

James S. Baumstark
Vice President
Nuclear Engineering

Consolidated Edison Company of New York, Inc.
Indian Point 2 Station
Broadway & Bleakley Avenue
Buchanan, New York 10511

Internet: baumstarkj@coned.com
Telephone: (914) 734-5354
Cellular: (914) 391-9005
Pager: (917) 457-9698
Fax: (914) 734-5718

June 2, 2000

Re: Indian Point Unit No. 2
Docket No. 50-247

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Subject: Inservice Testing (IST) Program Third 10-Year Interval Revision 2
Relief Requests for Pumps and Valves for Indian Point Unit No. 2

Reference: 1) NRC Letter to Con Edison dated April 15, 1996
2) Con Edison Letter to USNRC dated November 28, 1997
3) Con Edison Letter to USNRC dated May 12, 1998

This letter provides for your review and approval, Revision 2 of the Indian Point Unit No. 2 Inservice Testing (IST) Program Summary for Pumps and Valves. This program is applicable for the third 10-year inservice testing interval, which covers the period beginning July 1, 1994 through May 18, 2005.

By Reference 1, the NRC issued a safety evaluation relative to Revision 1 of the IST program summary document. In our response to a Notice of Violation contained in NRC Integrated Inspection Report 50-247/97-11, Con Edison committed via Reference 2, to re-evaluate the IST program selection criteria document and to review the need to revise the IST program scope. After the initiation of the program review activities, we provided the NRC with an interim status of our ongoing review via Reference 3. Within that letter, we provided a description of the process for performing our review, the actions taken to test components that were not previously incorporated into the program, and a schedule for performing the required testing. Based upon recent NRC inspection activities, additional test requirements for various components that were subsequently added to the IST program were also addressed in the review. The program review was performed in accordance with the requirements of ASME/ANSI OMa1988, Addenda to ASME/ANSI OM-1987, Parts 6 and 10. This review has been completed and the attached Revision 2 of the IST Program Summary document identifies those components, which were added or deleted from the program.

RGH-001

A047

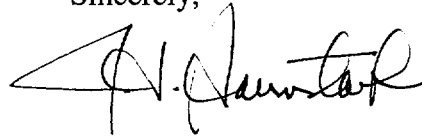
Specific items to be noted are as follows:

- The program has been reviewed against the requirements of NRC Generic Letter 89-04 and NRC Generic Letter 89-04, Supplement 1 (NUREG-1482). All relief requests requiring NRC review prior to implementation have been previously submitted and responded to by the Commission. The approval status of each relief request is noted on the individual relief requests.
- Relief requests pre-approved based upon compliance with NRC Generic Letter 89-04 and NRC Generic Letter 89-04, Supplement 1 (NUREG-1482) have been identified within the affected relief requests.
- Components not designated as ASME Class 1, 2, or 3 (unless such components are required to protect the integrity of ASME Class 1, 2, or 3 components or systems) have been removed from the IST Program and placed into a separate Augmented IST Program. Such affected items are so noted in the "Revision Summary" provided in the IST Program Summary.
- All IST program scope components required to be tested during the current refueling outage will be tested prior to return to service.

No new regulatory commitments are being made by Con Edison in this correspondence.

Should you or your staff have any concerns regarding this matter, please contact Mr. John McCann, Manager, Nuclear Safety & Licensing.

Sincerely,



Enclosure

C Mr. Hubert J. Miller
Regional Administrator-Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Jefferey F. Harold, Project Manager
Project Directorate I-1
Division of Regulatory Projects I/II
US Nuclear Regulatory Commission
Mail Stop 14B-2
Washington, DC 20555

Senior Resident Inspector
US Nuclear Regulatory Commission
PO Box 38
Buchanan, NY 10511

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

(Docket No. 50-247)

INSERVICE TESTING PROGRAM SUMMARY

for the interval

July 1, 1994, through May 18, 2005

Revision 2

Consolidated Edison Company of New York, Inc.

Revision 2
May, 2000

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Note: Test Summary pages are numbered as a computer printout.

Revision Summary

The following changes have been made in this revision:

- Updated date for end of 3rd interval to reflect extended outage effect on interval length.
- Section 1
 - Added drawings to list of systems to reflect current configuration documents.
- Section 2
 - Modified List of Subjects and Effective Pages to reflect new document layout.
 - Added Table Legend.
 - Pump Test Summary
 - Deleted Lube and Bearing Temperature requirements in accordance with OM-6.
 - Added Pump Type and Driver information.
 - Changed layout.
 - Removed all non-ASME required testing from program and placed into augmented (non-IST) program.
- Section 3
 - Modified List of Subjects and Effective Pages to reflect new document layout.
 - Modified text to reflect addition of unique numbers to Cold Shutdown and Refueling Justifications.
 - Clarified PIV testing discussion to clarify that discussed valves were exempted only from leakage testing requirements.
 - Added discussion on use of non-intrusive testing for check valves.
 - Modified Table Legend to clarify test types and frequencies.
 - Separated valve position, valve type, and actuator type abbreviations.
 - Valve Test Summary
 - Added Valve Description, Drawing Coordinates, Safety Position, Active/Passive designation, and CSJ/RFOJ identifiers.
 - Deleted Fail Mode, Remote Position Indication (replaced with PIT test designator), Alt Tests , and Rev fields.
 - Changed layout.
 - Removed all non-ASME required testing from program and placed into augmented (non-IST) program.

Component-specific changes made in the Pump and Valve Test Summaries are described in the pages following this section. Changes are listed in numerical order by tag number.

IST Program Changes - Component Specific Items

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
IVSW	1406	Deleted valve from program. Valve is a passive manual valve with no testing requirements. Previous revision showed as a check valve.
IVSW	1410	Deleted valve from program. Transferred testing to augmented program.
IVSW	1413	Deleted valve from program. Transferred testing to augmented program.
IVSW	1455	Deleted valve from program. Transferred testing to augmented program.
IVSW	1456	Deleted valve from program. Transferred testing to augmented program.
IVSW	1470	Deleted valve from program. Transferred testing to augmented program.
IVSW	1471	Deleted valve from program. Transferred testing to augmented program.
IVSW	1472	Deleted valve from program. Transferred testing to augmented program.
IVSW	1473	Deleted valve from program. Transferred testing to augmented program.
IVSW	1474	Deleted valve from program. Transferred testing to augmented program.
IVSW	1475	Deleted valve from program. Transferred testing to augmented program.
IVSW	1500	Deleted valve from program. Transferred testing to augmented program.
IVSW	1501	Changed Quality Group from NA to B.
IVSW	1502	Changed Quality Group from NA to B.
IVSW	1503	Changed Quality Group from NA to B.
IVSW	1504	Changed Quality Group from NA to B.
IVSW	1505	Changed Quality Group from NA to B.
IVSW	1506	Changed Quality Group from NA to B.
IVSW	1507	Changed Quality Group from NA to B.
IVSW	1508	Changed Quality Group from NA to B.
IVSW	1509	Changed Quality Group from NA to A.
IVSW	1510	Changed Quality Group from NA to A.
IVSW	1511	Changed Quality Group from NA to A.
IVSW	1512	Changed Quality Group from NA to B.
IVSW	1513	Changed Quality Group from NA to B.
IVSW	1514	Changed Quality Group from NA to B.
IVSW	1515	Changed Quality Group from NA to B.
IVSW	1516	Changed Quality Group from NA to B.
IVSW	1517	Changed Quality Group from NA to B.
IVSW	1518	Changed Quality Group from NA to B.
IVSW	1519	Changed Quality Group from NA to B.
IVSW	1520	Changed Quality Group from NA to B.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
IVSW	1521	Changed Quality Group from NA to B.
IVSW	1522	Changed Quality Group from NA to B.
IVSW	1523	Changed Quality Group from NA to B.
IVSW	1524	Changed Quality Group from NA to B.
IVSW	1525	Changed Quality Group from NA to B.
IVSW	1526	Changed Quality Group from NA to B.
IVSW	1527	Changed Quality Group from NA to B.
IVSW	1528	Changed Quality Group from NA to B.
IVSW	1529	Changed Quality Group from NA to B.
IVSW	1530	Changed Quality Group from NA to B.
IVSW	1531	Changed Quality Group from NA to B.
IVSW	1532	Changed Quality Group from NA to B.
IVSW	1534	Changed Quality Group from NA to B.
IVSW	1535	Changed Quality Group from NA to B.
IVSW	1536	Changed Quality Group from NA to B.
IVSW	1537	Changed Quality Group from NA to B.
IVSW	1538	Changed Quality Group from NA to B.
IVSW	1539	Changed Quality Group from NA to B.
IVSW	1540	Changed Quality Group from NA to B.
IVSW	1541	Changed Quality Group from NA to B.
IVSW	1542	Changed Quality Group from NA to B.
IVSW	1543	Changed Quality Group from NA to B.
IVSW	1545	Deleted valve from program. Valve does not exist in plant.
IVSW	1546	Deleted valve from program. Valve does not exist in plant.
IVSW	1547	Deleted valve from program. Valve does not exist in plant.
IVSW	1548	Deleted valve from program. Valve does not exist in plant.
IVSW	1549	Changed Quality Group from NA to B.
IVSW	1550	Changed Quality Group from NA to B.
GAS	1616	Changed from AC-Passive to AC-Active. Added SC-C. Changed Quality Group from NA to B. Changed normal position from O to O/C. Changed L-J frequency from R to J.
GAS	1649	Deleted valve from program. Associated line does not require overpressure protection.
WDS	1702	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
WDS	1705	Changed Quality Group from NA to E. Changed L-J frequency from R to J.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
WDS	1723	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
WDS	1728	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
WDS	1786	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
WDS	1787	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
WDS	1788	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
WDS	1789	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
SIS	1802A	Added CSJ reference.
SIS	1802B	Added CSJ reference.
SIS	1805	Added valve to program.
SIS	1810	Changed valve size from 3" to 8". Added CSJ reference.
CSS	1813	Added valve to program.
SIS	1814A	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
SIS	1814B	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
SIS	1814C	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
GAS	1816	Deleted valve from program. Transferred testing to augmented program.
CSS	1838A	Deleted valve from program (removed from system).
CSS	1838B	Deleted valve from program (removed from system).
RHR	1870	Changed valve size from 3" to 2". Changed L-J frequency from R to J. Added CSJ reference.
CCW	1873A	Deleted open testing. Transferred testing to augmented program.
CCW	1873B	Deleted open testing. Transferred testing to augmented program.
CCW	1873C	Deleted open testing. Transferred testing to augmented program.
CCW	1873D	Deleted open testing. Transferred testing to augmented program.
CCW	1874	Deleted closed testing. Transferred testing to augmented program.
HR	1878	Deleted valve from program (System retired in place).
HR	1879A	Deleted valve from program (System retired in place).
HR	1879B	Deleted valve from program (System retired in place).
HR	1880A	Deleted valve from program (System retired in place).
HR	1880B	Deleted valve from program (System retired in place).
HR	1881A	Deleted valve from program (System retired in place).
HR	1881C	Deleted valve from program (System retired in place).
HR	1881D	Deleted valve from program (Downstream system retired/capped in place).
HR	1884	Deleted valve from program (System retired in place).

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
CVCS	200A	Changed system from RCS to CVCS. Changed normal position from C to O/C.
CVCS	200B	Changed system from RCS to CVCS. Changed normal position from O to O/C.
CVCS	200C	Changed system from RCS to CVCS. Changed normal position from O to O/C.
CVCS	201	Changed L-J frequency from R to J. Added CSJ reference.
CVCS	202	Changed L-J frequency from R to J. Added CSJ reference.
CVCS	204A	Changed system from RCS to CVCS. Changed normal position from C to O. Added CSJ reference.
CVCS	204B	Changed system from RCS to CVCS. Changed normal position from O to C. Added CSJ reference.
CVCS	205	Changed L-J frequency from R to J. Added CSJ reference.
RCS	210A	Changed normal position from C to O/C. Added CSJ reference.
RCS	210B	Changed normal position from O to O/C. Added CSJ reference.
RCS	211	Added CSJ reference.
CVCS	212	Deleted valve from program. Valve determined to have no IST required function.
CVCS	213	Added valve to program.
CCW	21ACCP	Deleted pump from program. Pump function no longer required by design basis.
CCW	21CCSTV	Changed valve type from VR to CK. Deleted R testing. Added SC-C and SC-O.
IACC	21CLWP	Added pump to program.
EDG	21FOTP	Deleted from program. Transferred testing to augmented program.
SIS	21RP	Changed test frequency from R to 2Y. Added Relief Request.
CVCS	222	Changed L-J frequency from R to J.
CVCS	223	Changed L-J frequency from R to J.
CVCS	224A	Changed L-J frequency from R to J. Added CSJ reference.
CCW	22ACCP	Deleted pump from program. Pump function no longer required by design basis.
IACC	22CLWP	Added pump to program.
EDG	22FOTP	Deleted from program. Transferred testing to augmented program.
SIS	22RP	Changed test frequency from R to 2Y. Added Relief Request.
EDG	23FOTP	Deleted from program. Transferred testing to augmented program.
CVCS	250A	Changed L-J frequency from R to J. Added CSJ reference.
CVCS	250B	Changed L-J frequency from R to J. Added CSJ reference.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
CVCS	250C	Changed L-J frequency from R to J. Added CSJ reference.
CVCS	250D	Changed L-J frequency from R to J. Added CSJ reference.
RCS	251A	Added valve to program.
RCS	251B	Added valve to program.
RCS	251C	Added valve to program.
RCS	251D	Added valve to program.
RCS	251E	Added valve to program.
RCS	251F	Added valve to program.
RCS	251G	Added valve to program.
RCS	251H	Added valve to program.
CVCS	261A	Added valve to program.
CVCS	261B	Added valve to program.
CVCS	261C	Added valve to program.
CVCS	261D	Added valve to program.
CVCS	290	Added CSJ reference.
CVCS	292	Added valve to program.
CVCS	333	Added CSJ reference.
CVCS	360	Added valve to program.
CVCS	362A	Changed normal position from C to O/C. Deleted closure testing.
CVCS	362B	Deleted valve from program. Valve determined to have no IST required functions.
CVCS	368	Added valve to program.
CVCS	370	Added valve to program.
CVCS	374	Changed system from RCS to CVCS. Deleted Relief Request and added CSJ. Added PS.
CVCS	4000	Changed valve size form 3" to 1.5".
CVCS	4001	Deleted valve from program. Valve determined to have no IST required function.
CVCS	4002	Deleted valve from program. Valve determined to have no IST required function.
CVCS	4003	Changed valve size form 3" to 1.5".
CVCS	4004	Changed valve size form 3" to 1.5".
CVCS	4005	Deleted valve from program. Valve determined to have no IST required function.
GAS	4105	Deleted valve from program. Transferred testing to augmented program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
GAS	4106	Deleted valve from program. Transferred testing to augmented program.
GAS	4107	Deleted valve from program. Transferred testing to augmented program.
GAS	4108	Deleted valve from program. Transferred testing to augmented program.
RCS	4136	Changed Quality Group from NA to E. Changed normal position from C to LC. Changed L-J frequency from R to J.
CVCS	4148	Added valve to program.
CVCS	4149	Added valve to program.
CVCS	4150	Added valve to program.
CVCS	4151	Added valve to program.
RCS	4190	Added valve to program.
RCS	4191	Added valve to program.
GAS	4312	Changed from AC-Passive to AC-Active. Added SC-C. Changed L-J frequency from R to J. Added CSJ reference.
PSS	4399	Changed Quality Group from NA to E. Changed normal position from O to C. Changed valve from A-Active to A-Passive. Deleted S-C and T-C testing. Changed L-J frequency from R to J.
CVCS	4924	Changed SC-O frequency from CS to R. Added CSJ reference.
CVCS	4925	Changed valve type from GA to GL. Changed L-J frequency from R to J. Added CSJ reference.
CVCS	4926	Changed valve type from GA to GL. Changed L-J frequency from R to J. Added CSJ reference.
CVCS	4927	Changed valve type from GA to GL. Changed L-J frequency from R to J. Added CSJ reference.
CVCS	4928	Changed valve type from GA to GL. Changed L-J frequency from R to J. Added CSJ reference.
RCS	505A	Added valve to program.
RCS	505B	Added valve to program.
RCS	508A	Added valve to program.
RCS	508B	Added valve to program.
RCS	511A	Added valve to program.
RCS	511B	Added valve to program.
PSS	5132	Changed Quality Group from NA to E. Changed normal position from O to C. Changed valve from A-Active to A-Passive. Deleted S-C and T-C testing. Changed L-J frequency from R to J.
RCS	515A	Added valve to program.
RCS	515B	Added valve to program.
RCS	518	Changed normal position from C to O/C. Added closure testing. Changed L-J frequency from R to J. Added CSJ reference.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
RCS	519	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
RCS	520	Added valve to program.
SIS	5220	Added CSJ reference.
SIS	5222	Added valve to program.
SIS	5223	Added valve to program.
RCS	535	Changed normal position from O to C. Added CSJ reference.
RCS	536	Changed normal position from O to C. Added CSJ reference.
RCS	542	Added valve to program.
WDS	5459	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
RCS	548	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
RCS	549	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
RCS	552	Changed Quality Group from NA to E. Changed valve size from 0.75" to 3". Changed valve type from GL to DIA. Changed normal position from O to C. Changed L-J frequency from R to J.
RCS	560	Added valve to program.
IVSW	5602	Changed Quality Group from NA to B. Added CSJ reference.
IVSW	5624	Deleted valve from program. Transferred testing to augmented program.
RCS	580A	Changed valve size from 0.125" to 0.25". Changed normal position from LC to C. Changed Quality Group from NA to E.
RCS	580B	Changed valve size from 0.125" to 0.375". Changed normal position from LC to C. Changed Quality Group from NA to E.
CVCS	7001	Deleted SC-O. Added R.
RCS	730	Changed L-J frequency from R to J. Added CSJ reference.
RCS	731	Changed L-J frequency from R to J. Added CSJ reference.
RHR	732	Changed from A-Passive to A-Active (open testing added to Augmented Testing Program). Changed L-J frequency from R to J.
CCW	733C	Added CSJ reference.
CCW	734A	Changed normal position from O to LO. Added CSJ reference.
CCW	734B	Changed normal position from O to LO. Added CSJ reference.
CCW	734E	Changed S-O frequency from R to CS. Added CSJ reference.
CCW	734F	Changed S-O frequency from R to CS. Added CSJ reference.
SIS	7352	Changed valve size from 2" to 0.75".
RHR	738A	Changed valve size from 12" to 8". Added CSJ reference. Added PS.
RHR	738B	Changed valve size from 12" to 8". Added CSJ reference. Added PS.
RHR	741	Added valve to program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
RHR	741A	Changed L-J frequency from R to J. Added PS. Added CSJ reference.
RHR	743	Changed L-J frequency from R to J. Added CSJ reference.
RHR	744	Changed L-J frequency from R to J. Added CSJ reference.
RHR	746	Added CSJ reference.
RHR	747	Added CSJ reference.
CCW	755	Changed valve size from 2" to 1.5".
CCW	755A	Deleted open testing requirements.
CCW	755B	Deleted open testing requirements.
CCW	756A	Deleted valve from program. Transferred testing to augmented program.
CCW	756B	Deleted valve from program. Transferred testing to augmented program.
CCW	761A	Changed normal position from O to O/C.
CCW	761B	Changed normal position from O to O/C.
CCW	761C	Changed normal position from O to O/C.
CCW	769	Added CSJ reference.
CCW	770	Added open test. Deleted closed test. Deleted Relief Request. Added CSJ reference.
CCW	774A	Added valve to program.
CCW	774B	Added valve to program.
CCW	774C	Added valve to program.
CCW	774D	Added valve to program.
CCW	782	Changed valve size from 3" to 4".
CCW	783A	Added valve to program.
CCW	783B	Added valve to program.
CCW	783C	Added valve to program.
CCW	783D	Added valve to program.
CCW	784	Changed L-J frequency from R to J. Added CSJ reference.
CCW	786	Added CSJ reference.
CCW	789	Changed valve size from 6" to 3". Added CSJ reference.
CCW	790	Added valve to program.
CCW	791	Changed L-J frequency from R to J.
CCW	792	Added valve to program.
CCW	793	Changed L-J frequency from R to J.
CCW	796	Changed valve type from DIA to GL. Changed L-J frequency from R to J.
CCW	797	Changed L-J frequency from R to J. Added CSJ reference.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
CCW	798	Changed L-J frequency from R to J.
CCW	819A	Deleted valve from program. Valve determined to have no IST required function.
CCW	819B	Deleted valve from program. Valve determined to have no IST required function.
CCW	822A	Added CSJ reference.
CCW	822B	Added CSJ reference.
RHR	829A	Added valve to program.
RHR	829B	Added valve to program.
RCS	838A	Added PS. Changed L-T frequency from R to 9M/CS. Added CSJ reference.
RCS	838B	Added PS. Changed L-T frequency from R to 9M/CS. Added CSJ reference.
RCS	838C	Added PS. Changed L-T frequency from R to 9M/CS. Added CSJ reference.
RCS	838D	Added PS. Changed L-T frequency from R to 9M/CS. Added CSJ reference.
RCS	839B	Changed L-T frequency from R to 2Y.
RCS	839D	Changed L-T frequency from R to 2Y.
RCS	839F	Changed L-T frequency from R to 2Y.
RCS	839H	Changed L-T frequency from R to 2Y.
SIS	842	Changed normal position from LO to O. Added CSJ reference.
SIS	843	Changed normal position from LO to O. Added CSJ reference.
SIS	846	Added valve to program.
SIS	847	Added CSJ reference. Deleted Relief Request. Added PS.
SIS	849A	Added CSJ reference.
SIS	849B	Added CSJ reference.
SIS	850A	Changed L-J frequency from R to J.
SIS	850B	Changed L-J frequency from R to J.
SIS	851A	Changed L-J frequency from R to J.
SIS	851B	Changed L-J frequency from R to J.
SIS	852A	Added CSJ reference.
SIS	852B	Added PS. Added CSJ reference.
SIS	855	Added valve to program.
SIS	856A	Changed valve type from GA to GL. Added CSJ reference.
SIS	856B	Changed valve type from GA to GL. Added CSJ reference.
SIS	856C	Changed valve type from GA to GL. Added CSJ reference.
SIS	856D	Changed valve type from GA to GL. Added CSJ reference.

System	Tag Number	Change Summary
SIS	856E	Changed valve type from GA to GL. Added CSJ reference.
SIS	856F	Changed valve type from GA to GL. Added CSJ reference.
RCS	857A	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
RCS	857B	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
RCS	857C	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
RCS	857D	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
SIS	857E	Added CSJ reference.
RCS	857F	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
RCS	857G	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
RCS	857H	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
RCS	857J	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
RCS	857K	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
SIS	857L	Added CSJ reference.
RCS	857M	Changed L-T and SC-C frequency from R to 9M/CS. Added CSJ reference.
SIS	858A	Added valve to program.
SIS	858B	Added valve to program.
SIS	859A	Changed L-J frequency from R to J. Added CSJ reference.
SIS	859B	Changed L-J frequency from R to J. Added CSJ reference.
WCPS	85A	Changed P&ID reference. Changed Quality Group from NA to E. Changed normal position from O to C. Changed L-J frequency from R to J.
WCPS	85B	Changed P&ID reference. Changed Quality Group from NA to E. Changed normal position from O to C. Changed L-J frequency from R to J.
WCPS	85C	Changed reference P&ID. Changed Quality Group from NA to E. Changed SC-O frequency from R to CS. Changed L-J frequency from R to J. Added CSJ reference.
WCPS	85D	Changed reference P&ID. Changed Quality Group from NA to E. Changed SC-O frequency from R to CS. Changed L-J frequency from R to J. Added CSJ reference.
GAS	863	Changed from A-Passive to A-Active. Added S-C, T-C and F-C. Changed L-J frequency from R to J.
CSS	867A	Changed L-J frequency from R to J. Added CSJ reference.
CSS	867B	Changed L-J frequency from R to J. Added CSJ reference.
CSS	869A	Changed normal position from O to LO. Changed L-J frequency from R to J.
CSS	869B	Changed normal position from O to LO. Changed L-J frequency from R to J.
CSS	876A	Deleted valve from program (removed from system)
CSS	876B	Deleted valve from program (removed from system)

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
CSS	879A	Deleted valve from program (System removed from plant).
CSS	879B	Deleted valve from program (System removed from plant).
CSS	880A	Deleted valve from program (System removed from plant).
CSS	880B	Deleted valve from program (System removed from plant).
CSS	880C	Deleted valve from program (System removed from plant).
CSS	880D	Deleted valve from program (System removed from plant).
CSS	880E	Deleted valve from program (System removed from plant).
CSS	880F	Deleted valve from program (System removed from plant).
CSS	880G	Deleted valve from program (System removed from plant).
CSS	880H	Deleted valve from program (System removed from plant).
CSS	880J	Deleted valve from program (System removed from plant).
CSS	880K	Deleted valve from program (System removed from plant).
SIS	881	Changed Relief Request to CSJ. Added CSJ reference.
SIS	882	Changed S-C and T-C frequency from CS to CS/HU. Added CSJ reference.
SIS	883	Added valve to program.
SIS	885A	Changed L-J frequency from R to J.
SIS	885B	Changed L-J frequency from R to J.
SIS	886A	Added PS.
SIS	886B	Added PS.
SIS	888A	Changed L-J frequency from R to J.
SIS	888B	Changed L-J frequency from R to J.
SIS	890A	Added valve to program.
SIS	890B	Added valve to program.
SIS	890C	Added valve to program.
SIS	890D	Added valve to program.
SIS	891A	Added valve to program.
SIS	891B	Added valve to program.
SIS	891C	Added valve to program.
SIS	891D	Added valve to program.
SIS	892A	Added valve to program.
SIS	892B	Added valve to program.
SIS	892C	Added valve to program.
SIS	892D	Added valve to program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
RCS	895A	Changed L-T frequency from R to 2Y.
RCS	895B	Changed L-T frequency from R to 2Y.
RCS	895C	Changed L-T frequency from R to 2Y.
RCS	895D	Changed L-T frequency from R to 2Y.
RCS	897A	Changed L-T frequency from R to 9M/CS.
RCS	897B	Changed L-T frequency from R to 9M/CS.
RCS	897C	Changed L-T frequency from R to 9M/CS.
RCS	897D	Changed L-T frequency from R to 9M/CS.
PSS	951	Deleted valve from program. Valve determined to have no IST required function.
PSS	953	Deleted valve from program. Valve determined to have no IST required function.
PSS	955A	Deleted valve from program. Valve determined to have no IST required function.
PSS	955B	Deleted valve from program. Valve determined to have no IST required function.
PSS	956A	Changed valve from A-Active to A-Passive. Deleted S-C, T-C and F-C testing. Changed normal position from O to C. Changed L-J frequency from R to J.
PSS	956B	Changed valve from A-Active to A-Passive. Deleted S-C, T-C and F-C testing. Changed normal position from O to C. Changed L-J frequency from R to J.
PSS	956C	Changed valve from A-Active to A-Passive. Deleted S-C, T-C and F-C testing. Changed normal position from O to C. Changed L-J frequency from R to J.
PSS	956D	Changed valve from A-Active to A-Passive. Deleted S-C, T-C and F-C testing. Changed normal position from O to C. Changed L-J frequency from R to J.
PSS	956E	Changed valve from A-Active to A-Passive. Deleted S-C, and T-C testing. Changed normal position from O to C. Changed valve size from 0.375" to 0.75". Changed L-J frequency from R to J.
PSS	956F	Changed valve from A-Active to A-Passive. Deleted S-C, and T-C testing. Changed normal position from O to C. Changed valve size from 0.375" to 0.75". Changed L-J frequency from R to J.
PSS	956G	Changed valve from A-Active to A-Passive. Deleted S-C, and T-C testing. Changed normal position from O to C. Changed L-J frequency from R to J.
PSS	956H	Changed valve from A-Active to A-Passive. Deleted S-C and T-C testing. Changed normal position from O to C. Changed L-J frequency from R to J.
RHR	958	Changed valve from A-Active to A-Passive. Changed normal position from O to LC. Deleted S-C and T-C testing. Changed L-J frequency from R to J.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
PSS	959	Changed valve from A-Active to A-Passive. Deleted S-C and T-C testing. Changed L-J frequency from R to J.
WCPS	95A	Changed reference P&ID. Changed Quality Group from NA to E. Changed normal position from O to C. Changed L-J frequency from R to J.
WCPS	95B	Changed reference P&ID. Changed Quality Group from NA to E. Changed normal position from O to C. Changed L-J frequency from R to J.
WCPS	95C	Changed reference P&ID. Changed Quality Group from NA to E. Changed SC-O frequency from R to CS. Changed L-J frequency from R to J. Added CSJ reference.
WCPS	95D	Changed reference P&ID. Changed Quality Group from NA to E. Changed SC-O frequency from R to CS. Changed L-J frequency from R to J. Added CSJ reference.
PSS	990A	Changed valve from A-Active to A-Passive. Deleted S-C and T-C testing. Changed L-J frequency from R to J.
PSS	990B	Changed valve from A-Active to A-Passive. Deleted S-C and T-C testing. Changed L-J frequency from R to J.
PSS	990D	Changed valve from A-Active to A-Passive. Deleted S-C testing. Changed valve size from 0.75" to 0.375".
FW	BFD-2-21	Deleted valve from program. Transferred testing to augmented program.
FW	BFD-2-22	Deleted valve from program. Transferred testing to augmented program.
AFW	BFD-31	Valve size changed from 4" to 6". Deleted Relief Request. Added CSJ reference.
AFW	BFD-35	Added CSJ reference.
AFW	BFD-37	Added CSJ reference.
AFW	BFD-40	Added CSJ reference.
AFW	BFD-42	Added CSJ reference.
AFW	BFD-47	Added CSJ reference.
AFW	BFD-47-1	Added CSJ reference.
AFW	BFD-47-2	Added CSJ reference.
AFW	BFD-47-3	Added CSJ reference.
AFW	BFD-50	Added PS. Added CSJ reference.
AFW	BFD-68	Valve size changed from 3" to 2". Added PS. Changed SC-C and SC-O frequency from Q to R. Added CSJ reference.
AFW	BFD-74	Deleted valve from program. Valve determined to have no IST required function.
AFW	BFD-79	Added PS. Added CSJ reference.
AFW	BFD-79-1	Added PS. Added CSJ reference.
AFW	BFD-79-2	Added PS. Added CSJ reference.
AFW	BFD-79-3	Added PS. Added CSJ reference.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
HR	BV-10A	Deleted valve from program (System retired in place).
HR	BV-10B	Deleted valve from program (System retired in place).
HR	BV-11A	Deleted valve from program (System retired in place).
HR	BV-11B	Deleted valve from program (System retired in place).
HR	BV-12A	Deleted valve from program (System retired in place).
HR	BV-12B	Deleted valve from program (System retired in place).
HR	BV-5A	Deleted valve from program (System retired in place).
HR	BV-5B	Deleted valve from program (System retired in place).
HR	BV-6A	Deleted valve from program (System retired in place).
HR	BV-6B	Deleted valve from program (System retired in place).
HR	BV-7A	Deleted valve from program (System retired in place).
HR	BV-7B	Deleted valve from program (System retired in place).
HR	BV-8A	Deleted valve from program (System retired in place).
HR	BV-8B	Deleted valve from program (System retired in place).
HR	BV-9A	Deleted valve from program (System retired in place).
HR	BV-9B	Deleted valve from program (System retired in place).
IACC	CC-39	Added valve to program.
IACC	CC-39-1	Added valve to program.
IACC	CC-56	Added valve to program.
IACC	CC-56-1	Added valve to program.
AFW	CD-109	Changed normal position from O to C. Changed SC-C frequency from R2 to R. Deleted relief request. Added CSJ reference.
AFW	CD-631	Added valve to program.
AFW	CD-632	Added valve to program.
AFW	CT-25	Deleted valve from program. Transferred testing to augmented program.
AFW	CT-26	Added CSJ reference.
AFW	CT-28	Deleted valve from program. Transferred testing to augmented program.
AFW	CT-29	Added CSJ reference.
AFW	CT-31	Deleted valve from program. Transferred testing to augmented program.
AFW	CT-32	Added CSJ reference.
AFW	CT-6	Added valve to program.
AFW	CT-64	Added valve to program.
AFW	CT-714	Added valve to program.
AFW	CT-715	Added valve to program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
AFW	CT-764	Deleted valve from program. Valve is passive with no testing requirements.
EDG	DA-24	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-24-1	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-24-2	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-24-3	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-24-4	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-24-5	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-25	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-25-1	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-25-2	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-25-3	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-25-4	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-25-5	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-606	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-607	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-608	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-609	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-610	Deleted valve from program. Transferred testing to augmented program.
EDG	DA-611	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-13	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-14	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-25	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-25-1	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-25-2	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-3	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-3-1	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-3-2	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-4	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-4-1	Deleted valve from program. Transferred testing to augmented program.
EDG	DF-4-2	Deleted valve from program. Transferred testing to augmented program.
EDG	DLO-504	Deleted valve from program. Transferred testing to augmented program.
EDG	DLO-509	Deleted valve from program. Transferred testing to augmented program.
EDG	DLO-514	Deleted valve from program. Transferred testing to augmented program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
PACV	E-1	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACV	E-2	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACV	E-3	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACV	E-5	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACV	EA-1	Deleted valve from program. Transferred testing to augmented program.
SW	FCV-1111	Changed normal position from V to LO/LC. Added CSJ reference.
SW	FCV-1112	Changed normal position from V to LO/LC. Added CSJ reference.
HVAC	FCV-1170	Changed L-J frequency from R to J. Added CSJ reference.
HVAC	FCV-1171	Changed Quality Group from NA to B. Changed L-J frequency from R to J. Added CSJ reference.
HVAC	FCV-1172	Changed L-J frequency from R to J. Added CSJ reference.
HVAC	FCV-1173	Changed Quality Group from NA to B. Changed L-J frequency from R to J. Added CSJ reference.
SW	FCV-1176	Changed normal position from T to O.
SW	FCV-1176A	Changed normal position from T to O.
WCPS	FCV-1177-1	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1177-2	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1177-3	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1177-4	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1178-1	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1178-2	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1178-3	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1178-4	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1179-1	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1179-2	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1179-3	Deleted valve from program. Transferred testing to augmented program.
WCPS	FCV-1179-4	Deleted valve from program. Transferred testing to augmented program.
AFW	FCV-1205A	Deleted valve from program. Transferred testing to augmented program.
PACV	FCV-1308	Deleted valve from program. Transferred testing to augmented program.
PACV	FCV-1309	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-21-1NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-21-2NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-21-3NO	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-22-4NC	Deleted valve from program. Transferred testing to augmented program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
CCF	FCV-22-5NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-22-6NO	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-23-7NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-23-8NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-23-9NO	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-24-10NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-24-11NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-24-12NO	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-25-13NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-25-14NC	Deleted valve from program. Transferred testing to augmented program.
CCF	FCV-25-15NO	Deleted valve from program. Transferred testing to augmented program.
FW	FCV-417	Deleted valve from program. Transferred testing to augmented program.
FW	FCV-417L	Deleted valve from program. Transferred testing to augmented program.
FW	FCV-427	Deleted valve from program. Transferred testing to augmented program.
FW	FCV-427L	Deleted valve from program. Transferred testing to augmented program.
FW	FCV-437	Deleted valve from program. Transferred testing to augmented program.
FW	FCV-437L	Deleted valve from program. Transferred testing to augmented program.
FW	FCV-447	Deleted valve from program. Transferred testing to augmented program.
FW	FCV-447L	Deleted valve from program. Transferred testing to augmented program.
SW	FCV-46-1	Added valve to program (skid mounted).
SW	FCV-46-2	Added valve to program (skid mounted).
SW	FCV-46-3	Added valve to program (skid mounted).
SW	FCV-53-1	Added valve to program (skid mounted).
SW	FCV-53-2	Added valve to program (skid mounted).
SW	FCV-53-3	Added valve to program (skid mounted).
CCW	FCV-625	Changed L-J frequency from R to J. Added CSJ reference.
MS	HCV-1118	Added valve to program (skid mounted).
CVCS	HCV-123	Added valve to program.
RCS	HCV-3100	Changed valve type from GA to GL. Changed normal position from C to LC. Added CSJ reference.
RCS	HCV-3101	Changed valve type from GA to GL. Changed normal position from C to LC. Added CSJ reference.
IA	IA-1	Deleted valve from program. Transferred testing to augmented program.
IA	IA-1-1	Deleted valve from program. Transferred testing to augmented program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
IA	IA-1342	Deleted valve from program. Transferred testing to augmented program.
IA	IA-1343	Deleted valve from program. Transferred testing to augmented program.
IA	IA-1352	Deleted valve from program. Transferred testing to augmented program.
IA	IA-1353	Deleted valve from program. Transferred testing to augmented program.
IA	IA-1530	Deleted valve from program. Transferred testing to augmented program.
IA	IA-2	Deleted valve from program. Transferred testing to augmented program.
IA	IA-2-1	Deleted valve from program. Transferred testing to augmented program.
IA	IA-20	Deleted valve from program. Transferred testing to augmented program.
IA	IA-39	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
IA	IA-571	Deleted valve from program. Transferred testing to augmented program.
FW	IIP-500	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
FW	IIP-501	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
FW	IIP-502	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
FW	IIP-503	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
RCS	IIP-504	Changed Quality Group from NA to E. Changed referenced P&ID number. Changed L-J frequency from R to J.
RCS	IIP-505	Changed Quality Group from NA to E. Changed referenced P&ID number. Changed L-J frequency from R to J.
RCS	IIP-506	Changed Quality Group from NA to E. Changed referenced P&ID number. Changed L-J frequency from R to J.
RCS	IIP-507	Changed Quality Group from NA to E. Changed referenced P&ID number. Changed L-J frequency from R to J.
CVCS	LCV-112B	Added CSJ reference.
CVCS	LCV-112C	Added CSJ reference.
EDG	LCV-1207A	Deleted valve from program. Transferred testing to augmented program.
EDG	LCV-1207B	Deleted valve from program. Transferred testing to augmented program.
EDG	LCV-1208A	Deleted valve from program. Transferred testing to augmented program.
EDG	LCV-1208B	Deleted valve from program. Transferred testing to augmented program.
EDG	LCV-1209A	Deleted valve from program. Transferred testing to augmented program.
EDG	LCV-1209B	Deleted valve from program. Transferred testing to augmented program.
MS	MS-1-21	Added CSJ reference.
MS	MS-1-22	Added CSJ reference.
MS	MS-1-23	Added CSJ reference.
MS	MS-1-24	Added CSJ reference.
MS	MS-2A	Added CSJ reference.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
MS	MS-2B	Added CSJ reference.
MS	MS-2C	Added CSJ reference.
MS	MS-2D	Added CSJ reference.
MS	MS-41	Added PS, S-C and S-O. Added CSJ reference.
MS	MS-42	Added PS, S-C and S-O. Added CSJ reference.
MS	MS-45A	Changed valve size from 8" to 6". Changed testing from BT to R.
MS	MS-45B	Changed valve size from 8" to 6". Changed testing from BT to R.
MS	MS-45C	Changed valve size from 8" to 6". Changed testing from BT to R.
MS	MS-45D	Changed valve size from 8" to 6". Changed testing from BT to R.
MS	MS-46A	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-46B	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-46C	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-46D	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-47A	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-47B	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-47C	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-47D	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-48A	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-48B	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-48C	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-48D	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-49A	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-49B	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-49C	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-49D	Changed valve size from 10" to 6". Changed testing from BT to R.
MS	MS-577	Added valve to program (skid mounted).
MS	MS-58A-1	Added valve to program.
MS	MS-58B-1	Added valve to program.
MS	MS-58C-1	Added valve to program.
MS	MS-58D-1	Added valve to program.
MS	MS-91A	Added valve to program.
MS	MS-91B	Added valve to program.
MS	MS-91C	Added valve to program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
MS	MS-91D	Added valve to program.
AFW	MW-17	Changed Quality Group from N/A to B. Changed L-J frequency from R to J.
AFW	MW-17-1	Changed Quality Group from N/A to B. Changed L-J frequency from R to J.
MS	PCV-1133	Deleted valve from program. Transferred testing to augmented program.
MS	PCV-1134	Added CSJ reference.
MS	PCV-1135	Added CSJ reference.
MS	PCV-1136	Added CSJ reference.
MS	PCV-1137	Added CSJ reference.
MS	PCV-1139	Changed valve type from GA to GL.
AFW	PCV-1187	Changed from B Active to B Passive. Deleted S-C, S-O, T-C, T-O and F-O from program. Transferred testing to augmented program.
AFW	PCV-1188	Changed from B Active to B Passive. Deleted S-C, S-O, T-C, T-O and F-O from program. Transferred testing to augmented program.
AFW	PCV-1189	Changed from B Active to B Passive. Deleted S-C, S-O, T-C, T-O and F-O from program. Transferred testing to augmented program.
HVAC	PCV-1190	Changed L-J frequency from R to J.
HVAC	PCV-1191	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
HVAC	PCV-1192	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
AFW	PCV-1213	Added valve to program.
SGBD	PCV-1214	Changed L-J frequency from R to J.
SGBD	PCV-1214A	Changed L-J frequency from R to J.
SGBD	PCV-1215	Changed L-J frequency from R to J.
SGBD	PCV-1215A	Changed L-J frequency from R to J.
SGBD	PCV-1216	Changed L-J frequency from R to J.
SGBD	PCV-1216A	Changed L-J frequency from R to J.
SGBD	PCV-1217	Changed L-J frequency from R to J.
SGBD	PCV-1217A	Changed L-J frequency from R to J.
WCPS	PCV-1218	Deleted valve from program. Transferred testing to augmented program.
WCPS	PCV-1219	Deleted valve from program. Transferred testing to augmented program.
WCPS	PCV-1220	Deleted valve from program. Transferred testing to augmented program.
WCPS	PCV-1221	Deleted valve from program. Transferred testing to augmented program.
IA	PCV-1228	Changed valve type from GL to GA. Changed Quality Group from NA to B. Changed L-J frequency from R to J. Added CSJ reference.
RMS	PCV-1229	Changed Quality Group from NA to E. Changed valve type from GA to GL. Changed L-J frequency from R to J.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
RMS	PCV-1230	Changed Quality Group from NA to E. Changed valve type from GA to GL. Changed L-J frequency from R to J.
WCPS	PCV-1231	Changed Quality Group from NA to B. Changed normal position from C to O/C.
WCPS	PCV-1233	Changed Quality Group from NA to B. Corrected category from BP to B. Changed normal position from C to O/C.
RMS	PCV-1234	Changed valve type from GA to DIA. Changed Quality Group from NA to E. Changed normal position from O to O/C. Changed L-J frequency from R to J.
RMS	PCV-1235	Changed valve type from GA to DIA. Changed Quality Group from NA to E. Changed normal position from O to O/C. Changed L-J frequency from R to J.
RMS	PCV-1236	Changed valve type from GA to DIA. Changed Quality Group from NA to E. Changed normal position from O to O/C. Changed L-J frequency from R to J.
RMS	PCV-1237	Changed valve type from GA to DIA. Changed Quality Group from NA to E. Changed normal position from O to O/C. Changed L-J frequency from R to J.
WCPS	PCV-1238	Changed Quality Group from NA to B. Changed normal position from C to O/C.
WCPS	PCV-1239	Changed Quality Group from NA to B. Changed normal position from C to O/C.
WCPS	PCV-1240	Changed Quality Group from NA to B. Changed normal position from C to O/C.
WCPS	PCV-1241	Changed Quality Group from NA to B. Changed normal position from C to O/C.
WCPS	PCV-1242	Deleted valve from program. Transferred testing to augmented program.
WCPS	PCV-1243	Deleted valve from program. Transferred testing to augmented program.
WCPS	PCV-1244	Deleted valve from program. Transferred testing to augmented program.
WCPS	PCV-1245	Deleted valve from program. Transferred testing to augmented program.
MS	PCV-1310A	Deleted F-O. Changed normal position from O to O/C.
MS	PCV-1310B	Deleted F-O. Changed normal position from O to O/C.
RCS	PCV-455A	Changed normal position from C to O/C. Added CSJ reference.
RCS	PCV-455B	Changed normal position from C to O/C. Added CSJ reference.
RCS	PCV-455C	Changed normal position from C to O/C. Added CSJ reference.
RCS	PCV-456	Changed normal position from C to O/C. Added CSJ reference.
RCS	PCV-464	Changed test from BT to R. Changed frequency from R to R1.
RCS	PCV-466	Changed test from BT to R. Changed frequency from R to R1.
RCS	PCV-468	Changed test from BT to R. Changed frequency from R to R1.
PSS	PRV-7673	Added valve to program.
PSS	PRV-7675	Added valve to program.
WDS	PRV-7693	Added valve to program.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
WDS	PRV-7694	Added valve to program.
CCW	RCV-017	Changed valve type from GA to GL. Changed IST Category from C to B.
CSS	RV-1842A	Deleted valve from program (removed from system).
CSS	RV-1842B	Deleted valve from program (removed from system).
SA	SA-24	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
SA	SA-24-1	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
IACC	SOV-1177	Added valve to program.
IACC	SOV-1178	Added valve to program.
WCPS	SOV-1277	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1278	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1279	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1280	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1334	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1335	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1336	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1337	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1338	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1339	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1340	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1341	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1342	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1343	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1344	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1345	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1434	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1435	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1436	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1437	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1438	Deleted valve from program. Transferred testing to augmented program.
WCPS	SOV-1439	Deleted valve from program. Transferred testing to augmented program.
WDS	SOV-3416	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
WDS	SOV-3417	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
RCS	SOV-3418	Changed Quality Group from NA to E. Changed valve type from GL to GA. Changed L-J frequency from R to J.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
RCS	SOV-3419	Changed Quality Group from NA to E. Changed L-J frequency from R to J.
HR	SOV-3420	Deleted valve from program (System retired in place).
HR	SOV-3421	Deleted valve from program (System retired in place).
HR	SOV-3422	Deleted valve from program (System retired in place).
HR	SOV-3423	Deleted valve from program (System retired in place).
IVSW	SOV-3500	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3501	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3502	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3503	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3504	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3505	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3506	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3507	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3508	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3509	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3510	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3511	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3512	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3513	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3514	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3515	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3516	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3517	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3518	Deleted valve from program. Transferred testing to augmented program.
IVSW	SOV-3519	Deleted valve from program. Transferred testing to augmented program.
PACS	SOV-5018	Changed valve from A-Active to A-Passive. Deleted closure testing requirements. Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACS	SOV-5019	Changed valve from A-Active to A-Passive. Deleted closure testing requirements. Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACS	SOV-5020	Changed valve from A-Active to A-Passive. Deleted closure testing requirements. Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACS	SOV-5021	Changed valve from A-Active to A-Passive. Deleted closure testing requirements. Changed Quality Group from NA to B. Changed L-J frequency from R to J.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
PACS	SOV-5022	Changed valve from A-Active to A-Passive. Deleted closure testing requirements. Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACS	SOV-5023	Changed valve from A-Active to A-Passive. Deleted closure testing requirements. Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACS	SOV-5024	Changed valve from A-Active to A-Passive. Deleted closure testing requirements. Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACS	SOV-5025	Changed valve from A-Active to A-Passive. Deleted closure testing requirements. Changed Quality Group from NA to B. Changed L-J frequency from R to J.
PACV	SOV-EW-1	Changed valve size from 3" to 0.25". Changed valve type from GA to PLUG.
PACV	SOV-EW-2	Changed valve size from 3" to 0.25". Changed valve type from GA to PLUG.
HR	SOV-IV1A	Deleted valve from program (System retired in place).
HR	SOV-IV1B	Deleted valve from program (System retired in place).
HR	SOV-IV2A	Deleted valve from program (System retired in place).
HR	SOV-IV2B	Deleted valve from program (System retired in place).
HR	SOV-IV3A	Deleted valve from program (System retired in place).
HR	SOV-IV3B	Deleted valve from program (System retired in place).
HR	SOV-IV5A	Deleted valve from program (System retired in place).
HR	SOV-IV5B	Deleted valve from program (System retired in place).
SW	SWN-1	Changed normal position from O to O/C.
SW	SWN-1-1	Changed normal position from O to O/C.
SW	SWN-1-2	Changed normal position from O to O/C.
SW	SWN-1-3	Changed normal position from O to O/C.
SW	SWN-1-4	Changed normal position from O to O/C.
SW	SWN-1-5	Changed normal position from O to O/C.
SW	SWN-27	Changed valve type from GL to GA. Changed normal position from V to O/C.
SW	SWN-27-1	Changed valve type from GL to GA. Changed normal position from V to O/C.
SW	SWN-29	Changed normal position from V to O/C.
SW	SWN-30	Changed normal position from V to O/C.
SW	SWN-31	Changed normal position from V to O/C.
SW	SWN-31-1	Added valve to program.
SW	SWN-32	Changed normal position from V to O/C.
SW	SWN-33	Added valve to program.
SW	SWN-35	Deleted valve from program. Valve used only for system control.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
SW	SWN-35-1	Deleted valve from program. Valve used only for system control.
SW	SWN-38	Changed normal position from V to O/C.
SW	SWN-39	Changed normal position from V to O/C.
SW	SWN-4	Changed normal position from V to O/C.
SW	SWN-40	Added valve to program.
SW	SWN-40-1	Added valve to program.
SW	SWN-41-1A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-41-1B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-41-2A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-T frequency from R to J.
SW	SWN-41-2B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-41-3A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-41-3B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-41-4A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-41-4B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-41-5A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-41-5B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-42-1	Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-42-2	Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-42-3	Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-42-4	Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-42-5	Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-43-1	Changed valve size from 1" to 2.5". Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-43-2	Changed valve size from 1" to 2.5". Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-43-3	Changed valve size from 1" to 2.5". Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-43-4	Changed valve size from 1" to 2.5". Changed Quality Group from C to B. Changed L-J frequency from R to J.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
SW	SWN-43-5	Changed valve size from 1" to 2.5". Changed Quality Group from C to B. Changed L-J frequency from R to J.
SW	SWN-44-1A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-44-1B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-44-2A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-44-2B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-44-3A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-44-3B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-44-4A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-44-4B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-44-5A	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed L-J frequency from R to J.
SW	SWN-44-5B	Changed Quality Group from C to B. Changed valve type from GA to BU. Changed from B-Active to A-Active. Added L-T.
SW	SWN-5	Changed normal position from V to O/C.
SW	SWN-51-1A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-51-2A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-51-3A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-51-4A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-51-5A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-539	Deleted valve from program (removed from system).
SW	SWN-543	Deleted valve from program (removed from system).
SW	SWN-544	Deleted valve from program (removed from system).
SW	SWN-548	Deleted valve from program (removed from system).
SW	SWN-549	Deleted valve from program (removed from system).
SW	SWN-553	Deleted valve from program (removed from system).
SW	SWN-554	Deleted valve from program (removed from system).

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
SW	SWN-558	Deleted valve from program (removed from system).
SW	SWN-559	Deleted valve from program (removed from system).
SW	SWN-563	Deleted valve from program (removed from system).
SW	SWN-564	Deleted valve from program (removed from system).
SW	SWN-568	Deleted valve from program (removed from system).
SW	SWN-589	Deleted valve from program. Valve was added by NOV, but determined to have no IST required function.
SW	SWN-591	Deleted valve from program. Valve was added by NOV, but determined to have no IST required function.
SW	SWN-593	Deleted valve from program. Valve was added by NOV, but determined to have no IST required function.
SW	SWN-595	Deleted valve from program. Valve was added by NOV, but determined to have no IST required function.
SW	SWN-597	Deleted valve from program. Valve was added by NOV, but determined to have no IST required function.
SW	SWN-599	Deleted valve from program. Valve was added by NOV, but determined to have no IST required function.
SW	SWN-6	Changed normal position from V to O/C. Added CSJ reference.
SW	SWN-60	Changed normal position from C to O.
SW	SWN-617	Added valve to program.
SW	SWN-618	Added valve to program.
SW	SWN-619	Added valve to program.
SW	SWN-620	Added valve to program.
SW	SWN-621	Added valve to program.
SW	SWN-622	Added valve to program.
SW	SWN-63	Deleted valve from program. Valve determined to have no IST required function.
SW	SWN-63-1	Deleted valve from program. Valve determined to have no IST required function.
SW	SWN-63-2	Deleted valve from program. Valve determined to have no IST required function.
SW	SWN-7	Changed normal position from V to O/C.
SW	SWN-70	Changed valve type from GL to GA. Changed normal position from V to O/C.
SW	SWN-70-1	Changed valve type from GL to GA. Changed normal position from V to O/C.
SW	SWN-71-1A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed L-J frequency from R to J.
SW	SWN-71-1B	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
SW	SWN-71-2A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed L-J frequency from R to J.
SW	SWN-71-2B	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-71-3A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed L-J frequency from R to J.
SW	SWN-71-3B	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-71-4A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed L-J frequency from R to J.
SW	SWN-71-4B	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-71-5A	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed L-J frequency from R to J.
SW	SWN-71-5B	Changed Quality Group from C to B. Changed valve type from GA to GL. Changed from B-Active to A-Active. Added L-T.
SW	SWN-81	Deleted valve from program. Valve determined to have no IST required function.
SW	SWN-81-1	Deleted valve from program. Valve determined to have no IST required function.
SW	SWN-9	Added valve to program.
SW	SWN-9-1	Added valve to program.
SW	SWN-9-2	Added valve to program.
SW	SWN-9-3	Added valve to program.
SW	SWN-9-4	Added valve to program.
SW	SWN-9-5	Added valve to program.
SW	SWN-944	Added valve to program.
SW	SWN-945	Deleted testing in closed direction. Changed valve size from 1" to 2". Changed referenced drawing number.
SW	SWN-963	Deleted valve from program (valve removed from system).
SW	SWN-964	Deleted valve from program (valve removed from system).
SW	SWN-965	Deleted valve from program (valve removed from system).
SW	SWN-966	Deleted valve from program (valve removed from system).
SW	SWN-979-46	Added valve to program (skid mounted).
SW	SWN-979-53	Added valve to program (skid mounted).
SW	SWN-980-46	Added valve to program (skid mounted).
SW	SWN-980-53	Added valve to program (skid mounted).
SW	SWN-981	Changed valve size from 1.0" to 0.75".

<u>System</u>	<u>Tag Number</u>	<u>Change Summary</u>
SW	SWN-982	Changed valve size from 1.0" to 0.75".
SW	SWN-983	Changed valve size from 1.0" to 0.75".
SW	TCV-1103	Deleted valve from program. Valve was placed in program by NOV.
SW	TCV-1104	Changed normal position from O to C.
SW	TCV-1105	Changed normal position from O to C.
SW	TCV-1113	Deleted valve from program. Valve was placed in program by NOV.
AS	UH-43	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
AS	UH-44	Changed Quality Group from NA to B. Changed L-J frequency from R to J.
GAS	WCP-79	Deleted valve from program. Transferred testing to augmented program.

SECTION 1

Inservice Testing Program

Introduction

The Inservice Testing Program described herein has been developed as required by Section 50.55a of 10 CFR Part 50 to implement the requirements of the ASME Boiler and Pressure Vessel (B&PV) Code Section XI. Revision of this document was performed following re-evaluation of IST Program scope as committed to in the November 27, 1997, ConEd Reply to Notice of Violation. This Notice of Violation was issued following NRC review of the IST Program in September 1997.

Applicability

Consistent with Section 50.55a of 10 CFR Part 50, this program is applicable to the inservice testing of pumps and valves required for safety for the unit's third ten-year interval (July 1, 1994, through May 18, 2005).

Applicable Codes

In accordance with Section 50.55a of 10 CFR Part 50, the applicable ASME B&PV Code Section XI, Division I edition for the interval described above is the 1989 Edition. Subsections IWP and IWV of the 1989 Edition require pump and valve testing to be performed in accordance with the requirements stated in ASME/ANSI OM, Parts 6 and 10 respectively.

Program Description

Section 1 identifies the Indian Point Unit No. 2 plant specific systems subject to the inservice testing requirements of ASME/ANSI OM, Parts 6 and 10. This listing has been developed in consideration of the appropriate NRC regulatory guidance, Exhibit A to Con Edison Corporate Instruction 240-1, QA Program for Operating Nuclear Plants (list of Class A systems), and the Indian Point Unit No. 2 Technical Specifications.

Sections 2 and 3 identify the pumps and valves to be tested in accordance with ASME/ANSI OM, Parts 6 and 10, respectively. The pumps and valves are listed followed by both general and specific relief requests where it has been found that the testing requirements for that pump or valve are impractical. In such instances, appropriate alternative testing provisions have been identified. General relief requests are used when the impracticality of a particular test requirement applies to more than one pump or more than one valve. Specific relief requests are unique to a particular pump or valve. It should be noted that not every pump or valve in systems identified in Section 1 will be identified for testing in Sections 2 and 3. This is due to the provisions of ASME/ANSI OM, Parts 6 and 10, that limit the applicability of the testing requirements to pumps and valves of certain types performing certain functions.

The testing program outlined in the enclosures has been developed following a design review. Should certain OM Code requirements prove to be impractical due to unforeseen circumstances, subsequent relief from that requirement will be requested.

Relief Requests

Relief requests are written in accordance with 10CFR50.55a when specific ASME Section XI requirements for inservice testing are considered impractical or pose an undue burden on the licensee. The enclosed relief requests are subject to change throughout the inspection interval. If requirements are determined to be impractical, or result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, during the course of the interval, additional or modified relief requests will be submitted in accordance with 10CFR50.55a. NUREG-1482 "Guidelines for Inservice Testing at Nuclear Power Plants, was used in developing justification for the basis of the relief requests.

List of Systems Subject to Inservice Testing

The following list represents the systems included in this IST Program. To obtain the list, CI-240-1, "Quality Assurance Program for Operating Nuclear Plants," was reviewed against the NRC Draft Regulatory Guide entitled "Identification of Valves for Inclusion in Inservice Testing Programs." In addition, the Technical Specifications were reviewed to ensure that all Containment Isolation Valves and their respective systems were included.

	<u>GENERIC</u>	<u>CI-240-1 SYSTEM</u>	<u>DRAWINGS</u>
1.1	Reactor Coolant System and any proposed path for established natural circulation	Reactor Coolant System, PRT, Pressurizer System, Relief Valves, Main and Auxiliary Feed Systems	9321-F-2738
1.2	Portions of Main Steam	Main Steam System	9321-F-2017
1.3	High Pressure Coolant Injection (HPCI)	Safety Injection (HPCI)	9321-F-2735
1.4	Low Pressure Injection	Safety Injection (RHR) includes LPCI, External Internal Recirculation, Containment Sump	A235296 A251783
1.5	Accumulator System	Safety Injection (SI)	A235296
1.6	Containment Spray System	Safety Injection-Containment Spray	9321-F-2735 A235296
1.7	Primary and Secondary System Safety and Relief Valves and Atmospheric Relief Valves	RCS, Main Steam	9321-F-2738 9321-F-2017 A227780
1.8	Portions of Main Feedwater System	Feedwater, Condensate and Feedpump	9321-F-2019 9321-F-2018 308762
1.9	Auxiliary Feedwater System	Auxiliary Feedwater System	9321-F-2019 9321-F-2018
1.10	Residual Heat Removal System (Shut-down cooling)	RHR System	9321-F-2735 A251783
1.11	Component Cooling Water System	Component and Auxiliary Component Cooling Water Systems	9321-F-2720 A227781
1.12	Service Water Systems Ultimate Heat Sink	Service Water System	9321-F-2722 A209762 A208368 B226037 B235122 C235117 B242687

<u>GENERIC</u>		<u>CI-240-1 SYSTEM</u>	<u>DRAWINGS</u>
1.13	Containment Isolation Valves	Includes Various Systems:	
		1. Auxiliary Steam	9321-F-2027
		2. Air Ejector to Containment	9321-F-2025
		3. Containment Pressure Sensing	9321-F-2735
		4. City Water to Containment	9321-F-2018
		5. S/G Blowdown	9321-F-2729
		6. Containment Purge and Pressure Relief	9321-F-4022
		7. Containment Rad. Monitors	9321-F-2726
			9321-F-7045
		8. Waste Disposal System	9321-F-2719
		9. Sampling System	9321-F-2745
		10. Personnel Air Lock	FSAR Figure 5.2-27
			9321-F-7052
			228385
1.14	Chemical Volume and Control System (CVCS)	CVCS	9321-F-2736 A208168
1.15	Ventilation Systems that perform a function important to safety	1. Post Accident Containment Venting	B208879
		2. Containment Recirculation Fans	9321-F-4022
		3. Post Accident Containment Air Sampling	A208479
		4. Air Ejector to Containment	9321-F-2025
1.16	Instrument Air Systems	1. Instrument Air	9321-F-2036 A242656 A242688
		2. Station Air	9321-F-2035
		3. Instrument Air Closed Cooling	9321-F-2722
1.17	PORV and Block Valves	Reactor Coolant System	9321-F-2738
1.18	Closure Head Vent System	RCS Head Vent System	9321-F-2738
1.19	EDG Auxiliary System		
a.	Air Starting System	EDG Air Start System	9321-H-2029
b.	Cooling Water System	Service Water System - EDG Cooling Portion	9321-F-2722 A209762
c.	Fuel Oil Storage and Transfer System	Fuel Oil to Diesel Generators	9321-F-2030
d.	Lube Oil System	EDG Lube Oil System	A207698

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
1501	IVSW 9321-F-2746	IVSW to Line #10 Check Valve A-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1502	IVSW 9321-F-2746	IVSW to Line #19 Check Valve F-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1503	IVSW 9321-F-2746	IVSW to Line #16 Check Valve F-3	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1504	IVSW 9321-F-2746	IVSW to Line #16 Check Valve F-3	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1505	IVSW 9321-F-2746	IVSW to Line #15 Check Valve F-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1506	IVSW 9321-F-2746	IVSW to Line #23 Check Valve C-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1507	IVSW 9321-F-2746	IVSW to Line #24 Check Valve D-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1508	IVSW 9321-F-2746	IVSW to Line #30 Check Valve D-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1509	IVSW 9321-F-2746	IVSW to Line #25 Check Valve C-4	A	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1510	IVSW 9321-F-2746	IVSW to Line #26 Check Valve C-4	A	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1511	IVSW 9321-F-2746	IVSW to Line #59 Check Valve C-4	A	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1512	IVSW 9321-F-2746	IVSW to Line #45 Check Valve D-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
1513	IVSW 9321-F-2746	IVSW to Line #46 Check Valve D-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1514	IVSW 9321-F-2746	IVSW to Line #47 Check Valve E-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1515	IVSW 9321-F-2746	IVSW to Line #48 Check Valve E-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1516	IVSW 9321-F-2746	IVSW to Line #14 Check Valve D-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1517	IVSW 9321-F-2746	IVSW to Line #14A Check Valve D-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1518	IVSW 9321-F-2746	IVSW to Line #17 Check Valve B-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1519	IVSW 9321-F-2746	IVSW to Line #18 Check Valve C-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1520	IVSW 9321-F-2746	IVSW to Line #40 Check Valve D-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1521	IVSW 9321-F-2746	IVSW to Line #13 Check Valve D-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1522	IVSW 9321-F-2746	IVSW to Line #294 Check Valve A-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1523	IVSW 9321-F-2746	IVSW to Line #595 Check Valve B-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1524	IVSW 9321-F-2746	IVSW to Line #69 Check Valve E-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
1525	IVSW 9321-F-2746	IVSW to Line #27 Check Valve C-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1526	IVSW 9321-F-2746	IVSW to Line #22 Check Valve C-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1527	IVSW 9321-F-2746	IVSW to Line #20 Check Valve C-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1528	IVSW 9321-F-2746	IVSW to Line #21 Check Valve D-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1529	IVSW 9321-F-2746	IVSW to Line #31 Check Valve C-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1530	IVSW 9321-F-2746	IVSW to Line #33 Check Valve C-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1531	IVSW 9321-F-2746	IVSW to Line #34 Check Valve D-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1532	IVSW 9321-F-2746	IVSW to Line #35 Check Valve D-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1534	IVSW 9321-F-2746	IVSW to Line #9 Check Valve B-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1535	IVSW 9321-F-2746	IVSW to Line #60 Check Valve B-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1536	IVSW 9321-F-2746	IVSW to Line #60 Check Valve B-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1537	IVSW 9321-F-2746	IVSW to Line #51 Check Valve G-4	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
1538	IVSW 9321-F-2746	IVSW to Line #16 Check Valve F-2	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1539	IVSW 9321-F-2746	IVSW to Line #56 Check Valve F-2	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1540	IVSW 9321-F-2746	IVSW to Line #41 Check Valve F-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1541	IVSW 9321-F-2746	IVSW to Line #42 Check Valve G-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1542	IVSW 9321-F-2746	IVSW to Line #43 Check Valve G-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1543	IVSW 9321-F-2746	IVSW to Line #44 Check Valve F-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1549	IVSW 9321-F-2746	IVSW to Line #338 Check Valve C-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1550	IVSW 9321-F-2746	IVSW to Line #337 Check Valve A-5	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
1616	GAS 9321-F-2719	RCDT Nitrogen Supply Line CIV C-4	E	CK	SA	1"	O/C	C	A/C	Active
		L-J	J							
		SC-C	R	66						
1702	WDS 9321-F-2719	RCDT Pump Outlet Isolation Valve C-2	E	DIA	AO	3"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
1705	WDS 9321-F-2719	RCDT Pump Outlet Isolation Valve C-2	E	DIA	AO	3"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
1723	WDS 9321-F-2719	Containment Sump Pump Discharge CIV C-1	E	DIA	AO	2"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
1728	WDS 9321-F-2719	Containment Sump Pump Discharge CIV C-1	E	DIA	AO	2"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
1786	WDS 9321-F-2719	RCDT Vent Line Isolation Valve C-3	E	DIA	AO	1"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
1787	WDS 9321-F-2719	RCDT Vent Line Isolation Valve C-3	E	DIA	AO	1"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
1788	WDS 9321-F-2719	RCDT to Gas Analyzer Isolation Valve C-3	E	DIA	AO	1"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
1789	WDS 9321-F-2719	RCDT to Gas Analyzer Isolation Valve C-3	E	DIA	AO	1"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
1802A	SIS 235296	21 Recirculation Pump Discharge Stop I-4	B	GA	MO	10"	C	O	B	Active
		PIT	2Y							
		S-O	R	40						
		T-O	R	40						
1802B	SIS 235296	22 Recirculation Pump Discharge Stop I-4	B	GA	MO	10"	C	O	B	Active
		PIT	2Y							
		S-O	R	40						
		T-O	R	40						
1805	SIS 235296	Containment Sump Out Isolation E-2	B	BU	MO	18"	O	O	B	Passive
		PIT	2Y							
1810	SIS 9321-F-2735	Refueling Water to SI Pumps Suction H-4	B	GA	MO	8"	LO	O/C	B	Active
		PIT	2Y							
		S-C	CS	39						
		T-C	CS	39						
1813	CSS 9321-F-2735	Containment Spray Pumps Disch Test Line H-3	B	GA	AO	0.75"	C	C	B	Passive
		PIT	2Y							
1814A	SIS 235296	Containment Pressure Instruments Channel-1 CIV H-2	B	GL	M	0.75"	LO	O/C	A	Passive
		L-J	J							

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
1814B	SIS 235296	Containment Pressure Instruments Channel-2 CIV H-2	B	GL	M	0.75"	LO	O/C	A	Passive
		L-J	J							
1814C	SIS 235296	Containment Pressure Instruments Channel-3 CIV H-1	B	GL	M	0.75"	LO	O/C	A	Passive
		L-J	J							
1836	RHR 9321-F-2720	RHR Piping Relief Valve F-4	B	RE	SA	2"	C	O/C	C	Active
		R	R1							
1870	RHR 251783	RHR Pumps Miniflow Test Line E-6	B	GL	MO	2"	LO	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	6						
		S-O	CS	6						
		T-C	CS	6						
		T-O	CS	6						
200A	CVCS 208168	75 Gpm Letdown Orifice From 21 Regen. Hx C-6	A	GL	AO	2"	O/C	C	B	Active
		F-C	Q							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
200B	CVCS 208168	45 Gpm Letdown Orifice From 21 Regen. Hx C-6	A	GL	AO	2"	O/C	C	B	Active
		F-C	Q							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
200C	CVCS 208168	75 Gpm Letdown Orifice From 21 Regen. Hx D-6	A	GL	AO	2"	O/C	C	B	Active
		F-C	Q							
		PIT	2Y							
		S-C	Q							
		T-C	Q							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates		Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.		REL. REQ.			COMMENTS		
201	CVCS 9321-F-2736	Letdown From Regen. Hx-21 To Line 27 Isolation									
		C-6	B	GL	AO	2"	O	O/C	A	Active	
		F-C	CS	13							
		L-J	J								
		PIT	2Y								
		S-C	CS	13							
		T-C	CS	13							
202	CVCS 9321-F-2736	Letdown From Regen. Hx-21 To Line 27 Isolation									
		C-6	B	GL	AO	2"	O	O/C	A	Active	
		F-C	CS	13							
		L-J	J								
		PIT	2Y								
		S-C	CS	13							
		T-C	CS	13							
203	CVCS 208168	21 RHX Letdown Relief Vlv.									
		D-6	B	RE	SA	2"	C	O/C	C	Active	
		R	R1								
204A	CVCS 208168	Charging Flow From Regen. Hx-21 To Loop-2 Hot Leg									
		B-6	A	GL	AO	3"	O	O	B	Active	
		F-O	CS	42							
		PIT	2Y								
		S-O	CS	42							
		T-O	CS	42							
204B	CVCS 208168	Charging Flow From Regen. Hx-21 To Loop 1 Cold Leg									
		B-6	A	GL	AO	3"	C	O	B	Active	
		F-O	CS	42							
		PIT	2Y								
		S-O	CS	42							
		T-O	CS	42							
205	CVCS 9321-F-2736	Charging Flow To RCS Line No 19 Isolation Vlv									
		C-6	B	GA	MO	3"	O	O/C	A	Active	
		L-J	J								
		PIT	2Y								
		S-C	CS	14							
		T-C	CS	14							
210A	RCS 9321-F-2738	Charging Flow from Regen HX-21 to Loop-2 Hot Leg Check									
		D-3	A	CK	SA	3"	O/C	O	C	Active	
		SC-O	CS	43							

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
210B	RCS 9321-F-2738	Charging Flow from Regen HX-21 to Loop 1 Cold Leg Check D-1	A	CK	SA	3"	O/C	O	C	Active
		SC-O	CS	43						
211	RCS 9321-F-2738	Pressurizer Aux Spray Line Check Valve F-6	A	SP	SP	2"	C	O	C	Active
		SC-O	CS	45						
213	CVCS 208168	21 ELHX Inlet Stop C-5	A	GL	AO	1"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
218	CVCS 208168	Seal Water Return E-4	B	RE	SA	3"	C	O/C	C	Active
		R	R1							
21CCSTV	CCW 227781	Component Cooling Surge Tank #21 Vacuum Breaker E-6	C	CK	SA	1"	C	O/C	C	Active
		SC-C	R	74						
		SC-O	R	74						
222	CVCS 9321-F-2736	RCP Seal Return Flow Stop C-2	B	GA	MO	4"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	15						
		T-C	CS	15						
226	CVCS 9321-F-2736	Charging Flow To RCS Regulator HCV-142 Shut Off C-6	B	GL	MO	3"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	14						
		T-C	CS	14						
227	CVCS 9321-F-2736	Charging Flow To RCS Regulator HCV-142 Bypass C-6	B	GL	MO	3"	C	C	A	Passive
		L-J	J							
		PIT	2Y							
231	CVCS 9321-F-2736	21 CHP Relief Valve To Volume Control Tank A-3	B	RE	SA	0.75"	C	O/C	C	Active
		R	R1							
234	CVCS 9321-F-2736	22 CHP Relief Valve To Volume Control Tank A-2	B	RE	SA	0.75"	C	O/C	C	Active
		R	R1							

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	<i>Quality Group</i>	<i>Valve Type</i>	<i>Actuator Type</i>	<i>Valve Size</i>	<i>Normal Position</i>	<i>Safety Position</i>	<i>IST Cat</i>	<i>Active/Passive Classification</i>
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
237	CVCS 9321-F-2736	23 CHP Relief Valve To Volume Control Tank A-1	B	RE	SA	0.75"	C	O/C	C	Active
		R	R1							
250A	CVCS 9321-F-2736	21 RCP Seal Wtr. Injection Line Isolation B-6	B	GL	MO	2"	O	C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	16						
		T-C	CS	16						
250B	CVCS 9321-F-2736	22 RCP Seal Wtr. Injection Line Isolation B-6	B	GL	MO	2"	O	C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	16						
		T-C	CS	16						
250C	CVCS 9321-F-2736	23 RCP Seal Wtr. Injection Line Isolation B-5	B	GL	MO	2"	O	C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	16						
		T-C	CS	16						
250D	CVCS 9321-F-2736	24 RCP Seal Wtr. Injection Line Isolation B-5	B	GL	MO	2"	O	C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	16						
		T-C	CS	16						
251A	RCS 208168	Reactor Coolant Pump 21 Seal Water Inlet Check A-2	A	CK	SA	2"	O	O/C	C	Active
		SC-C	CS	56						
		SC-O	Q					Verified during normal operations.		
251B	RCS 208168	Reactor Coolant Pump 22 Seal Water Inlet Check B-2	A	CK	SA	2"	O	O/C	C	Active
		SC-C	CS	56						
		SC-O	Q					Verified during normal operations.		
251C	RCS 208168	Reactor Coolant Pump 23 Seal Water Inlet Check C-2	A	CK	SA	2"	O	O/C	C	Active
		SC-C	CS	56						
		SC-O	Q					Verified during normal operations.		

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
251D	RCS 208168	Reactor Coolant Pump 24 Seal Water Inlet Check D-2	A	CK	SA	2"	O	O/C	C	Active
		SC-C SC-O	CS Q	56						Verified during normal operations.
251E	RCS 208168	Reactor Coolant Pump 21 Seal Water Inlet Check A-1	A	CK	SA	2"	O	O/C	C	Active
		SC-C SC-O	CS Q	56						Verified during normal operations.
251F	RCS 208168	Reactor Coolant Pump 22 Seal Water Inlet Check B-1	A	CK	SA	2"	O	O/C	C	Active
		SC-C SC-O	CS Q	56						Verified during normal operations.
251G	RCS 208168	Reactor Coolant Pump 23 Seal Water Inlet Check C-1	A	CK	SA	2"	O	O/C	C	Active
		SC-C SC-O	CS Q	56						Verified during normal operations.
251H	RCS 208168	Reactor Coolant Pump 24 Seal Water Inlet Check D-1	A	CK	SA	2"	O	O/C	C	Active
		SC-C SC-O	CS Q	56						Verified during normal operations.
261A	CVCS 208168	#1 Seal Leak Off From RCP-21 A-3	B	GL	AO	2"	O	O	B	Passive
		PIT	2Y							Verified during normal operation
261B	CVCS 208168	#1 Seal Leak Off From RCP-22 B-3	B	GL	AO	2"	O	O	B	Passive
		PIT	2Y							Verified during normal operation
261C	CVCS 208168	#1 Seal Leak Off From RCP-23 B-3	B	GL	AO	2"	O	O	B	Passive
		PIT	2Y							Verified during normal operation
261D	CVCS 208168	#1 Seal Leak Off From RCP-24 E-3	B	GL	AO	2"	O	O	B	Passive
		PIT	2Y							Verified during normal operation
263	CVCS 9321-F-2736	21 Non Regenerative Heat Exchanger Relief D-6	B	RE	SA	2"	C	O	C	Active
		R	R1							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
264	CVCS 9321-F-2736	Volume Control Tank Relief Valve D-5	B	RE	SA	2"	C	O/C	C	Active
		R	R1							
290	CVCS 9321-F-2736	Emergency Refueling Water Makeup To Charging PPS Suction Check Valve E-2	B	CK	SA	4"	C	O	C	Active
		SC-O	CS	18						
292	CVCS 9321-F-2736	Volume Control Tank Drain Line Check D-4	B	CK	SA	4"	O	O/C	C	Active
		PS	Q	73						Verified during normal operations.
		SC-C	R	73						
		SC-O	CS	73						
332	CVCS 9321-F-2736	Emergency Boration Check Valve E-2	B	CK	SA	2"	C	O	C	Active
		SC-O	R	20						
333	CVCS 9321-F-2736	Emergency Boration Stop Valve E-2	B	GL	MO	2"	C	O/C	B	Active
		PIT	2Y							
		S-C	CS	17						
		S-O	CS	17						
		T-C	CS	17						
		T-O	CS	17						
360	CVCS 9321-F-2736	Boric Acid Transfer Pump 21 Outlet To BA Filter Stop F-3	B	DIA	M	2"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
362A	CVCS 9321-F-2736	Boric Acid Transfer Pump #21 Discharge Check Valve G-3	B	CK	SA	2"	O/C	O/C	C	Active
		SC-O	Q							
368	CVCS 9321-F-2736	Boric Acid Transfer Pump #22 Discharge Check Valve G-2	B	CK	SA	2"	O/C	O/C	C	Active
		SC-O	Q							
370	CVCS 9321-F-2736	Boric Acid Transfer Pump 22 Outlet To BA Filter Stop G-3	B	DIA	M	2"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
374	CVCS 208168	Regenerative Heat Exchanger Tube Side Inlet Check D-5	A	CK	SA	3"	O	O/C	C	Active
		PS	Q							
		SC-C	R	68						
		SC-O	CS	68						
4000	CVCS 9321-F-2736	Charging Pump 21 Discharge Stop Check A-3	B	CK	SA	1.5"	O	O	C	Active
		SC-O	Q							
4003	CVCS 9321-F-2736	Charging Pump 22 Alternate Leg Discharge Stop Check A-2	B	CK	SA	1.5"	O	O	C	Active
		SC-O	Q							
4004	CVCS 9321-F-2736	Charging Pump 23 Discharge Stop Check A-1	B	CK	SA	1.5"	O	O	C	Active
		SC-O	Q							
4058	CVCS 9321-F-2736	Volume Control Tank Bypass Relief E-5	B	RE	SA	0.75"	C	O/C	C	Active
		R	R1							
4136	RCS 9321-F-2738	SOV-3418 and SOV-3419 Bypass Valve B-5	E	DIA	M	0.75"	LC	C	A	Passive
		L-J	J							
4148	CVCS 208168	RCP 21 #1 Seal Leak Off A-3	B	CK	SA	0.75"	O	O	C	Active
		SC-O	Q					Verified during normal operations.		
4149	CVCS 208168	RCP 22 #1 Seal Leak Off B-3	B	CK	SA	0.75"	O	O	C	Active
		SC-O	Q					Verified during normal operations.		
4150	CVCS 208168	RCP 23 #1 Seal Leak Off C-3	B	CK	SA	0.75"	O	O	C	Active
		SC-O	Q					Verified during normal operations.		
4151	CVCS 208168	RCP 24 #1 Seal Leak Off E-3	B	CK	SA	0.75"	O	O	C	Active
		SC-O	Q					Verified during normal operations.		
4190	RCS 9321-F-2738	Isolation for PT-413/PE-402 C-2	A	GA	M	0.375"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.				COMMENTS		
4191	RCS 9321-F-2738	Instrument Stop for PT-413/PE-402									
		C-2	A	GA	M	0.375"	C	C	A	Passive	
		L-T	D						RCS Identified Leakage - Not individually tested.		
4312	GAS 235296	N2 Supply Line To PORV and SI Accumulators Check Valve									
		B-5	B	CK	SA	1"	C	C	A/C	Active	
		L-J	J								
		SC-C	R	62							
4399	PSS 227178	High Rad Sample System Return to Containment Sump Isolation Valve									
		NA	E	GL	MO	0.75"	C	C	A	Passive	
		L-J	J								
		PIT	2Y								
4924	CVCS 9321-F-2736	Emergency Boration/Primary Water Flush Check Valve									
		E-3	B	CK	SA	2"	C	O/C	C	Active	
		SC-O	R	21							
4925	CVCS 9321-F-2736	RCP-21 Seal Wtr. Injection Line Isolation									
		B-6	B	GL	MO	1"	O	C	A	Active	
		L-J	J								
		PIT	2Y								
		S-C	CS	16							
		T-C	CS	16							
4926	CVCS 9321-F-2736	RCP-22 Seal Wtr. Injection Line Isolation									
		B-6	B	GL	MO	1"	O	C	A	Active	
		L-J	J								
		PIT	2Y								
		S-C	CS	16							
		T-C	CS	16							
4927	CVCS 9321-F-2736	RCP-23 Seal Wtr. Injection Line Isolation									
		B-5	B	GL	MO	1"	O	C	A	Active	
		L-J	J								
		PIT	2Y								
		S-C	CS	16							
		T-C	CS	16							
4928	CVCS 9321-F-2736	RCP-24 Seal Wtr. Injection Line Isolation									
		B-5	B	GL	MO	1"	O	C	A	Active	
		L-J	J								
		PIT	2Y								
		S-C	CS	16							
		T-C	CS	16							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
505A	RCS 9321-F-2738	Loop 22 Drain Stop B-3	A	GL	M	2"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
505B	RCS 9321-F-2738	Loop 22 Drain Stop B-3	A	GL	M	2"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
508A	RCS 9321-F-2738	Loop 21 Drain Stop B-2	A	GL	M	2"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
508B	RCS 9321-F-2738	Loop 21 Drain Stop B-1	A	GL	M	2"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
511A	RCS 9321-F-2738	Loop 23 Drain Stop H-2	A	GL	M	2"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
511B	RCS 9321-F-2738	Loop 23 Drain Stop H-2	A	GL	M	2"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
5132	PSS 227178	High Rad Sample System Return to Containment Sump Isolation Valve NA	E	GL	MO	0.75"	C	C	A	Passive
		L-J PIT	J 2Y							
515A	RCS 9321-F-2738	Loop 24 Drain Stop H-3	A	GL	M	2"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
515B	RCS 9321-F-2738	Loop 24 Drain Stop H-3	A	GL	M	2"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
518	RCS 9321-F-2738	PRT Nitrogen Supply Line Check Valve C-5	NA	CK	SA	0.75"	O/C	C	A/C	Active
		L-J SC-C	J R							
				55						

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
519	RCS 9321-F-2738	Primary Water Makeup to PRT B-4	E	DIA	AO	3"	C	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
520	RCS 9321-F-2738	Pressurizer Relief Tank Spray Inlet Check C-4	NA	CK	SA	3"	C	O	C	Active
		SC-O	Q							
5220	SIS 9321-F-2735	Safety Injection Pump 22 Discharge Check A-2	B	CK	SA	4"	C	O/C	C	Active
		SC-C	R	27						
		SC-O	R	27						
5222	SIS 9321-F-2735	Accumulator Tanks Topping Pump Check A-4	B	CK	SA	0.75"	C	C	C	Active
		SC-C	Q							
5223	SIS 9321-F-2735	Accumulator Tanks Topping Pump Check A-4	B	CK	SA	0.75"	C	C	C	Active
		SC-C	Q							
535	RCS 9321-F-2738	Pressurizer Relief Line Train B Block Valve H-6	A	GA	MO	3"	C	O/C	B	Active
		PIT	2Y							
		S-C	Q	48						
		S-O	Q	48						
		T-C	Q	48						
		T-O	Q	48						
536	RCS 9321-F-2738	Pressurizer Relief Line Train A Block Valve I-6	A	GA	MO	3"	C	O/C	B	Active
		PIT	2Y							
		S-C	Q	48						
		S-O	Q	48						
		T-C	Q	48						
		T-O	Q	48						
542	RCS 9321-F-2738	Loop 1 Draindown Level Indication Tygon Hose Stop B-1	A	GA	M	0.75"	C	C	A	Passive
		L-T	D							RCS Identified Leakage - Not individually tested.

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
5459	WDS 9321-F-2719	Nitrogen to RCDT Isolation Valve C-4	E	DIA	M	1"	C	C	A	Passive
		L-J	J							
548	RCS 9321-F-2738	PRT to WDS Gas Analyzer B-6	E	GL	AO	0.375"	C	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
549	RCS 9321-F-2738	Gas Analyzer Sample Containment Isolation B-6	E	GL	AO	0.375"	C	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
552	RCS 9321-F-2738	Primary Water to PRT B-4	E	DIA	AO	3"	C	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
560	RCS 9321-F-2738	Primary Water Supply to PRT Makeup C-4	NA	DIA	AO	3"	C	O	B	Active
		PIT	2Y							
		S-O	Q							
		T-O	Q							
5602	IVSW 9321-F-2746	IVSW to Line #788 Check Valve E-6	B	CK	SA	0.375"	C	O	C	Active
		SC-O	R	27						
580A	RCS 9321-F-2738	Isolation Valve to Dead Weight Tester (Disconnected) I-5	E	NE	M	0.25"	C	C	A	Passive
		L-J	J							
580B	RCS 9321-F-2738	Isolation Valve to Dead Weight Tester (Disconnected) I-5	E	NE	M	0.375"	C	C	A	Passive
		L-J	J							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
7001	CVCS 208168	Valve 212 Bypass Check B-5	A	SP	SP	0.75"	C	O	C	Active
		R	R1							Tested as relief device.
730	RCS 9321-F-2720	RHR Pumps Suction from Loop 22 Hot Leg A-6	A	GA	MO	14"	C	O/C	A	Active
		L-T	2Y							
		PIT	2Y							
		S-O	CS/HU	9						
		T-O	CS/HU	9						
731	RCS 9321-F-2720	RHR Pumps Suction from Loop 22 Hot Leg B-6	A	GA	MO	14"	C	O/C	A	Active
		L-T	2Y							
		PIT	2Y							
		S-O	CS/HU	9						
		T-O	CS/HU	9						
732	RHR 251783	RHR Pump From Hot Leg 22 CIV F-6	B	GA	M	14"	LC	O/C	A	Active
		L-J	J							
733C	CCW 227781	Primary Water Emergency Makeup Stop Valve C-2	C	GL	M	2"	C	O/C	B	Active
		S-O	R	52						
734A	CCW 227781	CCW to SI/RHR Pump Supply Header Stop Valve C-2	C	GL	M	2"	LO	O/C	B	Active
		S-C	R	52						
734B	CCW 227781	CCW to SI Pumps Normal Outlet Stop Valve D-2	C	GL	M	2"	LO	O/C	B	Active
		S-C	R	52						
734E	CCW 227781	CCW to SI Pump Return Header Emergency Outlet Stop Valve D-3	C	GL	M	2"	C	O/C	B	Active
		S-O	CS	52						
734F	CCW 227781	CCW to SI Pump Return Header Emergency Outlet Stop Valve D-3	C	GL	M	2"	C	O/C	B	Active
		S-O	CS	52						
7352	SIS 9321-F-2735	SI Pump Suction Over Pressure Protection Isolation Valve C-3	B	GL	M	0.75"	LO	C	B	Active
		S-C	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
738A	RHR 251783	22 RHR Pump Discharge Check C-5	B	CK	SA	8"	C	O/C	C	Active
		PS	Q/CS	7						
		SC-C	Q							
		SC-O	R	7						
738B	RHR 251783	21 RHR Pump Discharge Check C-2	B	CK	SA	8"	C	O/C	C	Active
		PS	Q/CS	7						
		SC-C	Q							
		SC-O	R	7						
741	RHR 9321-F-2720	RHR Return Flow To RCS A-6	B	CK	SA	12"	C	O	C	Active
		PS	Q	3						
		SC-O	R	3						
741A	RHR 9321-F-2720	RCS Return Flow to RCS A-6	B	CK	SA	12"	C	O/C	A/C	Active
		L-J	J							
		PS	Q/CS	3						
		SC-C	R	3						
		SC-O	R	3						
743	RHR 251783	RHR Pumps Mini Flow Test Line Stop E-6	B	GL	MO	3"	LO	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	6						
		S-O	CS	6						
		T-C	CS	6						
		T-O	CS	6						
744	RHR 251783	RHR Pumps Disch To Residual HXs Isolation F-5	B	GA	MO	12"	LO	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	R	2						
		S-O	R	2						
		T-C	R	2						
		T-O	R	2						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
745A	RHR 9321-F-2720	RHR HX-22 Inlet Isolation C-5	B	GA	MO	8"	O	O/C	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
745B	RHR 9321-F-2720	RHR HX-22 Inlet Isolation Stop C-5	B	GA	MO	8"	O	O/C	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
746	RHR 9321-F-2720	RHR HX-22 Outlet Isolation Stop F-5	B	GA	MO	8"	C	O/C	B	Active
		PIT	2Y							
		S-C	CS	8						
		S-O	CS	8						
		T-C	CS	8						
		T-O	CS	8						
747	RHR 9321-F-2720	RHR HX-21 Outlet Isolation Stop F-5	B	GA	MO	8"	C	O/C	B	Active
		PIT	2Y							
		S-C	CS	8						
		S-O	CS	8						
		T-C	CS	8						
		T-O	CS	8						
750A	CCW 227781	CCW to SI Pump 23 Heat Exchanger Outlet Check Valve D-3	C	CK	SA	1"	C	O	C	Active
		SC-O	Q							
750B	CCW 227781	CCW to SI Pump 22 Heat Exchanger Outlet Check Valve E-3	C	CK	SA	1"	C	O	C	Active
		SC-O	Q							
750C	CCW 227781	CCW to SI Pump 21 Heat Exchanger Outlet Check Valve E-3	C	CK	SA	1"	C	O	C	Active
		SC-O	Q							
755	CCW 227781	Auxiliary Component Cooling Pumps Bypass Check Valve G-3	E	CK	SA	1.5"	O	O/C	C	Active
		SC-C	Q							
		SC-O	CS	65						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
755A	CCW 227781	22 Auxillary Component Cooling Water Pump Discharge Check Valve G-3	E	CK	SA	3"	C	C	C	Active
		SC-C	Q							
755B	CCW 227781	21 Auxillary Component Cooling Water Pump Discharge Check Valve G-3	E	CK	SA	3"	C	C	C	Active
		SC-C	Q							
761A	CCW 227781	Component Cooling Water Pump 23 Outlet Check Valve C-4	C	CK	SA	10"	O/C	O/C	C	Active
		SC-C	Q							
		SC-O	Q							
761B	CCW 227781	Component Cooling Water Pump 22 Outlet Check Valve C-4	C	CK	SA	10"	O/C	O/C	C	Active
		SC-C	Q							
		SC-O	Q							
761C	CCW 227781	Component Cooling Water Pump 21 Outlet Check Valve C-4	C	CK	SA	10"	O/C	O/C	C	Active
		SC-C	Q							
		SC-O	Q							
769	CCW 227781	CCW to RCP Bearings/Thermal Barriers and Reactor Vessel Cooling Support Blocks Inlet Isolation Valve F-2	C	GA	MO	6"	O	C	B	Active
		PIT	2Y							
		S-C	CS	5						
		T-C	CS	5						
770	CCW 9321-F-2720	CCW to RCP Bearings/Thermal Barriers and Reactor Vessel Cooling Support Blocks Inlet Check Valve C-4	C	CK	SA	6"	O	O	C	Active
		SC-O	Q					Verified during normal operation		
774A	CCW 9321-F-2720	RCP #21 Thermal Barrier CCW Supply Check Valve C-2	C	CK	SA	1.5"	O	C	A/C	Active
		L-T	2Y							
		SC-C	R	67						
774B	CCW 9321-F-2720	RCP #22 Thermal Barrier CCW Supply Check Valve E-2	C	CK	SA	1.5"	O	C	A/C	Active
		L-T	2Y							
		SC-C	R	67						
774C	CCW 9321-F-2720	RCP #23 Thermal Barrier CCW Supply Check Valve F-2	C	CK	SA	1.5"	O	C	A/C	Active
		L-T	2Y							
		SC-C	R	67						

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
774D	CCW 9321-F-2720	RCP #24 Thermal Barrier CCW Supply Check Valve G-2	C	CK	SA	1.5"	O	C	A/C	Active
		L-T SC-C	2Y R							
782	CCW 9321-F-2720	CCW from RCP Bearings/Thermal Barriers and Reactor Vessel Cooling Support Blocks Relief Valve B-4	C	RE	SA	4"	C	O/C	C	Active
		R	R1							
783A	CCW 9321-F-2720	#21 RCP Thermal Barrier Cooling Outlet Relief Valve D-2	C	RE	SA	1"	C	O/C	C	Active
		R	R1							
783B	CCW 9321-F-2720	#22 RCP Thermal Barrier Cooling Outlet Relief Valve E-2	C	RE	SA	1"	C	O/C	C	Active
		R	R1							
783C	CCW 9321-F-2720	#23 RCP Thermal Barrier Cooling Outlet Relief Valve F-2	C	RE	SA	1"	C	O/C	C	Active
		R	R1							
783D	CCW 9321-F-2720	#24 RCP Thermal Barrier Cooling Outlet Relief Valve H-2	C	RE	SA	1"	C	O/C	C	Active
		R	R1							
784	CCW 227781	CCW from RCP Bearings and Reactor Vessel Cooling Support Blocks Outlet Isolation Valve H-2	E	GA	MO	6"	O	C	A	Active
		L-J PIT S-C T-C	J 2Y CS CS							
				1 1						
786	CCW 227781	CCW from RCP Bearings and Reactor Vessel Cooling Support Blocks Outlet Isolation Valve G-2	C	GA	MO	6"	O	C	B	Active
		PIT S-C T-C	2Y CS CS							
				5 5						
789	CCW 227781	CCW from RCP Thermal Barriers Outlet Isolation Valve G-2	C	GA	MO	3"	O	C	B	Active
		PIT S-C T-C	2Y CS CS							
				5 5						
790	CCW 9321-F-2720	CCW to Excess Letdown Heat Exchanger #21 Inlet Check Valve B-3	C	CK	SA	3"	C	O	C	Active
		SC-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
791	CCW 227781	CCW to Excess Letdown Heat Exchanger Inlet Isolation Valve G-2	E	DIA	AO	3"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
792	CCW 9321-F-2720	Excess Letdown Heat Exchanger CCW Outlet Relief Valve C-3	C	RE	SA	3"	C	O/C	C	Active
		R	R1							
793	CCW 227781	CCW from Excess Letdown Heat Exchanger Outlet Isolation G-2	E	DIA	AO	3"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
796	CCW 227781	CCW from Excess Letdown Heat Exchanger Outlet Isolation H-2	E	GL	AO	3"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
797	CCW 227781	CCW to RCP Bearings/Thermal Barriers and Reactor Vessel Cooling Support Blocks Inlet Isolation Valve F-2	E	GA	MO	6"	O	C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	1						
		T-C	CS	1						
798	CCW 227781	CCW to Excess Letdown Heat Exchanger Inlet Isolation Valve G-2	E	DIA	AO	3"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
822A	CCW 9321-F-2720	CCW from 22 Residual Heat Exchanger Outlet Isolation Valve D-5	C	GA	MO	12"	C	O/C	B	Active
		PIT	2Y							
		S-O	CS	4						
		T-O	CS	4						
822B	CCW 9321-F-2720	CCW from 21 Residual Heat Exchanger Outlet Isolation Valve C-5	C	GA	MO	12"	C	O/C	B	Active
		PIT	2Y							
		S-O	CS	4						
		T-O	CS	4						
829A	RHR 9321-F-2720	21 RHR HX Outlet Check Valve F-5	B	CK	SA	2"	C	O/C	C	Active
		PS	R		37					Verified during normal operations.
		SC-C	R2		37					
		SC-O	R2		37					
829B	RHR 9321-F-2720	22 RHR HX Outlet Check Valve F-4	B	CK	SA	2"	C	O	C	Active
		PS	R		37					Verified during normal operations.
		SC-C	R2		37					
		SC-O	R2		37					
835	CCW 227781	21 CCW Surge Tank Relief Valve E-6	C	RE	SA	3"	C	O/C	C	Active
		R	R1							
838A	RCS 235296	RHR Flow to Loop 21 Cold Leg Check Valve B-4	A	CK	SA	6"	C	O/C	A/C	Active
		L-T	9M/CS							
		PS	CS	30						Verified during normal operations.
		SC-C	9M/CS	30						
		SC-O	R	30						
838B	RCS 235296	RHR Flow to Loop 22 Cold Leg Check Valve D-4	A	CK	SA	6"	C	O/C	A/C	Active
		L-T	9M/CS							
		PS	CS	30						Verified during normal operations.
		SC-C	9M/CS	30						
		SC-O	R	30						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
838C	RCS 235296	RHR Flow to Loop 23 Cold Leg Check Valve E-4	A	CK	SA	6"	C	O/C	A/C	Active
		L-T	9M/CS					Verified during normal operations.		
		PS	CS	30						
		SC-C	9M/CS	30						
		SC-O	R	30						
838D	RCS 235296	RHR Flow to Loop 24 Cold Leg Check Valve F-4	A	CK	SA	6"	C	O/C	A/C	Active
		L-T	9M/CS					Verified during normal operations.		
		PS	CS	30						
		SC-C	9M/CS	30						
		SC-O	R	30						
839B	RCS 235296	Test Line From Accum-21 or Residual HX's Outlets C-3	A	GL	AO	0.75"	C	C	A	Passive
		L-T	2Y							
839D	RCS 235296	Test Line From Accum-22 or Residual HX's Outlets C-3	A	GL	AO	0.75"	C	C	A	Passive
		L-T	2Y							
839F	RCS 235296	Test Line From Accum-23 or Residual HX's Outlets C-3	A	GL	AO	0.75"	C	C	A	Passive
		L-T	2Y							
839H	RCS 235296	Test Line From Accum-24 or Residual HX's Outlets C-3	A	GL	AO	0.75"	C	C	A	Passive
		L-T	2Y							
842	SIS 9321-F-2735	SI Pump Test/ Recirc Lines to RWST Isolation G-3	B	GL	MO	2"	O	O/C	B	Active
		PIT	2Y							
		S-C	CS	34						
		T-C	CS	34						
843	SIS 9321-F-2735	SI Pump Test/ Recirc Lines to RWST Isolation G-3	B	GL	MO	2"	O	O/C	B	Active
		PIT	2Y							
		S-C	CS	34						
		T-C	CS	34						
846	SIS 9321-F-2735	RWST To RHR Pumps H-5	B	GA	M	14"	LO	O/C	B	Active
		L-T	2Y							
		S-C	CS	64						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.				COMMENTS		
847	SIS 9321-F-2735	RWST to SI Pumps Hdr Check Valve C-4		B	CK	SA	8"	C	O/C	C	Active
		PS	Q	69							
		SC-C	R	69							
		SC-O	R	69							
849A	SIS 9321-F-2735	21 SIP Outlet Check A-2		B	CK	SA	4"	C	O/C	C	Active
		SC-C	R	37							
		SC-O	R	37							
849B	SIS 9321-F-2735	23 SIP Outlet Check A-3		B	CK	SA	4"	C	O/C	C	Active
		SC-C	R	37							
		SC-O	R	37							
850A	SIS 9321-F-2735	SI Pump 21 Discharge Isolation Stop A-2		B	GA	MO	4"	LO	O/C	A	Active
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
850B	SIS 9321-F-2735	SI Pump 23 Discharge Isolation Stop A-3		B	GA	MO	4"	LO	O/C	A	Active
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
851A	SIS 9321-F-2735	SI Pump 22 Disch to SI Pump 21 Injection Header Isolation A-2		B	GA	MO	4"	O	O/C	A	Active
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.				COMMENTS		
851B	SIS 9321-F-2735	SI Pump 22 Disch to SI Pump 23 Injection Header Isolation									
		A-3	B	GA	MO	4"	O	O/C	A	Active	
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
852A	SIS 9321-F-2735	22 SIP/21SIP Outlet Intertie Check									
		A-2	B	CK	SA	4"	C	O/C	C	Active	
		SC-C	R	37							
		SC-O	R	37							
852B	SIS 9321-F-2735	22 SIP/23 SIP Outlet Intertie Check									
		A-3	B	CK	SA	4"	C	O/C	C	Active	
		PS	Q	37							
		SC-C	R	37							
		SC-O	R	37							
855	SIS 235296	Safety Injection Piping Relief Valve									
		D-2	B	RE	SA	0.75"	C	O	C	Active	
		R	R1								
856A	SIS 235296	Loop 21 Cold Leg SI Line									
		B-2	B	GL	MO	2"	O	O/C	B	Active	
		PIT	2Y								
		S-C	CS	33							
		S-O	CS	33							
		T-C	CS	33							
		T-O	CS	33							
856B	SIS 235296	Loop 23 Hot Leg SI Line									
		B-2	B	GL	MO	2"	LC	O/C	B	Active	
		PIT	2Y								
		S-C	CS	32							
		S-O	CS	32							
		T-C	CS	32							
		T-O	CS	32							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
856C	SIS 235296	Loop 24 Cold Leg SI Line B-1	B	GL	MO	2"	O	O/C	B	Active
		PIT	2Y							
		S-C	CS	33						
		S-O	CS	33						
		T-C	CS	33						
		T-O	CS	33						
856D	SIS 235296	Loop 22 Cold Leg SI Line B-1	B	GL	MO	2"	O	O/C	B	Active
		PIT	2Y							
		S-C	CS	33						
		S-O	CS	33						
		T-C	CS	33						
		T-O	CS	33						
856E	SIS 235296	Loop 23 Cold Leg SI Line B-2	B	GL	MO	2"	O	O/C	B	Active
		PIT	2Y							
		S-C	CS	33						
		S-O	CS	33						
		T-C	CS	33						
		T-O	CS	33						
856F	SIS 235296	Loop 21 Hot Leg SI Line B-2	B	GL	MO	2"	LC	O/C	B	Active
		PIT	2Y							
		S-C	CS	32						
		S-O	CS	32						
		T-C	CS	32						
		T-O	CS	32						
857A	RCS 235296	Loop 21 Hot Leg RCS Inlet Check B-2	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	35						
		SC-O	R	35						
857B	RCS 235296	Loop 23 Hot Leg RCS Inlet Check B-2	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	35						
		SC-O	R	35						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
857C	RCS 235296	Loop 24 Cold Leg RCS Inlet Check B-1	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	35						
		SC-O	R	35						
857D	RCS 235296	Loop 22 Cold Leg RCS Inlet Check B-1	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	35						
		SC-O	R	35						
857E	SIS 235296	Loop 21 Cold Leg RCS Inlet Check B-2	B	CK	SA	2"	C	O	C	Active
		SC-O	R	36						
857F	RCS 235296	Loop 23 Hot Leg RCS Inlet Check B-2	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	35						
		SC-O	R	35						
857G	RCS 235296	Loop 24 Cold Leg RCS Inlet Check B-1	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	35						
		SC-O	R	35						
857H	RCS 235296	Loop 22 Cold Leg RCS Inlet Check B-1	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	35						
		SC-O	R	35						
857J	RCS 235296	Loop 21 Cold Leg RCS Inlet Check B-2	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	36						
		SC-O	R	36						
857K	RCS 235296	Loop 23 Cold Leg RCS Inlet Check B-2	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	36						
		SC-O	R	36						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
857L	SIS 235296	Loop 23 Cold Leg RCS Inlet Check B-2	B	CK	SA	2"	C	O	C	Active
		SC-O	R	36						
857M	RCS 235296	Loop 21 Hot Leg RCS Inlet Check B-2	A	CK	SA	2"	C	O/C	A/C	Active
		L-T	9M/CS							
		SC-C	9M/CS	35						
		SC-O	R	35						
858A	SIS 235296	Safety Injection Test Line Check C-2	B	CK	SA	0.5"	C	O/C	C	Active
		SC-C	Q							
		SC-O	CS	57						
858B	SIS 235296	Safety Injection Test Line Check C-1	B	CK	SA	0.5"	C	O/C	C	Active
		SC-C	Q							
		SC-O	CS	57						
859A	SIS 9321-F-2735	SI Test Line CIV C-4	B	GL	M	0.75"	LC	C	A	Passive
		L-J	J							
859C	SIS 9321-F-2735	SI Test Line CIV C-4	B	GL	M	0.75"	LC	C	A	Passive
		L-J	J							
85A	WCPS 9321-F-7052	83' Personnel Airlock Equalizing Valve - Inside Airlock to Outside NA	E	BL	M	3"	C	C	A	Active
		L-J	J							
		S-C	R	44						
85B	WCPS 9321-F-7052	83' Personnel Airlock Equalizing Valve - Inside Airlock to VC NA	E	BL	M	3"	C	C	A	Active
		L-J	J							
		S-C	R	44						
85C	WCPS 228385	83' Personnel Airlock WCPS Test Connection Line Check Valve B-2	E	CK	SP	1"	C	O/C	A/C	Active
		L-J	J							
		SC-C	R	44						
		SC-O	CS	44						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
85D	WCPS 228385	83' Personnel Airlock WCPS Test Connection Line Check Valve C-2	E	CK	SP	1"	C	O/C	A/C	Active
		L-J	J							
		SC-C	R	44						
		SC-O	CS	44						
863	GAS 235296	Safety Injection and PORV Accumulators N2 Gas Supply A-5	B	GL	AO	1"	C	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
866A	CSS 9321-F-2735	Spray Pump 21 Disch Stop E-4	B	GA	MO	8"	C	O	B	Active
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
866B	CSS 9321-F-2735	Spray Pump 21 Disch Stop E-4	B	GA	MO	8"	C	O	B	Active
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
866C	CSS 9321-F-2735	Spray Pump 22 Disch Stop E-3	B	GA	MO	8"	C	O	B	Active
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
866D	CSS 9321-F-2735	Spray Pump 22 Disch Stop E-3	B	GA	MO	8"	C	O	B	Active
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
867A	CSS 9321-F-2735	Containment Spray Header CIV E-4	B	CK	SA	8"	C	O/C	A/C	Active
		L-J	J							
		SC-C	R	31						
		SC-O	R	31						
867B	CSS 9321-F-2735	Containment Spray Header CIV E-6	B	CK	SA	8"	C	O/C	A/C	Active
		L-J	J							
		SC-C	R	31						
		SC-O	R	31						
869A	CSS 9321-F-2735	Spray Pump 21 Disch To Spray Hdr 51 Isolation E-6	B	GA	MO	8"	LO	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
869B	CSS 9321-F-2735	Spray Pump 22 Disch To Spray Hdr 15 Isolation F-6	B	GA	MO	8"	LO	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
878A	CSS 9321-F-2735	Containment Spray Header CIV E-5	B	GL	M	0.75"	LC	C	A	Passive
		L-J	J							
881	SIS 9321-F-2735	RWST To RHR Pump Check G-5	B	CK	SA	12"	C	O/C	C	Active
		PS	R	70						
		SC-C	R	70						
		SC-O	R	70						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
882	SIS 9321-F-2735	RHR Pumps Suction From RWST G-5	B	GA	MO	12"	LO	O/C	B	Active
		PIT	2Y							
		S-C	CS/HU	38						
		T-C	CS/HU	38						
883	SIS 9321-F-2735	RHR Pumps Return To RWST F-5	B	GA	MO	8"	LC	O/C	B	Active
		PIT	2Y							
		S-O	Q							
		T-O	Q							
884A	SIS 9321-F-2735	SI Pmp 21 Recirc Test Line Check B-2	B	CK	SA	0.75"	C	O	C	Active
		SC-C	Q							
		SC-O	Q							
884B	SIS 9321-F-2735	SI Pmp 22 Recirc Test Line Check B-3	B	CK	SA	0.75"	C	O	C	Active
		SC-C	Q							
		SC-O	Q							
884C	SIS 9321-F-2735	SI Pmp 23 Recirc Test Line Check B-3	B	CK	SA	0.75"	C	O	C	Active
		SC-C	Q							
		SC-O	Q							
885A	SIS 9321-F-2735	RHR Pump Suction From Containment Sump F-6	B	GA	MO	14"	C	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
885B	SIS 9321-F-2735	RHR Pump Suction From Containment Sump F-5	B	GA	MO	14"	C	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
886A	SIS 235296	21 Recirculation Pump Discharge Check Valve G-4	B	CK	SA	8"	C	O/C	C	Active
		PS	R		13					
		SC-C	R		13					
		SC-O	R2		13					

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
886B	SIS 235296	22 Recirculation Pump Discharge Check Valve I-4	B	CK	SA	8"	C	O/C	C	Active
		PS	R		13					
		SC-C	R		13					
		SC-O	R2		13					
887A	SIS 9321-F-2735	SI Pump 22 Suction from SI Pumps Common Suction Header C-2	B	GA	MO	6"	O	O/C	B	Active
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
887B	SIS 9321-F-2735	SI Pump 22 Suction from SI Pumps Common Suction Header C-2	B	GA	MO	6"	O	O/C	B	Active
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
888A	SIS 9321-F-2735	SI Pmps Suction From Residual Heat Exchangers 21,22 D-4	B	GA	MO	6"	C	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
888B	SIS 9321-F-2735	SI Pumps Suction From Residual Hx-21,22 D-4	B	GA	MO	6"	C	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
889A	RHR 235296	CB Spray Hdrs 1-3 Supply From Resid HX-22 I-6	B	GA	MO	8"	C	O/C	B	Active
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
889B	RHR 235296	CB Spray Hdrs 2-4 Supply From Resid HX-21 I-6	B	GA	MO	8"	C	O/C	B	Active
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
890A	SIS 235296	Accum Tank 21 Fill Line C-4	B	GL	AO	1"	C	C	B	Active
		F-C	Q							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
890B	SIS 235296	Accum Tank 22 Fill Line D-4	B	GL	AO	1"	C	C	B	Active
		F-C	Q							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
890C	SIS 235296	Accum Tank 23 Fill Line E-4	B	GL	AO	1"	C	C	B	Active
		F-C	Q							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
890D	SIS 235296	Accum Tank 24 Fill Line E-4	B	GL	AO	1"	C	C	B	Active
		F-C	Q							
		PIT	2Y							
		S-C	Q							
		T-C	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
891A	SIS 235296	Accum 21 N2 Fill Line B-5	B	GL	AO	1"	C	C	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
891B	SIS 235296	Accum 22 N2 Fill Line C-5	B	GL	AO	1"	C	C	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
891C	SIS 235296	Accum 23 N2 Fill Line E-5	B	GL	AO	1"	C	C	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
891D	SIS 235296	Accum 24 N2 Fill Line F-5	B	GL	AO	1"	C	C	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
892A	SIS 235296	Accumulator #21 Relief B-5	B	RE	SA	1"	C	O/C	C	Active
		R	R1							
892B	SIS 235296	Accumulator #22 Relief D-5	B	RE	SA	1"	C	O/C	C	Active
		R	R1							
892C	SIS 235296	Accumulator #23 Relief E-5	B	RE	SA	1"	C	O/C	C	Active
		R	R1							
892D	SIS 235296	Accumulator #24 Relief F-5	B	RE	SA	1"	C	O/C	C	Active
		R	R1							
895A	RCS 235296	Loop 21 Cold Leg RCS Inlet/21 SI Accumulator Check Valve B-4	A	CK	SA	10"	C	O/C	A/C	Active
		L-T	2Y							
		PS	R		14					
		SC-C	R		14					
		SC-O	R2		14					

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
895B	RCS 235296	Loop 21 Cold Leg RCS Inlet/22 SI Accumulator Check Valve C-4	A	CK	SA	10"	C	O/C	A/C	Active
		L-T	2Y							
		PS	R		14					
		SC-C	R		14					
		SC-O	R2		14					
895C	RCS 235296	Loop 21 Cold Leg RCS Inlet/23 SI Accumulator Check Valve E-4	A	CK	SA	10"	C	O/C	A/C	Active
		L-T	2Y							
		PS	R		14					
		SC-C	R		14					
		SC-O	R2		14					
895D	RCS 235296	Loop 21 Cold Leg RCS Inlet/24 SI Accumulator Check Valve F-4	A	CK	SA	10"	C	O/C	A/C	Active
		L-T	2Y							
		PS	R		14					
		SC-C	R		14					
		SC-O	R2		14					
897A	RCS 235296	SI and RHR Flow to Loop 21 Cold Leg Check Valve A-3	A	CK	SA	10"	C	O/C	A/C	Active
		L-T	9M/CS							
		PS	R		15					
		SC-C	R		15					
		SC-O	R2		15					
897B	RCS 235296	SI and RHR Flow to Loop 22 Cold Leg Check Valve A-3	A	CK	SA	10"	C	O/C	A/C	Active
		L-T	9M/CS							
		PS	R		15					
		SC-C	R		15					
		SC-O	R2		15					
897C	RCS 235296	SI and RHR Flow to Loop 23 Cold Leg Check Valve A-3	A	CK	SA	10"	C	O/C	A/C	Active
		L-T	9M/CS							
		PS	R		15					
		SC-C	R		15					
		SC-O	R2		15					

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
897D	RCS 235296	SI and RHR Flow to Loop 24 Cold Leg Check Valve								
		A-3	A	CK	SA	10"	C	O/C	A/C	Active
		L-T	9M/CS							
		PS	R		15					
		SC-C	R		15					
		SC-O	R2		15					
898	SIS 9321-F-2735	Alt Supply For Safety Injection Pump #22								
		H-4	B	GA	M	6"	C	O	B	Active
		S-O	Q							
956A	PSS 9321-F-2745	Pressurizer Steam Space to Sampling System Containment Isolation Valve								
		C-5	A	GL	AO	0.375"	C	C	A	Passive
		L-J	J							
		PIT	2Y							
956B	PSS 9321-F-2745	Pressurizer Steam Space to Sampling System Containment Isolation Valve								
		D-5	A	GL	AO	0.375"	C	C	A	Passive
		L-J	J							
		PIT	2Y							
956C	PSS 9321-F-2745	Pressurizer Liquid Space to Sampling System Containment Isolation Valve								
		C-5	A	GL	AO	0.375"	C	C	A	Passive
		L-J	J							
		PIT	2Y							
956D	PSS 9321-F-2745	Pressurizer Liquid Space to Sampling System Containment Isolation Valve								
		D-5	A	GL	AO	0.375"	C	C	A	Passive
		L-J	J							
		PIT	2Y							
956E	PSS 9321-F-2745	Reactor Coolant System to Sampling System Containment Isolation Valve								
		B-4	A	GL	MO	0.75"	C	C	A	Passive
		L-J	J							
		PIT	2Y							
956F	PSS 9321-F-2745	Reactor Coolant System to Sampling System Containment Isolation Valve								
		C-4	A	GL	MO	0.75"	C	C	A	Passive
		L-J	J							
		PIT	2Y							
956G	PSS 9321-F-2745	SIS Accumulators to Sampling System Containment Isolation Valve								
		C-5	B	GL	AO	0.375"	C	C	A	Passive
		L-J	J							
		PIT	2Y							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.						COMMENTS
956H	PSS	SIS Accumulators to Sampling System Containment Isolation Valve									
	9321-F-2745	D-5	B	GL	AO	0.375"	C	C	A	Passive	
		L-J	J								
		PIT	2Y								
958	RHR	RHR Sample to RCS Sample HX									
	251783	D-6	B	GL	MO	0.75"	LC	C	A	Passive	
		L-J	J								
		PIT	2Y								
959	PSS	RHR to Sampling System Containment Isolation Valve									
	9321-F-2745	C-3	B	GL	MO	0.75"	C	C	A	Passive	
		L-J	J								
		PIT	2Y								
95A	WCPS	95' Airlock Equalizing Valve - Inside Airlock to Outside									
	9321-F-7052	NA	E	BL	M	3"	C	C	A	Active	
		L-J	J								
		S-C	R	44							
95B	WCPS	95' Airlock Equalizing Valve - Inside Airlock to VC									
	9321-F-7052	NA	E	BL	M	3"	C	C	A	Active	
		L-J	J								
		S-C	R	44							
95C	WCPS	95' Airlock WCPS Test Connection Line Check Valve									
	228385	B-2	E	CK	SP	1"	C	O/C	A/C	Active	
		L-J	J								
		SC-C	R	44							
		SC-O	CS	44							
95D	WCPS	95' Airlock WCPS Test Connection Line Check Valve									
	228385	C-2	E	CK	SP	1"	C	O/C	A/C	Active	
		L-J	J								
		SC-C	R	44							
		SC-O	CS	44							
990A	PSS	Recirculation Pumps to Sampling System Containment Isolation Valve									
	9321-F-2745	B-3	B	GL	MO	0.75"	C	C	A	Passive	
		L-J	J								
		PIT	2Y								
990B	PSS	Recirculation Pumps to Sampling System Containment Isolation Valve									
	9321-F-2745	C-3	B	GL	MO	0.75"	C	C	A	Passive	
		L-J	J								
		PIT	2Y								

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
990D	PSS 9321-F-2745	RHR to Sampling System Containment Isolation Valve C-3	B	GL	M	0.375"	C	C	A	Passive
		L-J	J							
BFD-31	AFW 9321-F-2019	Aux. FW #22 ABFP Discharge Check Valve E-1	C	CK	SA	6"	C	O/C	C	Active
		SC-C	R	71						
		SC-O	R	71						
BFD-34	AFW 9321-F-2019	Aux FW 21 ABFW Pump Discharge Valve F-2	C	CK	SA	4"	C	O/C	C	Active
		PS	CS		32			Verified during normal operations.		
		SC-C	R2		32					
		SC-O	R		32					
BFD-35	AFW 9321-F-2019	Aux FW from Pmp #21 to FCV406B to Stm Gen #22 Chk Vlv B-2	C	CK	SA	3"	C	O	C	Active
		PS	CS	12				Verified during normal operations.		
		SC-O	R	12						
BFD-37	AFW 9321-F-2019	Aux FW from Pmp #21 to FCV406A to Stm Gen #21 Chk Vlv B-1	C	CK	SA	3"	C	O	C	Active
		PS	CS	12				Verified during normal operations.		
		SC-O	R	12						
BFD-39	AFW 9321-F-2019	Aux. FW #23 ABFW Pump Discharge Valve F-1	C	CK	SA	4"	C	O/C	C	Active
		PS	CS		32			Verified during normal operations.		
		SC-C	R2		32					
		SC-O	R		32					
BFD-40	AFW 9321-F-2019	Aux FW from Pmp #23 to FCV406C to Stm Gen #23 Chk Vlv B-6	C	CK	SA	3"	C	O	C	Active
		PS	CS	12				Verified during normal operations.		
		SC-O	R	12						
BFD-42	AFW 9321-F-2019	Aux FW from Pmp 23 to FCV-406D to Steam Gen #24 Chk Vlv B-4	C	CK	SA	3"	C	O	C	Active
		PS	CS	12						
		SC-O	R	12						
BFD-47	AFW 9321-F-2019	Aux FW from 22 AFWP to FCV-405A B-1	C	CK	SA	3"	C	O	C	Active
		SC-O	R	11						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
BFD-47-1	AFW 9321-F-2019	Aux FW from #22 AFWP to FCV405B to Stm Gen #22 Chk Vlv B-2	C	CK	SA	3"	C	O	C	Active
		SC-O	R	11						
BFD-47-2	AFW 9321-F-2019	Aux FW from #22 ABFWP to FCV405C to Stm Gen #23 Chk Vlv B-5	C	CK	SA	3"	C	O	C	Active
		SC-O	R	11						
BFD-47-3	AFW 9321-F-2019	AFW from #21 ABFW Pmp to FCV405D to Steam Gen #24 Chk B-4	C	CK	SA	3"	C	O	C	Active
		SC-O	R	11						
BFD-50	AFW 9321-F-2019	Aux. FW #22 ABFW Pump Recirculation Line Check Valve H-4	C	CK	SA	3"	C	O/C	C	Active
		PS	Q							
		SC-C	Q							
		SC-O	R2	60						
BFD-52	AFW 9321-F-2019	AFW Pump #21 Recirculation Line Check Valve H-2	C	CK	SA	2"	C	O/C	C	Active
		SC-C	Q							
		SC-O	Q							
BFD-54	AFW 9321-F-2019	AFW Pump #23 Recirculation Line Check Valve H-2	C	CK	SA	2"	C	O/C	C	Active
		SC-C	Q							
		SC-O	Q							
BFD-6	FW 9321-F-2019	SG 21 FW Supply Check B-1	B	CK	SA	18"	O	C	C	Active
		SC-C	R2		16					
BFD-6-1	FW 9321-F-2019	22 Stm Gen FW Inlet Check Valve B-3	B	CK	SA	18"	O	C	C	Active
		SC-C	R2		16					
BFD-6-2	FW 9321-F-2019	23 Stm Gen FW Inlet Check Valve B-6	B	CK	SA	18"	O	C	C	Active
		SC-C	R2		16					
BFD-6-3	FW 9321-F-2019	24 Stm Gen FW Inlet Check Valve B-5	B	CK	SA	18"	O	C	C	Active
		SC-C	R2		16					

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
BFD-68	AFW 9321-F-2019	#22 ABFP Cooling Drains To Condensate Transfer System Check Valve								
		H-3	C	CK	SA	2"	C	O/C	C	Active
		PS	Q	61						
		SC-C	R	61						
		SC-O	R	61						
BFD-69	AFW 9321-F-2019	#22 ABFWP Bearing Cooling Water Relief Valve								
		H-4	C	RE	SA	2"	C	O/C	C	Active
		R	R1							
BFD-79	AFW 9321-F-2019	Aux. FW to #21 Stm. Gen. Check Valve								
		B-2	B	CK	SA	4"	C	O/C	C	Active
		PS	CS	10				Verified during normal operations.		
		SC-C	D	10				Verified during normal operations.		
		SC-O	R	10						
BFD-79-1	AFW 9321-F-2019	Aux. FW to #22 Stm. Gen. Check Valve								
		B-3	B	CK	SA	4"	C	O/C	C	Active
		PS	CS	10				Verified during normal operations.		
		SC-C	D	10				Verified during normal operations.		
		SC-O	R	10						
BFD-79-2	AFW 9321-F-2019	Aux. FW to #24 Stm. Gen. Check Valve								
		B-4	B	CK	SA	4"	C	O/C	C	Active
		PS	CS	10				Verified during normal operations.		
		SC-C	D	10				Verified during normal operations.		
		SC-O	R	10						
BFD-79-3	AFW 9321-F-2019	Aux. FW to #23 Stm. Gen. Check Valve								
		B-6	B	CK	SA	4"	C	O/C	C	Active
		PS	CS	10						
		SC-C	D	10						
		SC-O	R	10						
CC-39	IACC 9321-F-2722	#21 Instrument Air Closed Cooling Water Pump Discharge Check Valve								
		H-2	C	CK	SA	1.25"	O/C	O/C	C	Active
		SC-C	Q							
		SC-O	Q							
CC-39-1	IACC 9321-F-2722	#22 Instrument Air Closed Cooling Water Pump Discharge Check Valve								
		H-2	C	CK	SA	1.25"	O/C	O/C	C	Active
		SC-C	Q							
		SC-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
CC-56	IACC 9321-F-2722	#21 Instrument Air Aftercooler Cooling Water Inlet Relief Valve H-5	C	RE	SA	0.75"	C	O/C	C	Active
		R	R1							
CC-56-1	IACC 9321-F-2722	#22 Instrument Air Aftercooler Cooling Water Inlet Relief Valve I-5	C	RE	SA	0.75"	C	O/C	C	Active
		R	R1							
CD-109	AFW 9321-F-2018	CST Inlet Header Check Valve D-5	C	CK	SA	6"	C	C	C	Active
		SC-C	R	72						
CD-631	AFW 9321-F-2018	Cond. Tank Nitrogen Blanket Inlet Check C-6	C	CK	SA	1"	O	C	C	Active
		SC-C	CS	75						
CD-632	AFW 9321-F-2018	Cond. Tank Nitrogen Blanket Inlet Check C-6	C	CK	SA	1"	O	C	C	Active
		SC-C	CS	75						
CT-26	AFW 9321-F-2018	ABFP 21 Condensate Suction Check B-4	C	CK	SA	6"	C	O	C	Active
		PS	Q	22						
		SC-O	R	22						
CT-29	AFW 9321-F-2018	ABFP 22 Condensate Suction Check B-5	C	CK	SA	6"	C	O	C	Active
		PS	Q	22						
		SC-O	R	22						
CT-32	AFW 9321-F-2018	ABFP 23 Condensate Suction Check B-3	C	CK	SA	6"	C	O	C	Active
		PS	Q	22						
		SC-O	R	22						
CT-35	AFW 9321-F-2018	Aux BFP-21 Suction A-4	C	RE	SA	0.75"	C	O/C	C	Active
		R	R1							
CT-35-1	AFW 9321-F-2018	Aux BFP-22 Suction A-5	C	RE	SA	0.75"	C	O/C	C	Active
		R	R1							
CT-35-2	AFW 9321-F-2018	Aux BFP-23 Suction A-3	C	RE	SA	0.75"	C	O/C	C	Active
		R	R1							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
CT-6	AFW 9321-F-2018	Condensate Storage Tank Outlet Stop B-6	C	BU	M	12"	O	O	B	Passive
		PIT	2Y							
CT-64	AFW 9321-F-2018	Condensate To Auxiliary Boiler Feed Pump Inlet Header Stop C-3	C	GA	M	12"	LO	O	B	Passive
		PIT	2Y							
CT-714	AFW 9321-F-2018	CST Nitrogen Blanket Inlet Check Valve B-5	C	CK	SA	1"	O	C	C	Active
		SC-C	CS	75						
CT-715	AFW 9321-F-2018	Cond. Tank Nitrogen Blanket Inlet Check Vlv B-5	C	CK	SA	1"	O	C	C	Active
		SC-C	CS	75						
CT-718	AFW 9321-F-2018	Condensate Storage Tank Vacuum/Press. Relief A-6	C	VR	SA	3"	C	O	C	Active
		R	R1							
CT-726	AFW 9321-F-2018	Condensate Storage Tank Vacuum/Press. Relief A-6	C	VR	SA	8"	C	O	C	Active
		R	R1							
CT-727	AFW 9321-F-2018	Condensate Storage Tank Vacuum/Press. Relief B-6	C	VR	SA	8"	C	O	C	Active
		R	R1							
E-1	PACV 208879	Instrument Air to CB PA Vent NA	E	DIA	AO	3"	C	O/C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
E-2	PACV 208879	CB Atmosphere to Pa Vent NA	E	DIA	AO	3"	C	O/C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.						COMMENTS
E-3	PACV 208879	Pri Vent Iso Stop NA		E	DIA	AO	3"	C	O/C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
E-5	PACV 208879	Pri Vent Iso Stop NA		E	DIA	AO	3"	C	O/C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
FCV-1111	SW 9321-F-2722	Service Water Pump 24/25/26 Supply to Conventional Plant Cooling Loads									
		C-4		C	BU	M	16"	LO/LC	C	B	Active
		S-C	CS	41							
FCV-1112	SW 9321-F-2722	Service Water Pump 21/22/23 Supply to Conventional Plant Cooling Loads									
		C-4		C	BU	M	16"	LO/LC	C	B	Active
		S-C	CS	41							
FCV-1121	AFW 9321-F-2019	Controls Flow In Recirculation Line									
		H-2		C	GA	AO	2"	O	O/C	B	Active
		F-O	Q								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
FCV-1123	AFW 9321-F-2019	23 AFP Recirc Flow Control H-2	C	GA	AO	2"	O	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
FCV-1170	HVAC 9321-F-4022	CB Purge Air Supply Inside D-5	NA	BU	AO	36"	C	C	A	Active
		F-C	CS	23						
		L-J	J							
		PIT	2Y							
		S-C	CS	23						
		T-C	CS	23						
FCV-1171	HVAC 9321-F-4022	CB Purge Air Supply Outside E-5	E	BU	AO	36"	C	C	A	Active
		F-C	CS	23						
		L-J	J							
		PIT	2Y							
		S-C	CS	23						
		T-C	CS	23						
FCV-1172	HVAC 9321-F-4022	CB Purge Exhaust Inside E-5	NA	BU	AO	36"	C	C	A	Active
		F-C	CS	23						
		L-J	J							
		PIT	2Y							
		S-C	CS	23						
		T-C	CS	23						
FCV-1173	HVAC 9321-F-4022	CB Purge Exhaust Outside F-5	E	BU	AO	36"	O/C	C	A	Active
		F-C	CS	23						
		L-J	J							
		PIT	2Y							
		S-C	CS	23						
		T-C	CS	23						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
FCV-1176	SW 9321-F-2722	Diesel Generator Service Water Cooling Outlet Flow Control Valve F-2	C	BU	AO	6"	O	O	B	Active
		F-O	Q							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
FCV-1176A	SW 9321-F-2722	Diesel Generator Service Water Cooling Outlet Flow Control Bypass Valve F-3	C	BU	AO	6"	O	O	B	Active
		F-O	Q							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
FCV-405A	AFW 9321-F-2019	Aux BFP-22 Disch To Stm Gen-21 D-1	C	GA	AO	2"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
FCV-405B	AFW 9321-F-2019	Aux BFP-22 Disch To Stm Gen-22 D-2	C	GA	AO	2"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
FCV-405C	AFW 9321-F-2019	Aux BFP-22 Disch To Stm Gen-23 D-5	C	GA	AO	2"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
FCV-405D	AFW 9321-F-2019	Aux BFP-22 Disch To Stm Gen-24 D-4	C	GA	AO	2"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
FCV-406A	AFW 9321-F-2019	AFP 21 to Steam Generator 21 Feedwater Regulator Valve B-1	C	GA	AO	2"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
FCV-406B	AFW 9321-F-2019	AFP 21 to Steam Generator 22 Feedwater Regulator Valve B-2	C	GA	AO	2"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
FCV-406C	AFW 9321-F-2019	AFP 23 to Steam Generator 23 Feedwater Regulator Valve B-5	C	GA	AO	2"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
FCV-406D	AFW 9321-F-2019	AFP 23 to Steam Generator 24 Feedwater Regulator Valve B-4	C	GA	AO	2"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
FCV-46-1	SW 226037	R-46 Sample Line Isolation Valve B-4	C	BL	MO	0.75"	O/C	O	B	Active
		S-O	Q							Skid Mounted
		T-O	Q							Skid Mounted
FCV-46-2	SW 226037	R-46 Sample Inlet Flow Control Valve D-4	C	3WAY	MO	0.75"	O/C	O	B	Active
		S-O	Q							Skid Mounted
		T-O	Q							Skid Mounted
FCV-46-3	SW 226037	R-46 Sampler Outlet Flow Control Valve E-3	C	3WAY	MO	0.75"	O/C	O	B	Active
		S-O	Q							Skid Mounted
		T-O	Q							Skid Mounted
FCV-53-1	SW 242687	R-53 Sample Line Isolation Valve B-4	C	BL	MO	0.75"	O/C	O	B	Active
		S-O	Q							Skid Mounted
		T-O	Q							Skid Mounted
FCV-53-2	SW 242687	R-53 Sample Inlet Flow Control Valve D-4	C	3WAY	MO	0.75"	O/C	O	B	Active
		S-O	Q							Skid Mounted
		T-O	Q							Skid Mounted
FCV-53-3	SW 242687	R-53 Sampler Outlet Flow Control Valve E-3	C	3WAY	MO	0.75"	O/C	O	B	Active
		S-O	Q							Skid Mounted
		T-O	Q							Skid Mounted
FCV-625	CCW 227781	CCW from RCP Thermal Barriers Outlet Isolation Valve G-2	E	GA	MO	3"	O	C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	CS	1						
		T-C	CS	1						
HCV-1118	MS 9321-F-2017	Turbine Driven Auxiliary Feedwater Pump Governor Valve I-6	C	AN	AO		C	O	B	Active
		PS	Q	59						Skid Mounted
		S-O	R	59						Skid Mounted
		T-O	R	59						Skid Mounted

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
HCV-123	CVCS 208168	Excess Letdown Hx-21 Outlet to VCT D-5	A	GL	AO	1"	C	C	A	Passive
		L-T	D					RCS Identified Leakage - Not individually tested.		
HCV-3100	RCS 9321-F-2738	Reactor Remote Head Vent Line E-4	A	GL	MO	0.75"	LC	O/C	B	Active
		PIT	2Y							
		S-C	CS	29						
		S-O	CS	29						
		T-C	CS	29						
		T-O	CS	29						
HCV-3101	RCS 9321-F-2738	Reactor Remote Head Vent Line E-4	A	GL	MO	0.75"	LC	O/C	B	Active
		PIT	2Y							
		S-C	CS	29						
		S-O	CS	29						
		T-C	CS	29						
		T-O	CS	29						
HCV-638	RHR 9321-F-2720	HX-21 Disch To SIS Manifold G-4	B	BU	MO	8"	O	T	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
HCV-640	RHR 9321-F-2720	HX-22 Disch To SIS Manifold F-5	B	BU	MO	8"	O	T	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
IA-39	IA 9321-F-2036	Inst Air To Containment Bldg B-6	E	CK	SA	2"	O	O/C	A/C	Active
		L-J	J							
		SC-C	R	58						
IIP-500	FW 308762	SG 22 LI-5002-1 Instrument Valve B-4	E	GL	M	0.25"	C	C	A	Passive
		L-J	J							
IIP-501	FW 308762	SG 22 LI-5002-1 Instrument Valve B-4	E	GL	M	0.25"	C	C	A	Passive
		L-J	J							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
IIP-502	FW 308762	SG 21 LI-5001-1 Instrument Valve B-4	E	GL	M	0.25"	C	C	A	Passive
		L-J	J							
IIP-503	FW 308762	SG 21 LI-5001-1 Instrument Valve B-4	E	GL	M	0.25"	C	C	A	Passive
		L-J	J							
IIP-504	RCS 308762	Pressurizer LI-3101-1 Instrument Stop Valve B-4	E	GL	M	0.25"	LC	C	A	Passive
		L-J	J							
IIP-505	RCS 308762	Pressurizer LI-3101-1 Instrument Stop Valve B-4	E	GL	M	0.25"	LC	C	A	Passive
		L-J	J							
IIP-506	RCS 308762	Pressurizer PI-3105-1 Instrument Stop Valve B-4	E	GL	M	0.25"	LC	C	A	Passive
		L-J	J							
IIP-507	RCS 308762	Pressurizer PI-3105-1 Instrument Stop Valve B-4	E	GL	M	0.25"	LC	C	A	Passive
		L-J	J							
LCV-112B	CVCS 9321-F-2736	Emergency Refueling Water Makeup to Charging PPS Section E-2	B	BU	AO	4"	C	O/C	B	Active
		F-C	CS	18						
		PIT	2Y							
		S-C	CS	18						
		S-O	CS	18						
		T-C	CS	18						
		T-O	CS	18						
LCV-112C	CVCS 9321-F-2736	VCT Outlet to Charging Pump Section D-4	B	GA	MO	4"	O	O/C	B	Active
		PIT	2Y							
		S-C	CS	19						
		S-O	CS	19						
		T-C	CS	19						
		T-O	CS	19						
LCV-1158	AFW 9321-F-2018	Cond. Storage Tnk Level C-3	C	BU	AO	12"	O	C	B	Active
		F-C	Q							
		S-C	Q							
		T-C	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
MS-1-21	MS 9321-F-2017	#21 Main Steam Isolation Valve E-4	B	SC	AO	28"	O	C	B/C	Active
		F-C	CS	28						
		PIT	2Y							
		S-C	CS	28						
		T-C	CS	28						
MS-1-22	MS 9321-F-2017	#22 Main Steam Isolation Valve E-6	B	SC	AO	28"	O	C	B/C	Active
		F-C	CS	28						
		PIT	2Y							
		S-C	CS	28						
		T-C	CS	28						
MS-1-23	MS 9321-F-2017	#23 Main Steam Isolation Valve E-3	B	SC	AO	28"	O	C	B/C	Active
		F-C	CS	28						
		PIT	2Y							
		S-C	CS	28						
		T-C	CS	28						
MS-1-24	MS 9321-F-2017	#24 Main Steam Isolation Valve E-2	B	SC	AO	28"	O	C	B/C	Active
		F-C	CS	28						
		PIT	2Y							
		S-C	CS	28						
		T-C	CS	28						
MS-2A	MS 9321-F-2017	#21 Main Steam Non-return Valve F-4	B	CK	SA	28"	O	C	C	Active
		SC-C	CS	50						
MS-2B	MS 9321-F-2017	#22 Main Steam Non-return Valve F-6	B	CK	SA	28"	O	C	C	Active
		SC-C	CS	50						
MS-2C	MS 9321-F-2017	#23 Main Steam Non-return Valve F-3	B	CK	SA	28"	O	C	C	Active
		SC-C	CS	50						
MS-2D	MS 9321-F-2017	#24 Main Steam Non-return Valve F-2	B	CK	SA	28"	O	C	C	Active
		SC-C	CS	50						

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.						COMMENTS
MS-41	MS 9321-F-2017	#22 S/G Steam Supply to #22 AFW Turbine Driven Pump									
		B-4	B	SC	M	4"	O	O/C	B/C	Active	
		PS	Q	63							
		S-C	Q								
		S-O	Q								
		SC-C	R	63							
		SC-O	R	63							
MS-42	MS 9321-F-2017	#23 S/G Steam Supply to #22 AFW Turbine Driven Pump									
		B-3	B	SC	M	4"	O	O/C	B/C	Active	
		PS	Q	63							
		S-C	Q								
		S-O	Q								
		SC-C	R	63							
		SC-O	R	63							
MS-45A	MS 9321-F-2017	#21 S/G Main Steam Safety Valve									
		C-4	B	RE	SA	6"	C	O/C	C	Active	
		R	R1								
MS-45B	MS 9321-F-2017	#22 S/G Main Steam Safety Valve									
		C-6	B	RE	SA	6"	C	O/C	C	Active	
		R	R1								
MS-45C	MS 9321-F-2017	#23 S/G Main Steam Safety Valve									
		C-3	B	RE	SA	6"	C	O/C	C	Active	
		R	R1								
MS-45D	MS 9321-F-2017	#24 S/G Main Steam Safety Valve									
		C-2	B	RE	SA	6"	C	O/C	C	Active	
		R	R1								
MS-46A	MS 9321-F-2017	#21 S/G Main Steam Safety Valve									
		C-4	B	RE	SA	6"	C	O/C	C	Active	
		R	R1								
MS-46B	MS 9321-F-2017	#22 S/G Main Steam Safety Valve									
		C-6	B	RE	SA	6"	C	O/C	C	Active	
		R	R1								
MS-46C	MS 9321-F-2017	#23 S/G Main Steam Safety Valve									
		C-3	B	RE	SA	6"	C	O/C	C	Active	
		R	R1								
MS-46D	MS 9321-F-2017	#24 S/G Main Steam Safety Valve									
		C-2	B	RE	SA	6"	C	O/C	C	Active	
		R	R1								

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
MS-47A	MS 9321-F-2017	#21 S/G Main Steam Safety Valve C-4	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-47B	MS 9321-F-2017	#22 S/G Main Steam Safety Valve C-6	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-47C	MS 9321-F-2017	#23 S/G Main Steam Safety Valve C-3	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-47D	MS 9321-F-2017	#24 S/G Main Steam Safety Valve C-2	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-48A	MS 9321-F-2017	#21 S/G Main Steam Safety Valve D-4	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-48B	MS 9321-F-2017	#22 S/G Main Steam Safety Valve D-6	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-48C	MS 9321-F-2017	#23 S/G Main Steam Safety Valve D-3	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-48D	MS 9321-F-2017	#24 S/G Main Steam Safety Valve D-2	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-49A	MS 9321-F-2017	#21 S/G Main Steam Safety Valve D-4	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-49B	MS 9321-F-2017	#22 S/G Main Steam Safety Valve D-6	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-49C	MS 9321-F-2017	#23 S/G Main Steam Safety Valve D-3	B	RE	SA	6"	C	O/C	C	Active
		R	R1							
MS-49D	MS 9321-F-2017	#24 S/G Main Steam Safety Valve D-2	B	RE	SA	6"	C	O/C	C	Active
		R	R1							

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
MS-52	MS 9321-F-2017	Turbine Driven Auxilliary Feedwater Pump Steam Supply Relief Valve H-6	C	RE	SA	4"	C	O/C	C	Active
		R	R1							
MS-577	MS 9321-F-2017	Turbine Driven Auxilliary Feedwater Pump Steam Control Valve I-6	C	CK	SA	3"	O	O/C	B/C	Active
		S-O	R	59				Skid Mounted		
		SC-C	R	59				Skid Mounted		
MS-58A-1	MS 9321-F-2017	#21 MSIV Upstream Drain Valve E-4	B	GA	M	1"	O	C	B	Active
		S-C	Q							
MS-58B-1	MS 9321-F-2017	#22 MSIV Upstream Drain Valve E-5	B	GA	M	1"	O	C	B	Active
		S-C	Q							
MS-58C-1	MS 9321-F-2017	#23 MSIV Upstream Drain Valve E-3	B	GA	M	1"	O	C	B	Active
		S-C	Q							
MS-58D-1	MS 9321-F-2017	#24 MSIV Upstream Drain Valve E-1	B	GA	M	1"	O	C	B	Active
		S-C	Q							
MS-91A	MS 9321-F-2017	Root Valve to MST-1 B-4	B	GL	M	1.5"	O	C	B	Active
		S-C	Q							
MS-91B	MS 9321-F-2017	Root Valve to MST-2 E-5	B	GL	M	1.5"	O	C	B	Active
		S-C	Q							
MS-91C	MS 9321-F-2017	Root Valve to MST-3 B-3	B	GL	M	1.5"	O	C	B	Active
		S-C	Q							
MS-91D	MS 9321-F-2017	Root Valve to MST-4 E-1	B	GL	M	1.5"	O	C	B	Active
		S-C	Q							
MW-17	AFW 9321-F-2018	City Water Supply To Containment Isolation Valve D-6	E	GA	M	2"	LC	C	A	Passive
		L-J	J							
MW-17-1	AFW 9321-F-2018	City Water Supply To Containment Isolation Valve D-6	E	GA	M	2"	LC	C	A	Passive
		L-J	J							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
PCV-1134	MS 9321-F-2017	#21 S/G Atmospheric Dump Valve D-4	B	AN	AO	6"	C	O/C	B	Active
		F-C	Q							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1135	MS 9321-F-2017	#22 S/G Atmospheric Dump Valve D-5	B	AN	AO	6"	C	O/C	B	Active
		F-C	Q							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1136	MS 9321-F-2017	#23 S/G Atmospheric Dump Valve D-3	B	AN	AO	6"	C	O/C	B	Active
		F-C	Q							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1137	MS 9321-F-2017	#24 S/G Atmospheric Dump Valve D-1	B	AN	AO	6"	C	O/C	B	Active
		F-C	Q							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1139	MS 9321-F-2017	Main Steam Supply to Auxilliary Feedwater Turbine Regulator Valve H-6	C	GL	AO	2.5"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1187	AFW 9321-F-2018	Aux BFP-21 City Wtr Suction B-4	C	GA	AO	6"	C	NA	B	Passive
		PIT	2Y							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
PCV-1188	AFW 9321-F-2018	Auxiliary Feed Pump 22 City Water Suction Stop B-5	C	GA	AO	6"	C	NA	B	Passive
		PIT	2Y							
PCV-1189	AFW 9321-F-2018	Auxiliary Feed Pump 23 City Water Suction Stop B-3	C	GA	AO	6"	C	NA	B	Passive
		PIT	2Y							
PCV-1190	HVAC 9321-F-4022	CB Pressure Relief A-1	NA	BU	AO	10"	C	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
PCV-1191	HVAC 9321-F-4022	CV Pressure Relief B-1	E	BU	AO	10"	C	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
PCV-1192	HVAC 9321-F-4022	CV Pressure Relief B-1	E	BU	AO	10"	C	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
PCV-1213	AFW 9321-F-2019	#22 ABFW Pmp Bearing Cooling Wtr Pressure Regulating Valve G-4	C	GA	AO	1"	O	O/C	B	Active
		F-O	Q					Skid Mounted		
		S-C	Q					Skid Mounted		
		S-O	Q					Skid Mounted		
		T-C	Q					Skid Mounted		
		T-O	Q					Skid Mounted		

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.				COMMENTS		
PCV-1214	SGBD 9321-F-2729	#21 Steam Generator Blowdown Containment Isolation Valve									
		C-3		B	GL	AO	2"	O	C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		T-C	Q								
PCV-1214A	SGBD 9321-F-2729	#21 Steam Generator Blowdown Containment Isolation Valve									
		D-3		B	GL	AO	2"	O	C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		T-C	Q								
PCV-1215	SGBD 9321-F-2729	#22 Steam Generator Blowdown Containment Isolation Valve									
		C-4		B	GL	AO	2"	O	C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		T-C	Q								
PCV-1215A	SGBD 9321-F-2729	#22 Steam Generator Blowdown Containment Isolation Valve									
		D-4		B	GL	AO	2"	O	C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		T-C	Q								
PCV-1216	SGBD 9321-F-2729	#23 Steam Generator Blowdown Containment Isolation Valve									
		C-4		B	GL	AO	2"	O	C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		T-C	Q								

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
PCV-1216A	SGBD 9321-F-2729	#23 Steam Generator Blowdown Containment Isolation Valve D-4	B	GL	AO	2"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
PCV-1217	SGBD 9321-F-2729	#24 Steam Generator Blowdown Containment Isolation Valve C-4	B	GL	AO	2"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
PCV-1217A	SGBD 9321-F-2729	#24 Steam Generator Blowdown Containment Isolation Valve D-4	B	GL	AO	2"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
PCV-1228	IA 9321-F-2036	Air Filter Discharge to Containment Bldg B-5	E	GA	AO	2"	O	C	A	Active
		F-C	R	26						
		L-J	J							
		PIT	2Y							
		S-C	R	26						
		T-C	R	26						
PCV-1229	RMS 9321-F-2025	SJAE Exhaust to Vapor Containment Isolation Valve A-4	E	GL	AO	4"	C	O/C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.				COMMENTS		
PCV-1230	RMS 9321-F-2025	SJAE Exhaust to Vapor Containment Isolation Valve									
		A-4		E	GL	AO	4"	C	O/C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
PCV-1231	WCPS 9321-F-2025	WCPS to SJAE Header Pressurization Valve									
		B-4		B	GA	AO	1"	O	O/C	B	Active
		F-O	Q								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
PCV-1233	WCPS 9321-F-2025	WCPS to SJAE Header Pressurization Valve									
		B-3		B	GA	AO	1"	O	O/C	B	Active
		F-O	Q								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
PCV-1234	RMS 9321-F-2726	Containment Air Sample CIV									
		B-1		E	DIA	AO	1"	O	O/C	A	Active
		F-C	Q								
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
PCV-1235	RMS 9321-F-2726	Containment Air Sample CIV B-1	E	DIA	AO	1"	O	O/C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1236	RMS 9321-F-2726	Containment Air Sample CIV B-1	E	DIA	AO	1"	O	O/C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1237	RMS 9321-F-2726	Containment Air Sample CIV B-1	E	DIA	AO	1"	O	O/C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1238	WCPS 9321-F-2726	WCPS to PCV-1234/PCV-1235 Supply B-1	B	GA	AO	0.5"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
PCV-1239	WCPS 9321-F-2726	WCPS to PCV-1234/PCV-1235 Supply B-1	B	GA	AO	0.5"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1240	WCPS 9321-F-2726	WCPS to PCV-1236/PCV-1237 Supply B-2	B	GA	AO	0.5"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1241	WCPS 9321-F-2726	WCPS to PCV-1236/PCV-1237 Supply B-1	B	GA	AO	0.5"	C	O/C	B	Active
		F-O	Q							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
PCV-1310A	MS 9321-F-2017	Turbine Drive Auxillary Feedwater Pump Steam Supply Control Valve G-5	C	GA	AO	4"	O	O/C	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							
PCV-1310B	MS 9321-F-2017	Turbine Drive Auxillary Feedwater Pump Steam Supply Control Valve G-5	C	GA	AO	4"	O	O/C	B	Active
		PIT	2Y							
		S-C	Q							
		T-C	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
PCV-455A	RCS	Loop 4 Cold Leg to Pressurizer Spray								
	9321-F-2738	F-4	A	GL	AO	3"	O/C	O/C	B	Active
		F-C	CS	47						
		PIT	2Y							
		S-C	CS	47						
		S-O	CS	47						
		T-C	CS	47						
		T-O	CS	47						
PCV-455B	RCS	Loop 3 Cold Leg to Pressurizer Spray								
	9321-F-2738	F-5	A	GL	AO	3"	O/C	O/C	B	Active
		F-C	CS	47						
		PIT	2Y							
		S-C	CS	47						
		S-O	CS	47						
		T-C	CS	47						
		T-O	CS	47						
PCV-455C	RCS	Pressurizer Power Operated Relief Valve								
	9321-F-2738	H-6	A	GL	AO	3"	C	O/C	B	Active
		F-C	CS	49						
		PIT	2Y							
		S-C	CS	49						
		S-O	CS	49						
		T-C	CS	49						
		T-O	CS	49						
PCV-456	RCS	Pressurizer Power Operated Relief Valve								
	9321-F-2738	I-6	A	GL	AO	3"	C	O/C	B	Active
		F-C	CS	49						
		PIT	2Y							
		S-C	CS	49						
		S-O	CS	49						
		T-C	CS	49						
		T-O	CS	49						
PCV-464	RCS	Pressurizer Safety Valve								
	9321-F-2738	H-6	A	RE	SA	4"	C	O/C	C	Active
		PIT	2Y							
		R	R1							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
PCV-466	RCS 9321-F-2738	Pressurizer Safety Valve G-6	A	RE	SA	4"	C	O/C	C	Active
		PIT R	2Y R1							
PCV-468	RCS 9321-F-2738	Pressurizer Safety Valve G-6	A	RE	SA	4"	C	O/C	C	Active
		PIT R	2Y R1							
PRV-7673	PSS 9321-F-2745	SIS Accumulator Sampling Relief Valve B-6	B	RE	SA	0.25"	C	O/C	C	Active
		R	R1							
PRV-7675	PSS 9321-F-2745	Pressurizer Liquid Space Sample Relief Valve B-4	A	RE	SA	0.25"	C	O/C	C	Active
		R	R1							
PRV-7693	WDS 9321-F-2719	Reactor Coolant Drain Tank Pump Discharge Relief C-2	NA	RE	SA	0.25"	C	O/C	C	Active
		R	R1							
PRV-7694	WDS 9321-F-2719	Containment Sump Pump Discharge Relief Valve C-2	NA	RE	SA	0.25"	C	O/C	C	Active
		R	R1							
RCV-017	CCW 227781	Component Cooling Surge Tank Vent E-6	C	GL	AO	2"	O	C	B	Active
		F-C PIT S-C T-C	Q 2Y Q Q							
SA-24	SA 9321-F-2035	Station Air Containment Isolation Valve C-4	E	DIA	M	2"	LC	C	A	Passive
		L-J	J							
SA-24-1	SA 9321-F-2035	Station Air Containment Isolation Valve C-5	E	DIA	M	2"	LC	C	A	Passive
		L-J	J							
SOV-1177	IACC 9321-F-2722	#21 Instrument Air Compressor After Cooler Cooling Water Inlet Solenoid Valve H-5	C	GA	SO	1"	O/C	O	B	Active
		S-O	Q		36					
SOV-1178	IACC 9321-F-2722	#22 Instrument Air Compressor After Cooler Cooling Water Inlet Solenoid Valve I-5	C	GA	SO	1"	O/C	O	B	Active
		S-O	Q		36					

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
SOV-3416	WDS 9321-F-2719	Nitrogen to RCDT Isolation Valve C-4	E	GA	SO	1"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
SOV-3417	WDS 9321-F-2719	Nitrogen to RCDT Isolation Valve C-4	E	GA	SO	1"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
SOV-3418	RCS 9321-F-2738	N2 Supply to PRT B-5	E	GA	SO	0.75"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
SOV-3419	RCS 9321-F-2738	N2 Supply to PRT B-5	E	GA	SO	0.75"	O	C	A	Active
		F-C	Q							
		L-J	J							
		PIT	2Y							
		S-C	Q							
		T-C	Q							
SOV-5018	PACS 208479	Containment Air Sample Ch-1 CIV C-5	E	GA	SO	0.375"	C	C	A	Passive
		L-J	J							
		PIT	2Y							
SOV-5019	PACS 208479	Containment Air Sample Ch-1 CIV C-5	E	GA	SO	0.375"	C	C	A	Passive
		L-J	J							
		PIT	2Y							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
SOV-5020	PACS 208479	Containment Air Sample Ch-2 CIV C-3	E	GA	SO	0.375"	C	C	A	Passive
		L-J PIT	J 2Y							
SOV-5021	PACS 208479	Containment Air Sample Ch-2 CIV C-3	E	GA	SO	0.375"	C	C	A	Passive
		L-J PIT	J 2Y							
SOV-5022	PACS 208479	Containment Air Sample Return Ch-1 CIV C-2	E	GA	SO	0.375"	C	C	A	Passive
		L-J PIT	J 2Y							
SOV-5023	PACS 208479	Containment Air Sample Return Ch-1 CIV C-2	E	GA	SO	0.375"	C	C	A	Passive
		L-J PIT	J 2Y							
SOV-5024	PACS 208479	Containment Air Sample Return Ch-2 CIV C-1	E	GA	SO	0.375"	C	C	A	Passive
		L-J PIT	J 2Y							
SOV-5025	PACS 208479	Containment Air Sample Return Ch-2 CIV C-1	E	GA	SO	0.375"	C	C	A	Passive
		L-J PIT	J 2Y							
SOV-EW-1	PACV 208879	PA CB Exh Isolation NA	B	PLUG	SO	0.25"	O	O/C	B	Active
		F-C S-C T-C	Q Q Q							
SOV-EW-2	PACV 208879	PA CB Exh Isolation NA	B	PLUG	SO	0.25"	O	O/C	B	Active
		F-C S-C T-C	Q Q Q							
SWN-1	SW 9321-F-2722	#21 Service Water Pump Discharge Check Valve E-1	C	CK	SA	14"	O/C	O/C	C	Active
		PS SC-C SC-O	Q Q R2		31 31					

VALVE TEST TABLE

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
SWN-1-1	SW 9321-F-2722	#22 Service Water Pump Discharge Check Valve D-1	C	CK	SA	14"	O/C	O/C	C	Active
		PS	Q		31					
		SC-C	Q							
		SC-O	R2		31					
SWN-1-2	SW 9321-F-2722	#23 Service Water Pump Discharge Check Valve D-1	C	CK	SA	14"	O/C	O/C	C	Active
		PS	Q		31					
		SC-C	Q							
		SC-O	R2		31					
SWN-1-3	SW 9321-F-2722	#24 Service Water Pump Discharge Check Valve C-1	C	CK	SA	14"	O/C	O/C	C	Active
		PS	Q		31					
		SC-C	Q							
		SC-O	R2		31					
SWN-1-4	SW 9321-F-2722	#25 Service Water Pump Discharge Check Valve B-1	C	CK	SA	14"	O/C	O/C	C	Active
		PS	Q		31					
		SC-C	Q							
		SC-O	R2		31					
SWN-1-5	SW 9321-F-2722	#26 Service Water Pump Discharge Check Valve A-1	C	CK	SA	14"	O/C	O/C	C	Active
		PS	Q		31					
		SC-C	Q							
		SC-O	R2		31					
SWN-27	SW 9321-F-2722	Service Water Supply to #21 Instrument Air CCHX from SWP 24/25/26 Header G-4	C	GA	M	2.5"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-27-1	SW 9321-F-2722	Service Water Supply to #22 Instrument Air CCHX from SWP 24/25/26 Header G-4	C	GA	M	2.5"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-29	SW 209762	Service Water Supply to EDG from SWP 24/25/26 Header D-1	C	BU	M	10"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
SWN-30	SW 209762	Service Water Supply to EDG from SWP 21/22/23 Header D-1	C	BU	M	10"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-31	SW 209762	Service Water Supply to CCHX from SWP 24/25/26 Header E-1	C	BU	M	20"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-31-1	SW 209762	CFCU Service Water Supply Cross Connect Valve E-1	C	BU	M	18"	O	O/C	B	Active
		S-C	Q							
SWN-32	SW 209762	Service Water Supply to CCHX from SWP 21/22/23 Header E-1	C	BU	M	20"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-33	SW 209762	CCHX Service Water Supply Cross Connect Valve E-1	C	BU	M	18"	O	O/C	B	Active
		S-C	Q							
SWN-38	SW 209762	Service Water Supply to CFCUs from SWP 24/25/26 Header C-1	C	BU	M	18"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-39	SW 209762	Service Water Supply to CFCUs from SWP 21/22/23 Header D-1	C	BU	M	18"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-4	SW 9321-F-2722	Service Water Supply to Screen Wash and Bearing Cooling from SWP 21/22/23 Header A-3	C	BU	M	8"	O/C	O/C	B	Active
		S-C	Q							
SWN-40	SW 209762	CFCU Service Water Supply Cross Connect Valve C-1	C	BU	M	18"	O	O/C	B	Active
		S-C	CS	54						
SWN-40-1	SW 209762	CFCU Service Water Supply Cross Connect Valve C-1	C	BU	M	18"	O	O/C	B	Active
		S-C	CS	54						

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
SWN-41-1A	SW 209762	#21 CFCU Service Water Inlet Isolation Valve								
		D-2	E	BU	MO	10"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-41-1B	SW 209762	#21 CFCU Service Water Inlet Isolation Valve								
		D-1	E	BU	MO	10"	O	O/C	A	Active
		L-T	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-41-2A	SW 209762	#22 CFCU Service Water Inlet Isolation Valve								
		E-2	E	BU	MO	10"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-41-2B	SW 209762	#22 CFCU Service Water Inlet Isolation Valve								
		E-1	E	BU	MO	10"	O	O/C	A	Active
		L-T	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-41-3A	SW 209762	#23 CFCU Service Water Inlet Isolation Valve								
		C-2	E	BU	MO	10"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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VALVE NO	SYSTEM	VALVE DESCRIPTION		Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
	P + ID No	Drawing Coordinates									
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.				COMMENTS		
SWN-41-3B	SW	#23 CFCU Service Water Inlet Isolation Valve									
	209762	C-1		E	BU	MO	10"	O	O/C	A	Active
		L-T	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
SWN-41-4A	SW	#24 CFCU Service Water Inlet Isolation Valve									
	209762	A-2		E	BU	MO	10"	O	O/C	A	Active
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
SWN-41-4B	SW	#24 CFCU Service Water Inlet Isolation Valve									
	209762	A-1		E	BU	MO	10"	O	O/C	A	Active
		L-T	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
SWN-41-5A	SW	#25 CFCU Service Water Inlet Isolation Valve									
	209762	F-2		E	BU	MO	10"	O	O/C	A	Active
		L-J	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								
SWN-41-5B	SW	#25 CFCU Service Water Inlet Isolation Valve									
	209762	F-1		E	BU	MO	10"	O	O/C	A	Active
		L-T	J								
		PIT	2Y								
		S-C	Q								
		S-O	Q								
		T-C	Q								
		T-O	Q								

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
SWN-42-1	SW 209762	#21 CFCU Service Water Inlet Relief Valve D-2	E	RE	SA	1.5"	C	O/C	A/C	Active
		L-J R	J R1							
SWN-42-2	SW 209762	#22 CFCU Service Water Inlet Relief Valve E-2	E	RE	SA	1.5"	C	O/C	A/C	Active
		L-J R	J R1							
SWN-42-3	SW 209762	#23 CFCU Service Water Inlet Relief Valve C-2	E	RE	SA	1.5"	C	O/C	A/C	Active
		L-J R	J R1							
SWN-42-4	SW 209762	#24 CFCU Service Water Inlet Relief Valve B-2	E	RE	SA	1.5"	C	O/C	A/C	Active
		L-J R	J R1							
SWN-42-5	SW 209762	#25 CFCU Service Water Inlet Relief Valve F-2	E	RE	SA	1.5"	C	O/C	A/C	Active
		L-J R	J R1							
SWN-43-1	SW 209762	#21 CFCU Service Water Inlet Drain Valve D-2	E	GA	M	2.5"	C	C	A	Passive
		L-J	J							
SWN-43-2	SW 209762	#22 CFCU Service Water Inlet Drain Valve E-2	E	GA	M	2.5"	C	C	A	Passive
		L-J	J							
SWN-43-3	SW 209762	#23 CFCU Service Water Inlet Drain Valve C-2	E	GA	M	2.5"	C	C	A	Passive
		L-J	J							
SWN-43-4	SW 209762	#24 CFCU Service Water Inlet Drain Valve B-2	E	GA	M	2.5"	C	C	A	Passive
		L-J	J							
SWN-43-5	SW 209762	#25 CFCU Service Water Inlet Drain Valve F-2	E	GA	M	2.5"	C	C	A	Passive
		L-J	J							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
SWN-44-1A	SW 209762	#21 CFCU Service Water Outlet Isolation Valve D-4	E	BU	MO	10"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-44-1B	SW 209762	#21 CFCU Service Water Outlet Isolation Valve D-4	E	BU	MO	10"	O	O/C	A	Active
		L-T	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-44-2A	SW 209762	#22 CFCU Service Water Outlet Isolation Valve E-4	E	BU	MO	10"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-44-2B	SW 209762	#22 CFCU Service Water Outlet Isolation Valve E-4	E	BU	MO	10"	O	O/C	A	Active
		L-T	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-44-3A	SW 209762	#23 CFCU Service Water Outlet Isolation Valve C-4	E	BU	MO	10"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
SWN-44-3B	SW 209762	#23 CFCU Service Water Outlet Isolation Valve C-4	E	BU	MO	10"	O	O/C	A	Active
		L-T	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-44-4A	SW 209762	#24 CFCU Service Water Outlet Isolation Valve A-4	E	BU	MO	10"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-44-4B	SW 209762	#24 CFCU Service Water Outlet Isolation Valve A-4	E	BU	MO	10"	O	O/C	A	Active
		L-T	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-44-5A	SW 209762	#25 CFCU Service Water Outlet Isolation Valve F-4	E	BU	MO	10"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-44-5B	SW 209762	#25 CFCU Service Water Outlet Isolation Valve F-4	E	BU	MO	10"	O	O/C	A	Active
		L-T	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates									Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.		REL. REQ.				COMMENTS								
SWN-5	SW	Service Water Supply to Screen Wash and Bearing Cooling from SWP 24/25/26 Header																
	9321-F-2722	A-3		C		BU		M		8"		O/C		O/C		B		Active
		S-C	Q															
SWN-51-1A	SW	#21 CFCU Service Water Outlet to PRMS																
	209762	D-4		E		GL		MO		1"		O		O/C		A		Active
			L-T	J														
			PIT	2Y														
			S-C	Q														
			S-O	Q														
			T-C	Q														
			T-O	Q														
SWN-51-2A	SW	#22 CFCU Service Water Outlet to PRMS																
	209762	E-4		E		GL		MO		1"		O		O/C		A		Active
			L-T	J														
			PIT	2Y														
			S-C	Q														
			S-O	Q														
			T-C	Q														
			T-O	Q														
SWN-51-3A	SW	#23 CFCU Service Water Outlet to PRMS																
	209762	C-4		E		GL		MO		1"		O		O/C		A		Active
			L-T	J														
			PIT	2Y														
			S-C	Q														
			S-O	Q														
			T-C	Q														
			T-O	Q														
SWN-51-4A	SW	#24 CFCU Service Water Outlet to PRMS																
	209762	B-4		E		GL		MO		1"		O		O/C		A		Active
			L-T	J														
			PIT	2Y														
			S-C	Q														
			S-O	Q														
			T-C	Q														
			T-O	Q														

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
SWN-51-5A	SW 209762	#24 CFCU Service Water Outlet to PRMS F-4	E	GL	MO	1"	O	O/C	A	Active
		L-T	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-56	SW 209762	Service Water Supply to PRMS Mixing Nozzle from SWP 24/25/26 Header C-1	C	GL	M	2"	O	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-6	SW 9321-F-2722	Service Water Supply to Turbine Loads from SWP 24/25/26 Header B-5	C	BU	M	10"	O/C	C	B	Active
		S-C	CS	53						
SWN-60	SW 209762	Service Water Supply to PRMS Mixing Nozzle from SWP 21/22/23 Header D-1	C	GL	M	2"	O	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-617	SW 9321-F-2722	#26 Service Water Pump Strainer Blowdown Valve A-2	C	GA	MO	3"	O/C	O	B	Active
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-618	SW 9321-F-2722	#25 Service Water Pump Strainer Blowdown Valve B-1	C	GA	MO	3"	O/C	O	B	Active
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-619	SW 9321-F-2722	#24 Service Water Pump Strainer Blowdown Valve C-1	C	GA	MO	3"	O/C	O	B	Active
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-620	SW 9321-F-2722	#23 Service Water Pump Strainer Blowdown Valve D-1	C	GA	MO	3"	O/C	O	B	Active
		PIT	2Y							
		S-O	Q							
		T-O	Q							

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
SWN-621	SW 9321-F-2722	#22 Service Water Pump Strainer Blowdown Valve D-1	C	GA	MO	3"	O/C	O	B	Active
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-622	SW 9321-F-2722	#21 Service Water Pump Strainer Blowdown Valve E-1	C	GA	MO	3"	O/C	O	B	Active
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-7	SW 9321-F-2722	Service Water Supply to Turbine Loads from SWP 21/22/23 Header B-5	C	BU	M	10"	O/C	C	B	Active
		S-C	CS	53						
SWN-70	SW 9321-F-2722	Service Water Supply to #21 Instrument Air CCHX from SWP 21/22/23 Header H-5	C	GA	M	2.5"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-70-1	SW 9321-F-2722	Service Water Supply to #21 Instrument Air CCHX from SWP 24/25/26 Header H-4	C	GA	M	2.5"	O/C	O/C	B	Active
		S-C	Q							
		S-O	Q							
SWN-71-1A	SW 209762	#21 CFCU Motor Cooler Service Water Outlet Isolation Valve D-4	E	GL	MO	2"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-71-1B	SW 209762	#21 CFCU Motor Cooler Service Water Outlet Isolation Valve D-4	E	GL	MO	2"	O	O	A	Active
		L-T	J							
		PIT	2Y							
		S-O	Q							
		T-O	Q							

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		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
SWN-71-2A	SW 209762	#22 CFCU Motor Cooler Service Water Outlet Isolation Valve								
		E-4	E	GL	MO	2"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-71-2B	SW 209762	#22 CFCU Motor Cooler Service Water Outlet Isolation Valve								
		E-4	E	GL	MO	2"	O	O	A	Active
		L-T	J							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-71-3A	SW 209762	#23 CFCU Motor Cooler Service Water Outlet Isolation Valve								
		C-4	E	GL	MO	2"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-71-3B	SW 209762	#23 CFCU Motor Cooler Service Water Outlet Isolation Valve								
		C-4	E	GL	MO	2"	O	O	A	Active
		L-T	J							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-71-4A	SW 209762	#24 CFCU Motor Cooler Service Water Outlet Isolation Valve								
		B-4	E	GL	MO	2"	O	O/C	A	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							

VALVE TEST TABLE

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	<i>Quality Group</i>	<i>Valve Type</i>	<i>Actuator Type</i>	<i>Valve Size</i>	<i>Normal Position</i>	<i>Safety Position</i>	<i>IST Cat</i>	<i>Active/Passive Classification</i>
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
SWN-71-4B	SW 209762	#24 CFCU Motor Cooler Service Water Outlet Isolation Valve <i>B-4</i>	<i>E</i>	<i>GL</i>	<i>MO</i>	<i>2"</i>	<i>O</i>	<i>O</i>	<i>A</i>	Active
		L-T	J							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-71-5A	SW 209762	#25 CFCU Motor Cooler Service Water Outlet Isolation Valve <i>F-4</i>	<i>E</i>	<i>GL</i>	<i>MO</i>	<i>2"</i>	<i>O</i>	<i>O/C</i>	<i>A</i>	Active
		L-J	J							
		PIT	2Y							
		S-C	Q							
		S-O	Q							
		T-C	Q							
		T-O	Q							
SWN-71-5B	SW 209762	#25 CFCU Motor Cooler Service Water Outlet Isolation Valve <i>F-4</i>	<i>E</i>	<i>GL</i>	<i>MO</i>	<i>2"</i>	<i>O</i>	<i>O</i>	<i>A</i>	Active
		L-T	J							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
SWN-9	SW 9321-F-2722	#21 Service Water Pump Vacuum Breaker <i>E-1</i>	<i>C</i>	<i>CK</i>	<i>SA</i>	<i>3"</i>	<i>C</i>	<i>O/C</i>	<i>C</i>	Active
		SC-C	Q					Skid Mounted		
		SC-O	Q					Skid Mounted		
SWN-9-1	SW 9321-F-2722	#22 Service Water Pump Vacuum Breaker <i>D-1</i>	<i>C</i>	<i>CK</i>	<i>SA</i>	<i>3"</i>	<i>C</i>	<i>O/C</i>	<i>C</i>	Active
		SC-C	Q					Skid Mounted		
		SC-O	Q					Skid Mounted		
SWN-9-2	SW 9321-F-2722	#23 Service Water Pump Vacuum Breaker <i>C-1</i>	<i>C</i>	<i>CK</i>	<i>SA</i>	<i>3"</i>	<i>C</i>	<i>O/C</i>	<i>C</i>	Active
		SC-C	Q					Skid Mounted		
		SC-O	Q					Skid Mounted		
SWN-9-3	SW 9321-F-2722	#24 Service Water Pump Vacuum Breaker <i>C-1</i>	<i>C</i>	<i>CK</i>	<i>SA</i>	<i>3"</i>	<i>C</i>	<i>O/C</i>	<i>C</i>	Active
		SC-C	Q					Skid Mounted		
		SC-O	Q					Skid Mounted		

VALVE TEST TABLE

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VALVE NO	SYSTEM P + ID No	VALVE DESCRIPTION Drawing Coordinates	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.					COMMENTS
SWN-9-4	SW 9321-F-2722	#25 Service Water Pump Vacuum Breaker B-1	C	CK	SA	3"	C	O/C	C	Active
		SC-C	Q							Skid Mounted
		SC-O	Q							Skid Mounted
SWN-9-5	SW 9321-F-2722	#26 Service Water Pump Vacuum Breaker A-1	C	CK	SA	3"	C	O/C	C	Active
		SC-C	Q							Skid Mounted
		SC-O	Q							Skid Mounted
SWN-944	SW 209762	Service Water Mixing Nozzle Discharge Check Valve H-4	C	CK	SA	2"	O	O	C	Active
		SC-O								Verified during normal operations.
SWN-945	SW 209762	R-46/49/53 Sample Return Check Valve H-4	C	CK	SA	2"	O	O	C	Active
		SC-O	R2		24					
SWN-954	SW 209762	Radiation Monitors R-39 and R-40 Sample Return Valve H-2	NA	CK	SA	0.75"	O	O	C	Active
		SC-O	R2		24					
SWN-979-46	SW 226037	R-46 Sample Line Inlet Check Valve B-4	C	CK	SA		O/C	O	C	Active
		SC-O	Q							Skid Mounted
SWN-979-53	SW 242687	R-53 Sample Line Inlet Check Valve B-4	C	CK	SA		O	O	C	Active
		SC-O	Q							Skid Mounted
SWN-980-46	SW 226037	R-46 Sampler Outlet Check Valve E-3	C	CK	SA	0.75"	O	O	C	Active
		SC-O	Q							Skid Mounted
SWN-980-53	SW 242687	R-53 Sampler Outlet Check Valve E-3	C	CK	SA	0.75"	O	O	C	Active
		SC-O	Q							Skid Mounted
SWN-981	SW 235117	R-49 Cooling Water Outlet Check Valve D-2	C	CK	SA	0.75"	O	O/C	C	Active
		SC-C	R2		24					
		SC-O	R2		24					
SWN-982	SW 235117	R-46 Cooling Water Outlet Check Valve A-2	C	CK	SA	0.75"	O	O/C	C	Active
		SC-C	R2		24					
		SC-O	R2		24					

VALVE TEST TABLE

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VALVE NO	SYSTEM <i>P + ID No</i>	VALVE DESCRIPTION <i>Drawing Coordinates</i>	Quality Group	Valve Type	Actuator Type	Valve Size	Normal Position	Safety Position	IST Cat	Active/Passive Classification
		TEST TYPE	TEST FREQ.	CS/RFO JUST.	REL. REQ.			COMMENTS		
SWN-983	SW 235117	R-53 Cooling Water Outlet Check Valve C-2	C	CK	SA	0.75"	O	O/C	C	Active
		SC-C	R2		24					
		SC-O	R2		24					
TCV-1104	SW 209762	CFCU Cooler Common Discharge Header Temperature Control Valve G-6	C	BU	AO	18"	C	O	B	Active
		F-O	Q							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
TCV-1105	SW 209762	CFCU Cooler Common Discharge Header Temperature Control Valve G-6	C	BU	AO	18"	C	O	B	Active
		F-O	Q							
		PIT	2Y							
		S-O	Q							
		T-O	Q							
UH-43	AS 9321-F-2027	Nuclear Service Steam Supply to Containment B-1	E	GA	M	3"	LC	C	A	Passive
		L-J	J							
UH-44	AS 9321-F-2027	Nuclear Service Steam Return from Containment B-2	E	GA	M	3"	LC	C	A	Passive
		L-J	J							

INDEX OF RELIEF REQUESTS

VALVE	QUALITY CLASS	SYSTEM	R.R. NUMBER	RELIEF FROM
Withdrawn (Augmented)			1	
Withdrawn			2	
Withdrawn (Moved to CSJ)			3	
Withdrawn (Augmented)			4	
Withdrawn			5	
Withdrawn (Moved to CSJ)			6	
Withdrawn (Augmented)			7	
Withdrawn			8	
Withdrawn (Augmented)			9	
Withdrawn			10	
Withdrawn			11	
Withdrawn			12	
886A, 886B	YES	SIS	13*	EXERCISE
895A/B/C/D	YES	SIS	14*	EXERCISE
897A/B/C/D	YES	RCS	15*	EXERCISE
BFD-6/6-1/6-2/6-3	YES	FW	16*	EXERCISE
Withdrawn (Moved to CSJ)			17	
Withdrawn (Augmented)			18	
Withdrawn (Augmented)			19	
Withdrawn (Augmented)			20	
Withdrawn (Augmented)			21	
Withdrawn (Augmented)			22	
Withdrawn			23	
SWN-981/982/983/945/954	YES	SW	24*	EXERCISE
Withdrawn			25	
Withdrawn			26	
Withdrawn			27	
Withdrawn			28	
Withdrawn			29	
Withdrawn (Augmented)			30	

INDEX OF RELIEF REQUESTS

VALVE	QUALITY CLASS	SYSTEM	R.R. NUMBER	RELIEF FROM
SWN-1 through SWN-1-5	YES	SW	31*	EXERCISE
BFD-34, 39	YES	AFW	32*	EXERCISE
Withdrawn (Moved to CSJ)			33	
Withdrawn (Moved to CSJ)			34	
Withdrawn (Moved to CSJ)			35	
SOV-1177, SOV-1178	YES	IACC	36	STROKE TIME
829A, 829B	YES	RHR	37	EXERCISE
Withdrawn			38	
Valve Position Verification	YES	Various	39	POSITION VERIFICATION

*NRC Generic Letter 89-04 Item.

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

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WITHDRAWN

RELIEF REQUEST BASIS

SYSTEM:

SIS

VALVES:

886A and 886B

FUNCTION:

These check valves are recirculation outlet check valves from the internal Recirculation Pumps of the SIS. They are normally closed and have a safety function of opening when the Recirculation Pumps are started and closing to prevent reverse flow when one pump is in operation.

TEST REQUIREMENT:

OM-10, Para. 4.3.2 (Exercise)

BASIS FOR RELIEF:

When the Recirculation Pumps are activated, the recirculation mode from the recirculation sump to the RCS is established. Valves 886A and 886B are located inside containment; therefore, the only means of exercising them is by activating the Recirculation Pumps.

Full-stroke exercising these valves quarterly during normal plant operations or during any other condition is impractical since the Recirculation Pumps are in a normally dry recirculation sump. Operation of these pumps in a dry condition will damage the pumps. There is no practical means available to permit full flow operation of the Recirculation Pumps and hence no practical means of full flow exercising these check valves. Part-stroke exercising during the mini-flow test of the Recirculation Pumps is the only practical means of exercising these valves to the part open and closed positions.

ALTERNATIVE TESTING:

These valves will be included in the Check Valve Sample Disassembly/Inspection Program at Refueling frequency in accordance with NRC Generic Letter 89-04. These valves may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14. They will be part stroked open and closed during the Recirculation Pump mini-flow test during refueling.

REFERENCE:

Pre-approved under NRC Generic Letter 89-04, Position 2 guidance.

RELIEF REQUEST BASIS**SYSTEM:**

SIS

VALVES:

895A, 895B, 895C and 895D

FUNCTION:

These check valves are pressure isolation check valves (PIVs) in the outlet lines from the SIS Accumulators (one per accumulator) to the Reactor Coolant System. They are closed during normal plant operation to fulfill their safety function. Their safety function is to open following a LOCA (RCS pressure drops below approximately 650 psig) to allow water from the accumulators to transfer to the RCS, and to close to prevent diversion during SI and RHR system operation following a LOCA.

TEST REQUIREMENT:

OM-10, Para. 4.3.2 (Exercise)

BASIS FOR RELIEF:

The SIS configuration is such that the only practical way the valves can be exercised is by blowing down water from the accumulators to the RCS. 895A through 895D are upstream and in series with 897A through 897D which are held closed at this condition by a differential pressure of about 1560 psig (RCS at 2200 psig vs. accumulators at 640 psig). Therefore, flow cannot be established from the accumulators during normal power conditions.

Part of the low temperature over-pressurization protection requirements at cold shutdown are that MOVs 894A through 894D be closed when the RCS pressure is reduced below 1000 psig. These MOVs are in the Accumulator outlet lines and are upstream and in series with the subject check valves; therefore, flow cannot be established from the accumulators during these cold shutdown conditions. These valves will be part-stroke tested as the Accumulators are dumped into the RCS during Refueling Outages. The PIV function will be demonstrated during leak testing as required by Technical Specification Surveillance Requirement 4.16.A.5. NUREG-1482, Section 4.1.4 allows use of the Category A leak testing to satisfy closure test requirements on a refueling frequency if no practical method of verifying valve closure exists.

ALTERNATIVE TESTING:

These valves will be included in the Check Valve Sample Disassembly/Inspection Program at Refueling frequency in accordance with NRC Generic Letter 89-04. These valves may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14. Valve closure will be tested during leak rate testing at a frequency consistent with Technical Specification Surveillance Requirement 4.16.A.5, not to exceed refueling, as discussed in NUREG-1482, Section 4.1.4.

REFERENCE:

Pre-approved under NRC Generic Letter 89-04, Position 2 guidance.

RELIEF REQUEST BASIS

SYSTEM:

RCS

VALVES:

897A, 897B, 897C, and 897D

FUNCTION:

These check valves are pressure isolation check valves (PIVs) in the cold leg injection lines to the Reactor Coolant System (RCS) from the Safety Injection System (SIS). Their safety function is to open to permit flow from the SIS into the RCS following a LOCA, and to close for their PIV function from RCS to SIS. These valves also close to allow switchover to high-head, hot leg recirculation.

TEST REQUIREMENT:

OM-10, Para. 4.3.2 (Exercise)

BASIS FOR RELIEF:

Valves 897A, 897B, 897C and 897D are in the flow paths from the High Pressure Safety Injection (HPSI) Pumps, the Recirculation Pumps, RHR Pumps and from their respective Accumulators. The system configuration is such that the only practical way the valves can be fully exercised is by putting flow through them from the SI Pumps in conjunction with the Accumulators.

During normal power operation, the RCS pressure is approximately 2200 psig. None of the SI Pumps or Accumulators have the pressure capability to overcome the RCS pressure in order to establish flow through the check valves. RHR flow at cold shutdown has been deemed inadequate for full exercise. These valves will be part-stroke tested during normal CSHD RHR operation and during Accumulator, SIS and RHR testing at Refueling frequency. The PIV function will be demonstrated during leak testing as required by Technical Specification Surveillance Requirement 4.16.A.5. NUREG-1482, Section 4.1.4 allows use of the Category A leak testing to satisfy closure test requirements on a refueling frequency if no practical method of verifying valve closure exists.

ALTERNATIVE TESTING:

These valves will be included in the Check Valve Sample Disassembly/Inspection Program at Refueling frequency in accordance with NRC Generic Letter 89-04. These valves may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14. Valve closure will be tested during leak rate testing at a frequency consistent with Technical Specification Surveillance Requirement 4.16.A.5, not to exceed refueling, as discussed in NUREG-1482, Section 4.1.4.

REFERENCE:

Pre-approved under NRC Generic Letter 89-04, Position 2 guidance.

RELIEF REQUEST BASIS

SYSTEM:

FW

VALVES:

BFD-6, BFD-6-1, BFD-6-2, BFD-6-3

FUNCTION:

These check valves are in the supply lines from the Main Boiler Feed Pumps to the Steam Generators. They are normally open during operation and have a safety function to close when the Steam Generators are fed with Auxiliary Feedwater.

TEST REQUIREMENT:

OM-10, Para. 4.3.2 (Exercise)

BASIS FOR RELIEF:

These check valves cannot be tested for closure during normal plant operations. When feeding Steam Generators for cold shutdown, leakage through the BFD-6 check valves may be detectable by pressure at the Main Boiler Feed Pump discharge. Positive identification of the leakage source normally requires check valve disassembly which may not be possible at all cold shutdowns.

ALTERNATIVE TESTING:

These valves will be included in the Check Valve Sample Disassembly/Inspection Program at Refueling frequency in accordance with NRC Generic Letter 89-04. These valves may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

REFERENCE:

Pre-approved under NRC Generic Letter 89-04, Position 2 guidance.

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

SYSTEM:

SW

VALVES:

SWN-981, 982, 983, 945, 954

FUNCTION:

These check valves are normally open, and have a safety function to open, to allow cooling water to various radiation monitors. Valves SWN-981, -982 and -983 also have a safety function to close on cessation or reversal of flow.

TEST REQUIREMENT:

OM-10, Para. 4.3.2 (Exercise)

BASIS FOR RELIEF:

There are no positive means to verify that the disk moves promptly away from the seat when flow through the valve is initiated or that the valves close on cessation or reversal of flow.

ALTERNATIVE TESTING:

These valves will be included in the Check Valve Sample Disassembly/Inspection Program at Refueling frequency in accordance with NRC Generic Letter 89-04. These valves may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

REFERENCE:

Pre-approved under NRC Generic Letter 89-04, Position 2 guidance.

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

SYSTEM:

SW

VALVES:

SWN-1, 1-1, 1-2, 1-3, 1-4, 1-5

FUNCTION:

These are check valves on the discharge of the six Service Water Pumps. They have a safety function to close to prevent reverse rotation of the non-operating pump. They also have the safety function to open to deliver accident design flow.

TEST REQUIREMENT:

OM-10, Para. 4.3.2 (Exercise)

BASIS FOR RELIEF:

Normal Service Water System alignment has two Service Water Pumps operating on each header. The pumps are tested quarterly and the SWN-1 Check Valves are demonstrated to close on cessation of flow during the quarterly pump test. In addition, the valves are demonstrated to partially stroke open during the quarterly pump test. This partial open stroke is determined by a positive delta-P across the discharge strainer to demonstrate that there is flow. There is no installed flow indication and the cement lined piping precludes the use of ultrasonic flow indication. Due to the header arrangement with three pumps feeding the common header during testing (two for operability, one for test) it is impossible to prove design flow of individual check valves.

ALTERNATIVE TESTING:

The close stroke will be demonstrated quarterly during pump testing. Partial open stroke will be demonstrated quarterly during pump testing. These valves will be included in the Check Valve Sample Disassembly/Inspection Program in accordance with NRC Generic Letter 89-04. These valves may be disassembled during power operations as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

REFERENCE:

Pre-approved under NRC Generic Letter 89-04, Position 2 guidance.

RELIEF REQUEST BASIS

SYSTEM:

AFW

VALVES:

BFD-34, BFD-39

FUNCTION:

These valves are the Motor Driven Auxiliary Feedwater (MDAFW) pumps discharge check valves. The valves are normally closed and have a safety function to open when the MDAFW pumps are activated to provide Condensate Storage Tank water to the steam generators. The valves have a safety function to close to prevent reverse rotation of the pumps on cessation of flow.

TEST REQUIREMENT:

OM-10, Para. 4.3.2 (Exercise)

BASIS FOR RELIEF:

Exercising these check valves quarterly during normal operation is impractical since the auxiliary feedwater pumps must be activated to flow ambient temperature water from the CST to the SG which can result in thermal shocking of the SG tube sheet. These valves are downstream of the AFW pump test recirculation lines thus precluding any exercising during quarterly pump testing. Full-stroke exercising at cold shutdown is impractical because the high flow rates required for full-stroke exercising make it difficult to control water levels in the SG. Excessively high water levels in the SG can result in water in the steamlines, and can lead to turbine damage when power operations are resumed. These valves are in series with two additional check valves and therefore reverse flow testing is impractical.

ALTERNATIVE TESTING:

Part-stroke open exercise BFD-34 and 39 at cold shutdowns during operation of the motor-driven auxiliary feedwater pumps. Full-stroke open exercise the valves during refueling outages in conjunction with full flow test of the auxiliary feedwater pumps. These valves will be included in the Check Valve sample Disassembly/Inspection Program at Refueling frequency in accordance with NRC Generic Letter 89-04. These valves may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

REFERENCE:

Pre-approved under NRC Generic Letter 89-04, Position 2 guidance.

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

SYSTEM:

IACC

VALVES:

SOV-1177, SOV-1178

FUNCTION:

These valves are in the cooling supply lines to the Instrument Air Aftercooler and the Instrument Air Compressor Bearings. Their function is to open to provide cooling water when the Instrument Air compressors are in service.

TEST REQUIREMENT:

OM-10, Para. 4.2.1.4 (Stroke Time)

BASIS FOR RELIEF:

These valves have no control switches and no indicating lights. They are solenoid operated from a direct wired signal from contact closure on the Instrument Air Compressor Motor control circuit. When the Instrument Air Compressor starts, its associated cooling water supply solenoid valve opens. When the motor stops, the cooling water is no longer necessary and the solenoid valve closes. The solenoid valves are verified to be open and closed based on the presence of cooling flow in the "bulls-eye" type flow indicators.

Historically, solenoid valve operation has been that they either function correctly or do not operate at all. Solenoid timing has not proven to be an indicator of valve degradation. Nominal solenoid stroke time is less than two seconds and therefore change in stroke time as compared to a reference is not required per OM-10, Para. 4.2.1.8.e.

ALTERNATIVE TESTING:

These valves will be exercised quarterly based on the presence and cessation of flow when the Instrument Air Compressors are started and stopped. These valves are stroke tested but timing will not be performed.

REFERENCE:

Acceptable for 3rd interval via SER dated February 18, 1999.

RELIEF REQUEST BASIS

SYSTEM:

RHR

VALVES:

829A, 829B

FUNCTION:

The function of these check valves is not specifically defined in the UFSAR. Check valves are to prevent reverse flow. When pressure in the RHR system during RHR operation is higher than the CVCS purification system pressure, check valves are not needed. When the plant is not on RHR, these valves can prevent letdown flow through valves 4055 and HCV-133. For potential RHR overpressurization events, the function of these check valves is to direct water to RV-1836, then to the PRT, to relieve RHR overpressurization.

TEST REQUIREMENT:

OM-10, Para. 4.3.2 (Exercise)

BASIS FOR RELIEF:

These valves are exercised open during refueling operation to provide routine clean-up of RCS water. The purification system is only placed in service if the RCS pressure is less than 50 psig. This precludes exercising the check valve quarterly. There is no practical test method to prove valve closure on cessation or reversal of flow.

ALTERNATIVE TESTING:

These check valves will be nominally exercised open during refueling by normal operation of RHR Purification. The valves will be included in the Check Valve Sample Disassembly/Inspection program at Refueling frequency in accordance with NRC Generic Letter 89-04. These valves may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

REFERENCE:

Acceptable for 3rd Interval via SER dated February 18, 1999.

RELIEF REQUEST BASIS

WITHDRAWN

RELIEF REQUEST BASIS

SYSTEM:

Various

VALVES:

Various, those valves which are Stroke Tested during Refueling Outages

FUNCTION:

Various

TEST REQUIREMENT:

OM-10, Para. 4.1 (Valve Position Verification)

BASIS FOR RELIEF:

Relief is requested from the ASME OM-10, Para. 4.1 requirement to observe locally at least once every 2 years that valve operation is accurately indicated. This relief request proposes a one-time only extension for those valves which are subject to valve position verification between June 1999 and May 2000. An extension not to exceed twelve months is requested in order to allow these tests to be performed at the next refueling outage, which is intended to commence no later than June 3, 2000. This relief request is applicable to those valves where stroke testing can only be performed during plant shutdown.

The proposed extension provides an acceptable level of quality and safety. The subjects valves are not normally disturbed from their position except during stroking during refueling outages. The valves are not subject to constant wear or harsh environmental conditions and remain idle during the majority of the period between tests. Thus, the period of time between tests does not impact valve position indication and the level of quality and safety would not be significantly impacted.

Strict compliance with the ASME OM-10 requirement would result in hardship and unwarranted cost without a compensating increase in the level of quality and safety. A plant shutdown solely for the purpose of performing the valve cycling required for valve position verification would unnecessarily challenge safety-related equipment and could create hazards that could be avoided until the next scheduled refueling outage. Furthermore, the need to keep personnel radiation exposure as low as reasonably achievable (ALARA) presents additional justification for the proposed relief request extension.

ALTERNATIVE TESTING:

The valves will have their position indication verified at the next refueling outage, which is intended to commence no later than June 3, 2000.

REFERENCE:

Acceptable for one-time use per SER dated April 2, 1999. Relief request expires at the end of the next refueling outage following issuance of the SER.

INDEX OF JUSTIFICATIONS

VALVE	QUALITY CLASS	SYSTEM	JUSTIFICATION NUMBER	ALTERNATE FREQUENCY
FCV-625, 797, 784	YES	CCW	1	CS/R
744	YES	RHR	2	R
741A, 741	YES	RHR	3	CS/R
822A, 822B	YES	CCW	4	CS/R
769, 786, 789	YES	CCW	5	CS/R
743, 1870	YES	RHR	6	CS
738A, 738B	YES	RHR	7	R
746, 747	YES	RHR	8	CS
730, 731	YES	RCS	9	CS
BFD-79/79-1/79-2/79-3	YES	AFW	10	R
BFD-47/47-1/47-2/47-3	YES	AFW	11	R
BFD-37/35/42/40	YES	AFW	12	R
201, 202	YES	CVCS	13	CS
205, 226	YES	CVCS	14	CS
222	YES	CVCS	15	CS/R
4925, 4926, 4927, 4928 250A, 250B, 250C, 250D	YES	CVCS	16	CS/R
333	YES	CVCS	17	CS
LCV-112B, 290	YES	CVCS	18	CS
LCV-112C	YES	CVCS	19	CS
332	YES	CVCS	20	R
4924	YES	CVCS	21	R
CT-26/29/32	YES	AFW	22	R
FCV-1170/1171/1172/1173	YES	HVAC	23	CS
Withdrawn			24	

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VALVE	QUALITY CLASS	SYSTEM	JUSTIFICATION NUMBER	ALTERNATE FREQUENCY
Withdrawn			25	
PCV-1228	YES	IA	26	R
1501 through 1532 1534 through 1543, 1549, 1530, 5602	YES	IVSW	27	R
MS-1-21/22/23/24	YES	MS	28	CS
HCV-3100, HCV-3101	YES	RCS	29	CS
838A/B/C/D	YES	RCS	30	R
867A, 867B	YES	CSS	31	R
856B, 856F	YES	SIS	32	CS
856A/C/D/E	YES	SIS	33	CS
842, 843	YES	SIS	34	CS
857A/B/C/D 857G/H/M/F	YES	RCS	35	R
857J/K	YES	RCS	36	R
857E/L	YES	SIS		
849A/B, 852A/B, 5220	YES	SIS	37	R
882	YES	SIS	38	CS
1810	YES	SIS	39	CS
1802A, 1802B	YES	SIS	40	R
FCV-1111, FCV-1112	YES	SW	41	CS
204A, 204B	YES	CVCS	42	CS
210A, 210B	YES	RCS	43	CS
85A, 85B, 85C, 85D 95A, 95B, 95C, 95D	YES	WCPS	44	CS/R
211	YES	RCS	45	CS
Withdrawn			46	

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VALVE	QUALITY CLASS	SYSTEM	JUSTIFICATION NUMBER	ALTERNATE FREQUENCY
PCV-455A, PCV-455B	YES	RCS	47	CS
535, 536	YES	RCS	48	CS
PCV-456, PCV-455C	YES	RCS	49	CS
MS-2A/2B/2C/2D	YES	MS	50	CS
Withdrawn			51	
733C, 734A, B, E, F	YES	CCW	52	CS/R
SWN-6, SWN-7	YES	SW	53	CS
SWN-40, SWN-40-1	YES	SW	54	CS
518	YES	RCS	55	R
251A, B, C, D, E, F, G, H	YES	RCS	56	CS/R
858A, B	YES	SIS	57	CS
IA-39	YES	IA	58	R
HCV-1118	YES	MS	59	R
BFD-50	YES	AFW	60	R
BFD-68	YES	AFW	61	R
4312	YES	GAS	62	R
MS-41, MS-42	YES	MS	63	R
846	YES	SIS	64	CS
755	YES	CCW	65	CS
1616	YES	GAS	66	R
774A, B, C, D	YES	CCW	67	R
374	YES	CVCS	68	R
847	YES	SIS	69	R
881	YES	SIS	70	R
BFD-31	YES	AFW	71	R

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VALVE	QUALITY CLASS	SYSTEM	JUSTIFICATION NUMBER	ALTERNATE FREQUENCY
CD-109	YES	AFW	72	R
292	YES	CVCS	73	R
21CCSTV	YES	CCW	74	R
CD-631, CD-632, CT-714, CT-715	YES	AFW	75	CS

COLD SHUTDOWN/REFUELING JUSTIFICATION: 1

SYSTEM:

CCW

VALVES:

FCV-625, 797, 784

FUNCTION:

Valves 797, 784, and FCV-625 are all containment isolation valves in the Component Cooling System that supplies cooling water to the Reactor Coolant Pumps bearing oil coolers and thermal barriers. Valve 797 is a CIV and allows cooling water to flow to the bearing oil coolers and thermal barriers. Valve 784 is a CIV in the return leg from the RC pump motor bearing cooler. Valve FCV-625 is a CIV in the return leg from the thermal barriers. All these valves are normally open during plant operation and have an emergency function to close upon receipt of a containment isolation signal.

JUSTIFICATION:

These valves are open or closed only valves; therefore, part-stroke testing of these valves is impractical. Also, full-stroke exercising these valves quarterly while the plant is at normal operating power is impractical because this would isolate cooling water to the RC pumps.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns provided the RC pumps are secured. If one or more RC pumps are not secured at cold shutdowns, the associated valves will be tested at intervals no greater than refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 2

SYSTEM:

RHR

VALVE:

744

FUNCTION:

Valve 744 is a non-redundant valve in the LPSI/RHR pump discharge header. It is a CIV and is de-energized in the open position during plant operation. The valve also has a safety function to close following the termination of the LPSI mode of operation of the RHR system.

JUSTIFICATION:

Full-stroke testing of the valve quarterly is impractical in that a failure of the valve in the closed position nullifies the function of the RHR pumps in the LPSI mode should an emergency occur concurrent with the valve failure. The valve cannot be exercised at cold shutdowns because closing the valve will terminate the normal RHR cooling mode (required to maintain cold shutdown). It is also impractical to part-stroke exercise the valve since this valve is an open or closed only valve. In addition, Technical Specifications effectively require one RHR pump operable at all times; closing 744 makes the RHR pumps inoperable. Technical Specifications also require that valve 744 be blocked open by de-energizing the motor operator.

ALTERNATIVE TESTING:

This valve will be full-stroke exercised at refueling outages.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 3

SYSTEM:

RHR

VALVES:

741, 741A

FUNCTION:

Valve 741A is a check valve and functions as a containment isolation valve in the discharge line from the RHR pumps. Valve 741A has a safety function to close for containment isolation. Valve 741 is a check valve in series with valve 741A. These valves are normally closed and both have a safety function to open when the RHR pumps are used in the LPSI mode of emergency cooling. Valve 741 has no safety function in the closed position.

JUSTIFICATION:

Full-stroke testing of the valves quarterly during normal power operations is impractical because the LPSI mode of emergency cooling would have to be initiated to do so. Full open testing at a cold shutdown frequency is limited by temperature constraints on cooling of the Reactor Coolant system, and therefore full open testing will be performed on a refueling frequency. These valves will be part-stroked quarterly using the miniflow test line for the RHR pumps and part stroked open at cold shutdown during normal RHR operation. Since valve 741A is a Containment Isolation Valve, periodic leakage testing is required. The closed stroke of valve 741A is verified in conjunction with Category A leakage testing at a frequency not to exceed refueling in accordance with the guidelines of NUREG 1482, Section 4.1.4.

ALTERNATIVE TESTING:

These valves will be part-stroked quarterly and at cold shutdown, and full-stroke exercised open at refueling. Valve 741 will be full-stroke exercised closed at a refueling frequency. Closure testing of valve 741A will be performed in conjunction with Category A leakage testing at a refueling frequency in accordance with the guidance of NUREG 1482, Section 4.1.4.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 4

SYSTEM:

CCW

VALVES:

822A and 822B

FUNCTION:

Valves 822A and 822B are flow isolation valves in the component cooling system on the return leg from the residual heat exchanger. The valves are normally closed and have an emergency function to open and allow the flow of component cooling water to the residual heat exchanger.

JUSTIFICATION:

Full-stroke testing of these valves during normal plant operation may divert flow from the component cooling system via the 12" return lines. This could result in reduced cooling flow to the RC pump coolers and thermal barriers which could create a potential for overheating and damage to the RC pumps.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns provided the RC pumps are secured. If one or more RC pumps are not secured at cold shutdowns, the associated valves will be tested at intervals no greater than refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 5

SYSTEM:

CCW

VALVES:

769, 786, and 789

FUNCTION:

These valves are isolation valves in the component cooling system that supplies water to the RC pumps bearing oil coolers and thermal barriers. Valve 769 is in the supply header leading to the RC pumps. Valve 786 is in the return header leading from the RC pump bearing oil coolers. Valve 789 is in the return header leading from the RC pumps thermal barriers. These valves are open or closed only valves and are normally open valves. They also receive a safety signal to close.

JUSTIFICATION:

Full-stroke testing of these valves quarterly during normal plant operation would cause a loss of cooling water to the RC pumps bearing oil coolers or the thermal barriers or both and would damage the RC pumps. Part-stroke testing is also impractical because these are open or closed only valves.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns provided the RC pumps are secured. If one or more RC pumps are not secured at cold shutdowns, the associated valves will be tested at intervals no greater than refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 6

SYSTEM:

RHR

VALVES:

743 and 1870

FUNCTION:

These valves are Containment Isolation Valves in the miniflow test line of the RHR pumps. These valves are motor operated and are locked open during normal plant operation. They are remote manually shut at some time (long-term) following accident initiation.

JUSTIFICATION:

These valves are open or closed only valves; therefore, part-stroke exercising of these valves is impractical. Full-stroke exercising these valves quarterly during normal plant operation is impractical because if the valves were closed and the RHR pumps were needed to start, they would start against a dead head and possibly be damaged. Also, these valves are locked open valves and are required to be open during an accident.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 7

SYSTEM:

RHR

VALVES:

738A and 738B

FUNCTION:

Valves 738A and 738B are RHR pump discharge check valves. Their safety functions are to open to permit LHSI flow to reach the core and to close on cessation of flow.

JUSTIFICATION:

Full-stroke testing of these valves during normal operation is impractical as it would require full flow of the RHR pumps through the SI system. This is impractical as it would require safety injection flow to the RCS which is at a higher pressure than the RHR pumps can deliver. Full flow testing at a cold shutdown frequency is limited by temperature constraints on cooling of the Reactor Coolant system.

ALTERNATIVE TESTING:

These valves will be part-stroke exercised open quarterly during the RHR pump mini-flow test and during cold shutdown when the normal RHR mode of cooling is in progress. Full stroke exercise open will be performed at a frequency not to exceed refueling. They will be stroke exercised closed quarterly during the RHR pump mini-flow test.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 8

SYSTEM:

RHR

VALVES:

746 and 747

FUNCTION:

Valves 746 and 747 are motor operated valves in the LHSI/RHR lines and are downstream of the RHR heat exchangers. These are normally closed valves and receive an engineered safeguard signal to open for LHSI/RHR operation.

JUSTIFICATION:

Valves 746 and 747 are only capable of being full-stroke exercised. Full-stroke exercising these valves quarterly during normal plant operations could subject the LHSI/RHR system to pressure in excess of their design pressure. It is assumed for purposes of a cycling test that one or more of the upstream check valves has failed. No positive methods are available for determining the pressure or lack thereof on the high pressure side of the valve to be cycled.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 9

SYSTEM:

RHR

VALVES:

730 and 731

FUNCTION:

Valves 730 and 731 are pressure isolation valves between the Reactor Coolant System and RHR system. They are normally closed and have a safety function to open in order to reach cold shutdown for most non-LOCA design basis events.

JUSTIFICATION:

During Residual Heat Removal Operation, Reactor Coolant Flow is from the hot leg of Loop 22 through the two motor operated valves 731 and 730. Valves 731 and 730 are pressure interlocked (PC402 and PC403) to prevent opening when reactor coolant pressure is above 450 psig. This arrangement prevents inadvertent pressurization of the residual heat removal system, which is designed for 600 psig.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns. If RHR is not secured during cold shutdown, the full stroke exercise will be performed during plant heatup.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 10

SYSTEM:

AFW

VALVES:

BFD-79, 79-1, 79-2, 79-3

FUNCTION:

These valves are check valves in the auxiliary feedwater lines at the interface of the main feedwater line. Their safety function is to open when the auxiliary feedpumps are activated to supply emergency feedwater from the Condensate Storage Tank. They also have the safety function to close to prevent backflow of main feedwater into the AFW pump room due to a pipe break.

JUSTIFICATION:

Exercising these check valves open quarterly during normal operation is impractical since the auxiliary feedwater pumps must be activated to flow ambient temperature water from the CST to the SG which can result in thermal shocking of the SG tube sheet. These valves are downstream of the AFW pump test recirculation lines thus precluding any exercising during quarterly pump testing. These valve are verified to be closed during the performance of the conventional area log sheets by monitoring the upstream piping temperature.

Full-stroke exercising at cold shutdown is impractical because the high flow rates required for full-stroke exercising make it difficult to control water levels in the SG. Excessively high water levels in the SG can result in water in the steamlines, and can lead to turbine damage when power operations are resumed.

ALTERNATIVE TESTING:

These valves will be part-stroke exercised open at cold shutdowns during operation of the auxiliary feedwater pumps and full-stroke exercised open at refueling in conjunction with the full flow test of the auxiliary feedwater pumps. These valve are verified closed during the performance of the daily Unit Two conventional area logs.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 11

SYSTEM:

AFW

VALVES:

BFD-47, 47-1, 47-2, 47-3

FUNCTION:

The BFD-47 series valves are in the AFW supply lines from the turbine driven pump and are redundant isolation valves in series with BFD-79 series valves. The valves are normally closed and have a safety function to open when the turbine driven AFW pump is activated to provide condensate storage tank water to the steam generators.

JUSTIFICATION:

Exercising these check valves quarterly during normal operation is impractical since the auxiliary feedwater pumps must be activated to flow ambient temperature water from the CST to the SG which can result in thermal shocking of the SG tube sheet. These valves are downstream of the AFW pump test recirculation line thus precluding any exercising during quarterly pump testing.

Full-stroke exercising at cold shutdown is impractical because the high flow rates required for full-stroke exercising make it difficult to control water levels in the SG. Excessively high water levels in the SG can result in water in the steamlines, and can lead to turbine damage when power operations are resumed.

Full or part-stroke exercising of these valves at cold shutdowns is impractical because there is no steam present to run the turbine driven AFW pumps.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised open at refueling in conjunction with the full flow test of the turbine driven auxiliary feedwater pump.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 12

SYSTEM:

AFW

VALVES:

BFD-37, BFD-35, BFD-42, BFD-40

FUNCTION:

BFD-35, 37, 40, and 42 are check valves in the auxiliary feedwater supply lines leading from the motor driven auxiliary feedwater pumps and act as redundant isolation valves in series with check valves BFD-79, 79-1, 79-2, and 79-3. The valves are normally closed and have a safety function to open when the auxiliary feedwater pumps are activated to supply emergency feed water from the Condensate Storage Tank.

JUSTIFICATION:

Exercising these check valves quarterly during normal operation is impractical since the auxiliary feedwater pumps must be activated to flow ambient temperature water from the CST to the SG which can result in thermal shocking of the SG tube sheet. These valves are downstream of the AFW pump test recirculation lines thus precluding any exercising during quarterly pump testing. Full-stroke exercising at cold shutdown is impractical because the high flow rates required for full-stroke exercising make it difficult to control water levels in the SG. Excessively high water levels in the SG can result in water in the steamlines, and can lead to turbine damage when power operations are resumed.

ALTERNATIVE TESTING:

Part-stroke open exercise the valves at cold shutdowns during operation of the auxiliary feedwater pumps. Full-stroke open exercise the valves during refueling outages in conjunction with full flow test of the auxiliary feedwater pumps.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 13

SYSTEM:

CVCS

VALVES:

201 and 202

FUNCTION:

Valves 201 and 202 are containment isolation valves and function as remote manual letdown flow isolation valves in the letdown line to the non-regenerative heat exchanger.

JUSTIFICATION:

Part-stroke exercising of these valves is impractical since these are open or close only valves. Full-stroke exercising of these valves is also impractical during normal plant operation because it would inhibit the control of the reactor coolant level control system.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 14

SYSTEM:

CVCS

VALVES:

205 and 226

FUNCTION:

Valves 205 and 226 are remote manual flow isolation valves in the charging line leading to the regenerative heat exchanger.

JUSTIFICATION:

Part-stroke exercising of these valves is impractical since these are open or close only valves. Full-stroke exercising of these valves is also impractical during normal plant operation because it would inhibit the control of the reactor coolant level control system. Closing these valves at any time during normal plant operation would shut down the charging flow creating a potential for a low level reactor trip.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 15

SYSTEM:

CVCS

VALVE:

222

FUNCTION:

Valve 222 is a flow shutoff valve in the RC pump seal water return line.

JUSTIFICATION:

Valve 222 is an open or closed only valve; therefore, part-stroke testing of this valve is impractical. This valve cannot be full-stroke exercised during normal plant operation because a loss of RC pump seal water flow could result in damaging the RC pumps.

ALTERNATIVE TESTING:

This valve will be full-stroke exercised at cold shutdowns provided the RCP seal injections are secured. If one or more RCP seal injection is not secured at cold shutdown, valve 222 will be tested at intervals no greater than refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 16

SYSTEM:

CVCS

VALVES:

4925, 4926, 4927, 4928, 250A, 250B, 250C, 250D

FUNCTION:

These valves are flow isolation valves in the charging lines to the RC pump seals. They are normally open valves during normal plant operation and have a safety function to close for containment isolation.

JUSTIFICATION:

Because these valves are open and close only valves, it is impractical to part-stroke these valves. Full-stroke exercising the valves quarterly during normal plant operation is also impractical since this action would isolate RC pump seal water flow and thus could damage the seals. Closure of these valve during cold shutdown is practical only when the associated RCP has been secured. These valves can be tested during cold shutdown if the RCP seal injection is not required, and are testable during refueling outages.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised and stroke timed at cold shutdowns provided the RCP seal injections are secured. If one or more RCP seal injection is not secured at cold shutdowns, the associated valves will be tested at intervals no greater than refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 17

SYSTEM:

CVCS

VALVE:

333

FUNCTION:

Valve 333 is a motor-operated valve in the emergency boration line at the suction side of charging pumps. Its opening allows boric acid addition to the reactor coolant system, at the maximum rate available, if a reactivity excursion occurs.

JUSTIFICATION:

Valve 333 is associated with the emergency boration path from the boric acid storage tanks. The boric acid storage tanks contain high concentrations of borated water for emergency shutdown purposes. Cycling 333 would result in aligning this source of high concentrated boric acid solution to the charging pump suction. Charging pump flow must be maintained to provide injection flow to the reactor coolant pump seals. Hence cycling this valve would result in a reactivity transient due to the injection of high concentrated boric acid solution which, if left unchecked, would cause a reactor shutdown. Such cycling during power operation is undesirable; hence, cold shutdown cycling has been proposed. Cold shutdown testing will provide assurance that these valves will function as required.

ALTERNATIVE TESTING:

This valve will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 18

SYSTEM:

CVCS

VALVES:

LCV-112B, 290

FUNCTION:

Valve 290 is a check valve in series with LCV-112B and has a safety function to open. Valve LCV-112B is a normally closed air-operated valve in the refueling water supply line to the charging pump suction. Its opening may be necessary to allow refueling water supply to the reactor coolant system in certain emergency conditions.

JUSTIFICATION:

Valves LCV-112B and 290 are associated with the emergency boration path from the refueling water storage tank. The refueling water storage tank contains high concentrations of borated water for emergency shutdown purposes. Cycling LCV-112B and 290 would result in aligning these sources of high concentrated boric acid solution to the charging pump suction. Charging pump flow must be maintained to provide injection flow to the reactor coolant pump seals. Hence, cycling these valves would result in a reactivity transient due to the injection of high concentrated boric acid solution which, if left unchecked, would cause a reactor shutdown. Such cycling during power operation is undesirable; hence, cold shutdown cycling has been proposed. Cold shutdown testing will provide assurance that these valves will function as required.

ALTERNATIVE TESTING:

LCV-112B will be full-stroke exercised open and closed at cold shutdowns. Valve 290 will be full-stroke exercised open at cold shutdown.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 19

SYSTEM:

CVCS

VALVE:

LCV-112C

FUNCTION:

Valve LCV-112C is a normally open motor-operated valve at the suction of charging pumps from the volume control tank. It is also required to remain open following engineered safeguards actuation and closes during the switch over of charging pump suction to RWST.

JUSTIFICATION:

Valve LCV-112C is in the suction line to charging pumps which provide for reactor coolant makeup and seal injection flow. The reactor coolant pump seals require injection flow whenever the pumps are operating. Stroking LCV-112C closed during normal operation would require realigning the charging pump suction to an alternate supply. Available alternate supplies from the refueling water storage tank and boric acid storage tanks both contain higher concentrations of borated water which if injected, would result in a reactivity transient and eventual plant shutdown. Cold shutdown testing will provide assurance that these valves will function as required.

ALTERNATIVE TESTING:

This valve will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 20

SYSTEM:

CVCS

VALVE:

332

FUNCTION:

Check valve 332 is located downstream of motor-operated valve 333 at the suction side of charging pumps. Its safety function is to open to facilitate emergency boration.

JUSTIFICATION:

System arrangement is such that valve 332 can not be exercised unless valve 333 is open to permit flow from the boric acid storage system. Aligning this flow path during power operation will result in a reactivity transient due to the introduction of highly concentrated boric acid solution from the boric acid storage system. Aligning this flowpath during cold shutdown will adversely affect RCS Boron Control.

ALTERNATIVE TESTING:

Valve 332 will be full stroke exercised open at refuelings using primary water to the suction of the boric acid transfer pumps delivering the charging pumps for delivery to the RCS.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 21

SYSTEM:

CVCS

VALVE:

4924

FUNCTION:

Check valve 4924 is located in the emergency boration line to the suction of charging pumps. Its safety function is to open during emergency boration.

JUSTIFICATION:

System arrangement is such that this check valve can only be exercised when the emergency boration path is aligned. Aligning this path during power operation will result in a reactivity transient due to the introduction of highly concentrated boric acid solution from the boric acid storage system. Aligning this flowpath during cold shutdown will adversely affect RCS Boron Control.

ALTERNATIVE TESTING:

Full stroke exercised open at refuelings using primary water to the suction of the boric acid transfer pumps delivering to charging pumps for delivery to the RCS.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 22

SYSTEM:

AFW

VALVES:

CT-26, CT-29, CT-32

FUNCTION:

These valves are check valves in the suction lines of each of the auxiliary feedwater pumps. These suction lines connect to the main header leading from the condensate storage tank. Their safety function is to open when the auxiliary feed pumps operate during normal start-up and shutdown of the plant or following an accident requiring the use of the auxiliary feedwater system.

JUSTIFICATION:

These valves are part-stroke exercised during start-up and shutdown of the reactor and are therefore part-stroke exercised during cold shutdown. In addition, these valves are part-stroke exercised during quarterly auxiliary feedwater pump testing.

Full flow testing of the auxiliary feedwater pump is conducted during refueling. The pump suction check valves must necessarily be full-stroke exercised during this test. Full stroke exercising these auxiliary feedwater pump suction check valves requires that the associated auxiliary feedwater pump be operating. Operating these pumps during normal operation would interfere with automatic steam generator level control, likely causing a plant trip. The auxiliary feedwater pumps normally operate during start-up and shutdown; however, the pump flow rate (and hence the degree to which the suction check valves are exercised) is largely dependent on the conditions associated with the particular heatup or cooldown (e.g., the required heatup/cooldown rate and the particular auxiliary feedwater pumps that are operating). In practice, during a typical heatup or cooldown auxiliary feedwater flow will be sufficient to full stroke exercise the suction check valves; however, this cannot be guaranteed for all heatup and cooldowns. Accordingly, credit is taken for only part-stroke exercising these valves at cold shutdowns. In addition to part-stroke exercising these valves during heatup/cooldown and full stroke exercising at refueling, these valves are part-stroked quarterly during the auxiliary feedwater pump miniflow test. Flow rate through the suction check valves during the pump mini-flow tests is limited to a part-stroke exercise due to the size of the mini-flow test recirculation line. We believe the exercise program that these valves are subject to between refueling provides adequate assurance that these valves will function as required.

In addition, NRC IE Bulletin 79-13 identified the potential for feedwater line cracking as a result of injecting relatively cold auxiliary feedwater (40 degrees to 60 degrees F) into relatively hot main feedwater piping (426 degrees F). Full flow testing these valves at anytime other than refueling is contrary to these successfully implemented practices intended to minimize the potential for thermal shock to the feedwater piping and steam generators.

ALTERNATIVE TESTING:

The three check valves will be part-stroke exercised open during quarterly AFW pump testing and full-stroke exercised open during the full-flow pump test at refueling. In addition, these valves are part-stroked open at cold shutdowns as part of the normal AFW system operation.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 23

SYSTEM:

HVAC

VALVES:

FCV-1170, 1171, 1172, 1173

FUNCTION:

Valves FCV-1170 and FCV-1172 are non-ASME Code Class Valves, but are included in the IST Program in accordance with Generic Letter 89-04, Position 10. Valves FCV-1171 and FCV-1173 are ASME Code Class components.

These valves are containment isolation valves in the containment purge system.

JUSTIFICATION:

These valves are normally closed during power operation and have a safety function to close. An administrative goal has been established to limit the amount of time these valves may be open during plant operation. As such, exercising will be accomplished at cold shutdown.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 24

WITHDRAWN

COLD SHUTDOWN/REFUELING JUSTIFICATION: 25

WITHDRAWN

COLD SHUTDOWN/REFUELING JUSTIFICATION: 26

SYSTEM:

IA

VALVE:

PCV-1228

FUNCTION:

PCV-1228 is a CIV in the Instrument Air System. This valve is normally open during power operation and must close to provide containment isolation under accident conditions.

JUSTIFICATION:

This valve is an open or close only valve so that part-stroke exercising is impractical. Full-stroke exercising the valve quarterly during power operations or at cold shutdowns is also impractical because it shuts off the operating air supply to the valves inside containment that may be required to function during both power and cold shutdown operations.

ALTERNATIVE TESTING:

This valve will be full-stroke exercised at refueling outages.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 27

SYSTEM:

IVSW

VALVES:

1501-1532, 1534-1543, 1549, 1550, 5602

FUNCTION:

These valves are check valves in the lines leading to the various CIVs. Their safety function is to open following a containment isolation signal to provide a pressurized water or nitrogen seal between the containment isolation valves.

JUSTIFICATION:

These valves form a boundary between the IVSW system and the process lines served by the IVSW system. The test connections installed to permit flow testing these check valves are located between their respective check valve and the process lines being served. With the process line in service, flow verification of these valves is precluded by the process fluid flowing through the test connection. As such, these valves can only be full stroke exercised at refueling.

In addition, the Isolation Valve Seal Water System serves a containment isolation function. As such, the IVSW injection function is appropriately tested at a frequency consistent with the IVSW system functional testing required by Technical Specification Surveillance Requirement 4.4.D.1.c.

ALTERNATIVE TESTING:

Full stroke exercise open at refueling during IVSW function testing per Technical Specification 4.4.D.1.c..

COLD SHUTDOWN/REFUELING JUSTIFICATION: 28

SYSTEM:

MS

VALVES:

MS-1-21, 22, 23, 24

FUNCTION:

These valves are stop check valves with the pneumatic operators holding the valve disks out of the main steam flow path. The safety function of these valves is to close.

JUSTIFICATION:

These MSIV's cannot be full-stroke or part-stroke exercised quarterly because to do so would cause a reactor trip. The reactor trip would be caused by the turbine tripping off line. The turbine trip is caused by a Valve Position Change Signal. The Technical Specifications require these valves be full-stroke tested and timed to their safe position during refueling.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised closed and timed at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 29

SYSTEM:

RCS

VALVES:

HCV-3100, 3101

FUNCTION:

These valves are motor operated pressure isolation valves in the reactor coolant system, and act as part of the vessel head vent portion. These valves are normally closed during normal plant operation. These valves are opened when it is necessary to vent the reactor vessel head.

JUSTIFICATION:

These valves were installed as part of the TMI action items and are required to be operable during normal plant operations. Consistent with NRC's SER for this system (NRC, Varga to Con Ed, O'Toole, dated September 9, 1983) these valves will be stroked at cold shutdowns.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 30

SYSTEM:

RCS

VALVES:

838A, 838B, 838C, and 838D

FUNCTION:

Valves 838A, 838B, and 838C, and 838D are pressure isolation valves (PIVs) in the cold leg injection lines from the Recirculation Pumps and Residual Heat Removal pumps to the Reactor Coolant System. These valves open to permit flow in the LPSI mode following a LOCA. They must close to satisfy the pressure isolation function and open to permit flow.

JUSTIFICATION:

Valves 838A through 838D are in the flowpaths from the Recirculation Pumps and RHR pumps to the Cold Legs. The system configuration is such that the only practical way the valves can be exercised open is by putting flow through them from one of the above listed pumps. These pumps are not capable of overcoming RCS pressure and therefore quarterly full or part open stroking is not possible. Full open testing at a cold shutdown frequency is limited by temperature constraints on cooling of the Reactor Coolant System. The plant Technical Specifications include these valves as RCS/RHR Pressure Isolation Valves and periodic leakage testing is required. The closed stroke is verified in conjunction with the leakage testing required by Technical Specification Surveillance Requirement 4.16.A.5.

ALTERNATIVE TESTING:

Valves 838A through 838D will be part-stroke exercised open during cold shutdowns when the normal RHR mode of cooling is in progress. Full stroke exercise open will be performed at a frequency not to exceed refueling. Valve closure will be tested during leak rate testing at a frequency consistent with Technical Specification Surveillance Requirement 4.16.A.5, not to exceed refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 31

SYSTEM:

CSS

VALVES:

867A and B

FUNCTION:

Valves 867A and B are Containment Spray discharge check valves in the lines leading to the containment spray headers. They are closed during plant operation (CIV's) and open when the containment spray pumps are activated to supply refueling water storage tank (RWST) water to the containment spray headers.

JUSTIFICATION:

These valves are located downstream of the containment spray pump mini-flow test line and therefore cannot be part-stroke exercised open quarterly or at cold shutdown without directing water through the Containment Spray Rings. These valves can be full-stroke exercised open at refueling through a mechanical jumper that is used to bypass the Containment Spray Rings and fill the Reactor Cavity for refueling operations. They will be stroke closed in conjunction with their Refueling Internal leakage testing.

ALTERNATIVE TESTING:

This valve will be full-stroke exercised open and closed at refueling outages.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 32

SYSTEM:

SIS

VALVES:

856B and 856F

FUNCTION:

These are shutoff valves in the Safety Injection lines leading to Hot Legs 23 and 21 of the Reactor Coolant System. They are normally locked closed and have a safety function to open approximately 24 hours after the cold leg injection has been initiated.

JUSTIFICATION:

Valves 856B and 856F are open or closed only valves; therefore, part stroke exercising is impractical. Full-stroke exercising these valves quarterly during normal plant operation would be impractical in that a failure of these valves concurrent with a loss of coolant accident (LOCA) can result in a steam binding effect which would prevent adequate cooling water from reaching the core. Plant Technical Specifications require that these valves be closed with their motor operators de-energized by locking out the circuit breakers at the Motor Control Center.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 33

SYSTEM:

SIS

VALVES:

856A, 856C, 856D, 856E

FUNCTION:

These valves are flow isolation valves in the SI lines leading to the cold legs of the Reactor Coolant System. These valves are normally open and have a function to close when hot leg safety injection, during the recirculation phase of Safety Injection, is required.

JUSTIFICATION:

These valves are open or closed only valves; therefore, part-stroke exercising these valves is impractical. Full-stroke exercising these valves quarterly during normal plant operations is impractical because these valves are normally open and are required to be open during an emergency situation utilizing the SI system. Failure of one of these valves in the closed position would place the plant in a less conservative condition that may eventually cause plant shutdown. Plant Technical Specifications require that these valves be in the Open position.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 34

SYSTEM:

SIS

VALVES:

842 and 843

FUNCTION:

These valves are located in the mini-flow return line from the discharge of the safety injection pumps to the RWST. They are motor operated valves and are locked open during normal plant operation. They have a function to close at some time after initiation of SI.

JUSTIFICATION:

These valves are open or closed only valves; therefore, part-stroke exercising them is impractical. Full-stroke exercising the valves quarterly could compromise the SI pump operation if the valves were in the closed position and the pumps were started. This would result in a dead head condition which would cause damage to the pumps. Plant Technical Specifications require that these valves be de-energized in the open position.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 35

SYSTEM:

RCS

VALVES:

857A, 857B, 857C, 857D, 857G, 857H, 857M, 857F

FUNCTION:

Valves 857A, 857B, 857C, and 857D are pressure isolation check valves in the injection lines to the RCS and are at the interface of the RCS and the Safety Injection System. Valves 857M, 857F, 857G, and 857H are upstream and in series with 857A, 857B, 857C, and 857D, respectively. All valves open in order to permit flow from the High Pressure Safety Injection (HPSI) pumps into the RCS following a LOCA. They close to satisfy the pressure isolation function and open to permit flow.

JUSTIFICATION:

During normal plant operation, valves 857A, 857B, 857C, and 857D are held closed by RCS pressure of approximately 2200 psig. The HPSI pumps do not have the pressure capability (design discharge pressure approximately 1700 psig) to overcome the RCS pressure and establish flow through the check valves. In addition, during cold shutdowns, part of the temperature and overpressure protection requirements provides that HPSI pumps be deactivated when the RCS is pressurized and below 1900 psig. This prevents an inadvertent pressurization of the RCS by HPSI pumps at this time. Therefore, flow cannot be established through the check valves by the HPSI pumps during these cold shutdowns. Since valves 857M, 857F, 857G and 857H are upstream and in series with 857A, 857B, 857C, and 857D, respectively, the same basis for relief applies. Since these valves are pressure isolation valves, periodic leakage testing is required. The closed stroke is verified in conjunction with the leakage testing required by Technical Specification Surveillance Requirement 4.16.A.5.

ALTERNATIVE TESTING:

Valves 857A, 857B, 857C, 857D, 857M, 857F, 857G, and 857H will be full-stroke exercised open at refueling. Valve closure will be tested during leak rate testing at a frequency consistent with Technical Specification Surveillance Requirement 4.16.A.5, not to exceed refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 36

SYSTEM:

RCS, SIS

VALVES:

857J, 857K (RCS)
857E, 857L (SIS)

FUNCTION:

Valves 857J, K, E and L are check valves in the cold leg injection lines from the HPSI pumps. Valves 857J and 857K are pressure isolation check valves. All four valves are closed during normal plant operation and their emergency function is to open to permit flow from the HPSI pumps to the RCS following a LOCA. 857J and 857K close to satisfy the pressure isolation function and open to permit flow.

JUSTIFICATION:

The SIS configuration is such that the only practical way the valves can be exercised is by activating the HPSI pumps and establishing flow through the valves. During normal plant operation, the RCS pressure is approximately 2200 psig. The HPSI pumps do not have the pressure capability (design discharge pressure approximately 1700 psig) to overcome the RCS pressure and establish flow through the check valves. In addition, part of the temperature over pressure protection requirements at cold shutdowns is that the HPSI pumps be deactivated when the RCS is pressurized and below 1900 psig. This is to prevent an inadvertent pressurization of the RCS by the HPSI pumps at this time. Therefore, flow cannot be established through the check valves by the HPSI pumps during cold shutdowns. Valves 857J and 857K are tested for leakage as pressure isolation valves. The closed stroke is verified in conjunction with the leakage testing required by Technical Specification Surveillance Requirement 4.16.A.5.

ALTERNATIVE TESTING:

Valves 857J, K, E and L will be full-stroke exercised open at refueling. Valves 857J and 8567K will be full-stroke exercised closed during leak rate testing at a frequency consistent with Technical Specification Surveillance Requirement 4.16.A.5, not to exceed refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 37

SYSTEM:

SIS

VALVES:

849A, 849B, 852A, 852B, 5220

FUNCTION:

These valves are check valves located at the outlet of the SI pumps. They are normally closed and have a safety function of opening upon actuation of the Safety Injection pumps. They also have a safety function to close on cessation of flow.

JUSTIFICATION:

Full-stroke exercising these valves quarterly while the plant is at normal operating power is impractical in that the RCS pressure is at approximately 2250 psig. This pressure locks out these check valves at the RCS/SIS interface that is downstream and in series with the subject check valves. The head available from the Safety Injection pumps is not great enough to overcome the RCS pressure, thereby preventing flow. It is also impractical to exercise these valves at cold shutdowns because the Safety Injection Pumps are deactivated when the RCS goes below 1900 psig as part of the over pressure protection requirements.

Valve 852B is part-stroked to the open position on an intermittent frequency during normal operation when topping of the Safety Injection accumulators is performed.

ALTERNATIVE TESTING:

Valves 849A, 849B, 852A, and 5220 will be full-stroke exercised open and closed at refueling outages. Valve 852B will be part stroked intermittently during normal operation during topping of the SI accumulators, and full-stroke exercised open and closed at refueling outages.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 38

SYSTEM:

SIS

VALVE:

882

FUNCTION:

This valve is located in the supply line from the RWST to the RHR pumps. The valve is normally de-energized open to ensure flow to the RHR pumps for low-head SI. The valve must close during recirculation from the containment sump to the RHR pumps.

JUSTIFICATION:

This valve is de-energized open during normal plant operations to ensure proper operability of the RHR system following an accident. Failure of this valve in the closed position during normal operations would preclude the proper operation of the system. Plant Technical Specifications require that Valve 882 be blocked open by de-energizing the motor operator. When on normal RHR cooling, valve 882 must be maintained closed.

ALTERNATIVE TESTING:

This valve will be full-stroke exercised at cold shutdowns. If RHR is not secured during cold shutdown, the full stroke exercise will be performed during plant heatup.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 39

SYSTEM:

SIS

VALVE:

1810

FUNCTION:

This valve is located in the water supply leading to the SI pumps from the RWST. It is normally de-energized open; however, following an accident where the SI piping is broken downstream of valves 888A and B, this valve is required to shut and valve 898 is manually opened.

JUSTIFICATION:

This valve is required by the Plant Technical Specifications to be de-energized open during normal plant operations to ensure water flow from the RWST to the SI pumps. Because it is a single valve in this line, failure of this valve in the shut position would cause the failure of the SI system and require the plant to shutdown.

ALTERNATIVE TESTING:

This valve will be full-stroke exercised at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 40

SYSTEM:

SIS

VALVES:

1802A, 1802B

FUNCTION:

These valves are redundant parallel valves on the discharge of the containment internal recirculation pumps. They are normally closed and have a safety function to open when the recirculation pumps are put into service during the recirculation phase of a Loss of Coolant Accident. The recirculation pump header is provided with a normally open bypass line back to the sump to prevent dead heading the pumps. The elevation and piping arrangement from the RWST is such that with either valve 1802A or 1802B open the RWST would drain to the recirculation sump via the open bypass line with the potential for flooding the containment.

JUSTIFICATION:

Opening either valve during normal plant operation will cause the RWST to drain to containment. The only time the RWST is drained sufficiently to permit stroking 1802A and 1802B is at refueling.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 41

SYSTEM:

SW

VALVES:

FCV-1111 and FCV-1112

FUNCTION:

These valves are manual flow isolation valves in the normal service water supply to the conventional plant equipment.

JUSTIFICATION:

Either one of these valves is open during normal plant operation and the other closed. The open valve is closed at some time following an accident condition. Full or part-stroke exercising the open valve during normal plant operation is impractical because doing so would reduce or secure flow to plant equipment requiring this cooling water. This could cause damage to this plant equipment.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised at those cold shutdowns when the conventional plant equipment is not in use. In addition, these valves may be stroked during plant operation during those infrequent instances when it becomes necessary to realign service water system headers.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 42

SYSTEM:

CVCS

VALVES:

204A, 204B

FUNCTION:

These valves are the isolation valves for the normal and alternate charging lines, respectively. During normal operation, either the normal or alternate charging path is selected to provide borated water from the charging pumps to the Reactor Coolant System. The selected path isolation valve remains open and the unselected path remains closed.

JUSTIFICATION:

Cycling valves 204A and 204B during plant operation has been identified as a possible contributor to fatigue. If the valves are cycled during power operation, cold water is injected into the charging lines while the lines are at normal operating temperatures. This potentially results in a thermal fatigue cycle, reducing the design life of components in the charging lines. Therefore, it is impractical to exercise these valves during plant operation.

ALTERNATIVE TESTING:

These valves will be tested at cold shutdown.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 43

SYSTEM:

RCS

VALVES:

210A, 210B

FUNCTION:

These check valves have the safety function to open to admit borated water from the CVCS into the RCS. The check valves are downstream of the isolation valves 204A and 204B on the normal and alternate charging lines from the Chemical Volume and Control System to the Reactor Coolant System.

JUSTIFICATION:

These valves are full stroked to pass full charging flow whenever the respective isolation valve is open during normal operation. The isolation valves will no longer be cycled during normal operation. Cycling of the charging and letdown isolation valves during plant operation has been identified as a possible contributor to fatigue. If the valves are cycled during power operation, cold water is injected into the charging lines while the lines are at normal operating temperatures. This potentially results in a thermal fatigue cycle, reducing the design life of components in the charging lines. Therefore, it is impractical to exercise these valves during plant operation.

ALTERNATIVE TESTING:

These check valves will be full-stroke exercised open at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 44

SYSTEM:

WCPS

VALVES:

85A, 85B, 85C, 85D, 95A, 95B, 95C, 95D

FUNCTION:

Check valves 85C, 85D, 95C, and 95D and equalizing ball valves 85A, 85B, 95A, and 95B function as Containment Isolation Valves for the containment airlocks. Valves 85C, 85D, 95C, and 95D are required to open to provide overpressure protection for the airlocks.

JUSTIFICATION:

There are no positive means available for exercising these valves during normal operation. Proper operation of each valve may be deduced when making periodic entries to containment by verification of proper airlock operation. Valves 85C, 85D, 95C, and 95D can be full-stroke tested in the open direction during cold shutdown.

These valves cannot be closure tested during power operation or cold shutdown due to the need to install test equipment which would require containment entry or breach the airlock. The Category A leakage tests serve to verify the closure capability of these valves. These valves will be closure tested during Category A leakage testing in accordance with the guidelines of NUREG 1482, Section 4.1.4.

ALTERNATIVE TESTING:

These valves will be closure tested during Category A leakage testing at a frequency not to exceed refueling in accordance with the guidance of NUREG 1482, Section 4.1.4. Valves 85C, 85D, 95C and 95D will be full-stroke tested during cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 45

SYSTEM:

RCS

VALVE:

211

FUNCTION:

This valve is a spring loaded normally closed check valve and its safety function is to open to provide Auxiliary Pressurizer Spray. This spray path is a backup for Normal Spray from Reactor Coolant Loops 3 and 4. This check valve also has a safety function to open to provide a pressure relief path for the piping and components upstream of Valve 212 (Aux. Spray Iso) in accordance with NRC Generic Letter 96-06.

JUSTIFICATION:

Check Valve 211 is normally closed due to back pressure from the RCS. Technical Specifications require that "Spray shall not be used if the temperature difference between the pressurizer and the spray fluid is greater than 320 °F". In addition, there is no driving force to overcome RCS Pressure and flow through 211 during power operation.

ALTERNATIVE TESTING:

Check Valve 211 will be full-stroke exercised open at cold shutdown.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 46

WITHDRAWN

COLD SHUTDOWN/REFUELING JUSTIFICATION: 47

SYSTEM:

RCS

VALVES:

PCV-455A
PCV-455B

FUNCTION:

The Pressurizer Spray valves, PCV-455A and PCV-455B, are used to control RCS pressure and pressurizer temperature. They modulate as necessary to spray the Pressurizer with RCS water from either Loop 23 Cold Leg or Loop 24 Cold Leg.

JUSTIFICATION:

If valves PCV-455A and PCV-455B are unavailable for pressurizer control, then the Power Operated Relief Valves would be used to reduce RCS pressure and cool down the pressurizer. It is not desirable to full-stroke PCV-455A and PCV-455B on line due to the transients caused in RCS pressure and pressurizer temperature.

ALTERNATIVE TESTING:

Valves PCV-455A and PCV-455B will be tested at cold shutdown.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 48

SYSTEM:

RCS

VALVES:

535, 536

FUNCTION:

Valves 535 and 536 are motor operated block valves and are normally closed to ensure isolation in the event of a postulated short in the valve circuitry. They are closed or remain closed when leakage from the downstream power operated relief valves (PCV-456, 455C) exists. These valves are required to function, as part of the Overpressure Protection System and the RCS Vent System, post-accident.

JUSTIFICATION:

Valves 535 and 536 will be exercised and stroke timed quarterly when they are not maintained in the closed position by any Technical Specification requirements. Should a block valve be required to remain in the closed position due to associated excessive seat leakage in its series PORV, the block valve then becomes part of the reactor coolant pressure boundary. In that case, opening the block valve will likely invoke the Technical Specification limiting condition for operation for identified leakage, and perhaps, cause further degradation to the PORV. If the block valve had been closed because of a stuck open series PORV, then opening that block valve will cause a small LOCA. In the modified Standard Technical Specifications the block valves are exempt from the surveillance requirements to cycle the valves when they have been closed to comply with ACTION requirements.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised and timed quarterly when they are not being maintained in the closed position to comply with an ACTION requirement, and exercised and stroke timed at a cold shutdown frequency when they have been closed to prevent PORV leakage.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 49

SYSTEM:

RCS

VALVES:

PCV-456, PCV-455C

FUNCTION:

These valves function as part of the Low Temperature Over-Pressurization Protection System. They also operate during power operation to limit any pressure excursion and thus limit the operation of the spring loaded Pressurizer Safety Valves. PCV-456 and PCV-455C are normally shut pressure relief valves.

JUSTIFICATION:

The September 1983 Safety Evaluation Report for the remote reactor head vent system requires "the licensee to exercise the remote reactor head vent system valves during cold shutdown or each refueling outage, and not every three months." PORV's PCV-456 and PCV-455C are used in the remote reactor head vent (RCS Vent) system.

In Generic Letter 90-06, the NRC staff included PORVs within the scope of a program covered by the ASME Section XI, Subsection IWV. Stroke testing of PORVs should only be performed during Mode 3 (HOT STANDBY) or Mode 4 (HOT SHUTDOWN) and in all cases prior to establishing conditions where PORVs are used for low-temperature overpressure protection. Stroke testing of PORVs should not be performed during power operation.

ALTERNATIVE TESTING:

These valves will be full-stroke exercised during hot shutdown when the plant is entering a controlled shutdown. Otherwise, the valves will be tested during cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 50

SYSTEM:

MS

VALVES:

MS-2A, MS-2B, MS-2C, MS-2D

FUNCTION:

These valves are reverse current check valves in the main steam line from each steam generator. The four main steam lines are headered together. A steamline break upstream of an MS-2 valve would permit the other three steam generators to feed the break. Closure of the MS-2 valves under such a scenario limits the break flow (and the cooldown) to that associated with a single steam generator. As such, the safety function of these valves is to close.

JUSTIFICATION:

These valves are normally open during power operation passing nuclear generated steam to the turbine-generator unit. There are no means available to physically stroke these valves either on-line or off-line. However, as they are normally open check valves and are equipped with external position indication that is physically observable, physical observation to assure these valves are in the closed position can be verified at cold shutdown. In addition, these valves are equipped with an external counterweight. For a steamline break upstream of an MS-2, the check valve closes by the extreme differential pressure. Occasionally, on a controlled cooldown, the counterweight is assisted by hand to provide valve closure (due to lack of differential pressure). The torque to assist the counter weight is not measured since it is negligible when compared to steamline break differential pressure.

ALTERNATIVE TESTING:

These valves will be verified closed at cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 51

WITHDRAWN

COLD SHUTDOWN/REFUELING JUSTIFICATION: 52

SYSTEM:

CCW

VALVES:

733C
734A, 734B, 734E, 734F

FUNCTION:

Valves 734A and 734B are the normally open supply and return of CCW to the RHR/SIS Pump Bearing Coolers. Valves 733C, 734E and 734F are normally closed CCW backup from the Primary Water System and hose connections. In the unlikely event of loss of CCW when the RHR/SIS Pumps are required for achieving Cold Shutdown or Accident Mitigation, these valve positions would be required to be manually changed.

JUSTIFICATION:

Cycling valves 733C, 734A and 734B quarterly or at Cold Shutdown will interrupt CCW flow to the RHR/SIS Pump Bearing Coolers and then introduce Primary Water into the CCW System. Although the SIS pumps are not required in Cold Shutdown, the RHR pumps are required. It is undesirable to introduce Primary Water into the chemically treated CCW System on a quarterly frequency. Valves 734E and 734F can be cycled less frequently on a cold shutdown basis.

ALTERNATIVE TESTING:

Valves 733C, 734A and 734B will be full-stroked exercised at Refueling Outages. Valves 734E and 734F will be full-stroke exercised on a cold shutdown frequency.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 53

SYSTEM:

SW

VALVES:

SWN-6, SWN-7

FUNCTION:

Valve SWN-6 AND SWN-7 are the Service Water Header isolation to the Turbine Oil Coolers, Boiler Feed Pump Turbine Oil Coolers and the Seal Oil Coolers. All of these loads are Non-Essential. During normal (three header) operation, these valves are both closed and the equipment is fed via the River Water Header. During those periods of two header operation, (during maintenance) the valve supplying from the Non-essential Header would be maintained open. If a seismic event occurs, operators are directed to inspect the Service Water piping downstream of these valves. Since alignment is to the Non-Essential Header, sufficient time is available for local operator action to restore full header integrity.

JUSTIFICATION:

With the Service Water System on normal three header operation, valves SWN-6 and SWN-7 must remain closed to avoid cross-tieing of headers. During the swap over to two header operation one of the valves will be stroked depending on selection of the Non-Essential Header.

ALTERNATIVE TESTING:

These valves will be full-stroke tested at Cold Shutdown.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 54

SYSTEM:

SW

VALVES:

SWN-40, SWN-40-1

FUNCTION:

These normally open valves have a safety function to remain open to allow service water flow to the Containment Fan Coil Units (CFCUs). These valves also have a safety function to close to isolate a failed header, which would allow the CFCUs to continue to be supplied from the opposite (non-failed) service water header.

JUSTIFICATION:

During normal plant operation, the CFCUs are supplied by the essential service water header. Technical Specifications require separation of the essential and non-essential headers to be maintained at all times. Closure of these valves during power operation would isolate the cooling water supply to either 2 or 3 CFCUs (depending upon the designated essential header) at one time. Technical Specifications only allow one CFCU to be out of service during power operation. The essential and non-essential service water headers would have to be cross-tied in order to meet Technical Specification operability requirements during stroking of the valves, which would not provide a commensurate increase in safety. These valves will be exercised during cold shutdown when the CFCUs are not required to be operable.

ALTERNATIVE TESTING:

These valve will be exercised during cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 55

SYSTEM:

RCS

VALVES:

518

FUNCTION:

This check valve is intermittently opened to allow nitrogen flow to the Pressurizer Relief Tank (PRT). This valve has a safety function to close for Containment Isolation.

JUSTIFICATION:

This valve cannot be closure tested during normal operation since the valve and associated test connections are located inside containment, precluding containment entry for test equipment installation during power operation or cold shutdown. In accordance with the guidelines of NUREG 1482, Section 4.1.4, the need to set up test equipment for this test is adequate justification to defer backflow testing until refueling outages. This valve will be tested during Category A leakage testing at a frequency not to exceed refueling.

ALTERNATIVE TESTING:

This valve will be closure tested during Category A leakage testing at a frequency not to exceed refueling in accordance with the guidance of NUREG 1482, Section 4.1.4.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 56

SYSTEM:

RCS

VALVES:

251A, B, C, D, E, F, G, H

FUNCTION:

These valves must close to isolate the associated line upon a break in the piping between the check valves and the upstream isolation valves. Failure to close these valves would result in an uncontrolled loss-of-coolant accident.

JUSTIFICATION:

The associated test connections for these valves are located inside the vapor containment, and are inaccessible during normal plant operation. Closure of these valves during normal plant operation is impractical since this would isolate the Reactor Coolant Pump seal water flow which could damage the seals. Closure of these valves during cold shutdown is practical only when the associated RCP has been secured. These valves can be tested during cold shutdown if the RCP seal injection is not required, and are testable during refueling outages.

ALTERNATIVE TESTING:

These valves will be tested in the closed direction during cold shutdowns provided the RCP seal injections are secured. If one or more RCP seal injection is not secured at cold shutdowns, the associated valves will be tested at intervals no greater than refueling.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 57

SYSTEM:

SIS

VALVES:

858A, 858B

FUNCTION:

Valves 858A and B are the safety injection test line return check valves. These valves must open to provide an overpressure protection relief path to relief valve 855 to protect the piping system against overpressurization. The valve will provide a relief path for Containment Penetrations NN and Q as discussed in NRC Generic Letter 96-06. These valves must pass any flow greater than zero in order to perform their credited opening function.

JUSTIFICATION:

These valves cannot be exercised to the open position on a quarterly basis during normal plant operation since testing requires opening of downstream manual valves due to the absence of local test connections. Should an SI signal be generated during this test, flow from the SI pumps would be diverted out of this test line away from the SI injection path.

These valves can be exercised to the open position during cold shutdowns utilizing the local test connections to verify flow. These valves must prove the capability to pass any amount of flow greater than zero, as their only safety function in the open position is to open to provide a pressure relief path to satisfy Generic Letter 96-06 concerns.

ALTERNATIVE TESTING:

These valves will be exercised to the open position during cold shutdowns.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 58

SYSTEM:

IA

VALVE:

IA-39

FUNCTION:

IA-39 is a CIV (check valve) in the Instrument Air System leading to the containment building. This valve is normally open and has a safety function to close for Containment Isolation.

JUSTIFICATION:

Exercising the valve closed would require securing the operating Instrument Air supply to all valves in the containment which are required to be operational during power and cold shutdown operations. Also, existing plant design and construction provides no means for indication or verification of check valve disk motion in either direction. The proper position for satisfying the containment isolation function is confirmed by acceptable Category A valve leak rate testing results. NUREG-1482, section 4.1.4 allows use of the Category A leak testing to satisfy closure test requirements on a refueling frequency if no practical method of verifying check valve closure exists.

ALTERNATIVE TESTING:

Verification of valve closure will be made during Category A leak testing requirements of OM-10, Para. 4.2.2.2 during refueling outages as discussed in NUREG-1482, Section 4.1.4.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 59

SYSTEM:

MS

VALVES:

HCV-1118, MS-577

FUNCTION:

Valve HCV-1118 is the Turbine Driven Auxiliary Feedwater Pump (TDAFWP) governor valve, and has a safety function to open upon pump start to allow steam flow to the pump. MS-577 is the TDAFWP steam control valve and has a safety function to close upon overspeed of the pump for pump protection.

These valves are classified as skid-mounted in accordance with NUREG 1482, Section 3.4.

JUSTIFICATION:

MS-577 cannot be tested during normal operation due to the need to develop an overspeed condition on the TDAFWP. Performance of this test during power operation is not possible due to the inability to develop full-flow conditions on the TDAFWP while the plant is at power. Establishment of TDAFWP full-flow conditions during each hot shutdown is not desirable due to the need to utilize ambient temperature water from the CST to the SG which can result in thermal shocking of the SG tube sheet. The TDAFWP is overspeed tested during hot-shutdown when entering or following refueling outages. MS-577 will be full-stroked open and closed during hot shutdown. The open stroke is performed by manually resetting the valve following turbine overspeed.

HCV-1118 cannot be full-stroke tested during normal operation or each hot shutdown due to the inability to establish full-flow conditions for the TDAFWP as discussed above. This valve will be part-stroked to the open position during the quarterly pump test, and full-stroked to the open position during hot shutdown entering or following refueling outages.

ALTERNATIVE TESTING:

MS-577 will be full-stroke tested open and closed during hot shutdown following or entering refueling outages. HCV-1118 will be part-stroke tested quarterly during normal operation and full-stroke tested during hot shutdown entering or following refueling outages.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 60

SYSTEM:

AFW

VALVE:

BFD-50

FUNCTION:

This check valve provides a min-flow path from the #22 AFW Pump. The valve must open when AFW Pump #22 is running to prevent pump damage when operating near shutoff head. This is a support function required for operation of the AFW Pump.

JUSTIFICATION:

The associated line is not equipped with a flow measuring device which would allow quantification of the required 80 gpm flow through this valve. This valve can be verified to partial stroke during quarterly performance of the pump operational test. However, it is not practicable to quantify the flow through this valve during testing. The downstream flow instrument measures the combined flow from this valve and the pump bearing cooling water return line during testing, preventing determination of individual valve flow.

ALTERNATIVE TESTING:

This valve will be part-stroked quarterly during performance of the pump operational test. Full-stroke capability will be verified by disassembly and inspection during refueling outages in accordance with OM-10, paragraph 4.2.3.4(c). This valve may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 61

SYSTEM:

AFW

VALVE:

BFD-68

FUNCTION:

This check valve provides a return path for the bearing cooling water from the #22 AFW Pump. The valve must open when AFW Pump #22 is running to allowing combined cooling water flow to return to the Condensate Storage Tank. This is a support function required for operation of the AFW Pump.

JUSTIFICATION:

The associated line is not equipped with a flow measuring device which would allow quantification of flow through this valve. This valve can be verified to partial stroke during quarterly performance of the pump operational test. However, it is not practicable to quantify the flow through this valve during testing. The downstream flow instrument measures the combined flow from this valve and the pump min-flow return line during testing, preventing determination of individual valve flow.

ALTERNATIVE TESTING:

This valve will be part-stroked quarterly during performance of the pump operational test. Full-stroke capability will be verified by disassembly and inspection during refueling outages in accordance with OM-10, paragraph 4.2.3.4(c). This valve may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 62

SYSTEM:

GAS

VALVE:

4312

FUNCTION:

This valve has a safety function to close for containment isolation of penetration RR. This valve is open during normal operation to allow charging of the safety injection and pressurizer PORV accumulators with nitrogen.

JUSTIFICATION:

This valve cannot be closure tested during normal operation since testing would require removal of the nitrogen makeup supply to the safety injection and pressurizer PORV accumulators. This valve is located inside containment, precluding containment entry for test equipment installation during power operation or cold shutdown. In accordance with the guidelines of NUREG 1482, Section 4.1.4, the need to set up test equipment for this test is adequate justification to defer backflow testing until refueling outages. This valve will be tested during Category A leakage testing at a frequency not to exceed refueling.

ALTERNATIVE TESTING:

This valve will be closure tested during Category A leakage testing at a frequency not to exceed refueling in accordance with the guidance of NUREG 1482, Section 4.1.4.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 63

SYSTEM:

MS

VALVES:

MS-41, MS-42

FUNCTION:

These valves have a safety function to open as a check valve to supply steam to the Turbine Driven Auxiliary Feedwater Pump. Each individual valve must be capable of providing sufficient steam flow to allow the TDAFWP to perform its function. These valves are also required to close to isolate the TDAFWP steam supply line in the event of a main steam line break in its associated header. These are stop check valves which are also required to be manually exercised to the closed position to ensure manual isolation capability.

JUSTIFICATION:

These valves cannot be full-stroke tested at power operation due to the limitations on operation of the Turbine Driven Auxiliary Feedwater Pump, which is limited to min-flow when the plant is at power. Each of these valves is individually tested quarterly to verify partial stroke capability by observing acceptable operation of the TDAFWP.

These valves can be manually stroked open and closed quarterly, and partially stroked open with flow quarterly.

Full-stroke testing during cold shutdown is not practicable due to the absence of steam in the Main Steam system. Pump full-flow operation during each plant heatup from cold shutdown is undesirable due to the temperature gradient between the low temperature CST supply to the pump and the high temperature feedwater supply, which could result in a plant transient. Therefore, these valves cannot be full-stroke tested during heatup following each cold shutdown.

Closure testing of these valves (check valve function) cannot be performed during power operation as there are no isolation points for the valves, and testing would render the TDAFWP inoperable. Testing requires the upstream piping to be fully depressurized. Therefore, closure testing during cold shutdowns is not practicable due to the need to vent a steam generator to allow testing. This would present a hardship without a compensating increase in safety during plant shutdown.

These valves will be individually full-flow tested during full-flow testing of the TDAFWP during heatup following each refueling outage. The valves will be closure tested during each refueling outage.

ALTERNATIVE TESTING:

These valves will be manually full-stroked quarterly, and partial stroked open quarterly with flow. These valves will be full-stroked open during plant startup following each refueling outage, and closure tested during each refueling outage.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 64

SYSTEM:

SIS

VALVE:

846

FUNCTION:

This manual valve is normally locked open to allow flow from the Refueling Water Storage Tank (RWST) to the Safety Injection Pumps. This valve must close during abnormal high-head recirculation to prevent contaminating the RWST with highly radioactive water from the containment sump.

JUSTIFICATION:

Closure of this valve during normal operation would isolate the RWST from the safety injection system. There is no bypass flowpath around this valve. Failure to maintain this flowpath would render the safety injection system unavailable, which is a violation of Technical Specifications. Partial stroking of this valve is not practicable during normal operation as this valve is required to be maintained in the full open position to support safety injection operability.

This valve can be full stroked to the closed position during cold shutdown conditions when the safety injection system is not required, and when the RWST is not required as a supply source for the Residual Heat Removal System.

ALTERNATIVE TESTING:

This valve will be full stroked to the closed position during cold shutdown when the RWST suction path is not required.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 65

SYSTEM:

CCW

VALVE:

755

FUNCTION:

This valve must open to provide Component Cooling Water flow to the Safety Injection Recirculation Pumps when a Safety Injection signal has been generated. The valve is normally open, providing flow to the SI Recirculation Pumps during standby conditions.

JUSTIFICATION:

This valve cannot be verified to full stroke open during normal operation. There are two CCW flowpaths running parallel to this valve, preventing the quantification of flow through a single valve. Isolation of the other flowpaths during normal operation is not practicable since this would require isolation of the Auxiliary Component Cooling Water Pumps, which would auto-start during a loss-of-power accident, and these pumps are not equipped with min-flow protection. Likewise, partial flow testing cannot be performed due to the inability to attribute the measured flow to an individual valve.

This valve can be full stroke tested during cold shutdown when the parallel paths can be isolated.

ALTERNATIVE TESTING:

This valve will be full stroke tested in the open direction during cold shutdown.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 66

SYSTEM:

GAS

VALVE:

1616

FUNCTION:

This check valve provides nitrogen for the Reactor Coolant Drain Tank nitrogen blanket. The valve has a safety function to close for containment isolation.

JUSTIFICATION:

This valve cannot be closure tested during normal operation or cold shutdown since testing would require removal of the nitrogen header from service due to the absence of suitable test connections in the associated line. In accordance with the guidelines of NUREG 1482, Section 4.1.4, this valve will be tested during Category A leakage testing at a frequency not to exceed refueling.

ALTERNATIVE TESTING:

This valves will be closure tested during Category A leakage testing at a frequency not to exceed refueling in accordance with the guidance of NUREG 1482, Section 4.1.4.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 67

SYSTEM:

CCW

VALVES:

774A, B, C, D

FUNCTION:

These check valves are located at the CCW inlet to the Reactor Coolant Pump Thermal Barrier. These valves must close to provide isolation between the high pressure and low pressure portion of CCW piping. Closure is necessary to prevent overpressurization of the upstream (low pressure) piping in the event of a thermal barrier cooling coil rupture.

JUSTIFICATION:

These valves cannot be closure tested during normal operation since testing would require removal of a Reactor Coolant Pump from service. These valves are located inside containment, precluding containment entry for test equipment installation during power operation or cold shutdown. In accordance with the guidelines of NUREG 1482, Section 4.1.4, the need to set up test equipment for this test is adequate justification to defer backflow testing until refueling outages. These valves will be tested during Category A leakage testing at a frequency not to exceed refueling.

ALTERNATIVE TESTING:

These valves will be closure tested during Category A leakage testing at a frequency not to exceed refueling in accordance with the guidance of NUREG 1482, Section 4.1.4.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 68

SYSTEM:

CVCS

VALVE:

374

FUNCTION:

Valve 374 is the inlet check valve to the Regenerative Heat Exchanger from the CVCS. The valve has a safety function to open to supply charging flow to the RCS and to provide a relief path to prevent piping overpressurization as discussed in NRC Generic Letter 96-06. It has a safety function to close to prevent reverse flow of RCS into the CVCS.

JUSTIFICATION:

Valve 374 will be part-stroke exercised (nominally full-stroked open) during power operation via normal charging. This valve can be full-stroke exercised during cold shutdown. Valve closure cannot be verified quarterly as normal charging cannot be isolated with the unit at power. There is no practical test method to prove valve closure on cessation or reversal of flow during power operation or cold shutdown.

ALTERNATIVE TESTING:

Valve 374 will be part-stroked open quarterly and full-stroked open during cold shutdown. Valve closure will be verified by disassembly and inspection during refueling outages in accordance with OM-10, paragraph 4.2.3.4(c). This valve may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 69

SYSTEM:

SIS

VALVE:

847

FUNCTION:

Valve 847 is a check valve located at the inlet to the Safety Injection pumps from the Refueling Water Storage Tank (RWST). The safety function is to open upon activation of the safety injection pumps and to close during External Containment Recirculation to prevent reverse flow to the RWST.

JUSTIFICATION:

The only practical means to exercise this check valve is to activate the Safety Injection pumps and flow water from the RWST to the Reactor Coolant System (RCS). Full-stroke exercising the valve quarterly while the plant is at normal operating power is impractical in that the RCS pressure is at approximately 2250 psig and this pressure locks out the check valve at the RCS/SIS interface that is downstream and in series with the subject check valve. The head available from the SI pumps is not enough to overcome the RCS pressure, thereby preventing flow. It is also impractical to exercise the valve at cold shutdowns. There is no practical test method to prove valve closure on cessation or reversal of flow.

ALTERNATIVE TESTING:

Valve 847 will be part-stroke exercised open quarterly during SI pump tests and will be full-stroke exercised open at refueling outages. Valve closure and full-stroke open capability will be verified by disassembly and inspection during refueling outages in accordance with OM-10, paragraph 4.2.3.4(c). This valve may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 70

SYSTEM:

SIS

VALVE:

881

FUNCTION:

Valve 881 is an inlet line check valve to the RHR pumps from the Refueling Water Storage Tank. The valve is normally closed and has the safety function of opening when the RHR pumps are used in the LPSI mode. The valve also has a safety function to close during External Containment recirculation to prevent reverse flow to the RWST.

JUSTIFICATION:

This valve cannot be part-stroke exercised open quarterly during the RHR pump mini-flow test because the test line taps in downstream of this valve. Although an 8 inch bypass line is provided around the RHR pumps for the purpose of pumping refueling water back to the RWST following refueling operations, its use during normal operations would render both RHR pumps inoperable in the LPSI mode. This line could potentially serve to permit part-stroke exercising of valve 881 during cold shutdowns when RHR pump operability is not required by Technical Specifications. However, the duration of a typical cold shutdown is such that the decay heat load is sufficiently large so as to preclude diverting any significant flow from the discharge header. There is no practical test method to prove valve closure on cessation or reversal of flow.

ALTERNATIVE TESTING:

Valve 881 will be exercised (nominally full-stroked open) at refueling using the RHR pumps to refill the primary system. Valve closure and full-stroke open capability will be verified by disassembly and inspection during refueling outages in accordance with OM-10, paragraph 4.2.3.4(c). This valve may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 71

SYSTEM:

AFW

VALVE:

BFD-31

FUNCTION:

These valve is the Turbine Driven Auxiliary Feedwater (TDAFW) pump discharge check valve. The valve is normally closed and has a safety function to open when the TDAFW pump is activated to provide Condensate Storage Tank water to the steam generators. The valve has a safety function to close to prevent reverse rotation of the pump on cessation of flow.

JUSTIFICATION:

Exercising this check valve quarterly during normal operation is impractical since the auxiliary feedwater pump must be activated to flow ambient temperature water from the CST to the SG which can result in thermal shocking of the SG tube sheet. This valve is downstream of the AFW pump test recirculation line thus precluding any exercising during quarterly pump testing. Full-stroke exercising at cold shutdown is impractical because the high flow rates required for full-stroke exercising make it difficult to control water levels in the SG.

Excessively high water levels in the SG can result in water in the steamlines, and can lead to turbine damage when power operations are resumed. This valve is in series with two additional check valves and therefore reverse flow testing is impractical.

ALTERNATIVE TESTING:

Full-stroke open exercise the valve during refueling outages in conjunction with full flow test of the auxiliary feedwater pump. Valve closure will be verified by disassembly and inspection during refueling outages in accordance with OM-10, paragraph 4.2.3.4(c). This valve may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 72

SYSTEM:

AFW

VALVE:

CD-109

FUNCTION:

This check valve opens when makeup water is supplied to the Condensate Storage Tanks (CST). This valve is a seismic boundary for the CST and has the safety function to close to ensure the CST remains at the required capacity for decay heat removal.

JUSTIFICATION:

There are no positive means to verify that the disk of this valve travels to the seat promptly on cessation or reversal of flow.

ALTERNATIVE TESTING:

Valve closure will be verified by disassembly and inspection during refueling outages in accordance with OM-10, paragraph 4.2.3.4(c). This valve may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 73

SYSTEM:

CVCS

VALVE:

292

FUNCTION:

Valve 292 is located upstream from where the emergency boration line and Refueling Water Tank boration path enters the charging pump suction line. This valve must open to supply water from the Volume Control Tank (VCT) to the charging pumps suction. This valve must close if there is an uncontrolled reactivity addition requiring boric acid addition. If the selected source is the emergency boration path (valves 333, 332 and 4924), valve 292 must close to prevent flow diversion from the charging path to the VCT.

JUSTIFICATION:

This valve cannot be full-stroke tested to the open position during normal operations due to the lack of installed flow instrumentation. This valve can be full-stroke tested during cold shutdown. Partial-flow testing is possible during normal operation by verification of adequate seal flow to the Reactor Coolant Pumps.

Valve 292 cannot be closure tested during normal operation or cold shutdown since the Volume Control Tank (VCT) must be removed from service. The VCT is required to be operable during normal operation and cold shutdown to provide a source of seal water for the Reactor Coolant Pumps. This valve can be verified to close during testing of the emergency boration flowpath. This testing can be performed during refueling outages when the VCT can be removed from service.

ALTERNATIVE TESTING:

This valve will be verified to full-stroke to the open position during cold shutdown. Valve closure will be verified during refueling outages.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 74

SYSTEM:

CCW

VALVE:

21CCSTV

FUNCTION:

This check valve must open to prevent vacuum conditions from developing in the Component Cooling Water (CCW) Surge Tank. This valve must close to maintain the CCW as a closed system as part of the reactor building isolation barrier.

JUSTIFICATION:

This valve is an integral part of the CCW Surge Tank and cannot be tested during normal operation without rendering the surge tank inoperable. This would cause the entire CCW System to be inoperable, violating the plant Technical Specifications. There are no means of testing this valve without disassembly, precluding testing during cold shutdowns. This valve can be verified to full-stroke open using disassembly and inspection during refueling outages when the surge tank can be removed from service.

ALTERNATIVE TESTING:

Valve full-stroke open and closed capability will be verified by disassembly and inspection during refueling outages in accordance with OM-10, paragraph 4.2.3.4(c). This valve may be disassembled during power operation or cold shutdown as discussed in the Public Meeting Minutes for NRC Generic Letter 89-04, Question Group 14.

COLD SHUTDOWN/REFUELING JUSTIFICATION: 75

SYSTEM:

AFW

VALVES:

CD-631, CD-632, CT-714, CT-715

FUNCTION:

Valves CD-631/CD-632 and CT-714/CT-715 are two pairs of series check valves which provide nitrogen to the Condensate Storage Tank to maintain the nitrogen blanket. These valves have a safety function to close to prevent draining of the CST inventory in the event of a loss of the upstream piping.

JUSTIFICATION:

These check valves are not provided with intermediate test connections or other indicators which would allow verification that the disks move to the closed position promptly upon cessation of flow during normal operation. Removing the associated lines from service during normal operation could adversely affect the chemistry in the CST. Valve closure can be verified during cold shutdown when nitrogen can be isolated from the CST.

ALTERNATIVE TESTING:

These valves will be closure tested during cold shutdowns.