RH-15

Category: C

Class: 2

Function: RHR Pump Discharge Check Valves

Cold Shutdown Justification

These RHR pump discharge check valves can only be exercised to the open position and verified closed when the RHR pumps 2-RH-P-1A and 2-RH-P-1B are running. The low-pressure pumps take suction from and discharge to the reactor coolant system which operates at 2235 psig. This pressure is well above the operating pressure of the pumps, therefore, testing during normal operation is not practical.

Testing Frequency

These valves will be full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-11

System: Reactor Coolant

Valve(s): 2-RC-SOV-201A-1
2-RC-SOV-201A-2
2-RC-SOV-201B-1
2-RC-SOV-201B-2

Category: B

Class: 1

Function: Reactor Vessel Vent Line Isolation Valves

Cold Shutdown Justification

These valves are the Reactor Vessel Head Vent Valves. Full or part-stroke exercising these valves at power could release reactor coolant into the reactor vessel refueling cavity. Stroking of these valves has been performed while the Reactor Coolant System (RCS) was pressurized. This test revealed that when the upstream valve was stroked, the downstream valve tended to lift and then reseal due to the motive force of the steam. As long as these valves remain closed under RCS pressure, they are an effective isolation boundary. However, these valves should not be stroked while the RCS is fully pressurized, because a valve could develop a leak across the seat during the exercise test due to the high differential pressures and exposure to steam. These valves will be exercised during each cold shutdown when the RCS is at a reduced pressure. Testing at a reduced RCS pressure allows the valves to seat properly and maintain RCS boundary integrity.

Testing Frequency

Exercise for operability during cold shutdown when the Reactor Coolant System is at a reduced pressure but not more frequently than once per three months.

COLD SHUTDOWN JUSTIFICATION CSV-12

System: Auxiliary Feedwater

Valve(s): 2-FW-HCV-200A

2-FW-HCV-200B

2-FW-HCV-200C

Category: B

Class: 3

Function: Standby Auxiliary Feedwater Supply Valves

Cold Shutdown Justification

Valve position is controlled by turning a knob on a potentiometer. Several turns of the knob are necessary to full stroke the valve, which would not simulate a fail safe test. Isolating instrument air and electrical power to the valve is the only valid method for performing a fail safe test and full stroke exercising these valves. The fail safe test cannot be performed during normal operation because these valves must be available in the event of a reactor trip.

Testing Frequency

These valves will be partial stroke exercised every three months, and full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-13

System: Auxiliary Feedwater

Valve(s): 2-FW-PCV-259A
2-FW-PCV-259B

Category: B

Class: 3

Function: Auxiliary Feedwater Pressure Control Valves

Cold Shutdown Justification

During normal operation, these valves control auxiliary feedwater header pressure and cannot be full stroked. Isolating instrument air and electrical power to the valves is the only valid method for performing a fail safe test and full stroke exercising these valves. The fail safe test cannot be performed during normal operation because these valves must be in service.

Testing Frequency

These valves will be partial stroke exercised every three months during the turbine driven AFW pump tests and full stroke exercised during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-14

System: Feedwater

Valve(s): 2-FW-62
2-FW-94
2-FW-126

Category: C

Class: 2

Function: Main Feedwater Supply Isolation Check Valves

Cold Shutdown Justification

These check valves must seat upon reversal of flow to fulfill their safety functions. The only method to verify this actuation is to perform a back pressure test. Since the valves must be open to sustain power operation, they cannot be tested every three months.

Testing Frequency

These check valves will be tested in the closed position during cold shutdown but not more frequently than once every three months. Normal operation of the main feedwater system verifies these valves open.

COLD SHUTDOWN JUSTIFICATION CSV-15

System: Auxiliary Feedwater

Valve(s): 2-FW-63	2-FW-129
2-FW-65	2-FW-150
2-FW-95	2-FW-167
2-FW-97	2-FW-185
2-FW-127	2-FW-279

Category: C

Class: 3

Function: Auxiliary Feedwater Header Check Valves

Cold Shutdown Justification

These valves can be back seat tested with auxiliary feedwater flow. However, the back seat test involves extended periods of auxiliary feedwater flow to the steam generators. Extended periods of relatively cold auxiliary feedwater flow to the steam generators when the plant is at power causes reactivity transients. Therefore, the back seat tests should be performed during cold shutdowns.

Testing Frequency

Valves 2-FW-95, 129 and 279 are in dedicated flow paths and are full flow tested every three months. Valves 2-FW-150, 167 and 185 are on the minimum flow recirculation lines and are full flow tested every three months. The remaining valves will be full flow tested during cold shutdown but not more frequently than once every three months. These valves will be exercised closed during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-16

System: Auxiliary Feedwater

Valve(s): 2-FW-70
2-FW-102
2-FW-134

Category: C

Class: 2

Function: Auxiliary Feedwater Header Check Valves

Cold Shutdown Justification

The close position for these valves is the non-safety position because other boundaries upstream serve the reverse flow safety function. The valves are located near the main feedwater system header and cannot be isolated from the header. The only way to verify the closed position using flow is to perform a back seat test using main feedwater header pressure. To perform the test, pressure gauges must be installed upstream of the valves and the piping upstream must be partially drained and vented. The upstream piping is then isolated and the differential pressure across the check valve is measured and compared to an acceptance criterion. The valves will be exercised only during cold shutdowns and refueling outages because the small increase in safety gained by testing every three months does not justify the burden of setting up test equipment, draining lines and performing the back seat tests. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be full stroke exercised open every three months and closed during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-17

System: Auxiliary Feedwater

Valve(s): 2-FW-156

2-FW-172

2-FW-192

Category: C

Class: 3

Function: Auxiliary Feedwater Pump Discharge Check Valves

Cold Shutdown Justification

These valves can be back seat tested with auxiliary feedwater flow. However, the back seat test involves extended periods of auxiliary feedwater flow to the steam generators. Extended periods of relatively cold auxiliary feedwater flow to the steam generators when the plant is at power causes reactivity transients. Therefore, the back seat tests should be performed during cold shutdowns.

Testing Frequency

These valves will be full stroke exercised open every three months and closed during cold shutdown but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-18

System: Instrument Air

Valve(s): 2-IA-TV-202A
2-IA-TV-202B

Category: A for 2-IA-TV-202A
B for 2-IA-TV-202B

Class: 2

Function: Instrument Air Supply to Containment Isolation Valves

Cold Shutdown Justification

Testing these trip valves to the closed position interrupts the instrument air (IA) supply to containment including IA supply to the component cooling (CC) trip valves that isolate flow to the Reactor Coolant Pumps (RCPs) thermal barriers, lube oil, stator and/or shroud coolers. The IA trip valves are in series. If one of these valves failed closed, instrument air to containment may be interrupted for an extended period. In this case, the CC trip valves would be maintained open only by the compressed air system inside containment. The non-safety related compressed air system may not be able to sustain plant operation for an extended period. Therefore, to avoid challenging plant operation, the IA trip valves should only be exercised during cold shutdown when the RCPs are secured.

Testing Frequency

These valves will be full stroke exercised during cold shutdown when the RCPs are secured but not more frequently than once every three months.

COLD SHUTDOWN JUSTIFICATION CSV-19

System: Charging

Valve(s): 1-CH-118
1-CH-133

Category: C

Class: 3

Function: Boric Acid Transfer Pump Discharge Check Valves

Cold Shutdown Justification

To achieve full flow through these check valves, a flow path must be established to the reactor coolant system. This test would allow the injection of boric acid into the reactor coolant system which would upset the boron concentration in the primary plant water.

Testing Frequency

These valves will be full stroke exercised open and closed during cold shutdown but not more frequently than once every three months.

4.7 VALVE TEST PROGRAM REACTOR REFUELING JUSTIFICATIONS

ISTC-3521 and ISTC-3522 allow for the full stroke exercising of valves during reactor refueling (but not more frequently than every three months) if it is not practical to exercise the valves during normal operation or cold shutdown. Therefore, no request for relief from testing every three months or every cold shutdown is necessary.

However, ISTC-9200 does require that these valves be specifically identified by the owner. The reactor refueling justifications identify and provide the technical basis for valves exercised during reactor refueling outages.

Reactor Refueling Justification Index	
RRV-01	CC Supply to Reactor Coolant Pump Containment Isolation Check Valve
RRV-02	Charging Supply Inside Containment Isolation Check Valves (2-CH-332, 335), RC Pump Seal Water Supply Isolation Check Valves (2-CH-260, 284 and 308), and RC Pump Seal Water Return Containment Isolation Check Valve (2-CH-331)
RRV-03	Fire Protection System Supply Containment Isolation Check Valve
RRV-04	Hydrogen Analyzer/Recombiner Containment Isolation Check Valves
RRV-05	Instrument Air Supply Containment Isolation Check Valves
RRV-06	Primary Grade Water Supply Containment Isolation Check Valves
RRV-07	High Head (2-SI-MOV-2836, 2869A and B) and Low Head (2-SI-MOV-2890 A and B) SI to RCS Containment Isolation Valves
RRV-08	Boron Injection Tank Discharge Line to RCS Cool Legs (2-SI-MOV-2867C and D), and Low Head SI Discharge to RCS Cool Legs (2-SI-MOV-2890C and D) Containment Isolation Valves
RRV-09	Low Head SI Pump Suction and Discharge Check Valves
RRV-10	RWST Supply to Charging Pump Suction Header Check Valve
RRV-11	Nitrogen and Makeup Supply to Accumulators Containment Isolation Check Valves
RRV-12	RCS Cold Leg SI to RCS Loops Check Valves
RRV-13	SI Accumulator Discharge Check Valves
RRV-14	High Head SI to RCS Cold Legs Check Valves (2-SI-85 and 93), High Head SI to RCS Hot Legs Check Valves (2-SI-107 and 119), SI to RCS Hot Legs Check Valves (2-SI-113, 118 and 125), Low Head to RCS Hot Legs Check Valves (2-SI-112, 117, 124, 126 and 128)
RRV-15	High Head SI to RCS Cold Legs Check Valves
RRV-16	Recirculation Spray Heat Exchanger Service Water Supply Check Valves
RRV-17	Condenser Air Removal Discharge Containment Isolation Check Valve

Reactor Refueling Justification Index	
RRV-18	Charging Pump Discharge Check Valves
RRV-19	Low Head SI Pump Seal Water Supply Check Valves
RRV-20	CC Water Supply to Containment Recirculation Air Coolers Containment Isolation Check Valves
RRV-21	CC Supply to RC Pump Thermal Barrier Cooler Isolation Check Valves
RRV-22	Quench Spray and Outside Recirculation Spray Containment Isolation Check Valves
RRV-23	CC Water Supply to the RHR Heat Exchangers Containment Isolation Check Valves
RRV-24	Charging Pump Supply from the VCT (2-CH-153) and Charging Pump Recirculation and Seal Water Return (2-CH-495) Containment Isolation Check Valves
RRV-25	Boron Injection Tank Inlet Isolation valves (2-SI-MOV-2867A and B) and Boric Acid Recirculation Line Check Valve (2-SI-70)
RRV-26	Recirculation Spray Heat Exchanger Service Water Supply and Discharge Isolation Valves
RRV-27	Casing Cooling Pump Discharge Check Valves
RRV-28	Low Head SI Pump Suction from Containment Sump Check Valves
RRV-29	Bottled Air System Supply to PORV Isolation Check Valves
RRV-30	Instrument Air Supply to Hydrogen Recombiner Containment Isolation Valves
RRV-31	Bottled Air Supply to Safeguards Exhaust Vent Relief Damper Isolation Valves
RRV-32	Control Room Chilled Water System Pump Discharge Check Valves
RRV-33	Emergency Boration Line and Alternate Boration Line Check Valves
RRV-34	Emergency Diesel Air Receiver Tank Discharge Check Valves
RRV-35	Main Steam Header Discharge to Atmosphere Pressure Control Valves
RRV-36	Charging Pump Recirculation Line Check Valves
RRV-37	RHR Supply and Return Isolation Valves
RRV-38	Diesel Fuel Oil Pump Discharge Check Valves
RRV-39	Auxiliary Feedwater Pump Oil Cooler Check Valves
RRV-40	Quench Spray Bleed Line Isolation Check Valves
RRV-41	"C" Main Steam Header Supply Check Valve to Turbine Driven Auxiliary Feedwater (AFW) Pump
RRV-42	Provide Sensing Lines for Containment Pressure During Type A Leakrate Testing and Instrument Air Penetration Isolation

REACTOR REFUELING JUSTIFICATION RRV-01

System: Component Cooling

Valve(s): 2-CC-78
2-CC-115
2-CC-152

Category: AC

Class: 2

Function: CC Supply to Reactor Coolant Pump Containment Isolation Check Valve

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only exercise method to verify this actuation is to perform a leak rate test/back pressure test. Since the valves are located inside containment and their systems are required during power operation, they cannot be tested every three months. The valves will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining lines and performing leak rate tests in a subatmospheric containment. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be exercised closed each reactor refueling. The open position is verified during normal operation as component cooling water is supplied to the reactor coolant pumps.

REACTOR REFUELING JUSTIFICATION RRV-02

System: Chemical & Volume Control

Valve(s): 2-CH-260 2-CH-308 2-CH-332
 2-CH-284 2-CH-331 2-CH-335

Category: AC for 2-CH-331
 C for 2-CH-260, 284, 308, 332 and 335

Class: 1 for 2-CH-260, 284, 308, 332 and 335
 2 for 2-CH-331

Function: Charging Supply Inside Containment Isolation Check Valves (2-CH-332, 335), RC Pump Seal Water Supply Isolation Check Valves (2-CH-260, 284 and 308), and RC Pump Seal Water Return Containment Isolation Check Valve (2-CH-331)

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only method to verify this actuation is to perform a leak rate/back pressure test. Since the valves are located inside containment (subatmospheric) and their systems are required during power operation, they cannot be tested every three months. 2-CH-335 is in the normal charging line to the RCS. These lines cannot be drained during short cold shutdowns because charging flow is often maintained. 2-CH-260, 284 and 308 are in the RCP seal water supply lines, and 2-CH-331 is in the RCP seal water return line. Seal flow is maintained during cold shutdown to reduce RCS leakage and to float the RCP seals. 2-CH-332 is the charging supply to loop fill header, inside containment isolation valve. A local back seat test inside containment is required to verify closure for valve 2-CH-332. The valves will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining lines and performing leak rate tests in a subatmospheric containment.

Testing Frequency

These valves will be exercised closed each reactor refueling. Valve 2-CH-335 is in the normal charging supply line. The open position is verified during normal operation. Valve 2-CH-332 is in the charging supply line to the loop fill header. The open position is verified during RCS refill during refueling outages. Valves 2-CH-260, 284 and 308 are in the seal water supply lines to the reactor coolant pumps. The open position is verified during normal operation.

REACTOR REFUELING JUSTIFICATION RRV-03

System: Fire Protection

Valve(s): 2-FP-79

Category: AC

Class: 2

Function: Fire Protection System Supply Containment Isolation Check Valve

Reactor Refueling Justification

This check valve must seat upon reversal of flow in order to fulfill its safety function. The only method to verify this actuation is to perform a leak rate/back pressure test. Since the valve is located inside containment (subatmospheric), it cannot be tested every three months. 2-FP-79 is in the containment fire protection system. Testing this valve will render the fire protection system inoperable. It will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining the lines and performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

This valve will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-04

System: Post Accident Hydrogen Removal

Valve(s): 2-HC-15
2-HC-20

Category: AC

Class: 2

Function: Hydrogen Analyzer/Recombiner Containment Isolation Check Valves

Reactor Refueling Justification

Check valves 2-HC-15 and 20 open to sample hydrogen, which is a non-safety function. These valves also provide containment isolation and must seat upon reversal of flow in order to fulfill their safety functions. The only exercise method to verify closure is to perform a leakage/back pressure test.

Since the valves are located inside containment (subatmospheric), they cannot be tested every three months. Performing a leakage/back pressure test requires installing temporary leakage test equipment. Because of the effort involved, it is impractical to perform this test during cold shutdowns. These valves will be verified closed only during refueling outages. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

The ASME OM Code ISTC-3522(a) states in part that, "Open and close tests need only be performed at an interval when it is practicable to perform both tests." The close test can only be performed during the reactor refueling outages. Therefore, the interval for the open test can also be on a reactor refueling outage interval as allowed by ISTC-3522(a).

Testing Frequency

Check valves 2-HC-15 and 20 will be tested open and closed every reactor refueling outage.

REACTOR REFUELING JUSTIFICATION RRV-05

System: Instrument Air

Valve(s): 2-IA-250

2-IA-428

Category: AC

Class: 2

Function: Instrument Air Supply Containment Isolation Check Valves

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only method to verify this actuation is to perform a leak rate test. Since the valves are located inside containment (subatmospheric), they cannot be tested every three months. Valve 2-IA-250 is in the instrument air supply line to containment. Testing this valve renders the instruments and components supplied by instrument air inside containment inoperable.

They will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of performing leak rate tests. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-06

System: Reactor Coolant

Valve(s): 2-RC-162

Category: AC

Class: 2

Function: Primary Grade Water Supply Containment Isolation Check Valves

Reactor Refueling Justification

This check valve must seat upon reversal of flow in order to fulfill its safety function. The only method to verify this actuation is to perform a leak rate test. Since the valve is located inside containment (subatmospheric), it cannot be tested every three months. The valve will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining lines and performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

This valve will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-07

System: Safety Injection

Valve(s): 2-SI-9 2-SI-32
 2-SI-12 2-SI-35

Category: C

Class: 2

Function: Low Head SI Pump Suction and Discharge Check Valves

Reactor Refueling Justification

Check valve 2-SI-19 is on the suction line from the RWST to the LHSI pumps, check valves 2-SI-9 and 32 are on the discharge lines from the LHSI pumps and check valves 2-SI-12 and 35 are on the recirculation lines from the LHSI pumps. Valves 2-SI-9 and 32 cannot be full or partial stroked exercised during power operation because the LHSI pumps cannot overcome reactor coolant system pressure. During cold shutdown, the filled reactor coolant system still prevents full flow testing of the check valves. Valve 2-SI-19 can be partial stroke exercised during power operation but can only be full stroke exercised when LHSI flow can be established to the reactor coolant system. Therefore, these valves will be full flow tested every reactor refueling to verify the full open position.

To verify closure of valves 2-SI-9, 12, 32 and 35, the low head safety injection system must be isolated which can only be done at reactor refueling. By isolating the system, the test boundary is established to demonstrate adequate seat tightness for the discharge valves (2-SI-9 and 32) and discharge recirculation line valves (2-SI-12 and 35) to the non-running pump.

Testing Frequency

Valves 2-SI-12 and 35 will be full flow tested every three months. Valves 2-SI-9 and 32 will be full flow tested every reactor refueling. Valves 2-SI-9, 12, 32 and 35 will be exercised to the closed position every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-08

System: Safety Injection

Valve(s): 2-SI-18

Category: AC

Class: 2

Function: RWST Supply to Charging Pump Suction Header Check Valve

Reactor Refueling Justification

Exercising this valve during power operation would require charging pump suctions be aligned with the Refueling Water Storage Tank. This alignment would cause a sudden increase in Reactor Coolant System boron inventory. Full flow for the charging system can only be established during reactor refueling when the RCS is depressurized.

To verify valve closure, the refueling water storage tank must be isolated which requires the plant to enter a one-hour LCO per Technical Specification 3.5.4.B.

The only method to verify closure other than disassembly and inspection is to perform a leak rate/back pressure test. This valve is also subject to leak testing, which is performed every reactor refueling. Verification of closure will be performed during the leak test every reactor refueling instead of every cold shutdown because the small increase in safety gained by testing during cold shutdown does not justify the burden of draining the lines and performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

Exercise to the full open and closed positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-09

System: Safety Injection

Valve(s): 2-SI-132
2-SI-136

Category: AC

Class: 2

Function: Nitrogen and Makeup Supply to Accumulators Containment Isolation Check Valves

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only method to verify closure is to perform a leak rate/back pressure test. Since the valves are located inside containment (subatmospheric), they cannot be tested every three months. These valves will be exercised only during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify the burden of performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-10

System: Safety Injection

Valve(s): 2-SI-85	2-SI-126
2-SI-93	2-SI-128
2-SI-107	2-SI-119

Category: AC

Class: 1

Function: High Head SI to RCS Cold Legs Check Valves (2-SI-85 and 93), High Head SI to RCS Hot Legs Check Valves (2-SI-107 and 119), Low Head to RCS Hot Legs Check Valves (2-SI-126 and 128)

Reactor Refueling Justification

These Safety Injection check valves must open and close to fulfill their safety functions. They cannot be exercised to the open position during power operation because this would cause safety injection flow into the Reactor Coolant System which would thermally shock the injection system and cause unnecessary plant transients. Flow cannot be established in the low head injection lines during normal plant operation.

During cold shutdown, the Reactor Coolant System pressure still prevents full design flow. Also, a stroke test could cause an over pressurization of the Reactor Coolant System and force a safety system to function.

These valves can only be tested to the closed position by a back seat leak test, which requires draining the lines.

The remaining check valves can be full flow tested using installed instrumentation.

Testing Frequency

These valves will be exercised to the open position using flow and confirmed closed every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-11

System: Safety Injection

Valve(s): 2-SI-90
2-SI-98
2-SI-104

Category: C

Class: 1

Function: High Head SI to RCS Cold Legs Check Valves

Reactor Refueling Justification

These Safety Injection check valves must open and close to fulfill their safety functions. They cannot be exercised to the open position during power operation because this would thermally shock the injection system and cause unnecessary plant transients.

During cold shutdown, the filled Reactor Coolant System still prevents full design flow. Also, a stroke test could cause an over pressurization of the Reactor Coolant System and force a safety system to function.

The only test methods which will individually back seat these valves are to perform leak tests or to use downstream pressure provided by the low head safety injection pump tests. Either test can only be performed during reactor refueling.

Testing Frequency

Exercise to the open position using flow and to the closed position every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-12

System: Service Water

Valve(s): 2-SW-68 2-SW-94
 2-SW-70 2-SW-104
 2-SW-74
 2-SW-84

Category: C

Class: 2 for 2-SW-74, 84, 94, 104
 3 for 2-SW-68, 70

Function: Recirculation Spray Heat Exchanger Service Water Supply Check Valves

Reactor Refueling Justification

Exercising these valves would flow service water into the recirculation spray heat exchangers. Per FSAR Section 6.2.2.2.5, in order to ensure long term reliability of the heat exchangers, following each periodic test the heat exchangers are drained, purged with air and maintained in dry lay-up. The logistics of this procedure make testing every three months or at cold shutdown impractical considering the small increase in system safety gained from exercising the valves.

Testing Frequency

These valves will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-13

System: Vacuum Priming

Valve(s): 2-VP-24

Category: AC

Class: 2

Function: Condenser Air Removal Discharge Containment Isolation Check Valve

Reactor Refueling Justification

This check valve must seat upon reversal of flow in order to fulfill its safety function. The only method to verify this actuation is to perform a leak rate test. Since the valve is located inside containment (subatmospheric), it cannot be tested every three months. The valve will be exercised during refueling outages because the small increase in safety gained by testing during cold shutdown does not justify performing a leak rate test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

This valve will be exercised open and closed each reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-14

System: CH

Valve(s): 2-CH-178

2-CH-193

2-CH-208

Category: C

Class: 2

Function: Charging Pump Discharge Check Valves

Reactor Refueling Justification

The only available flow path to test these valves to the full open position is into the reactor coolant system. During cold shutdown, exercising these valves could result in over pressurization of the reactor coolant system and could force a safety system to function.

Testing Frequency

Exercise closed every three months and full open every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-15

System: Safety Injection

Valve(s): 2-SI-6
2-SI-29

Category: AC

Class: 2

Function: Low Head SI Pump Seal Water Supply Check Valves

Reactor Refueling Justification

Due to the plant configuration, these valves cannot be verified closed using system flow. The only method to verify closure other than disassembly and inspection is to perform a back pressure test using a primary grade water supply as the pressure source. To perform the back pressure test on these 3/4" check valves, each LHSI pump must be removed from service for approximately two hours. With one ECCS train out of service, the plant must enter an action statement per Technical Specification LCO 3.5.2 and proceed to hot shutdown within 72 hours.

Including the preparation for the test which consists of connecting primary grade water to the test volume using supply hoses, the entire test for each valve takes several hours to perform. Also, the seal water line, which may contain contaminated water, must be drained and vented. Considering that one train of ECCS must be removed from service for an extended period of time which degrades the safety of the plant, and the difficulty in performing the back pressure test, testing these 3/4" check valves to the closed position every three months is not practical.

These valves are also subject to leak testing, which is performed every reactor refueling. A leak test provides more information concerning the condition of the valve seats than just a back pressure test. When compared to the Code requirements for a back seat test performed every cold shutdown, the performance of a leak test every refueling outage is an alternative that provides an acceptable level of quality and safety. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing." The open position is verified using flow every reactor refueling.

Testing Frequency

Exercise to the closed and open positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-16

System: Component Cooling

Valve(s): 2-CC-276

2-CC-289

2-CC-302

Category: AC

Class: 2

Function: CC Water Supply to Containment Recirculation Air Coolers Containment Isolation
Check Valves

Reactor Refueling Justification

These check valves must seat upon reversal of flow in order to fulfill their safety functions. The only exercise method to verify this actuation is to perform a leak rate test/back pressure test which would involve isolating the containment air cooling coils. The containment recirculation air cooling coils are required for normal operation to maintain containment temperature below the limit specified in Technical Specification LCO 3.6.5. Removing a cooler from service to perform the leak rate test/back pressure test may result in an increased containment temperature that could challenge the containment temperature limit. There is typically less margin to the temperature limit during the summer months. Therefore, these valves should not be tested every three months.

These valves are also subject to leak testing, which is performed every reactor refueling. A leak test provides more information concerning the condition of the valve seats than just a back pressure test. When compared to the Code requirements for a back seat test performed every cold shutdown, the performance of a leak test every refueling outage is an alternative that provides an acceptable level of quality and safety. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

Exercise to the closed position every reactor refueling. The open position is verified during normal system operation as cooling water is supplied to the containment recirculation coolers.

REACTOR REFUELING JUSTIFICATION RRV-17

System: Component Cooling

Valve(s): 2-CC-107

2-CC-144

2-CC-181

Category: C

Class: 3

Function: CC Supply to RC Pump Thermal Barrier Cooler Isolation Check Valves

Reactor Refueling Justification

These check valves must be locally back pressure tested to verify closure. Since the valves are located inside containment (subatmospheric), they cannot be back pressure tested during normal operation. The valves will be tested every refueling outage because the small increase in safety gained by testing during cold shutdown does not justify the burden of performing a back pressure test.

Testing Frequency

Exercise to the closed position every reactor refueling. The open position is verified during normal system operation as cooling water is supplied to the RC pump thermal barrier coolers.

REACTOR REFUELING JUSTIFICATION RRV-18

System: Recirculation Spray

Valve(s): 2-RS-20 2-QS-11
 2-RS-30 2-QS-22

Category: AC for 2-QS-11 and 22
 C for 2-RS-20 and 30

Class: 2

Function: Quench Spray and Outside Recirculation Spray Containment Isolation Check Valves

Reactor Refueling Justification

These valves must seat to maintain containment integrity and open to allow flow to the containment spray headers. Flow testing these valves would introduce water to the spray arrays and saturate containment. These valves can be mechanically exercised to the open and closed positions. However, the valves are located inside containment (subatmospheric) and require the construction of scaffolding before they can be exercised. The small increase in safety gained by exercising the valves during cold shutdown does not justify the burden of constructing the scaffolding.

Testing Frequency

These valves will be exercised to the open and closed positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-19

System: Component Cooling

Valve(s): 2-CC-194
2-CC-199

Category: AC

Class: 2

Function: CC Water Supply to the RHR Heat Exchangers Containment Isolation Check Valves

Reactor Refueling Justification

Valves 2-CC-194 and 2-CC-199 are check valves in the component cooling lines to the RHR heat exchangers and must close for isolation and open to allow RHR flow. The valves can only be exercised open when RHR is in service during shutdown conditions. The only exercise method to verify closure is to perform a leak rate test/back pressure test. These lines cannot be drained for back seat testing because the RHR system is needed during cold shutdown to control the RCS temperature.

The full flow open test will be performed at the same frequency as the close test (every refueling outage) as allowed by ISTC-3522(a) which states in part, "Each check valve exercise test shall include open and close tests. Open and close tests need only be performed at an interval when it is practicable to perform both tests."

Testing Frequency

Exercise for closure and full open every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-20

System: Chemical & Volume Control System

Valve(s): 2-CH-153
2-CH-495

Category: AC

Class: 2

Function: Charging Pump Supply from the VCT (2-CH-153) and Charging Pump Recirculation and Seal Water Return (2-CH-495) Containment Isolation Check Valves

Reactor Refueling Justification

Due to the plant configuration, these valves cannot be verified closed using flow. The only method to verify closure other than disassembly and inspection is to perform a leak rate/back pressure test on each valve.

During normal operation, these valves cannot be isolated to perform a back pressure test because normal letdown and charging flow, and reactor coolant pump seal flow would be interrupted. Also, if the valves were isolated during normal operation, the charging pumps would have to be secured.

These valves are also subject to leak testing, which is performed every reactor refueling. A leak test provides more information concerning the condition of the valve seats than just a back pressure test. When compared to the Code requirements for a back seat test performed every cold shutdown, the performance of a leak test every refueling outage is an alternative that provides an acceptable level of quality and safety. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

These valves will be exercised closed every reactor refueling. Valve 2-CH-153 will be exercised full open every three months and valve 2-CH-495 will be exercised full open every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-21

System: Safety Injection

Valve(s): 2-SI-70

Category: C

Class: 2

Function: Boric Acid Recirculation Line Check Valve

Reactor Refueling Justification

In the past, the BIT recirculation line isolation check valve 2-SI-70 was back seat tested using charging system pressure to create a pressure differential across the valve disk. Leakage was collected at a point upstream of the check valve. This test was performed after the inlet isolation valves are opened. The hydraulic transient described above was avoided by disabling one of the inlet isolation valves and manually cracking the valve open so as to slowly pressurized the BIT. However, this method of testing disables the BIT inlet valves and presents the potential for causing a hydraulic transient if the inlet valve is opened too quickly. The preferred method for back seat testing the check valve is during reactor refueling when the charging system is secured and a local back seat/leak test can be performed. According to NUREG-1482, Revision 2, Section 4.1.6, "The NRC staff has determined that the need to set up test equipment constitutes adequate justification to defer reverse flow testing of a check valve to a refueling outage."

Testing Frequency

2-SI-70 will be tested closed every reactor refueling. The check valve is verified open during normal operation because the contents of the BIT are continuously recirculated with the boric acid storage tank on service using the boric acid transfer pump.

REACTOR REFUELING JUSTIFICATION RRV-22

System: Service Air

Valve(s): 2-GN-101	2-IA-2130
2-GN-102	2-IA-2131
	2-IA-2132
	2-IA-2133

Category: AC

Class: NC

Function: Bottled Air System Supply to PORV Isolation Check Valves

Reactor Refueling Justification

Due to the plant configuration, these valves cannot be verified closed using flow.

The only method to verify closure other than disassembly and inspection is to perform a local leak rate/back pressure test. To perform the leak rate/back pressure test, the normal instrument air and nitrogen supplies to the PORVs must be isolated. The PORVs are required to be operable during normal operation. Also, these valves are located inside containment (subatmospheric) making it impractical to perform the test during normal operation.

These valves are also subject to leak testing, which is performed every reactor refueling. Verification of closure will be performed during the leak test every reactor refueling instead of every cold shutdown because the small increase in safety gained by testing during cold shutdown does not justify the burden of performing a back pressure test. This technical basis is consistent with the NRC position on this subject that is described in NUREG-1482, Revision 2, Section 4.1.6, entitled "Extension of Test Interval to Refueling Outage for Check Valves Verified Closed by Leak Testing."

Testing Frequency

Exercise to the closed and open positions every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-23

System: Service Air

Valve(s): 2-IA-497
2-IA-499

Category: A

Class: NC

Function: Instrument Air Supply to Hydrogen Recombiner Containment Isolation Valves

Reactor Refueling Justification

These non-Code check valves close in the event of a loss of pressure in the respective instrument air supply header to prevent blow down of the nitrogen reserve volume tank which supplies the hydrogen recombining system isolation valves. Testing the check valves to the closed position requires that the instrument air supply be isolated to both Units 1 and 2 hydrogen recombining isolation valves, the high radiation sampling subsystem, and various liquid waste and boron recovery system components. Isolating the instrument air supply to these systems every three months to perform the back-pressure test would be disruptive to normal plant operation. Therefore, these valves should not be closure tested every three months.

The check valves are also subject to leak testing at least once every 24 months. These check valves will be closure tested at least once every 24 months during the leak test because the small increase in safety gained by performing the back pressure test every cold shutdown does not justify the disruption of normal operating activities of the opposite unit or the added burden of performing the back-pressure test on the more frequent schedule.

Testing Frequency

Exercise to the open and close positions at least once every 24 months.

REACTOR REFUELING JUSTIFICATION RRV-24

System: Service Air

Valve(s): 2-IA-2251
2-IA-2591

Category: A

Class: NC

Function: Bottled Air Supply to Safeguards Exhaust Vent Relief Damper Isolation Valves

Reactor Refueling Justification

These non-Code check valves close in the event of a loss of pressure in the respective instrument air supply header to prevent blow down of the air reserve volume tank which supplies the safeguards exhaust vent relief dampers. Testing check valve 2-IA-2251 to the closed position requires that the instrument air supply be isolated to the Unit 1 and Unit 2 safeguards exhaust vent relief dampers, the Unit 2 containment personnel hatch, the Unit 1 ventilation vent multi-sampler particulate radiation monitor 1-VG-RM-105, the Unit 1 multi-sampler off-line radio gas radiation monitor, 1-VG-RM-106, and the Unit 2 containment atmosphere particulate and gaseous radioactivity monitors, 2-RM-RMS-259 and 260.

Disabling the containment atmosphere monitors, 2-RM-RMS-259 and 260, enters Unit 2 into an action statement per Technical Specification LCO 3.4.15 and violates Technical Requirements Manual TR 3.9.5. TR 3.9.5 applies only to Mode 6 and does not affect quarterly testing. LCO 3.4.15 applies to Modes 1, 2, 3 and 4 and requires that a RCS leak rate calculation be performed at least once per 24 hours until the monitors are restored to service.

Testing check valve 2-IA-2591 to the closed position requires that the instrument air supply be isolated to the UNIT 1 containment personnel hatch, the Unit 1 process vent radiation monitors, 1-GW-RM-101 and 102, Unit 1 ventilation vent radiation monitors, 1-VG-RM-103, 104, 112 and 113, and the Unit 1 containment atmosphere particulate and gaseous monitors, 1-RM-RMS-159 and 160.

Disabling the containment atmosphere monitors 1-RM-RMS-159 and 160 enters Unit 1 into an action statement per Technical Specification LCO 3.4.15 and violates Technical Requirements Manual TR 3.9.5. TR 3.9.5 applies only to Mode 6 and does not affect quarterly testing. LCO 3.4.15 applies to Modes 1, 2, 3 and 4 and requires that a RCS leak rate calculation be performed at least once per 24 hours until the monitors are restored to service.

Disabling the Unit 1 ventilation vent radiation monitors, 1-VG-RM-112 and 113, enters Unit 1 into an action statement per Technical Specification LCO 3.7.15. LCO 3.7.15 applies during irradiated fuel movement within the spent fuel pit and during crane operation with loads over irradiated fuel in the spent fuel pit.

REACTOR REFUELING JUSTIFICATION RRV-24 (Cont.)

In addition to entering the LCO action statement, isolating the instrument air supply to these systems every three months to perform the back-pressure test would be disruptive to normal plant operation. Also, disabling four radiation monitors when testing 2-IA-2251 and eight radiation monitors when testing 2-IA-2591 reduces the ability of the operator to observe and possibly respond to changing plant conditions. Therefore, these valves should not be closure tested every three months.

The check valves are also subject to leak testing at least once every 24 months. These check valves will be closure tested at least once every 24 months during the leak test because the small increase in safety gained by performing the back pressure test every cold shutdown does not justify any disruption of normal operating activities of the opposite unit or the added burden of performing the back pressure test on the more frequent schedule.

Testing Frequency

Exercise to the open and close positions at least once every 24 months.

REACTOR REFUELING JUSTIFICATION RRV-25

System: Control Room Chilled Water System

Valve(s): 2-CD-163

2-CD-187

2-CD-211

Category: C

Class: 3

Function: Control Room Chilled Water System Pump Discharge Check Valves

Reactor Refueling Justification

Due to the plant configuration, these valves cannot be verified closed using flow. The downstream isolation motor operated valves (2-HV-MOV-211A, B and C) are interlocked with the associated upstream chilled water pumps (2-HV-P-20A, B and C). When the MOV is stroked open to allow a flow path to the check valve, the upstream pump starts. Therefore, the check valves cannot be tested closed using the discharge from another pump without disabling the interlock circuitry of the downstream MOV. Another way to perform a back pressure test is to isolate the upstream and downstream piping, vent and drain the upstream piping and use an external water source to pressurize the downstream piping. There is no external source of water such as a primary grade water supply or a domestic water supply that is available. Domestic water is hard piped to the chilled water system expansion tanks, but this source is not available for other use without a temporary modification to the piping system.

Another method to verify valve closure is disassembly and examination as allowed by ISTC-5221(c).

Testing Frequency

These valves will be grouped together and one valve from this group will be disassembled and inspected every reactor refueling. A different valve will be disassembled every reactor refueling. This test frequency is in accordance with ISTC-5221(c). The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-25.

REACTOR REFUELING JUSTIFICATION RRV-25 (Cont.)

Table RRV-25

Valve Number	2-CD-163	2-CD-187	2-CD-211
Manufacturer	Anderson, Greenwood	Anderson, Greenwood	Anderson, Greenwood
Design	Wafer	Wafer	Wafer
Service	Water	Water	Water
Size	3"	3"	3"
Body Material	CS	CS	CS
Orientation	Horizontal	Horizontal	Horizontal

REACTOR REFUELING JUSTIFICATION RRV-26

System: Chemical & Volume Control System
Valve(s): 2-CH-155
Category: C
Class: 3
Function: Emergency Boration Line Check Valves

Reactor Refueling Justification

With the current piping configuration, the check valve cannot be back seat tested with flow. Therefore, the valve will be disassembled and examined as allowed by ISTC-5221(c). As allowed by ISTC-3522(a), this check valve will be full stroked exercised on the same test interval as the close test, which is every reactor refueling.

Testing Frequency

This valve will be exercised to the full open position and disassembled and examined every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-27

System: Emergency Diesel System

Valve(s): 2-EB-15
2-EB-34
2-EB-61
2-EB-78

Category: C

Class: NC

Function: Emergency Diesel Air Receiver Tank Discharge Check Valves

Reactor Refueling Justification

The system configuration does not allow for back seat testing with flow. These valves will be disassembled and inspected on a reactor refueling test frequency (nominally every 18 months but not to exceed 24 months) per the requirements of ISTC-5221(c) to verify the closed position.

Flow through these check valves cannot be measured because instrumentation is not installed. However, failure of these valves to promptly stroke to their proper positions will affect the starting time of the diesel when the diesel is started from just one air bank. A diesel alarm will activate if the starting time exceeds start failure requirements. Verification that the diesel starts without the start failure alarm constitutes a full stroke test for the check valves. The test to start the diesels on one air bank is performed on a rotating basis once every six months. Based on this rotation, each check valve will be full flow tested once every 18 months.

Testing Frequency

One valve in the group will be disassembled and inspected on a reactor refueling test frequency (nominally every 18 months but not to exceed 24 months) and on a rotating basis to verify the closed position per the requirements of ISTC-5221(c). The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-27.

Every 18 months, the check valves will be full stroke tested by discharging only one air bank to start the diesel. The failure of either the solenoid or check valves to open will promptly give a diesel alarm. Further investigation would identify problems with the operability of these valves. The diesel start time will be recorded and compared to a maximum allowable start time during this test.

REACTOR REFUELING JUSTIFICATION RRV-27 (Cont.)

Table RRV-27

Valve Number	2-EB-15	2-EB-34	2-EB-61	2-EB-78
Manufacturer	Crane	Crane	Crane	Crane
Design	Lift	Lift	Lift	Lift
Service	Air	Air	Air	Air
Size	1.5"	1.5"	1.5"	1.5"
Body Material	Bronze, B61 Alloy 922	Bronze, B61 Alloy 922	Bronze, B61 Alloy 922	Bronze, B61 Alloy 922
Orientation	Horizontal	Horizontal	Horizontal	Horizontal

REACTOR REFUELING JUSTIFICATION RRV-28

System: Main Steam System

Valve(s): 2-MS-PCV-201A

2-MS-PCV-201B

2-MS-PCV-201C

Category: B

Class: 2

Function: Main Steam Header Discharge to Atmosphere Pressure Control Valves

Reactor Refueling Justification

These valves are located above the main steam lines on the top floor of the main steam valve house. The top floor of the main steam valve house is exposed to heat loads from the main steam lines and is a high temperature environment, particularly in the summer time.

If the plant is at power, upstream isolation valves must be closed manually. Then the pressure control valves must be stroked and observed locally when performing the fail-safe test. Given that test personnel must stand near the high temperature main steam lines and valves when manipulating the upstream manual isolation valves, and the high temperatures in the main steam valve house, this test presents a hazardous situation for the test personnel when performed under high temperature conditions. To ensure the safety of test personnel, this test should be performed during reactor refueling outages when the main steam lines and the main steam valve house are cooler.

Testing Frequency

These valves will be exercised closed every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-29

System: Chemical and Volume Control

Valve(s): 2-CH-176

2-CH-191

2-CH-206

Category: C

Class: 2

Function: Charging Pump Recirculation Line Check Valves

Reactor Refueling Justification

These charging pump recirculation line check valves cannot be back seat tested with flow because each recirculation line has a pressure reducing orifice just downstream of each check valve. If one charging pump is running, the recirculation check valves on the non-running pumps will not receive an observable differential pressure to back seat the valves.

To back seat the valves, the recirculation lines between the check valves and the downstream motor operated isolation valve 2-CH-MOV-2373 must be isolated and the volume pressurized. All three charging pumps would be secured during the test. Securing all charging pumps can only be done during cold shutdown after the reactor coolant system is depressurized. Given the difficulty of performing the back seat test, the test should be performed during reactor refueling outages.

Testing Frequency

These valves will be exercised full open and closed every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-30

System: Residual Heat Removal

Valve(s): 2-RH-FCV-2605
2-RH-HCV-2758

Category: B

Class: 2

Function: RHR Supply and Return Isolation Valves

Reactor Refueling Justification

Valves 2-RH-FCV-2605 and 2-RH-HCV-2758 are required to mitigate the consequences of an Appendix R (fire) event. According to ETE-NA-2013-0059, valve 2-RH-FCV-2605 is ranked as a Category 2A valve and valve 2-RH-HCV-2758 is ranked as a Category 1 valve, which are defined as active safety related/non-safety related valves with high or medium safety significance. As stated in Section 3.0 of IST Program basis document, "Pumps and valves whose only safety function is predicated on plant shutdown and recovery from a fire per commitments made as a result of 10 CFR 50, Appendix R are not included in the IST Program."

Although the only active safety function is related to an Appendix R event, these valves are included in the IST program as augmented IST valves. Doing so aligns the Category 1 and 2A valves from ETE-NA-2013-0059 with the IST program.

Valves 2-RH-FCV-1605 and 2-RH-HCV-1758 are required to mitigate the consequences of an Appendix R (fire) event. The valves do not have remote position indication and must be observed locally to verify stem movement. The valves cannot be exercised during normal operation because they are located inside containment.

These valves are required to be full cycle exercised every 18 months by TRM 3.7.8 and are considered power operated control valves in Technical Position TP-03.

Testing Frequency

These valves will be full stroke exercised every reactor refueling.

REACTOR REFUELING JUSTIFICATION RRV-31

System: Diesel Fuel Oil System

Valve(s): 2-EG-260

2-EG-272

2-EG-284

2-EG-289

Category: C

Class: NC

Function: Diesel Fuel Oil Pump Discharge Check Valves

Reactor Refueling Justification

Each fuel oil supply line is a dedicated flow path with no cross connect line to the other fuel oil supply lines. Therefore, the check valves cannot be back seat tested with flow. Given the system configuration and the accessibility of the check valves, disassembly and inspection is the preferred method to verify valve closure.

Testing Frequency

These valves will be exercised full open every three months. One valve in the group will be disassembled and inspected on a reactor refueling test frequency (nominally every 18 months but not to exceed 24 months) and on a rotating basis to verify closure per the requirements of ISTC-5221(c). The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-31.

Table RRV-31

Valve Number	2-EG-260	2-EG-272	2-EG-284	2-EG-289
Manufacturer	Henry Vogt	Henry Vogt	Henry Vogt	Henry Vogt
Design	Piston	Piston	Piston	Piston
Service	Fuel Oil	Fuel Oil	Fuel Oil	Fuel Oil
Size	1.5"	1.5"	1.5"	1.5"
Body Material	CS A105	CS A105	CS A105	CS A105
Orientation	Horizontal	Horizontal	Horizontal	Horizontal

REACTOR REFUELING JUSTIFICATION RRV-32

System: Feedwater

Valve(s): 2-FW-609

2-FW-610

2-FW-611

Category: C

Class: 3

Function: Auxiliary Feedwater Pump Oil Cooler Check Valves

Reactor Refueling Justification

The closed position for these check valves cannot be verified by flow because reverse flow may be blocked by a downstream sight glass. Specifically, the sight glass flow indicators contain a flapper to aid in determining flow. Although the Vendor Technical Manual describes the flapper as not having a tight seal capability and is not intended as a check valve, the question remains as to how much restriction the flapper creates. The manufacturer was not able to provide information to the expected leakage past the sight glass flapper. Since the restriction of flow through the sight glass indicator caused by the internal flapper cannot be quantified, there is no assurance that the check valve will actually be in the closed position if a back flow test is used. Given the system configuration, the best method to verify that the valves close properly is to disassemble and examine the valves.

Testing Frequency

To verify the closed positions, valves 2-FW-609, 610, and 611 will be grouped together, and one valve from each group will be disassembled and examined every reactor refueling. A different valve from each group will be disassembled for each examination. The test method and frequency are in accordance with ISTC-5221(c). The valves are tested with flow to the open position every three months. The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-32.

REACTOR REFUELING JUSTIFICATION RRV-32 (Cont.)

Table RRV-32

Valve Number	2-FW-609	2-FW-610	2-FW-611
Manufacturer	Conval	Conval	Conval
Design	Piston	Piston	Piston
Service	Water	Water	Water
Size	1"	1"	1"
Body Material	SS, 316	SS, 316	SS, 316
Orientation	Horizontal	Horizontal	Horizontal

REACTOR REFUELING JUSTIFICATION RRV-33

System: Quench Spray

Valve(s): 2-QS-147

2-QS-150

Category: AC

Class: 2

Function: Quench Spray Bleed Line Isolation Check Valves

Reactor Refueling Justification

These check valves are located on the bleed lines that run from the quench spray (QS) supply lines inside containment to the containment sump strainer. With the current line configuration, the valves cannot be tested full open with flow. The valves are downstream from the portion of the QS system that is used to test the QS pumps. Flow cannot be established past the QS pump discharge line motor operated isolation valves without introducing spray to the containment. Given the system configuration, manual manipulation during disassembly and inspection is the only method to verify that the valves stroke to the full open position.

Also, these valves are located inside containment (subatmospheric) making it impractical to perform the test during normal operation. The valves are subject to leak testing once every 24 months. Due to the inaccessibility of the valves, the leak testing will be performed every reactor refueling outage. Verification of the closed position will be performed by the leak test.

Testing Frequency

The valves will be disassembled and inspected each reactor refueling outage on a rotating basis to verify that the valves stroke to the full open position per the requirements of ISTC-5221(c). The closed position for each valve will be verified by leak testing every reactor refueling outage. The valves are grouped based on manufacturer, design, service, size, materials of construction and orientation as described in Table RRV-33.

REACTOR REFUELING JUSTIFICATION RRV-33 (Cont.)

Table RRV-33

Valve Number	2-QS-147	2-QS-150
Manufacturer	Check-All	Check-All
Design	Inline Spring-Loaded Disc	Inline Spring-Loaded Disc
Service	Water	Water
Size	2"	2"
Body Material	SS, 316	SS, 316
Orientation	Vertical	Vertical

REACTOR REFUELING JUSTIFICATION RRV-34

System: Main Steam

Valve: 2-MS-117

2-MS-119

2-MS-121

Category: C

Class: 2

Function: Main Steam Header Supply Check Valve to Turbine Driven Auxiliary Feedwater (AFW) Pump

Reactor Refueling Justification

A new style of valve (nozzle check valve) replaced the swing type check valve per DC-NA-15-00090 (for 2-MS-117) and DC NA-17-00233 (for 2-MS-119/121). These check valves cannot be reverse-flow tested during normal operation, because the test would require venting excessive process steam while verifying the closed position.

Testing Frequency

To verify the close position, one valve from Table RRV-34 will be disassembled and examined every reactor refueling. The test frequency is in accordance with ISTC-5221(c). The valve will be full flow tested every three months.

Table RRV-34

Valve Number	2-MS-117	2-MS-119	2-MS-121
Manufacturer	Enertech (DRV-Z)	Enertech (DRV-Z)	Enertech (DRV-Z)
Design	Nozzle Check	Nozzle Check	Nozzle Check
Service	Steam	Steam	Steam
Size	3"	3"	3"
Body Material	Carbon Steel	Carbon Steel	Carbon Steel
Orientation	Vertical	Vertical	Vertical

REACTOR REFUELING JUSTIFICATION RRV-35

System: Containment Leakage Monitoring and Instrument Air

Valve(s):	2-LM-TV-200A	2-LM-TV-201A
	2-LM-TV-200B	2-LM-TV-201B
	2-LM-TV-200C	2-LM-TV-201C
	2-LM-TV-200D	2-LM-TV-201D
	2-LM-TV-200E	2-IA-TV-201A
	2-LM-TV-200F	2-IA-TV-201B
	2-LM-TV-200G	
	2-LM-TV-200H	

Category: A

Class: 2

Function: Provide Sensing Lines for Containment Pressure During Type A Leakrate Testing and Instrument Air Penetration Isolation

Reactor Refueling Justification

These valves are normally closed (fail closed) air-operated valves and must remain closed during normal operation and cold shutdowns to maintain containment integrity. Because the valves are passive and are not required to be exercised or stroke timed per the ASME OM Code, Table ISTC-3500-1, Inservice Test Requirements, the exercise and stroke time tests are considered augmented tests to the IST program.

These valves are required to close within 60 seconds per TRM Table 4.1-1 and verified per TS SR 3.6.3.3.

Testing Frequency

These valves will be full stroke exercised and stroke timed every reactor refueling.

4.8 ALTERNATIVE TESTING FOR NON-CODE VALVES

Paragraph (f)4 of 10 CFR 50.55a discusses non-Code Class components within the Scope of ISTA-1100 shall be testing IAW the IST program. When these non-Code Class components require alternatives from the Code approval from the regulator is not required, but the justification shall be included with the program plan and available for inspection.

Where the Code provisions cannot be met for non-Code components, alternative testing is performed that is adequate to ensure continued operability. The alternate testing is described in this section.

Alternative Testing for Non-Code Class Components	
VNC-01	Main Steam Pressure Control and Auxiliary Feedwater Valves Air Accumulators Isolation Check Valves
VNC-02	Diesel Air Start Solenoid Valves
VNC-03	Diesel Fuel Oil Pump Discharge Relief Valves
VNC-04	5 Minute Hold Time on Pressure Relief Valves

NON-CODE ALTERNATIVE TESTING VNC-01

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Valve(s): 2-IA-504 2-IA-531
2-IA-510 2-IA-537
2-IA-516 2-IA-543
2-IA-525 2-IA-549

System: Instrument Air

Category: AC

Class: NC

Function: Main Steam Pressure Control and Auxiliary Feedwater Valves Air
Accumulators Isolation Check Valves

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2004 Edition

3.0 Applicable Code Requirements

ISTC-3630 - Category A valves, which perform a function other than containment isolation, shall be seat leakage tested to verify their leak-tight integrity.

4.0 Reason for Alternative

Check valves 2-IA-504, 510 and 516 isolate the normal instrument air supply from the backup bottled air supply for the main steam pressure control valves 2-MS-PCV-201A, B and C. Valves 2-IA-525, 531 and 537 isolate the normal instrument air supply to the auxiliary feedwater valves 2-FW-HCV-200A, B and C. Valves 2-IA-543 and 549 isolate the normal instrument air supply to the auxiliary feedwater valves 2-FW-PCV-259A and B.

NON-CODE ALTERNATIVE TESTING VNC-01 (Cont.)

The purpose of the bottled air supplies is to ensure that the main steam PCVs and the auxiliary feedwater valves can be remotely operated following an accident. The bottled air supplies must be able to cycle the main valves a specified number of times over a predetermined period in order to meet their design requirements. In lieu of a leakage test for the isolation check valves given above, the main valves will be cycled the required number of times over the required period with the normal air supply isolated and vented. This test provides verification that the isolation check valves are leak tight enough to allow the main valves to perform their safety functions.

5.0 Alternative

In lieu of a leakage test for the isolation check valves given above, the main valves will be cycled the required number of times over the required period as defined by their design requirements with the normal air supply isolated and vented.

6.0 Duration of Alternative

The alternative described in Non-Code Alternative VNC-1 will be used for the North Anna Power Station Unit 2 Fifth Ten Year Inservice Testing Interval.

NON-CODE ALTERNATIVE TESTING VNC-02

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Valve(s): 2-EG-SOV-700HA 2-EG-SOV-700JA
 2-EG-SOV-701HA 2-EG-SOV-707JA
 2-EG-SOV-700HB 2-EG-SOV-700JB

System: Emergency Diesel Air Services

Category: B

Class: NC

Function: Diesel Air Start Solenoid Valves

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

ISTC-5151(c) - Stroke time shall be measured to at least the nearest second.

4.0 Reason for Alternative

The solenoid valves have actuation times considerably under a second and there is no visual reference on the solenoid valve to determine when it has stroked. Therefore, the stroke time cannot be measured. The solenoid valves are activated every month to start the diesels. Both air banks are discharged when performing the monthly test. After the test, the air bank pressure is recorded to verify a decrease in pressure, which confirms that the air banks discharged properly.

5.0 Alternative

The solenoid valves will be full stroke exercised monthly by observing that the valves perform their intended function (if the diesel starts, the air bank pressures decrease and the air supply manifold maintains its integrity, then the solenoid valves were stroked successfully).

ON-CODE ALTERNATIVE TESTING VNC-02 (Cont.)

6.0 Duration of Alternative

The alternative described in Non-Code Alternative VNC-2 will be used for the North Anna Power Station Unit 2 Fifth Ten Year Inservice Testing Interval.

NON-CODE ALTERNATIVE TESTING VNC-03

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Valve(s): 2-EG-RV-204A
2-EG-RV-204B
2-EG-RV-206A
2-EG-RV-206B

System: EG

Category: C

Class: NC

Function: Diesel Fuel Oil Pump Discharge Relief Valves

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

According to ASME OM Appendix I, I-8130(a), "Test Media. Valves shall be tested with the normal system operating fluid and temperature for which they are designed. Alternative liquids and different temperatures may be used, provided the requirements of I-8300 are met." The normal system operating fluid for the diesel fuel oil pump discharge relief valves is diesel fuel oil. The valves are tested with water.

4.0 Reason for Alternative

Safety and relief valves used in liquid service are certified by the manufacturers with water in accordance with the requirements of the National Board Inspection Code. This certification process applies to valves used in diesel fuel oil service. Also, there is no correlation from water to diesel fuel oil provided by the manufacturer.

NON-CODE ALTERNATIVE TESTING VNC-03 (Cont.)

To test the relief valves with diesel fuel oil would require a separate set of test equipment. The current test equipment would be contaminated if fuel oil was used and would not be suitable for use with relief valves that are used in water service.

Testing the set point pressure of the diesel fuel oil pump discharge relief valves with water instead of diesel fuel oil is an industry accepted practice and provides adequate assurance that the relief valves will function properly and protect the diesel fuel oil pump discharge piping.

5.0 Alternative

The set pressure test for the diesel fuel oil pump discharge relief valves will be performed with water instead of diesel fuel oil.

6.0 Duration of Alternative

The alternative described in Non-Code Alternative VNC-03 will be used for the North Anna Power Station Unit 2 Fifth Ten Year Inservice Testing Interval.

NON-CODE ALTERNATIVE TESTING VNC-04

Alternative Testing for Non-Code Components

Alternative Provides Acceptable Level of Quality and Safety.

1.0 ASME Non-Code Components Affected

Safety and relief valves listed in Table VNC-04.

2.0 Applicable Code Edition and Addenda

ASME OM Code, 2012 Edition

3.0 Applicable Code Requirements

ISTC Appendix I, I-8120, "Compressible Fluid Services Other Than Steam", I-8120(h) requires that a minimum of 5 minutes shall elapse between successive openings.

ISTC Appendix I, I-8120, "Liquid Service", I-8130(g) requires that a minimum of 5 minutes shall elapse between successive openings.

4.0 Reason for Alternative

The ASME OM Code requires a minimum of two consecutive valve actuations to establish the lift setpoint of safety and relief valves and that a minimum of 5 minutes elapse between successive tests. For the valves listed in Table VNC-5, the requirement for verifying temperature stability by waiting 5 minutes between successive lift setpoint tests is inappropriate and adds no value. Lift setpoint testing is conducted using water or nitrogen as the test medium, and the tests are performed when the valve and the test medium are at the same temperature. There is a negligible effect on lift setpoint due to minor temperature deviations that might occur during testing.

Eliminating the 5-minute wait time will minimize system outage times and radiation exposure. Numerous non-Code classed safety and relief valves associated with contaminated systems are bench tested in the hot shop, located within the RCA in the Auxiliary Building, to prevent contamination.

NON-CODE ALTERNATIVE TESTING VNC-04 (Cont.)

Entry into the hot shop testing facility requires full Anti-C's. During the test, personnel are exposed to background radiation levels present in the Auxiliary Building hot shop as well as the radiation levels associated with the specific valve being tested. The proposed elimination of the hold time between successive tests for non-Code classed safety/relief valves tested under ambient conditions using a test medium at ambient conditions reduces the duration of each test. Most importantly, reducing the hold times reduces the length of time that the test personnel must spend in close proximity to the valve. As a result, personnel radiation exposure is reduced.

For all safety and relief valves, including those located in "clean areas" that are in-situ/bench-tested in the Mechanical Maintenance Shop, the proposed elimination of the hold time between successive tests will reduce the duration of each test. Since there are numerous safety/relief valve tests for both units and most require at least two people, the proposed elimination of the hold time between successive tests is expected to also result in a significant cumulative reduction in limited manpower resources.

5.0 Alternative

For non-Code classed safety and relief valves tested under ambient conditions using test medium at ambient conditions, the 5-minute hold requirement between successive openings will be deleted.

In accordance with 1-8120(a), and 1-8130(a), the test medium used will be the same as the normal system operating fluid and temperature for which the valves in Table VNC-5 were designed. For liquid service this will be water. For compressible fluid services other than steam, this will be nitrogen. In both cases, the test stand and surrounding environment ambient temperature conditions are relatively fixed with negligible changes occurring over the set pressure and seat tightness test determinations. There is a negligible effect on valve setpoint due to minor temperature deviations that might occur at these conditions.

6.0 Duration of Alternative

The alternative described in Non-Code Alternative VNC-04 will be used for the North Anna Power Station Unit 2 Fifth Ten Year Inservice Testing Interval.

NON-CODE ALTERNATIVE TESTING VNC-04 (Cont.)

Table VNC-04

Valve Number	System	ASME Class	Test Medium	Component Protected
2-CC-RV-204A	Component Cooling	NC	Water	Containment penetration
2-CC-RV-204B	Component Cooling	NC	Water	Containment penetration
2-CC-RV-204C	Component Cooling	NC	Water	Containment penetration
2-EG-RV-204A	Emergency Diesel Generator	NC	Water ¹	Diesel fuel pump oil discharge pipe
2-EG-RV-204B	Emergency Diesel Generator	NC	Water ¹	Diesel fuel pump oil discharge pipe
2-EG-RV-206A	Emergency Diesel Generator	NC	Water ¹	Diesel fuel pump oil discharge pipe
2-EG-RV-206B	Emergency Diesel Generator	NC	Water ¹	Diesel fuel pump oil discharge pipe
2-EG-RV-702HA	Emergency Diesel Generator	NC	Nitrogen	Air receiver tank
2-EG-RV-702HB	Emergency Diesel Generator	NC	Nitrogen	Air receiver tank
2-EG-RV-702JA	Emergency Diesel Generator	NC	Nitrogen	Air receiver tank
2-EG-RV-702JB	Emergency Diesel Generator	NC	Nitrogen	Air receiver tank
2-GN-RV-208A-1	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
2-GN-RV-208A-2	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
2-GN-RV-208A-3	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
2-GN-RV-208B-1	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
2-GN-RV-208B-2	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
2-GN-RV-208B-3	Bottled Nitrogen Supply	NC	Nitrogen	Nitrogen supply lines
2-IA-RV-210	Instrument Air Supply	NC	Nitrogen	Containment penetration
2-IA-RV-211	Instrument Air Supply	NC	Nitrogen	Containment penetration

¹ Refer to VNC-03 for change in liquid from fuel oil to water.

5.0 Code Case Application Summary

Code Case OMN-20, Inservice Testing Frequency **(incorporated by reference in 10 CFR 50.55a)**

Purpose

This Code Case allows grace to be applied to Inservice Testing that may not be covered by Technical Specifications.

Background

ASME OM, Division 1, Section IST and all earlier editions and addenda specify component test frequencies based either on elapsed time periods (e.g., quarterly, 2 yr, ect.) or the occurrence of plant conditions or events (e.g., cold shutdown, refueling outage, upon detection of a sample failure, following maintenance, etc.).

- a) Components whose test frequencies are based on elapsed time periods shall be tested at the frequencies specified in Section IST with a specified time period between tests as shown in Table 1.

Table 1. Specified Test Frequencies.

Frequency	Specified Time Period Between Tests
Quarterly (every 3 months)	92 Days
Semiannually (every 6 months)	184 Days
Annually (every year)	366 Days
X Years	X calendar years where X is a whole number of years ≥ 2

The specified time period between tests may be reduced or extended as follows:

- 1) For periods specified as fewer than 2 yr, the period may be extended by up to 25% for any given test.
- 2) For periods specified as greater than or equal to 2 yr, the period may be extended by up to 6 months for any given test.
- 3) All periods specified may be reduced at the discretion of the owner (i.e., there is no minimum period requirement).

Period extension is to facilitate test scheduling and considers plant operating conditions that may not be suitable for performance of the required testing (e.g., performance of the test would cause an unacceptable increase in the plant risk profile due to transient conditions or other ongoing surveillance, test, or maintenance activities). Period extensions are **NOT**

intended to be used repeatedly merely as an operational convenience to extend test intervals beyond those specified.

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

- b) Components whose test frequencies are based on the occurrence of plant conditions or events may not have their period between tests extended except as allowed by the OM Code.

Position

North Anna Inservice Testing will utilize either the Grace prescribed under the Technical Specifications or this Code Case as applicable, but not for convenience.

**OMN-16, Revision 1:
Use of a Pump Curve for Testing**

Purpose

Code Case OMN-16 is advantageous when a pump is in operation and difficult to adjust a flow rate to a specific reference point due to system conditions. Under these conditions a range of flows can be used rather than a specific reference point to reduce the burden of manipulating system parameters.

Background

16 – 2100 Definitions

1. Maximum Pump Curve Range: The maximum potential flow or differential pressure range for the pump curve, from shutoff conditions to maximum required flow rate.
2. Reference Curve: A range of values of a test parameter versus flow or differential pressure, for a centrifugal or vertical line shaft pump, measured or determined when the pump is known to be operating acceptably.

16-3300 Establishing Reference Curves

Reference curves shall be obtained as follows:

- a) Initial reference curves shall be determined from the results of testing meeting the requirements of para. ISTB-3100, Preservice Testing, or from the results of testing performed in conjunction with the first inservice test.
- b) New or expanded reference curves shall be established as required by para. 16-3310, 16-3320, or subparagraph 16-6200(c).
- c) Reference curves shall only be established when the pump is known to be operating acceptably.
- d) The range of the reference curve shall be sufficient to bound the points of operation expected during subsequent tests. The reference curve shall be established within $\pm 20\%$ of pump design flow rate for the comprehensive pump test.
- e) A reference curve shall be established from a minimum of three data points and have at least one data point for each 20% of the maximum pump curve range for the portion of the maximum pump curve established by the reference curve.
 - 1) A reference curve shall be established with the independent variable on the x-axis and the dependent variable on the y-axis. Alternatively, the curve may be represented by an equation.

- 2) If vibration is relatively unaffected by changing differential pressure of flow over the reference curve range, a single reference value may be used for that test quantity, provided it is at the minimum of the measured data.
- f) All subsequent test results shall be compared with the initial reference curves or new reference curves established in accordance with paragraph 16-3310, 16-3320, or subparagraph 16-6200(c).
- g) Related conditions that can significantly influence the measurement or determination of the data points used to establish the reference curve shall be analyzed in accordance with paragraph ISTB-6400.

If reference curves are used, the reasons for doing so and suitability of the methods used to develop the reference curves and acceptance criteria shall be justified and documented in the record of tests (see section ISTB-9000).

16-3310, Effect of Pump Replacement, Repair, and Maintenance on Reference Curves

When a reference curve(s) may have been affected by repair, replacement, or routine servicing of a pump, a new reference curve shall be determined in accordance with paragraph 16-3300 or the previous curve(s) reconfirmed by comprehensive or Group A test run before declaring the pump operable. The Owner shall determine whether the requirements of paragraph ISTB-3100, to reestablish reference curves, apply. Deviations between the previous and new reference curves shall be placed in the record of tests (see section ISTB-9000).

16-3320, Establishment of Expanded Reference Curves or Additional Reference Curves

If it is necessary or desirable, for some reason other than stated in paragraph 16-3310, to extend the current pump curve or establish an additional reference curve, an inservice test shall be run at the conditions of an existing set of reference values, or within the range of existing reference curves, and the results analyzed. If operation is acceptable, a second test run at the new reference conditions shall follow as soon as practicable. The results of this test shall establish the additional reference curves or be used to extend the range of the current reference curves. Whenever an additional set of reference curves, or extension of existing reference curves, is established, the reasons for so doing shall be justified and documented in the record of tests (see section ISTB-9000). The requirements of paragraph 16-3300 apply.

16-5120 / 16-5220, Inservice Test Procedure

An inservice test shall be conducted with the pump operating at the specified test conditions. The test parameters shown in Table ISTB-3000-1 shall be determined and recorded as directed in this paragraph. The test shall be conducted as follows:

- a) The pump shall be operated at nominal motor speed for constant speed drives and at a speed adjusted to the reference speed ($\pm 1\%$) for variable speed drives.

- b) Differential pressure, flow rate, and vibration (displacement or velocity, for Comprehensive or Group A tests) shall be determined and compared with the associated reference values from the reference curves. All deviations from the associated reference values shall be compared with the limits given in Table ISTB-5121-1 or ISTB-5221-1 and Figure ISTB-5223-1 and corrective action taken as specified in paragraph 16-6200. Comparison may be done graphically as shown in Examples 1 and 2 of Figure 1.
- c) Vibration measurements shall be per the requirements of subparagraphs ISTB-5121(d), ISTB-5123(d), ISTB-5221(d), or ISTB-5223(d).

16-6200 Corrective Action

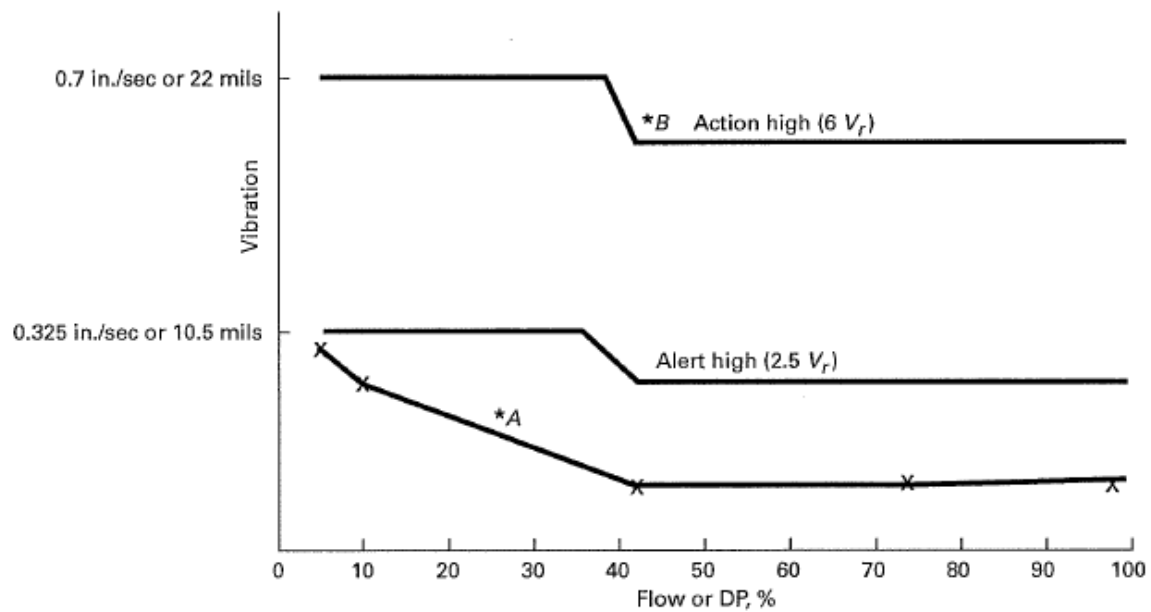
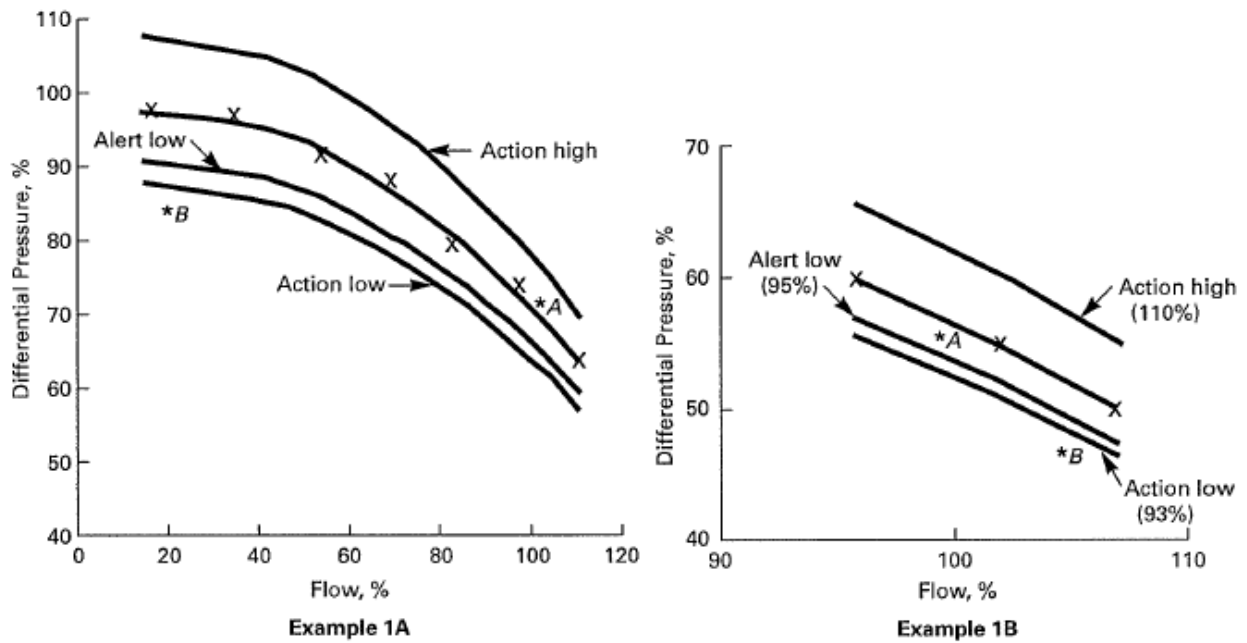
When using reference curves, determination of the values falling in the alert or required action ranges may be done graphically, as shown in Examples 1 and 2 of Figure 1.

- a) Alert Range. If the measured test parameter values fall within the alert range of Table ISTB-5121-1 or ISTV-5221-1, as applicable, the frequency of the testing specified in paragraph ISTB-3400 shall be doubled until the cause of the deviation is determined and the condition corrected.
- b) Required Action Range. If the measured test parameter values fall within the required action range of Table ISTB-5121-1 or ISTB-5221-1, as applicable, the pump shall be declared inoperable until either the cause of the deviation has been determined and the condition corrected, or an analysis of the pump is performed and new reference values are established in accordance with subparagraph ITB-6200(c).
- c) New Reference Curves. In cases where the pump's test parameters are within either the alert or required action ranges of Table ISTB-5121-1 or ISTB-5221-1, as applicable, and the pump's continued use at the changed values is supported by an analysis, a new set of reference curves may be established. This analysis shall include verification of the pump's operational readiness. The analysis shall include both a pump and system level evaluation of operational readiness, the cause of the change in pump performance, and an evaluation of all trends indicated by available data. The results of this analysis shall be documented in the record of tests (see section ISB-9000).

16-9500 Documentation of Code Case Usage

Use of this Code Case shall be documented in the test plans per paragraph ISTA-3100.

Figure 1. Examples of Graphical Evaluation of Tests Using Reference Curves



Example 2

A = acceptable operation
B = required action
X = data points used to establish reference curve

Position

The pump tests in the below table will utilize a pump curve for testing in lieu of a reference point. Past vibration data for the subject pumps have been reviewed and it has been determined that pump vibration does not vary significantly with flow rate over the range of test flow rates.

Table 1. Pump Tests Utilizing Pump Curve

Pump	Name	ASME Class	Pump Test
2-CC-P-1A 2-CC-P-1B	Component Cooling	3	Group A and Comprehensive
2-CH-P-1A 2-CH-P-1B 2-CH-P-1C	Charging Pump	2	Group A
2-SW-P-1A 2-SW-P-1B	Service Water Pump	3	Group A and Comprehensive

6.0 STATION TECHNICAL POSITIONS

Technical Position No.	Description
TP-01	Use of Normal Plant Operations to Verify Non-Safety Direction on Check Valves
TP-02	Fail Safe Testing of Valves
TP-03	Testing of Power Operated Control Valves
TP-04	Obturator Verification
TP-05	Technical Specification Required Stroke-Timing of Motor Operated Valves
TP-06	Motor Operated Valve Risk-Informed Exercise Test Frequency
TP-07	Valve Limiting Stroke Times
TP-08	RWST Isolation Valves

**Technical Position TP-01:
Use of Normal Plant Operations to Verify Non-Safety Direction on Check Valves**

Purpose

The purpose of this Technical Position is to establish the station position for the verification of the non-safety direction exercise testing of check valves by normal plant operations. This position applies to those check valves listed in Table TP-01 that are required to be tested in accordance with Subsection ISTC. This Technical Position does not apply to testing of the safety function (direction) of check valves included in the Inservice Testing Program.

Background

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

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

Section ISTC-3510 requires that check valves shall be exercised nominally every 3 months with exceptions (for extended periods) referenced. Extended test periods are identified as CSVs or RRVs in this Program Plan.

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

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

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

"Check valves that have a safety function in only the close direction shall be exercised by initiating flow and observing that the obturator has traveled [to] at least the partially open position, and verify that on cessation or reversal of flow, the obturator has traveled to the seat."

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

Normal or expected system flow may vary with plant configuration and alignment; however, the open "safety function" of a check valve typically requires a specified design accident flow rate or some other means to verify that the valve strokes to the full open position. Since the North Anna Operations staff is trained in recognizing normal plant conditions, Operator judgment is

acceptable in determining the check valve non-safety direction by obtaining normal or expected flow rates for the plant operating condition.

Position

North Anna will verify the non-safety position of check valves included in the Inservice Testing Program. In lieu of a dedicated surveillance to perform the non-safety direction testing, the following alternate verification methods may be performed as follows:

1. Observation of plant processes that a check valve is satisfying its non-safety direction function may be used. One example is a check valve that has a safety function only in the closed direction and normally provides a flow path to maintain plant operations. If the check valve is not open to pass flow, an alarm or indication would identify a problem to the operator. The operator would respond to take appropriate actions. A Condition Report would then be generated for the abnormal plant condition which would identify the check valve failure.
2. Observation of plant logs and other records satisfied by Operator or Engineering reviews may be an acceptable method for verifying a check valves non-safety direction during normal plant operations.

The open or closed non-safety function shall be recorded at a frequency required by ISTC-3510, nominally every 3 months, with exceptions as provided as CSVs or RRVs, in plant records such as North Anna Operator Logs, chart recorders, station procedures, etc. The test frequencies given in Table TP-01 for the non-safety position are based on the frequency for the safety function position as allowed by ISTC-3522(a). According to ISTC-3522(a), "Open and close tests need only be performed at an interval when it is practicable to perform both tests."

Justification

This Technical Position requires that the method of determining the non-safety position be established and documented in the IST Program Plan. The plant systems and operator actions provide for the observations that the valve is satisfying its non-safety function. Additionally, the recording of parameters which demonstrate valve position is at a frequency in accordance with ISTC-3510. These actions collectively demonstrate the non-safety position of Inservice Testing Program check valves in regular use as required by ISTC-3550.

Technical Position TP-01 (Cont.)

Table TP-01

Valve Number	System	ASME Class	Non-Safety Direction	Test Freq ¹	Normal Operational Function	Alternate Position Verification Record
2-CC-78	Component Cooling	2	Open	RR	main CC supply to "A" RC pump coolers	Operator Log
2-CC-107	Component Cooling	3	Open	RR	CC supply to "A" RC pump thermal barrier cooler	Operator Log
2-CC-115	Component Cooling	3	Open	RR	main CC supply to "B" RC pump coolers	Operator Log
2-CC-144	Component Cooling	2	Open	RR	CC supply to "B" RC pump thermal barrier cooler	Operator Log
2-CC-152	Component Cooling	2	Open	RR	main CC supply to "C" RC pump coolers	Operator Log
2-CC-181	Component Cooling	3	Open	RR	CC supply to "C" RC pump thermal barrier cooler	Operator Log
2-CC-276	Component Cooling	2	Open	RR	CC supply to containment air coolers	Operator Log
2-CC-289	Component Cooling	2	Open	RR	CC supply to containment air coolers	Operator Log
2-CC-302	Component Cooling	2	Open	RR	CC supply to containment air coolers	Operator Log
2-CH-260	Chemical and Volume Control	1	Open	RR	"A" RC pump seal water supply	Operator Log
2-CH-284	Chemical and Volume Control	1	Open	RR	"B" RC pump seal water supply	Operator Log
2-CH-308	Chemical and Volume Control	1	Open	RR	"C" RC pump seal water supply	Operator Log
2-CH-335	Chemical and Volume Control	1	Open	RR	main charging supply header	Operator Log
2-EB-41	EDG Air System	NC	Open	03	2HA Air Dryer discharge check valve	Operator Log

Technical Position TP-01 (Cont.)

Valve Number	System	ASME Class	Non-Safety Direction	Test Freq ¹	Normal Operational Function	Alternate Position Verification Record
2-EB-51	EDG Air System	NC	Open	03	2JA Air Dryer discharge check valve	Operator Log
2-EB-68	EDG Air System	NC	Open	03	2HB Air Dryer discharge check valve	Operator Log
2-EB-85	EDG Air System	NC	Open	03	2JB Air Dryer discharge check valve	Operator Log
2-FW-62	Feedwater	2	Open	CS	"A" main feedwater supply	Operator Log
2-FW-94	Feedwater	2	Open	CS	"B" main feedwater supply	Operator Log
2-FW-126	Feedwater	2	Open	CS	"C" main feedwater supply	Operator Log
2-IA-250	Instrument Air	2	Open	RR	instrument air supply to containment	2-OP-46.3
2-IA-428	Instrument Air	2	Open	RR	radiation monitor system return to containment	1-OP-62.2 ²
2-IA-497	Instrument Air	NC	Open	RR	IA supply to H ₂ Recombiner containment isolation valves	2-PT-213.3
2-IA-499	Instrument Air	NC	Open	RR	IA supply to H ₂ Recombiner containment isolation valves	2-PT-213.3
2-MS-NRV-201A	Main Steam	2	Open	CS	"A" main steam supply header	Operator Log
2-MS-NRV-201B	Main Steam	2	Open	CS	"B" main steam supply header	Operator Log
2-MS-NRV-201C	Main Steam	2	Open	CS	"C" main steam supply header	Operator Log
2-SI-70	Safety Injection	2	Open	RR	supply to boron injection tank	Operator Log
2-SI-132	Safety Injection	2	Open	RR	nitrogen supply to SI accumulators	2-OP-7.3
2-SI-136	Safety Injection	2	Open	RR	SI accumulator makeup supply	2-OP-7.3
2-WT-41	SG Chemical Feed	2	Open	03	"A" SG chemical feed supply	CH-22.914 CH-22.915 CH-22.916
2-WT-53	SG Chemical Feed	2	Open	03	"B" SG chemical feed supply	CH-22.914 CH-22.915 CH-22.916

Technical Position TP-01 (Cont.)

Valve Number	System	ASME Class	Non-Safety Direction	Test Freq ¹	Normal Operational Function	Alternate Position Verification Record
2-WT-69	SG Chemical Feed	2	Open	03	"C" SG chemical feed supply	CH-22.914 CH-22.915 CH-22.916

¹ Test frequencies are based on the frequency of the safety direction test

**Technical Position TP-02:
Fail-Safe Testing of Valves**

Purpose

The purpose of this Technical Position is to establish North Anna's position for fail-safe testing of valves in conjunction with stroke time exercising or position indication testing and applies to valves with fail-safe actuators required to be tested in accordance with ISTC-3560.

Background

The 2012 edition of the ASME OM Code section ISTC-3560 requires:

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

Paragraph ISTC-3510 States:

Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months...

Position

For valves with fail-safe actuators required to be tested in accordance with ISTC-3560 where normal valve operator action moves the valve to the open or closed position by de-energizing the operator electrically, by venting air, or both, the exercise test will satisfy the fail-safe test requirements and an additional test specific for fail-safe testing will not be performed.

Justification

Valves that fail open or closed upon loss of actuator power use the fail-safe mechanism to stroke the valve to its safety position. For example, an air operated valve that fails closed may use air to open the valve against spring force. When the actuator control switch is placed in the closed position, air is vented from the diaphragm and the spring moves the obturator to the closed position.

Technical Position TP-03:
Testing of Power Operated Control Valves

Purpose

The purpose of this Technical Position is to identify power operated control valves that have only a fail-safe safety function.

Background

Code Case OMN-8 has been incorporated into the ASME OM Code in paragraph ISTC-5100:

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

Position

No stroke time testing is required for these valves since this function is excluded from testing based on ISTC-5100. The fail-safe function of these valves will be tested in accordance with the ASME OM Code requirements of ISTC-3560. The power operated control valves that have only a fail-safe safety function are identified in Table 1.

Justification

2012 edition of the ASME OM Code, paragraph ISTC-5100

Table 1: Power Operated Control Valves That Have Only a Fail-Safe Safety Function

Component ID	Description	OM Category	ASME Code Class
2-CH-FCV-2113A	Boric Acid to Blender System Flow Control Valve	B	3
2-CH-FCV-2114A	Primary Grade Water to Blender Flow Control Valve	B	NC
2-FW-HCV-200A 2-FW-HCV-200B 2-FW-HCV-200C	Standby Auxiliary Feedwater Supply Hand Control Valves	B	3
2-FW-PCV-259A 2-FW-PCV-259B	Auxiliary Feedwater Pressure Control Valves	B	3
2-HV-PCV-2235A1 2-HV-PCV-2235B1 2-HV-PCV-2235C1	Control Room Condenser Water Bypass Line Pressure Control Valves	B	3
2-HV-PCV-2235A2 2-HV-PCV-2235B2 2-HV-PCV-2235C2	Control Room Condenser Water Line Pressure Control Valves	B	3
2-MS-PCV-201A 2-MS-PCV-201B 2-MS-PCV-201C	Main Steam Header Discharge to Atmosphere Pressure Control Valves	B	2
2-SI-HCV-2936	Waste Gas from Accumulators to Charcoal Filter Line Hand Control Valve	A	2
2-SW-TCV-202A 2-SW-TCV-202B 2-SW-TCV-202C	Service Water from Charging Pump Lube Oil Cooler Temperature Control Valves	B	3

**Technical Position TP-04:
Obturator Verification 10 CFR 50.55a(b)(3)(xi)**

Purpose

To document the IST program position and process for verifying valve obturator position during position verification testing.

Background

The requirements for obturator verification are currently in flux and expected to change prior to the start of the fifth interval. Current requirements are driven by ISTC-3700, ISTC-3530, and 10 CFR 50.55a(b)(3)(xi). Dominion's position is documented here based on what is expected by future rulemaking that will take place after Dominion's submittal to the NRC, but prior to the start of the fifth interval. Current requirements to the OM Code are shown below:

1) ISTC-3530 Valve Obturator Movement:

The necessary valve obturator movement shall be determined by exercising the valve while observing an appropriate indicator, such as indicating lights that signal the required changes of obturator position, or by observing other evidence, such as changes in system pressure, flow rate, level, or temperature, that reflects change of obturator position.

2) ISTC-3700 Position Verification Testing:

Valves with remote position indicators shall be observed locally at least once every 2 yr to verify that valve operation is accurately indicated. Where practicable, this local observation should be supplemented by other indications such as use of flow meters or other suitable instrumentation to verify obturator position. These observations need not be concurrent. Where local observation is not possible, other indication shall be used for verification of valve operation.

Position verification for active MOVs shall be tested in accordance with Mandatory Appendix III of this Division.

3) 10 CFR 50.55a(b)(3)(xi) OM condition – Valve Position Indication:

When implementing paragraph ISTC-3700, "Position Verification Testing," in the ASME OM Code, 2012 Edition through the latest edition and addenda of the ASME OM Code incorporated by reference in paragraph (a)(1)(iv) of this section, licensees shall verify that valve operation is accurately indicated by supplementing valve position indicating lights with other indications, such as flow meters or other suitable instrumentation, or NRC-approved testing programs where justified with an acceptable interval to verify obturator position, to provide assurance of proper obturator

position for valves with remote position indication within the scope of Subsection ISTC including its mandatory appendices and their verification methods and frequencies.

Position

Obturator verification is required on all active valves in the IST program and passive valves that have indicating lights on the main control board. The obturator verification test only needs to prove that the stem-disk integrity is intact. If the test requires that the valve needs to be tested in the open and closed direction the tests do not need to be concurrent. When a test is controlled by other regulatory approved test methods such as the Appendix J program, the test(s) can be performed on the frequency of the performance-based test method. The test can rely on changes to systems and components during normal plant operation provided that the change is documented with a plant record such as an operator log.

**Technical Specification TP-05:
Technical Specification Stroke Timing of Motor-Operated Valves**

Purpose

This Technical Position documents the Technical Specification requirements associated with stroke timing Motor-Operated Valves (MOV) for Unit 1 in the fifth IST interval for convenience.

Background

The 2012 edition of the ASME OM Code contains new Mandatory Appendix III for MOVs in the fifth IST interval. Stroke timing of MOVs is no longer a requirement due to the inherent nature of MOVs to not produce a degrading trend from stroke time testing. The NRC has placed a condition on Mandatory Appendix III as shown below:

10 CFR 50.55a(b)(3)(ii)(D) Stroke Time:

When applying Paragraph III-3600, "MOV Exercising Requirements," of Appendix III to the ASME OM Code, licensees shall verify that the stroke time of MOVs specified in plant technical specifications satisfies the assumptions in the plant's safety analyses.

Position

Stroke timing on MOVs will be performed on the MOVs shown in Table 1 at a frequency that will coincide with the full cycle exercise (FCE) test. The stroke time test only needs to surpass the required stroke time listed in the site's technical specifications or licensing document and does not require trending. Stroke timing on an MOV is only required if there is a specific surveillance requirement in the site's Technical Specifications and there is a specific stroke time associated with the MOV in the site's licensing documents (UFSAR, TRM). The stroke time, and references associated with it, are listed in Table 1.

Table 1: MOVs Requiring Stroke Time Testing

Component ID	Required Stroke Time (seconds)	Open / Closed	TS Surveillance Requirement	Stroke Time Reference
02-CH-MOV-2380	25	Closed	3.6.3	TRM Table 4.1-1
02-CH-MOV-2381	25	Closed	3.6.3	TRM Table 4.1-1
02-FW-MOV-250A	60	Closed	3.7.3.1	TS SR 3.7.3.1
02-FW-MOV-250B	60	Closed	3.7.3.1	TS SR 3.7.3.1
02-FW-MOV-250C	60	Closed	3.7.3.1	TS SR 3.7.3.1
02-FW-MOV-254A	6.98	Closed	3.7.3.1	TS SR 3.7.3.1
02-FW-MOV-254B	6.98	Closed	3.7.3.1	TS SR 3.7.3.1
02-FW-MOV-254C	6.98	Closed	3.7.3.1	TS SR 3.7.3.1

**Technical Position TP-06:
Motor Operated Valve Risk-Informed Full Cycle Exercise Test Frequency**

Purpose

This Technical Position provides the background and basis for extending the Full Cycle Exercise (FCE) test required of High Safety Significant Component (HSSC) Motor Operated Valves (MOV) from quarterly to 18 months.

Background

Mandatory Appendix III in the 2012 edition of the ASME OM Code allows Owners to implement a risk-informed testing program for motor operated valves per the requirements in section III-3700 and 10 CFR 50.55a(b)(3)(ii)(B).

Position

The 2012 edition of the ASME OM Code requires that Low Safety Significant Component (LSSC) MOVs receive a FCE test every 24M and HSSC receive the FCE test every 3M. If the Owner chooses to use a risk-informed approach the HSSC MOV FCE test can be extended out to as infrequent as every 24M if it is determined that the risk associated with CDF and LERF is acceptably small when extending exercise test intervals beyond a quarterly frequency.

With the implementation and merger of the MOV program with the IST program, the risk rankings assigned from the JOG MOV program contain three tiers (high, medium, and low). The guidance for the FCE test in the ASME OM Code only allows for two tiers (high and low), so the high and medium classifications from the MOV program have all been grouped into the high category when making testing determinations for the FCE test.

With this guidance, and input from PRA, the risk associated with CDF and LERF was analyzed and determined to be acceptably small when extending the HSSC MOV FCE frequency from 3M to 18M for all of the HSSC MOV population. Since MSPI analysis is typically limited to within a fuel cycle the test interval frequency extension was also limited to the 18M fuel cycle rather than the Code allowed 24M. This analysis is documented in NOTEBK-PRA-NAPS-RA.047 and the applicable HSSC MOVs are listed in Table 1.

Justification

The FCE test frequency extension described in this Technical Position has been performed in accordance with III-3700 and 10 CFR 50.55a(b)(3)(ii)(B).

Table 1: HSSC Active MOVs

Component ID	Description	Valve Category	ASME Code Class
02-CH-MOV-2115B	CHARGING PUMP SUPPLY ISOLATION VALVE FROM REFUELING WATER STORAGE TANK	A	2
02-CH-MOV-2115C	CHARGING PUMP SUPPLY ISOLATION FROM VOLUME CONTROL TANK	B	2
02-CH-MOV-2115D	CHARGING PUMP SUPPLY ISOLATION VALVE FROM REFUELING WATER STORAGE TANK	A	2
02-CH-MOV-2115E	CHARGING PUMP SUPPLY ISOLATION VALVE FROM VOLUME CONTROL TANK	B	2
02-FW-MOV-200B	AFW MOV HEADER TO B S/G	B	3
02-FW-MOV-200D	TURBINE DRIVEN AFW PUMP TO A S/G	B	3
02-RC-MOV-2535	2-RC-PCV-2456 PORV BLOCK VALVE	B	1
02-RC-MOV-2536	2-RC-PCV-2455C PORV BLOCK VALVE	B	1
02-RH-MOV-2700	RHR PUMP SUPPLY ISOLATION FROM "A" HOT LEG, INSIDE MISSILE BARRIER	A	1
02-RH-MOV-2701	RHR PUMP SUPPLY ISOLATION FROM "A" HOT LEG, OUTSIDE MISSILE BARRIER	A	1
02-RH-MOV-2720A	RHR RETURN ISOLATION TO "B" ACCUMULATOR DISCHARGE LINE	A	1
02-RH-MOV-2720B	RHR RETURN ISOLATION TO "C" ACCUMULATOR DISCHARGE LINE	A	1
02-SI-MOV-2860A	1A LOW HEAD SI PUMP SUCTION ISOLATION FROM CONTAINMENT SUMP	B	2
02-SI-MOV-2860B	1B LOW HEAD SI PUMP SUCTION ISOLATION FROM CONTAINMENT SUMP	B	2

Component ID	Description	Valve Category	ASME Code Class
02-SI-MOV-2862A	1A LOW HEAD SI PUMP SUCTION FROM RWST	B	2
02-SI-MOV-2862B	1B LOW HEAD SI PUMP SUCTION FROM RWST	B	2
02-SI-MOV-2863A	1A LOW HEAD SAFETY INJECTION PUMP SUPPLY ISOLATION TO CHARGING PUMPS	B	2
02-SI-MOV-2863B	1B LOW HEAD SAFETY INJECTION PUMP SUPPLY ISOLATION TO CHARGING PUMPS	B	2
02-SI-MOV-2867A	BORON INJECTION TANK HIGH HEAD SI INLET ISOLATION VALVE	B	2
02-SI-MOV-2867B	BORON INJECTION TANK HIGH HEAD SI INLET ISOLATION VALVE	B	2
02-SI-MOV-2867C	BORON INJECTION TANK OUTLET TO RCS COLD LEG, OUTSIDE CONTAINMENT ISOLATION VALVE	A	1
02-SI-MOV-2867D	BORON INJECTION TANK OUTLET TO RCS COLD LEG, OUTSIDE CONTAINMENT ISOLATION VALVE	A	1
02-SW-MOV-201A	A SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS	B	3
02-SW-MOV-201B	A SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS	B	3
02-SW-MOV-201C	B SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS	B	3
02-SW-MOV-201D	B SERVICE WATER HEADER SUPPLY ISOLATION TO RECIRC SPRAY HEAT EXCHANGERS	B	3
02-SW-MOV-203A	A RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
02-SW-MOV-203B	B RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE	A	2

Component ID	Description	Valve Category	ASME Code Class
02-SW-MOV-203C	C RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
02-SW-MOV-203D	D RECIRC SPRAY HEAT EXCHANGER SW SUPPLY, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
02-SW-MOV-204A	A RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
02-SW-MOV-204B	B RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
02-SW-MOV-204C	C RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
02-SW-MOV-204D	D RECIRC SPRAY HEAT EXCHANGER SW RETURN, OUTSIDE CONTANMENT ISOLATION VALVE	A	2
02-SW-MOV-205A	B SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS	B	3
02-SW-MOV-205B	B SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS	B	3
02-SW-MOV-205C	A SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS	B	3
02-SW-MOV-205D	A SERVICE WATER HEADER RETURN ISOLATION FROM RECIRC SPRAY HEAT EXCHANGERS	B	3
02-SW-MOV-208A	B SERVICE WATER SUPPLY HEADER ISOLATION TO COMPONENT COOLING HEAT EXCHANGERS	B	3
02-SW-MOV-208B	B SERVICE WATER SUPPLY HEADER ISOLATION TO COMPONENT COOLING HEAT EXCHANGERS	B	3

Technical Position TP-07: Stroke Time Limiting Values

Purpose

To document North Anna's position when utilizing limiting values associated with power operated valve stroke times.

Background

Subsection ISTC states that the limiting value(s) of full stroke time of each power operated valve shall be specified by the Owner. Stroke times that exceed this limiting value shall be immediately declared inoperable.

Position

When a valve does not have a specific design or licensing basis stroke time limit and has been assigned a limiting value based on this Technical Position the limiting values in Table 1 shall be applied.

A stroke time that falls within the 'normal' acceptance criteria and the limiting value shall be immediately retested or declared inoperable. If the second set of data meets the acceptance criteria, the cause of the initial deviation shall be analyzed and the results documented in the record of tests. If the second set of data does not meet the acceptance criteria the valve should be declared inoperable.

Justification

Consistent with industry practice, Table 1 identifies the limiting stroke time values that should be applied to power operated valves that do not have more conservative criteria in their design or licensing basis as allowed by the OM Code.

Table 1: Stroke Time Limiting Values

Actuator Type	Reference Stroke Time (ST_r) Range	Limiting Stroke Time
Power Operated ¹	≤ 10.0 Seconds	2.0 x ST _r
Power Operated ¹	> 10.0 Seconds	1.5 x ST _r
Rapid Acting Valves	≤ 2.0 Seconds	≤ 2.0 Seconds

¹ Limiting stroke time values should not be applied to motor-operated valves

Technical Position TP-08: RWST Isolation Valves

Purpose

This Technical Position identifies those valves whose safety function includes providing isolation of the RWST and preventing the consequences of leakage from the containment sump from reaching the atmosphere through the RWST vent.

Background

During recirculation mode transfer, the RWST is isolated and the low head SI pumps recirculate highly contaminated water from the containment sump to the reactor vessel.

Position

According to ISTC-3630(f), valves or valve combinations with leakage rates exceeding the values specified by the Owner in ISTC-3630(e) shall be declared inoperable and be either repaired or replaced.

The RWST isolation valves listed in Table 1 work as a system of valves to protect the RWST from the contaminated sump water. Permissible valve leakage rates are based on each valve's possible contribution to the total allowable leakage rate to the RWST. When the leakages from each valve have been measured and summed, an individual valve's permissible leakage rate may have been exceeded, but the overall allowable leakage to the RWST may not have been exceeded. In these cases, a repair or replacement may not be necessary because the system of isolation valves has been verified to be performing adequately.

In addition to the repair or replacement as corrective actions, an evaluation can be performed which demonstrates that even if a valve has exceeded its permissible leakage rate, the overall leakage rate to the RWST will be maintained below the overall allowable RWST leakage rate hence the system function is satisfied. This evaluation should provide a high level of assurance that delaying the repair or replacement will not result in exceeding the overall limit before the next leak rate test. The evaluation should include a determination of the cause for the individual valve leakage. The evaluation should also address the effect of the degradation mechanism for the valve on the ability of the valve group to maintain overall leakage to the RWST below the overall allowable leakage rate during the subsequent 24-month test interval. Evaluations will be documented and retained in plant records and are available for subsequent review.

Justification

In addition to repair or replacement as corrective actions, an evaluation can be performed which demonstrates that even if a valve has exceeded its permissible leakage rate, the overall leakage rate to the RWST will be maintained below the overall allowable RWST leakage rate.

Table 1: RWST Isolation Valves

Component ID	Description	OM Category	ASME Code Class
2-CH-MOV-2115B 2-CH-MOV-2115D	Charging Pump Supply Isolation Valve from Refueling Water Storage Tank	A	2
2-SI-18	RWST to Charging Pump Suction Header Check Valve	AC	2
2-SI-MOV-2885A 2-SI-MOV-2885B 2-SI-MOV-2885C 2-SI-MOV-2885D	Low Head SI Pump Minimum Flow/Test Line Isolation Valve	A	2

7.0 REPORTING OF INSERVICE TEST RESULTS

7.1 PUMP INSERVICE TESTING PROGRAM

A record of each pump will be maintained in accordance with ISTB-9100 that includes the following:

- 1) The manufacturer and the manufacturer's model and serial or other identification number,
- 2) A copy or summary of the manufacturer's acceptance test report if available,
- 3) A copy of the pump manufacturer's operating limits.

In addition to the requirements of ISTA-3120 and 3160, a record of inservice test plans and procedures will be maintained in accordance with ISTB-9200 that includes the following:

- 1) The identification of the pumps subject to testing,
- 2) The category of each pump,
- 3) The hydraulic circuit to be used,
- 4) The location and type of measurement for the required test parameters,
- 5) The method of determining test parameter values which are not directly measured by instrumentation.

A record of test results will be maintained in accordance with ISTA-9200.

A record of corrective action will be maintained in accordance with ISTA-9240 that includes a summary of the corrections made, the subsequent inservice tests and confirmation of operation adequacy, and the printed or typed name and signature of the individual responsible for the corrective action and verification of results.

The Pump Inservice Test Program, associated surveillance test procedures and results will be kept at North Anna Power Station. They will be available for audit by the NRC.

7.2 VALVE INSERVICE TESTING PROGRAM

A record of each valve will be maintained in accordance with ISTC-9110 that includes the following:

- 1) The manufacturer and the manufacturer's model and serial or other unique identification number,
- 2) A copy or summary of the manufacturer' acceptance test report if available,
- 3) Preservice test results and
- 4) Limiting value of full stroke time.

This IST Program Plan meets the requirements of ISTC-9200, Test Plans.

A record of test results will be maintained in accordance with ISTA-9230.

A record of corrective action will be maintained in accordance with ISTA-9240 that includes a summary of the corrections made, the subsequent inservice tests and confirmation of operation adequacy, and the printed or typed name and signature of the individual responsible for the corrective action and verification of results.

The Valve Inservice Test Program, associated surveillance test procedures and results will be kept at North Anna Power Station. They will be available for audit by NRC.

8.0 QUALITY ASSURANCE PROGRAM

The Pump and Valve Inservice Test Program activities will be conducted in accordance with the Technical Specifications for North Anna Power Station.

ENCLOSURE

Attachment 5

**Unit 1 and Unit 2 Inservice Testing Program Plan for Snubbers,
Fifth 10-Year Interval**

**Virginia Electric and Power Company
(Dominion Energy Virginia)
North Anna Power Station Units 1 and 2**

NORTH ANNA POWER STATION

SNUBBER INSERVICE TESTING PROGRAM PLAN

UNIT 1 FIFTH 10-YEAR INTERVAL

Commercial Service Date: June 6, 1978

Fifth Interval: December 15, 2020 through December 14, 2030

UNIT 2 FIFTH 10-YEAR INTERVAL

Commercial Service Date: December 14, 1980

Fifth Interval: December 15, 2020 through December 14, 2030

Document Number: U1/U2 Snubber Program Plan, Interval 5

Revision Number: 0

This program plan is the initial issue of the Snubber Program Plan after transition from the ASME ISI Code, Section XI to the ASME OM Code, Section IST. The NAPS Unit 1 Fourth ISI Interval was extended until December 14, 2020 by relief request N1-I4-CS-002, ML18275A105 in order to align the Unit 1 snubber program with the Unit 2 snubber program and the fifth IST Program Interval. Beginning December 15, 2020, management of the snubber program will be governed by the 2012 Edition of the ASME OM Code, Section IST and will thereafter be aligned with the associated IST Interval for both Units 1 and 2. The Fifth IST Interval is currently scheduled to end on December 14, 2030.

TABLE OF CONTENTS

SECTION

- 1.0 GENERAL
- 2.0 EXAMINATION, TESTING AND MONITORING REQUIREMENTS
- 3.0 EXAMINATION AND TESTING METHODS
- 4.0 EXAMINATION AND TESTING FREQUENCY
- 5.0 ASME OM CODE CASE OMN-13
- 6.0 EXAMINATION, TESTING AND MONITORING EVALUATION
- 7.0 REPAIR, REPLACEMENT, AND MODIFICATION REQUIREMENTS
- 8.0 SCHEDULING
- 9.0 REPORTS AND RECORDS

1.0 General:

- 1.1 The examination, service life monitoring and testing of all safety related snubbers at North Anna Power Station (NAPS) will be implemented and performed in accordance with ER-NA-IST-SN-614, "Inservice Testing of Dynamic Restraints (Snubbers) – Program Administration" and "ER-NA-IST-SN-615, "Inservice Testing of Dynamic Restraints (Snubbers) – Program Implementation" to assess the required operational readiness of these snubbers during a seismic or other event, initiating dynamic loads.
- 1.2 The Snubber program, as defined within ER-NA-IST-SN- 614 and ER-NA-IST-SN-615, establishes visual examination, functional testing and service life monitoring requirements, pertaining to all snubbers that are required for safe shutdown of the reactor, maintaining the safe shutdown condition, mitigating the consequences of an accident, or to ensure the integrity of the reactor coolant pressure boundary.
 - 1.2.1 The examination boundaries are the snubber assembly from pin to pin inclusive. Integral and nonintegral piping and structural attachments for snubbers will be evaluated within the site ISI program, in accordance with the requirements of the ASME Code Section XI, 2013 Edition.
 - 1.2.2 The snubbers included in this program are identified within the station Technical Requirements Manual, section 3.7.5
- 1.3 The Snubber Program, as described in ER-NA-IST-SN-614 and ER-NA-IST-SN-615, adheres to the requirements of ASME OM Code, Section IST, 2012 Edition, as required by 10CFR50.55a(b)(3)(v)(B).
- 1.4 The snubber program document ER-NA-IST-SN-615 establishes a Visual Examination program, an Operational Readiness Testing program and Snubber Service Life Monitoring for program snubbers, which adhere to the requirements of Subsections ISTD-4000, ISTD-5000 and ISTD-6000 respectively.

2.0 Examination, Testing and Monitoring Requirements:

- 2.1 Visual Examinations and Operational Readiness Testing will be performed to the extent specified within ER-NA-IST-SN-614 and in accordance with TRM section 3.7.5.
- 2.2 Snubbers are grouped into Defined Test Plan Groups, (DTPG's) by snubber size,

in accordance with ISTD-5252 for testing purposes. The DTPG's at NAPS Unit 1 and 2 are identified in ER-NA-IST-SN-614.

- 2.3 The Service Life of all snubbers in this program will be monitored and snubbers replaced or reconditioned as specified in ER-NA-IST-SN-615 to ensure that the service life is not exceeded at or before the next scheduled system or plant outage, or during a period when the snubber is required to be operable. The replacement or reconditioning of snubbers will be documented, and records retained in accordance with NAPS Procedures.

3.0 Examination and Testing Methods:

- 3.1 Visual Examinations will be performed by individuals qualified in accordance with ISTA-1500(e). Visual Examinations and Operational Readiness Testing shall be performed to verify the requirements specified within ER-NA-IST-SN-614, ER-NA-IST-SN-615 and in accordance with Subsection ISTD.

4.0 Examination and Testing Frequency:

- 4.1 Visual Examinations and Operational Readiness Testing will be performed at the frequency specified within ER-NA-IST-SN-614, Inservice Testing of Dynamic Restraints – Program Administration.
- 4.2 Visual Examinations will be performed whenever new snubber locations are installed, or after system replacements or modifications in accordance with Subsection ISTD-4100.

5.0 Relief Request, S-1

- 5.1 Code Case OMN-13 Rev. 2, which allows the extension of the visual examination interval, is approved for use by the NRC in Regulatory Guide 1.192 Rev. 2 (March 2017) and is approved for use via relief request S-1 for the Fifth IST Program Interval.

6.0 Examination, Testing and Monitoring Evaluation:

- 6.1 Snubbers that do not appear to conform to the Visual Examination requirements outlined in either ER-NA-IST-SN-614 or ER-NA-IST-SN-615 will be evaluated and appropriate corrective action taken in accordance with ER-NA-IST-SN-615.
- 6.2 Snubbers that do not appear to conform to the visual examination acceptance requirements and are later determined to be operable based on the results of operational readiness testing may be declared operable for the purpose of establishing the next visual examination interval, providing that the unacceptable condition did not otherwise affect operational readiness of the snubber.
- 6.3 Snubbers that do not meet the Operational Readiness Testing acceptance criteria outlined in ER-NA-IST-SN-615 will be evaluated to determine the cause of the failure and appropriate corrective action will be taken.
- 6.4 The service life of a snubber is evaluated at least once each fuel cycle using manufacturer input and engineering information gained through consideration of the snubber service conditions and inservice Operational Readiness test results in accordance with ER-NA-IST-SN-615.

7.0 Repair, Replacement and Modification Requirements:

- 7.1 Repairs, Replacements and Modifications performed on snubbers under this program shall conform, as applicable, to the requirements specified within the Repair and Replacement Program.

8.0 Scheduling:

- 8.1 The Visual Examinations and Operational Readiness Testing schedules will be established, tracked and maintained within the North Anna Power Station Engineering Department.
- 8.2 The Snubber Testing Program will identify, and track expanded, or additional testing and/or examinations as specified and required by ER-NA-IST-SN-614, ER-NA-IST-SN-615 and in accordance with Subsection ISTD.

9.0 Reports and Records:

- 9.1 Reports and records for the Visual Examinations and Operational Readiness Testing will be maintained on all snubbers in the scope of the program.
- 9.2 Applicable records and reports, as required for Repair and Replacements, will be maintained for all snubbers.
- 9.3 Records of the service life of all snubbers listed in this program, including the date at which the service life commences, and associated installation and maintenance records will be maintained.