TUELECTRIC

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November 15, 1989

William J. Cahill, Jr.
Executive Vice President

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NO. 50-445
UNIT 1, INSERVICE TESTING PROGRAM PLAN, INTERIM
CHANGE REQUEST NOS. IST-R3-001 AND IST-R3-002

REF: TU Electric letter, TXX-89565, from W. J. Cahill, Jr., to USNRC, dated August 21, 1989.

Gentlemen:

Enclosed please find two (2) copies of Interim Change Request (ICR) Nos. IST-R3-001 and IST-R3-002 to the CPSES Unit 1, Inservice Testing (IST) Program Plan, Revision 3. Copies of the ICR's are also being sent to the Region IV office, the NRC Resident Inspector, the Texas Department of Licensing and Regulation, and the Hartford Steam Boiler.

ICR Nos. IST-R3-001 and IST-R3-002 are accompanied with the revised pages to be inserted into the controlled copies of the CPSES Unit 1, IST Program Plan, Revision 3. Included in these ICR's are changes involving valve additions and valve numbering. In addition, the ICR's are added into Appendix D of the IST Program Plan, Revision 3.

During the course of the IST program review, the NRC noted inconsistencies in the CPSES Unit 1, IST Program Plan, Revision 3. The TU Electric responses to these inconsistencies, with applicable comments/justifications to support conclusions, are attached.

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P. O. Box 1002 Glen Rose, Texas 76043-1002

Should any questions arise regarding the responses or these ICR's, please contact Norman Hood, at (214) 897-5889.

Sincerely,

William J. Cahill, Jr.

DAR/dar
Attachment
Enclosures

c - Mr. R. D. Martin, Region IV
Resident Inspectors, CPSES (3)

Texas Department of Licensing and Regulation
Boiler Division
E. O. Thompson State Office Building
P. O. Box 12157, Capitol Station
Austin, Texas 78701
Attn. George Bynog

Hartford Steam Boiler
15415 Katy Freeway
Houston, Texas 77094
Attn. Tom Barbara

REQUEST FOR ADDITIONAL INFORMATION
NRC INCONSISTENCIES, IDENTIFIED DURING THE REVIEW OF THE IST PROGRAM

Inconsistencies in the licensee's programs noted during the course of the IST program review:

NRC IST Program Inconsistency No. 1:

In relief request No. P-11, the licensee stated that pressure and temperature instrumentation for the safeguard building sump pumps is not installed, that vibration measurement is impractical because of the pump mounting configuration, and that flooding and draining the sumps every three months for testing would create a hardship. The licensee has proposed performing a functional test once every two years during which only the pump flowrate will be measured. The licensee's basis for not performing vibration measurements does not provide the detail necessary to evaluate whether this Code requirement is indeed impractical. Further, the proposed testing is not a reasonable alternative to the Code requirements since measurement of flow alone would not provide a reasonable assurance of operational readiness for these pumps. Additional details relative to pump mounting configuration is needed to justify the impracticality of vibration testing. Also, the licensee should address the applicability of installing pressure instrumentation to assure the operational readiness in accordance with 10CFR50.55a.

TU Electric Response:

Relief Request Number P-11, has been revised to reflect the testing program for these pumps to be in accordance with code requirements. Vibration, flow and pressure are to be measured during the inservice test to evaluate the pumps condition.

NRC IST Program Inconsistency No. 2:

During a working meeting between CPSES, NRC, and INEL on July 19 and 20, 1989, Item E-3 was identified as an open item involving the auxiliary feedwater isolation check valve testing. The licensee was told they should determine the maximum back leakage through those check valves that the auxiliary feedwater system could tolerate and this leakage limit should be incorporated into the testing of the valves. The licensee has responded as follows:

> It is the owner's responsibility to define the ASME Section XI valve category for each valve to be tested. Check valves for which seat leakage is not limited to a specific maximum amount by Technical Specifications or the FSAR are categorized as "C" only in the CPSES IST plan. Verification of closure will be positive means.

In the CPSES reply to NRC IE Bulletin 85-01 dated May 17, 1988, the licensee committed to monitoring the auxiliary feedwater pump discharge temperature by touch to determine if the temperature is at or near ambient conditions each shift. The licensee feels that this monitoring combined with quarterly [cold shutdown] category C closure testing of the auxiliary feedwater isolation check valves will provide adequate assurance that this system's operability will not be jeopardized by back leakage. It should be noted, however, that the auxiliary feedwater pumps are located a considerable distance from the isolation check valves and that monitoring the temperature by touch near the auxiliary feedwater pump may not provide an adequate indication of individual check valve back leakage. Additional information is needed to demonstrate that the proposed testing for these check valves is adequate to insure that the valves are capable of performing their safety function in the closed position.

TU Electric Response:

A. To clarify the proposed Auxiliary Feedwater Isolation Check Valves Testing.

Closure testing (as well as forward flow testing) is performed at cold shutdowns; not quarterly as the above NRC question suggests. Cold shutdown testing is reasonable, as indicated by a review of the flow diagram configuration.

Temperature monitoring performed three (3) times per day on the AFW pumps discharge piping is a reasonable method of detecting excessive feedwater back leakage. Regardless of the distance from the feedwater header back to the pumps; if saturation conditions do not exist in the piping and pump casings then the pumps are not inoperable due to feedwater back leakage (i.e., steam binding) and the check valves are sufficiently closed.

TU Electric Response (continued):

B. To expand on the AFW Isolation Check Valves cold shutdown testing.

Forward flow testing is accomplished by flowing through the valves and simulating design flowrates. Therefore, this testing verifies check valve operability in the open direction on the "running pump" headers, and further verifies check valve operability in the closed direction on the "non-running pump" headers as evidenced by the net flow to the steam generator criteria being met.

Additional closure testing is performed on each check valve individually by isolating the line which contains the valve and impressing a delta pressure across the valve in the closed direction using an external pressure source (usually demineralized water). Check valve back leakage is observed by opening an upstream (of the check valve) test connection and/or pressure decay on the supplying system.

NRC IST Program Inconsistency No. 3:

The check valves identified in valve relief requests Nos. 16.6 and 16.7 were discussed during the July 19 and 20, 1989, working meeting (Item P-2 of the meeting minutes). The response for this item indicated that these valves would either be identified as non-safety related or they would be removed from the IST program. However, the licensee subsequently included these valves in Revision 3 of the IST program as Category C valves that perform a safety function in the closed position.

Given that these check valves are safety related, relief requests Nos. 16.6 and 16.7 do not provide an adequate basis for not verifying valve reverse flow closure during cold shutdowns by leak testing or other positive means as provided for in Section XI, Paragraph IWV-3522. The licensee stated that testing during cold shutdown would require containment entry, plant manipulation, and test equipment setup. These activities are part of the normal testing process and are not seen as being impractical or as constituting an excessive burden to the licensee. Generic Letter 89-04 states that valve disassembly can be used as a positive means of verifying closure capability of check valves, if this verification cannot be performed by monitoring system parameters such as pressure or reverse flow. Also, this approach may be performed during reactor refueling outages. However, the licensee has not demonstrated that it is impractical or burdensome to test these valves by some positive means during cold shutdowns and that the valves can only be tested by disassembly and inspection. Additional input is needed to resolve this issue.

TU Electric Response:

Relief Requests Numbers 16.6 and 16.7, have been revised to indicate a cold shutdown test frequency of the subject check valves.

NRC IST Program Inconsistency No. 3:

The check valves identified in valve relief requests Nos. 16.6 and 16.7 were discussed during the July 19 and 20, 1989, working meeting (Item P-2 of the meeting minutes). The response for this item indicated that these valves would either be identified as non-safety related or they would be removed from the IST program. However, the licensee subsequently included these valves in Revision 3 of the IST program as Category C valves that perform a safety function in the closed position.

Given that these check valves are safety related, relief requests Nos. 16.6 and 16.7 do not provide an adequate basis for not verifying valve reverse flow closure during cold shutdowns by leak testing or other positive means as provided for in Section XI, Paragraph IWV-3522. The licensee stated that testing during cold shutdown would require containment entry, plant manipulation, and test equipment setup. These activities are part of the normal testing process and are not seen as being impractical or as constituting an excessive burden to the licensee. Generic Letter 89-04 states that valve disassembly can be used as a positive means of verifying closure capability of check valves, if this verification cannot be performed by monitoring system parameters such as pressure or reverse flow. Also, this approach may be performed during reactor refueling outages. However, the licensee has not demonstrated that it is impractical or burdensome to test these valves by some positive means during cold shutdowns and that the valves can only be tested by disassembly and inspection. Additional input is needed to resolve this issue.

TU Electric Response:

Relief Requests Numbers 16.6 and 16.7, have been revised to indicate a cold shutdown test frequency of the subject check valves.

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FIGURE 7.2

INTERIM CHANGE REQUEST

IST Plan Revision 3 **ICR No.** IST-R3-001

Reference: **Page** See Below
Table See Below
Relief Request, and/or
Component: 1AF-009, 1DD-064, 1DD-066, 1PV-4552, 1PV-4553, 1PS-193, 1PS-194, 1PS-195, 1PS-196.

Reason for Change:

1) Table of Contents: Required to be updated per this ICR.
2) 1PV-4552, 1PV-4553: These control valves were not included in the "Notes" Section.
3) 1AF-009: This valve is installed in the fill path for the Condensate Storage Tank and is required to prevent the tank from draining.
4) 1DD-064, 1DD-066: These valves are installed in the fill path for the Reactor Make-up Water Storage Tank and are required to prevent the tank from draining.
5) 1PS-193, 1PS-194, 1PS-195, 1PS-196: These valve numbers have been changed to 1PS-500, 1PS-503, 1PS-501 and 1PS-502 respectively.
6) Appendix D: Required to be updated per this ICR.

Proposed Revision:

Remove and discard the Table of Contents; "Notes" page 1; Table 4 pages 3, 4, and 5; Table 5 page 5; Table 7 page 1; Table 9 page 3; and Relief Request V-5.

1) Insert the attached, revised Table of Contents.
2) Insert the attached, revised "Notes" section and Table 5 page 5 which adds 1PV-4552 and 1PV-4553 to the IST Program.
3) Insert the attached, revised Table 4 pages 3, 4 and 5 which adds 1AF-009 to the IST Program.
4) Insert the attached, revised Table 7 page 1 which adds 1DD-064 and 1DD-066 to the IST Program. Insert the attached, revised Relief Request V-5.
5) Insert the attached, revised Table 9 page 3 which revises the valve numbers as described above.
6) Add this ICR to Appendix D.

Bruce Wadley	CPE/MCS	9/15/89
Initiator	Department	Date

Approved: [X] Yes [ ] No

J DeBoni for	CPE ASME Section XI Coordinator	9/15/89
		Date

Reason for Disapproval:

ICR No: IST-R3-001

INDEX

to IST Plan Interim Change Requests (ICRs)

ICR NO./DATE	AFFECTED PAGE(S)	DESCRIPTION OF CHANGE
IST-R3-001 09/15/89	Table of Contents	Remove page numbers from Appendix D.
	Section III, "Notes" Page 1	Add valves 1PV-4552 and 1PV-4553 to the CCW System note.
	Section III, Table 4, Pages 3, 4 and 5	Add valve 1AF-009.
	Section III, Table 5, Page 5	Add valves 1PV-4552 and 1PV-4553.
	Section III, Table 7, Page 1	Add valves 1DD-064 and 1DD-066.
	Section III, Table 9, Page 3	Correct revised valve numbers.
	Appendix A, Relief Request V-5	Add valves 1DD-064 and 1DD-066.
	Appendix D	Add ICR Index and ICR IST-R3-001.

TABLE OF CONTENTS

ICR No: IST-R3-001

NOTES

This section of the Comanche Peak Steam Electric Station IST Plan contains explanations or clarifications for the testing that is performed on some components contained in the valve tables.

Manually operated valves are not subject to exercise testing by the IST Plan. These valves are either routinely operated or are subject to normal preventive maintenance programs.

Auxiliary Feedwater System

Accumulator check valves for auxiliary feedwater valves 1-FV-2453A/B, 1-FV-2454A/B, 1-HV-2459, 1-HV-2460, 1-HV-2461, and 1-HV-2462 have been listed in the IST plan and will be tested as a single unit. This is appropriate for the design function of these valves. A pressure decay test will be performed on the accumulator units, with the upstream test connection for the accumulators vented to atmosphere. This test method will meet the intent of IWV-3420, to demonstrate the seat leak tightness of Category A valves.

Chemical and Volume Control System

Check valves 1CS-8388 A,B,C and D are normally open and remain open during post accident conditions. They are pressurized in excess of containment pressure from an ESF source which meets single failure criteria. Closure is not relied on for containment isolation.

Component Cooling Water System

Valves XFV-3583, XFV-3584, XFV-3585, XFV-3586, FCV-H116A, FCV-H116B 1FV-4552 and 1FV-4553 control the flow of component cooling water to the Control Room A/C, U.P.S. A/C and Nuclear Chiller condensers to maintain a minimum condensing pressure. These valves are exempted from inservice testing in accordance with IWV-1200 as control valves. FCV-H116A, FCV-H116B, 1FV-4552 and 1FV-4553 are required to fail open.

Containment Ventilation System

Hydrogen purge system valves 1HV-5540, 1HV-5541, 1HV-5542 and 1HV-5543 are valves in a non-essential backup system to the Hydrogen Recombiners. The Hydrogen Recombiners are the safety related components required to remove hydrogen during post accident scenarios. These valves are locked closed in modes 1, 2, 3 and 4.

Main Steam Reheat and Steam Dumps System

Manual valves 1HV-2333B, 1HV-2334B, 1HV-2335B, 1HV-2336B, 1MS-384, 1MS-387, 1MS-390, 1MS-393, 1MS-711 and 1MS-712 are listed as performing a containment isolation function in Technical Requirements Manual Table 2.1.1 have been listed in the IST plan. The position of these valves is administratively controlled.

Residual Heat Removal System

Check valves 1-RH-8705A and 1-RH-8705B provide thermal overpressurization protection for the normally isolated RHR system inlet piping.

ICR No: IST-R3-001

CPSES UNIT NO. 1
TABLE NO. 4
INSERVICE TESTING/ REVISION 3
SYSTEM: AUXILIARY FEEDWATER

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-PV-2453B	3	B-2	B		GL	3.000	AO	O	O/C		MT/Q FST PIT	M1-0206	AFW SG Isol. (See Notes)
1-PV-2454A	3	B-1	B		GL	3.000	AO	O	O/C		MT/Q FST PIT	M1-0206	AFW SG Isol. (See Notes)
1-PV-2454B	3	B-5	B		GL	3.000	AO	O	O/C		MT/Q FST PIT	M1-0206	AFW SG Isol. (See Notes)
1AF-009	3	D-1	C		CK	3.000	SA	C	C		CV/Q	M1-0206-02	CST Fill Path
1AF-014	3	B-2	C		CK	6.000	SA	C	O		CV/Q	M1-0206-01	MDAFWP Suction Check
1AF-024	3	B-3	C		CK	6.000	SA	C	O		CV/Q	M1-0206-01	MDAFWP Suction Check
1AF-032	3	B-5	C		CK	8.000	SA	C	O		CV/Q	M1-0206-01	TDAFWP Suction Check
1AF-038	3	E-4	C		CK	8.000	SA	C	O		CV/Q	M1-0206-01	AFWP Dschg. Check
1AF-045	3	E-4	C		CK	3.000	SA	C	O		CV/Q	M1-0206-01	AFWP Recirc. Check
1AF-051	3	E-3	C		CK	6.000	SA	C	O		CV/Q	M1-0206-01	AFWP Dschg. Check
1AF-057	3	E-3	C		CK	3.000	SA	C	O		CV/Q	M1-0206-01	AFWP Recirc. Check
1AF-065	3	E-2	C		CK	6.000	SA	C	O		CV/Q	M1-0206-01	AFWP Dschg. Check

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1AF-069	3	E-1	C		CK	3.000	SA	C	O		CV/Q	M1-0206-01	AFWP Recirc. Check
1AF-075	3	C-4	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	MDAFWP to SG Check (SEE APPENDIX B)
1AF-078	3	D-4	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	TDAFWP to SG Check (SEE APPENDIX B)
1AF-083	3	C-3	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	MDAFW to SG Check (SEE APPENDIX B)
1AF-086	3	D-3	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	TDAFWP to SG Check (SEE APPENDIX B)
1AF-093	3	C-1	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	MDAFW to SG Check (SEE APPENDIX B)
1AF-098	3	D-2	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	TDAFW to SG Check (SEE APPENDIX B)
1AF-101	3	C-5	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	MDAFW to SG Check (SEE APPENDIX B)
1AF-106	3	D-5	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	TDAFW to SG Check (SEE APPENDIX B)
1AF-167	3	B-5	C		CK	8.000	SA	C	O		CV/Q	M1-0206-02	AFWP Test Return Check
1AF-215/-216	3	D-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-PV-2453A)
1AF-217/-218	3	D-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-PV-2453B, 1-FV-2456)
1AF-219/-220	3	B-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-PV-2454A)

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1AF-221/-222	3	C-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-PV-2454B, 1-FV-2457)
1AF-223/-224	3	A-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-HV-2459)
1AF-226/-227	3	B-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-HV-2460)
1AF-228/-229	3	A-3	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-HV-2461)
1AF-230/-231	3	B-3	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-HV-2462)
1AF-232/-233	3	F-2	A/C		CK	0.500	SA	C	C	V-5 V-6	CV/Q LT	M1-0218-01	ACCUMULATOR CHECK VALVE (1-HV-2452-1)
1AF-234/-235	3	F-1	A/C		CK	0.500	SA	C	C	V-5 V-6	CV/Q LT	M1-0218-01	ACCUMULATOR CHECK VALVE (1-HV-2452-2)
1AF-248	3		C		RE	0.750	SA	C			SRV	M1-0206-01	MDAFWP Suction Piping Rlf.
1AF-249	3		C		RE	0.750	SA	C			SRV	M1-0206-01	MDAFWP Suction Piping Rlf.
1AF-250	3		C		RE	0.750	SA	C			SRV	M1-0206-01	TDAFWP Suct. Piping Rlf.

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST DIAGRAM	REMARKS
1CC-1077	3	C-3	C		CK	2.000	SA	O	C	5.4	CV/RR M1-231-A	RCP Thermal Barrier Check
1CC-1078	3	C-4	C		CK	2.000	SA	O	C	5.4	CV/RR M1-231-A	RCP Thermal Barrier Check
1CC-1079/1080	3	G-4	A/C		CK	0.500	SA	O	O	V-5 V-6	CV/O M1-0216-01 LT	Accumulator Check (1-PV-4552)
1CC-1081/1082	3	G-4	A/C		CK	0.500	SA	O	O	V-5 V-6	CV/O M1-0216-01 LT	Accumulator Check (1-PV-4553)
1LV-4500	3	C-2	B		GL	3.000	AO	C	O		MT/O M1-0229-A FST PIT	CCW Surge Tank Sply.
1LV-4500-1	3	C-1	B		GL	3.000	AO	C	O		MT/O M1-0229-A FST PIT	CCW Surge Tank Sply.
1LV-4501	3	D-2	B		GL	3.000	AO	C	O		MT/O M1-0229-A FST PIT	CCW Surge Tank Sply.
PCV-N116A	3	A-4	B		PL	1.000	AO	O			FST M1-0229-A	CCW to UPS A/C Unit (See Notes)
PCV-N116B	3	F-3	B		PL	1.000	AO	O			FST M1-0229-B	CCW to UPS A/C Unit (See Notes)
1-PV-4552	3	D-4	B		PL	3.000	AO	O			FST M1-0229-A	CCW to Nuclear Chiller (See Notes)
1-PV-4553	3	D-4	B		PL	3.000	AO	O			FST M1-0229-B	CCW to Nuclear Chiller (See Notes)
XPV-3583	3	E-5	B		PL	3.000	MO	O			MT M1-0229-A	CCW to Control Room A/C Unit (See Notes)
XPV-3584	3	E-6	B		PL	3.000	MO	O			MT M1-0229-B	CCW to Control Room A/C Unit (See Notes)

CPSES UNIT NO. 1
TABLE NO. 7
INSERVICE TESTING/ REVISION 3
SYSTEM: DEMINERALIZED AND REACTOR MAKEUP WATER

ICR No: IST-R3-001

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-HV-5365	2	E-2	A		GL	3.000	AO	C	C		MT/Q FST PIT LTJ	M1-0242-B	DWS Cntmt. Isol.
1-HV-5366	2	E-2	A		GL	3.000	AO	C	C		MT/Q FST PIT LTJ	M1-0242-B	DWS Cntmt. Isol.
1DD-006	3	C-6	C		CK	3.000	SA	C	C	V-5	CV/Q	M1-0241-01	Deaerated Water Trans Pumps to RWST
1DD-016	3	D-3	C		CK	1.000	SA	C	O		CV/Q	M1-0241-01	RMUP Dschg. Flow Path
1DD-018	3	E-3	C		CK	3.000	SA	C	O		CV/Q	M1-0241-01	RMUP Dschg. Flow Path
1DD-064	3	D-4	C		CK	2.000	SA	C	C	V-5	CV/Q	M1-0241-01	RMWST Makeup Flow Path
1DD-065	3	C-6	C		CK	3.000	SA	C	C	V-5	CV/Q	M1-0241-01	Deaerated Water Trans Pumps to RWST
1DD-066	3	D-4	C		CK	2.000	SA	C	C	V-5	CV/Q	M1-0241-01	RMWST Makeup Flow Path
1DD-430	2	E-2	A/C		RE	0.750	SA	C			LTJ	M1-0242-B	DWS Cntmt. Penet. Thermal Rlf.
XDD-044	3	D-2	C		CK	1.000	SA	C	O		CV/Q	M1-0241-01	RMUP Dschg. Flow Path
XDD-048	3	E-2	C		CK	3.000	SA	C	O		CV/Q	M1-0241-01	RMUP Dschg. Flow Path

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1PS-500	2	B-3	A/C		RE	0.750	SA	C			LTJ	M1-0228	Accum. Liquid Space Sample Cntmt. Penet. Thermal Rlf.
1PS-501	2	B-1	A/C		RE	0.750	SA	C			LTJ	M1-0228	PZR Sample (Liquid) Penet. Thermal Rlf.
1PS-502	2	B-1	A/C		RE	0.750	SA	C			LTJ	M-0228	PZR Sample (Steam) Penet. Thermal Rlf.
1PS-503	2	B-2	A/C		RE	0.750	SA	C			LTJ	M1-0228	RC HL Sample Penet. Thermal Rlf.

ICR No: IST-R3-001

RELIEF REQUEST NUMBER: V-5

SYSTEM(S): Auxiliary Feedwater
Main Steam, Reheat, and Steam Dump
Compressed Air
Emergency Diesel Generator
Component Cooling Water
Demineralized Water

VALVE NUMBER(S): 1AF-215, 1AF-216, 1AF-217, 1AF-218, 1AF-219, 1AF-220, 1AF-221, 1AF-222, 1AF-223, 1AF-224, 1AF-226, 1AF-227, 1AF-228, 1AF-229, 1AF-230, 1AF-231, 1AF-232, 1AF-233, 1AF-234, 1AF-235, 1MS-680, 1MS-681, 1MS-682, 1MS-683, 1MS-684, 1MS-685, 1MS-686, 1MS-687, 1CI-844, 1CI-845, 1CI-846, 1CI-847, 1DO-058, 1DO-059, 1DO-060, 1DO-061, 1DO-062, 1DO-063, 1DO-064, 1DO-065, 1CC-1078, 1CC-1080, 1CC-1081, 1CC-1082, 1DD-008, 1DD-064, 1DD-0065, 1DD-066

CATEGORY: A/C,C

CLASS: 3

FUNCTION: These valves provide a safety-related air supply to pneumatically operated valves, the diesel starting air receiver tanks, or are associated with the reactor makeup water storage tank.

TEST REQUIREMENT: Exercise check valves once every 3 months per IWV-3521.

BASIS FOR RELIEF: Each valve listed is one of two series check valves associated with valve accumulators, air receiver tanks, or water tanks. Due to system configuration there is no typical means, without performing modifications, to individually verify that each valve has been full stroke exercised. Performing system modifications are considered hardships that are not compensated by an increased level of quality or safety.

ALTERNATE TESTING: These series check valves will have their closure verified by positive means (such as pressure indication) such that at least one of the series check valves is closed once every three months. No additional testing needs to be performed unless there is an indication that the closure capability of the pair of valves is questionable, then both valves will be declared inoperable and either be disassembled and visually inspected or be repaired or replaced prior to being returned to service.

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FIGURE 7.2

INTERIM CHANGE REQUEST

IST Plan Revision Rev. 3 **ICR No.** IST-R3-002

Reference: **Page** See Attachment
Table See Attachment
Relief Request, and/or
Component: Relief Requests: V-6, 15.1, 16.6, 16.7, P.2, P.8, and P.11, Appendix B, Tables 0 and 16

Reason for Change: See Attachment

Proposed Revision: See Attachment

David G. Hobson Jr.	Technical Support	11/1/89
Initiator	**Department**	**Date**

Approved: [X] Yes [ ] No per telecon w/ M.D. Skaggs 11/1/89
CPE ASME Section XI Coordinator **Date**

Reason for Disapproval:

ATTACHMENT
FIGURE 7.2
INTERIM CHANGE REQUEST

Reason for Change:

1) Relief Request V-6: Revision 3 of the IST Plan recategorized the Emergency Diesel Generator air start check valves as "C", rather than "A/C". However, "Emergency Diesel Generator", was still listed on Relief Request V-6.

2) Relief Request 15.1: Overpressurization concerns require isolation of the flow path necessary to partial stroke check valves 1-8922A and 1-8922B when the RCS is depressurized.

3) Relief Request 16.6, 16.7: These valves will be tested on a cold shutdown frequency. The NRC questioned the original relief request which proposed disassembly on a refueling frequency.

4) Relief Request P.2, P.8, P.11: These Relief Requests were revised in response to an NRC inquiry on the initially proposed functional test for these pumps (SFGDS BLDG SUMPS). Vibration, flow, and pressures will now be measured during inservice testing. Pump design precludes bearing temperature measurements.

5) Appendix B: Provides additional information on testing performed on auxiliary feedwater valves as requested by NRC. Deleted cold shutdown note for valves 1-8511A and 1-8511B, valves are now tested quarterly.

6) Table 0: Revised to reflect testing specified in P.2, P.8, and P.11 for Safeguards Building Sump Pumps, in response to inquiry on Rev. 3 of the plan.

7) Table 16: The testing frequency of valves 1-8511A/B has been changed to quarterly to correspond with quarterly slave testing which defeats interlocks and strokes the valves. Testing requirements of Relief Requests 16.6 and 16.7 have also been incorporated in the Table.

Proposed Revision:

Remove and discard V-6; 15.1; 16.6; 16.7; P.2; P.8; P.11; Appendix B pages 1 through 8; Table 0, page 2; and Table 16, pages 3, 4 and 5.

1) Insert the attached, Relief Requests V-6, 15.1, 16.6, 16.7, P.2, P.8 and P.11.
2) Insert the attached, Appendix B, pages 1 through 8.
3) Insert the attached, Table 0, page 2.
4) Insert the attached, Table 16, pages 3, 4 and 5.
5) Add this ICR to Appendix D.

INDEX

to IST Plan Interim Change Requests (ICRs)

ICR NO./DATE	AFFECTED PAGE(s)	DESCRIPTION OF CHANGE
IST-R3-002 10/31/89	Section II, Table 0 page #2	Table 0 revised to note the testing program for the SFGDS BLDG SUMP PUMPS
	Section III, Table 16 pages 3, 4, 5	Testing frequency for valves 1-8511A/B changed to quarterly; Table revised to incorporate testing of Relief Requests 16.6 and 16.7.
	Appendix A, Relief Request V-6	Reivsed to reflect reclassification of Emergency Diesel Generator air start check valves.
	Appendix A, Relief Request 15.1	Revised to note limitation for performance of a partial stroke test of check valves 1-8922A/B with the RCS depressurized.
	Appendix A, Relief Request 15.6, 16.7	Class 1/2 boundary check valves to be tested during cold shutdowns.
	Appendix A, Relief Request P.2, P.8, P.11	Relief Requests revised to upgrade SGDF BLDG SUMP PUMP testing program.
	Appendix B	Cold shutdown note deleted for quarterly tested valves 1-8511A, and 1-8511B; added description of testing performed on AFW check valves.

COMANCHE PEAK STEAM ELECTRIC STATION
UNIT 1 PUMP TEST PROGRAM
TABLE 0

PROGRAM PLAN REV. NO. 3

PUMP NUMBER	PUMP NAME	CODE CLASS	TEST PARAMETERS FD AND COORDINATES		SPEED	INLET PRESS	DIFF PRESS	FLOW RATE	VIB. AMP.	BRG TEMP	LUBE LVL OR PRESS
CP1-DOAFFT-02B	FUEL OIL TRANSFER	3	215	F-5	NO	NO(6)	NO(6)	YES	YES	NO(6)	NO(6)
CPX-SFAPSF-01	SPENT FUEL POOL COOLING	3	235	C-2	NO	YES	YES	YES	YES	NO(8)	YES
CPX-SFAPSF-02	SPENT FUEL POOL COOLING	3	235	C-5	NO	YES	YES	YES	YES	NO(8)	YES
CP1-DOAFRM-01	REACTOR MAKEUP TRANSFER	3	241-01	D-3	NO	YES(7)	YES	YES	YES	NO(8)	YES
CPX-DOAFRM-01	REACTOR MAKEUP TRANSFER	3	241-01	D-2	NO	YES(7)	YES	YES	YES	NO(8)	YES
CP1-WPAPSS-01	SFGD. BLDG. SUMP PUMPS (11)	3	236	C-6	NO	YES	YES	YES	YES	NO(8)	NO(2)
CP1-WPAPSS-02	SFGD. BLDG. SUMP PUMPS (11)	3	236	C-6	NO	YES	YES	YES	YES	NO(8)	NO(2)
CP1-WPAPSS-03	SFGD. BLDG. SUMP PUMPS (11)	3	236	E-6	NO	YES	YES	YES	YES	NO(8)	NO(2)
CP1-WPAPSS-04	SFGD. BLDG. SUMP PUMPS (11)	3	236	E-6	NO	YES	YES	YES	YES	NO(8)	NO(2)

(1) See Relief Request P-1; (2) See Relief Request P-2; (3) See Relief Request P-3; (4) See Relief Request P-4; (6) See Relief Request P-6; (7) See Relief Request P-7; (8) See Relief Request P-8; (9) Deleted. (10) See Relief Request P-10; (11) See Relief Request P-11.

RELIEF REQUEST NUMBER: V-6

SYSTEM(S): Auxiliary Feedwater
Main Steam, Reheat, and Steam Dump
Compressed Air
Safety Injection
Component Cooling Water

VALVE NUMBER(S): 1AF-215, 1AF-216, 1AF-217, 1AF-218, 1AF-219, 1AF-220, 1AF-221, 1AF-222, 1AF-223, 1AF-224, 1AF-225, 1AF-226, 1AF-227, 1AF-228, 1AF-229, 1AF-230, 1AF-231, 1AF-232, 1AF-233, 1AF-234, 1AF-235, 1MS-680, 1MS-681, 1MS-682, 1MS-683, 1MS-684, 1MS-685, 1MS-686, 1MS-687, 1CI-644, 1CI-645, 1CI-646, 1CI-647, 1SI-166, 1SI-167, 1SI-168, 1SI-169, 1CC-1079, 1CC-1080, 1CC-1081, 1CC-1082

CATEGORY: A/C

CLASS: 3

FUNCTION: Provide a safety-related air (and nitrogen) supply to pneumatically operated valves and the diesel starting air receiver tanks.

TEST REQUIREMENT: Category A valve leak rate testing requirements of 1WV-3421, 1WV-3424, and 1WV-3426.

BASIS FOR RELIEF: Two check valves in series are utilized at each class 3 to NNS piping boundary. Relief is requested from 1WV-3421 to individually leak test each series check valve.

Due to the system configuration there is no typical means, without performing modifications, to individually verify the leak tightness of each valve. In addition the test data for this testing will not lend itself to analysis in accordance with 1WV-3426 due to the relatively rigid acceptance criteria which will need to be applied. Performing system modifications would result in hardships that are not compensated by an increased level of quality or safety.

ALTERNATE TESTING: The respective series check valves will be leak tested in pairs. A pressure decay test or functional test will be performed to verify the pressure retaining integrity of at least one of the series check valves with the normal supply system secured and vented to atmosphere upstream of the Class 3/NNS piping boundary. No additional testing needs to be performed unless there is an indication that the leak tightness capability of the pair of valves is questionable, then both valves will be declared inoperable and either be disassembled and visually inspected or be repaired or replaced prior to being returned to service.

RELIEF REQUEST NUMBER: 15.1

SYSTEM: Safety Injection

VALVE NUMBER: 1-8922A,
1-8922B

CATEGORY: C

CLASS: 2

FUNCTION: Safety Injection Pump Discharge Isolation Check Valve

TEST REQUIREMENT: Exercise valve to position required to fulfill their function at least once every 3 months (IWV-3520).

BASIS FOR RELIEF: Power Operation - No positive means exist to full stroke exercise these valves since the only full flow path available is into the RCS and the SI pumps cannot develop sufficient discharge head to pump into the RCS. In addition, a partial stroke test cannot be performed with the RCS depressurized below 1700 psig. The safety injection test header is not available as a flow path. The safety injection pumps are required per Technical Specification 3.5.3.2 to be isolated from the RCS to prevent RCS overpressurization.

Cold Shutdown - Full stroking these valves utilizing the SI pumps to pump into the RCS could result in RCS low temperature overpressurization which would exceed the design limitations of the system and adversely affect plant safety.

ALTERNATE TESTING: Perform partial stroke quarterly when the RCS is pressurized above 1700 psig and full stroke exercise valve at each refueling outage.

RELIEF REQUEST NUMBER: 16.6

SYSTEM: Chemical and Volume Control

VALVE NUMBER: 1CS-8350A,B,C,D
1CS-8367A,B,C,D

CATEGORY: C

CLASS: 1

FUNCTION: Class 1 / Class 2 Pressure Boundary

TEST REQUIREMENT: Exercise valve to the position required to fulfill its function at least once every 3 months. Relief is also requested from the requirement to test each series check valve.

BASIS FOR RELIEF: Power Operation - These series check valves provide the ASME boundary between Class 1 RCS and Class 2 CVCS as required by ANSI N18.2a. These valves are not leak tested, and are not listed as RCS pressure isolation valves in Technical Specification Table 3.4-1. These valves perform their safety function in the closed position therefore partial stroking is not applicable. Full stroke exercising during power operation would require securing seal injection flow to the reactor coolant pumps. The interruption of this flow would result in equipment damage.

In addition, relief is requested from exercising both series check valves to the closed position, due to the absence of test connections.

ALTERNATE TESTING: Verify operability of the valves during cold shutdowns when the RCPs are secured. The series check valves will be verified closed by positive means. No additional testing needs to be performed unless there is an indication that the closure capability of the pair of valves is questionable, then both valves will be declared inoperable and either be disassembled and visually inspected or repaired or replaced prior to being returned to service.

RELIEF REQUEST NUMBER: 16.7

SYSTEM: Chemical and Volume Control

VALVE NUMBER: 1CS-8378A,B
1CS-8379A,B

CATEGORY: C

CLASS: 1

FUNCTION: Charging and Alternate Charging Line Flow Path

TEST REQUIREMENT: Exercise valve to the position required to fulfill its function at least once every 3 months.

BASIS FOR RELIEF: Power Operation - These series check valves provide the ASME boundary between Class 1 RCS and Class 2 CVCS as required by ANSI N18.2a. These valves are not leak tested, and are not listed as RCS pressure isolation valves in Technical Specification Table 3.4-1. These valves perform their safety function in the closed position therefore partial stroking is not applicable. Full stroke exercising during power operation would require securing normal and alternate charging flow. The interruption of this flow could result in a loss of pressurizer level control and cause a plant trip.

In addition, relief is requested from exercising both series check valves to the closed position, due to the absence of test connections.

ALTERNATE TESTING: Verify operability of the valves during cold shutdowns. The series check valves will be verified closed by positive means. No additional testing needs to be performed unless there is an indication that the closure capability of the pair of valves is questionable, then both valve will be declared inoperable and either be disassembled and visually inspected or be repaired or replaced prior to being returned to service.

RELIEF REQUEST NUMBER: P-2

PUMP NUMBER: CP1-SWAPSW-01, CP1-SWAPSW-02, CP1-WPAPSS-01, CP1-WPAPSS-02, CP1-WPAPSS-03, CP1-WPAPSS-04

SYSTEM: Service Water, Vents and Drains (Safeguard Bldg. Sump Pumps)

CLASS: 3

TEST REQUIREMENT: Observe proper lubricant level or pressure. (IWP-3100)

BASIS FOR RELIEF: These pumps are submerged. The bearings for these pumps are internal and water cooled, therefore lube oil level and pressure observation is not applicable. The parameters that shall be measured as delineated in the proposed Alternate Testing, provides sufficient information for evaluating the condition of the Service Water Pumps and Safeguard Bldg. Sump Pumps and thus does not endanger life or property or the common defense and security of the public.

ALTERNATE TESTING: The other test parameter measurements indicated in Table O will be performed.

RELIEF REQUEST NUMBER: P-8

PUMP NUMBER: All pumps listed in Table 0.

SYSTEM(S): Various

CLASS: 2 and 3

TEST REQUIREMENT: Per IWP-3300, measure bearing temperature yearly.

BASIS FOR RELIEF: Relief is requested from the requirement to yearly measure pump bearing temperatures per IWP-3300 due to the design limitations for some of the pumps in the IST program which prevent direct bearing temperature measurement. Relief is further requested for the remaining pumps in the IST program. Industry data has shown that bearing temperature changes due to degrading bearings only occurs after major degradation has occurred at the bearing. Prior to this, vibration monitoring would more likely provide information to identify changes in the condition of bearings. Reliance on vibration monitoring would allow corrective actions to be taken prior to the failure of a bearing and damage to the pump. Bearing temperature measurements for the Service Water, Residual Heat Removal, Boric Acid Transfer, Safeguard Bldg. Sump Pumps, and Safety Chilled Water Pumps are not possible due to pump design.

ALTERNATE TESTING: Measure Vibration Velocity as part of a predictive maintenance program outside of the IST Program.

RELIEF REQUEST NUMBER: P-11

PUMP NUMBER: CP1-WPAPSS-01, CP1-WPAPSS-02
CP1-WPAPSS-03, CP1-WPAPSS-04

SYSTEM(S): Vents and Drains (Safeguard Bldg. Sump Pumps)

CLASS: 3

TEST REQUIREMENT: Measure the test quantities of Table IWP-3100-1 on each pump every three months during normal plant operation.

BASIS FOR RELIEF: These pumps are located in dry sumps, it is impractical to supply the required fluid inventory necessary to test these pumps on a quarterly inservice test frequency. Any water introduced into the sumps for test purposes must be treated as radwaste and disposed of accordingly. Flooding and draining the sumps every three months to perform testing creates a hardship that is not compensated for by an increased level of quality or safety.

ALTERNATE TESTING: Perform a functional test of these pumps at least once every two years, as suggested by the current ASME code on pump testing. (Reference OM-6).

APPENDIX B

VALVES TESTED AT COLD SHUTDOWNS AND REFUELING OUTAGES

The following are Category A, B, C, and A/C valves that meet the exercising requirements of ASME Section XI, and are not full-stroke exercised every three months during plant operation. These valves are full-stroke exercised during cold shutdowns. Testing these valves during power operation is not practical, due to the valve type and location or system design. These valves are listed below and grouped according to the system in which they are located.

STEAM GENERATOR FEEDWATER SYSTEM

Category B Valves

Valves 1-HV-2134, 1-HV-2135, 1-HV-2136, and 1-HV-2137, main feedwater to steam generators isolation valves, cannot be full-stroke exercised during power operation. Closing these valves to accomplish stroke time testing results in an interruption of feedwater flow, resulting in a steam generator level transient which would cause a reactor trip. These valves will be partial-stroke exercised quarterly and full-stroke exercised during cold shutdowns.

Valves 1FV-2193, 1FV-2194, 1FV-2195 and 1FV-2196, feedwater preheater bypass valves, cannot be full or partial stroke exercised during power operation. Opening these valve to accomplish stroke time testing to the closed position results in a temporary diversion of feedwater, the resultant steam generator level perturbation may result in a reactor trip. These valves will be full-stroke exercised during cold shutdowns.

Valves 1FV-2181, 1FV-2182, 1FV-2183 and 1FV-2184, feedwater split flow bypass valves, cannot be full or partial stroke exercised during power operation. These valves are interlocked with the feedwater isolation valves and function to prevent flow induced tube failures in the preheater region of the steam generator by diverting a portion of main feedwater flow to the steam generator auxiliary feedwater nozzles. Valve closure during testing diverts 100% of feedwater flow through the main feedwater nozzle. The resultant flow induced vibration could result in premature steam generator tube damage. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-HV-2185, 1-HV-2186, 1-HV-2187 and 1-HV-2188, feedwater isolation bypass valves, cannot be full or partial stroke exercised during power operation. These valves are in parallel with the feedwater isolation valves and are interlocked against opening with the feedwater isolation valves in the open position during power operation. Testing these valves at power would require defeating the system interlocks and could possibly result in unstable feedwater flow. These valves will be full-stroke exercised during cold shutdowns.

Category C Valves

Valves 1FW-70, 1FW-76, 1FW-82, and 1FW-88, Feedwater Check Valves, cannot be full or partial stroke exercised during unit operation. Stroke testing these valves to the closed position requires securing feedwater flow to the associated operating steam generator, the resultant level transient would result in a plant trip. These valves will be verified closed when feed to the associated steam generator is secured during cold shutdown.

Valves 1FW-195, 1FW-196, 1FW-197 and 1FW-198, tempering line backflow to steam generators check valves, cannot be full or partial stroke exercised during power operation. Exercising these check valves could cause potential damage to the auxiliary feedwater nozzles. The auxiliary feedwater flow necessary to stroke these valves is not preheated and therefore, would cause unnecessary thermal shock to the S/G auxiliary feedwater nozzles. A cycle of thermal shocks to these nozzles would eventually result in nozzle degradation. These valves will be full-stroke exercised to the open position during cold shutdowns.

MAIN STEAM, REHEAT AND STEAM DUMP SYSTEMS

Category B Valves

Valves 1-PV-2325, 1-PV-2326, 1-PV-2327 and 1-PV-2328, power operated relief valves cannot be full or partial stroke exercised during power operation since this would cause a secondary pressure transient. The isolation of these valves, by closing the manual inlet isolation valve, to accomplish testing in turn could challenge a main steam safety valve. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-HV-2333A, 1-HV-2334A, 1-HV-2335A and 1-HV-2336A, main steam isolation valves, cannot be full stroke exercised during power operation. Closing these valves to accomplish stroke time testing could result in an interruption of main steam flow from the associated steam generator to the high pressure turbine and could result in a plant trip. These valves will be partial stroke exercised quarterly and full-stroke exercised during cold shutdowns.

Category C Valves

Valves 1MS-142 and 1MS-143, main steam to turbine driven AFWP, cannot be exercised to their closed safety position during power operation. Full stroke testing to the open position will be accomplished quarterly by passing steam flow which is equal to or greater than the accident required flow through the valve. However, closure testing at power would require isolating the check valve under test from its respective steam generator by shutting the manual upstream isolation valve. To verify closure high pressure steam would then have to be vented upstream of the check which is a safety concern. The closure test for these check valves will be performed during cold shutdowns when testing can be safely accomplished.

AUXILIARY FEEDWATER SYSTEM

Category C Valves

Valves 1AF-075, 078, 083, 086, 098, 101 and 106, auxiliary feedwater to the steam generators, are required to open to deliver flow to the generators as well as to close to prevent a running pump from recirculating back through a non-running pump. These check valves also have a secondary function in the closed position to prevent back leakage from the main feedwater system. These valves cannot be fully or partially stroked during power operation. Exercising these check valves to the open position or to the open position and back to the closed position could result in damage to the auxiliary feedwater nozzles. The auxiliary feedwater flow necessary to stroke these valves is not preheated and, therefore, would cause an unnecessary thermal shock to these nozzles. A series of thermal shocks to the auxiliary feedwater nozzles would eventually result in nozzle degradation. These valves will be full-stroke exercised to the open position and to the closed position during cold shutdowns. Cold shutdown testing includes forward flowing through the valves with an auxiliary feedwater pump which exposes the adjacent non-running pump's check valves to a reverse differential pressure. Check valve operability, in this case, is demonstrated by verification of the required minimum flow delivered to the steam generator. It is recognized that these check valves perform their closed safety function in series with other system check valves (ie. pump discharge check valves). Thus, additional testing is performed during cold shutdowns to demonstrate closure individually. The check valves are isolated upstream and downstream and a reverse differential pressure is impressed across the valve through a test connection. Subsequently, an upstream vent is opened and a leakage observation is made to ascertain valve closure. Further, when the plant is at power, the closure of the check valves is monitored continuously. During each shift, the pump casings and discharge piping are checked for increases in temperature above ambient.

Also, temperature elements located downstream of the subject check valves are connected to indicators (0-200°F) on the main control board. The temperature indicators provide evidence of feedwater back leakage into the auxiliary feedwater system. Other temperature elements are located in the feedwater piping upstream of the normally closed check valves 1FW-0195, 0196, 0197, 0198. These elements are connected to control room alarms to warn of steam or feedwater back leakage into the normally cool portion of the feedwater system, into which the auxiliary feedwater system injects.

COMPONENT COOLING WATER SYSTEM

Category A Valves

Valves 1-HV-4696, 1-HV-4700, 1-HV-4701, 1-HV-4708 and 1-HV-4709, component cooling water containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing could cause damage to plant equipment. Closure of the valves interrupts component cooling water flow to the reactor coolant pump thermal barrier coolers, lower bearing lube oil coolers, upper bearing lube oil coolers and motor air coolers. Securing flow could result in reactor coolant pump damage. These valves will be full stroke exercised during cold shutdowns when the reactor coolant pumps have been removed from operation and component cooling water can be secured without the risk of pump damage.

Category B Valves

Valves 1-HV-4524, 1-HV-4525, 1-HV-4526 and 1-HV-4527, component cooling water to non-safeguards loop isolation valves, and 1-HV-4699, CCW supply to containment, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing could cause damage to plant equipment. Closing these valves isolates cooling to the reactor coolant pump thermal barrier coolers, lower bearing lube oil coolers, upper bearing lube oil coolers and motor air coolers. Securing flow could result in reactor coolant pump damage. In addition, flow would be secured from equipment necessary for plant operation: letdown heat exchanger, seal water heat exchanger and reactor coolant pump coolers. These valves will be full stroke exercised during cold shutdowns when the reactor coolant pumps have been removed from operation and component cooling water can be secured without the risk of pump damage.

Valves 1-FV-4650 A and B, component cooling water to ventilation chillers isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing could cause containment temperatures to exceed limitations imposed by the Technical Specifications. Securing flow to the ventilation chillers results in their tripping off, after reopening the valves, the ventilation chillers must be manually restarted. The subsequent recovery is slow and during this absence of cooling flow, containment temperatures rise due to the high heat loads. As a result, a potential to damage environmentally qualified electrical components exists. These valves will be full-stroke exercised during cold shutdowns when cooling to the ventilation chillers can be safely secured.

REACTOR COOLANT SYSTEM

Category B Valves

Valves 1-HV-3607, 1-HV-3608, 1-HV-3609 and 1-HV-3610, reactor vessel head and pressurizer vent isolation valves, cannot be full or partial stroke exercised during power operation since this would unnecessarily jeopardize the integrity of the reactor coolant system by relying on single valve isolation of the RCS pressure boundary. These valves will be full-stroke exercised during cold shutdowns.

PORV's, 1-PCV-455A and 1-PCV-456, are not required to shut down the reactor to the cold shutdown condition. They are, however, required to be available during power operation to prevent challenges to the pressurizer safety valves. They may be required during shutdown operation to provide overpressure protection. In order to minimize the consequence of a PORV sticking open, these valves will be full-stroked exercised during cold shutdowns.

COMPRESSED AIR SYSTEM

Category A Valves

Valve 1-HV-3487, instrument air to containment cannot be full or partial stroke exercised during power operation. Closing this valves to accomplish stroke time testing isolates instrument air to the containment and this air is required for plant control. Testing could result in a plant trip and/or operational transient. This valve will be full stroke exercised during cold shutdowns when instrument air to the containment can be secured without having an impact on plant operations.

VENTILATION CHILLED WATER SYSTEM

Category A Valves

Valves 1-HV-6082, 1-HV-6083 and 1-HV-6084, ventilation chilled water to and from containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing isolates all ventilation chilled water system heat loads in the containment. In addition, valve failure during testing could result in exceeding containment temperature Technical Specification limits and possibly result in damage to environmentally qualified electrical equipment. These valves will be full-stroke exercised during cold shutdowns when ventilation chilled water cooling to the containment can be safety secured.

RESIDUAL HEAT REMOVAL SYSTEM

Category A Valves

Valves 1-8701 A and B and 1-8702 A and B, RCS hot leg to RHR isolation valves, cannot be full or partial stroke exercised during power operation since these valves are interlocked with RCS pressure which prevents opening these valves when RCS pressure is greater than 425 psig. These valves will be full-stroke exercised during cold shutdowns.

Category B Valves

Valves 1-8716A and 1-8716B, RHR crosstie valves, in accordance with IE Information Notice No. 87-01, will not be exercised during power operation. Failure of either valve in the closed position, concurrent with the failure of an RHR pump results in ECCS injection flow to only two of the required four reactor coolant system cold legs. These valves will be full-stroke exercised during cold shutdowns when they can be exercised without challenging RHR ECCS capabilities.

Category C Valves

Valves 1-8730A and 1-8730B, RHR pump discharge check valves, cannot be full-stroke exercised during power operation. There is not a full flow path available to full-stroke exercise these valves at power. One potential full flow path discharges to the Reactor Coolant System. The RHR pumps, being low head injection pumps will not overcome RCS nominal operating pressure. The alternate flow path, through the normally isolated test line to the

RWST, cannot be utilized with the plant at power. The valve alignment and resultant RHR configuration represents a degraded safety condition, rendering the RHR system inoperable. IEN-87-01 "RHR Valve Misalignment Causes Degradation of ECCS in PWRs" discusses how operability testing of RHR systems at several PWRs (Westinghouse NSSS) has resulted in system configurations outside design bases at several plants. These valves will be partial-stroke exercised quarterly and full-stroke exercised at cold shutdown.

SAFETY INJECTION SYSTEM

Category A Valves

Valves 1-8809 A and B, RHR injection to RCS cold legs isolation valves, cannot be full or partial stroke exercised during power operation since this would cause a loss of the required number of cold leg, low head safety injection flow paths. In addition Technical Specification Surveillance Requirement 4.5.2.a requires these valves be in the Open position with power to the valve operators removed in Modes 1, 2, and 3. These valves will be full-stroke exercised during cold shutdowns.

Valve 1-8835, SI pump discharge to RCS cold leg injection isolation valve, cannot be full or partial stroke exercised during power operation since failure in the closed position would isolate the SI pump to all RCS cold legs injection flow paths. In addition Technical Specification Surveillance Requirement 4.5.2.a requires this valve be in the Open position with power to the valve operator removed in Modes 1, 2, and 3. This valve will be full-stroke exercised during cold shutdowns.

Valves 1-8802A, 1-8802B, and 1-8840, normally closed motor operated gate valves in hot leg injection lines, cannot be full or partial stroke exercised during power operation since Technical Specification 4.5.2.a requires these valves to be maintained in the closed position with power removed from the operators in operation Modes 1, 2, and 3. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-8811A and 1-8811B, RHR containment recirculation sump isolation valves, cannot be full or partial stroke exercised with the plant at power. The stroke test of these valves requires isolating the RHR pumps from the RWST to prevent gravity draining the RWST to the containment sump. The absence of a check valve in the RHR suction line potentially could push water into the containment sump which would then require removal. The RHR pump suction header would then have to be partially drained to prevent water back flow to the sump rendering the pumps inoperable. An additional concern involves the ability to adequately vent and fill the system after testing. The additional risks encountered and amount of time to perform testing do not justify the additional assurance gained by quarterly testing. These valves will be full stroke exercised during cold shutdown when the proper precautions can be taken without impacting operation.

Category B Valves

Valves 1-8804A and B, Charging Pump Suction from RHRS HX, cannot be full or partial stroke exercised during power operation due to interlocks. 1-8804A and 1-8804B are opened by operator action during the recirculation mode of SIS operation following a LOCA to supply the suctions of the Charging and Safety Injection Pumps. The valves are interlocked with ECCS valves 1-8813, 1-8814A and 1-8814B. These valves must be closed to open 1-8804A and 1-8804B. Valve 1-8813, as noted below, is required to be open with the plant at power to protect the SI pumps by providing a minimum flow protection path. These valves will be full-stroked during cold shutdowns.

Valve 1-8806, SI pump suction from the RWST isolation valve, cannot be full or partial stroke exercised during power operation since failure of this valve in the closed position would render both trains of SI inoperable. In addition, valve 1-8806 is required to be in the open position, with power to the valve operator removed, during Modes 1, 2, and 3 per Technical Specification 4.5.2.a. These valves will be full-stroke exercised during cold shutdowns.

Valve 1-8813, minimum flow recirculation from SI pumps common isolation valve, cannot be full or partial stroke exercised during power operation since this could render both SI pumps without minimum flow recirculation protection. In addition, Technical Specification Requirement 4.5.2.e requires the valve to be in the Open position, with power to the valve operator removed during Modes 1, 2, and 3. This valve will be full-stroke exercised during cold shutdowns.

Valves 1-8808A, 1-8808B, 1-8808C and 1-8808D, accumulator isolation valves, cannot be full or partial stroke exercised during power operation. These valves are required to be in the open position, with power to the valve operator removed in Modes 1, 2 and 3 per Technical Specification 4.5.1.1. These valves are considered passive for their safety function in the open position. Procedurally, these valves are required to be closed prior to decreasing reactor coolant pressure below 800 psig. These valves will be full stroke tested to the closed position during cold shutdowns.

CHEMICAL AND VOLUME CONTROL

Category A Valves

Valves 1-8152 and 1-8160, CVCS letdown containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke testing could cause the failure of these valves during testing which could result in the loss of pressurizer level control and a reactor trip. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-8100 and 1-8112, RCP seal leak-off containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke testing could result in equipment damage. Valve closure interrupts seal water flow from the RCP's which could result in seal damage. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-8351 A, B, C, and D, RCP seal injection containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke testing could result in equipment damage. Valve closure would isolate seal water injection flow which could result in RCP seal damage. These valves will be full-stroke exercised during cold shutdowns.

Valve 1-8105, normal charging isolation valve, cannot be full or partial stroke exercised during power operation since this would interrupt normal charging flow. Valve closure could result in loss of pressurizer level control and a plant trip. This valve will be full-stroke exercised during cold shutdowns.

Category B Valve.

Valve 1-8106, normal charging isolation valve, cannot be full or partial stroke exercised during power operation since this would interrupt normal charging flow which could result in loss of pressurizer level control and a plant trip. This valve will be full-stroke exercised during cold shutdowns.

Valves 1-LCV-112 D and E, charging pump suction from RWST isolation valves, cannot be full or partial stroke exercised during power operation since this would result in defeating the chemical balance attained by normal use of the CVCS. The subsequent reactivity transient could result in an uncontrolled plant shutdown. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-LCV-112 B and C, volume control tank outlet isolation valves, cannot be full or partial stroke exercised during power operation since this would cause a loss of the following: pressurizer level control, RCP seal injection, and letdown regenerative heat exchanger cooling. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-HV-8220 and 1-HV-8221 allow gases in the centrifugal and charging pumps piping to vent to the VCT and cannot be full or partial stroke exercised during power operation. These valves are interlocked with 1-LCV-112B and 1-LCV-112C, and do not have their own handswitch. These valves will be full-stroke exercised during cold shutdowns with 1-LCV-112B and 1-LCV-112C.

Valves 1-LCV-459 and 1-LCV-460, Class 1 RCS to Class 2 CVCS boundary valves, cannot be full or partial stroked during power operation since this would interrupt charging flow. Valve closure could therefore result in a loss of pressurizer level control and cause a plant trip. These valves will be full stroke exercised during cold shutdowns.

Valve 1-8145, pressurizer auxiliary spray isolation valve cannot be full or partial stroke exercised during power operation since stroke testing could result in a pressurizer pressure transient. This valve will be full-stroke exercised during cold shutdowns.

Valve 1-8104, emergency boration isolation valve cannot be full or partial stroke exercised during power operation. Stroke testing this valve to the open position could cause boric acid to be delivered to the RCS and the increase in boric acid concentration, should the valve fail open, would result in a plant trip. This valve will be full-stroke exercised at cold shutdowns.

Category C Valves

Valve 1CS-8442, emergency boration flow path check valve cannot be full or partial stroke exercised during power operation since stroking would require flow through the emergency boration flow path which would cause a reactivity transient resulting in plant shutdown. This valve will be full-stroke exercised during cold shutdowns

Valve 1CS-8377, auxiliary spray check valve cannot be full or partial stroke exercised because this requires the initiation of auxiliary spray. The initiation of auxiliary spray during power operations could cause a pressurizer pressure transient. This check valve will be full-stroke exercised during cold shutdowns, when 1-8145 is exercised.

CONTAINMENT VENTILATION

Category A Valves

Valves 1HV-5536, 1-HV-5537, 1-HV-5538 and 1-HV-5539, containment purge system valves, perform a containment isolation function. These valves cannot be full or partial stroke exercised during power operation. Technical Specification LCO 3.6.1.7 requires these valves to be locked closed in Modes 1, 2, 3 and 4. These valves will be full stroke exercised during cold shutdowns.

CPSES UNIT NO. 1
TABLE NO. 16
INSERVICE TESTING/ REVISION 3
SYSTEM: CHEMICAL & VOLUME CONTROL

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-8351A	2	D-5	B		GL	2.000	MO	O	C		MT/CS PIT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (SEE APPENDIX B)
1-8351B	2	D-5	B		GL	2.000	MO	O	C		MT/CS PIT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (SEE APPENDIX B)
1-8351C	2	D-5	B		GL	2.000	MO	O	C		MT/CS PIT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (SEE APPENDIX B)
1-8351D	2	D-5	B		GL	2.000	MO	O	C		MT/CS PIT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (SEE APPENDIX B)
1-8378A	1	B-5	C		CK	3.000	SA	O	C	16.7	CV/CS	M1-0253A	CLASS 1/2 BOUNDARY
1-8378B	1	B-5	C		CK	3.000	SA	O	C	16.7	CV/CS	M1-0253A	CLASS 1/2 BOUNDARY
1-8379A	1	B-5	C		CK	3.000	SA	O	C	16.7	CV/CS	M1-0253A	CLASS 1/2 BOUNDARY
1-8379B	1	B-5	C		CK	3.000	SA	O	C	16.7	CV/CS	M1-0253A	CLASS 1/2 BOUNDARY
1-8381	2	E-3	A/C		CK	3.000	SA	O	O/C	16.1	LTJ CV/Q	M1-0253A	CVCS Chrg. - Cntmt. Isol.
1-8481A	2	E-4	C		CK	4.000	SA	C	O/C	16.4	PS/Q CV/RR	M1-0255-01	Charging Pump Dschg.
1-8481B	2	E-5	C		CK	4.000	SA	C	O/C	16.4	PS/Q CV/RR	M1-0255-01	Charging Pump Dschg.
1-8497	2	D-2	C		CK	3.000	SA	O	C		CV/Q	M1-0255-01	Pump Discharge Check

CPSES UNIT NO. 1
TABLE NO. 16
INSERVICE TESTING/ REVISION 3
SYSTEM: CHEMICAL & VOLUME CONTROL

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-8510A	2	E-4	C		RE	1.500	SA	C			SRV	M1-0255-01	High Head SI Miniflow Rlf.
1-8510B	2	E-5	C		RE	1.500	SA	C			SRV	M1-0255-01	High Head SI Miniflow Rlf
1-8511A	2	D-4	B		GL	2.000	MO	C	O/C		MT/Q PIT	M1-0255-01	High Head SI Miniflow Isol.
1-8511B	2	D-5	B		GL	2.000	MO	C	O/C		MT/Q PIT	M1-0255-01	High Head SI Miniflow Isol.
1-8512A	2	D-4	B		GL	2.000	MO	O	O/C		MT/Q PIT	M1-0255-01	Charging Pump Miniflow Isol.
1-8512B	2	D-4	B		GL	2.000	MO	O	O/C		MT/Q PIT	M1-0255-01	Charging Pump Miniflow Isol.
1-8546	2	C-6	C		CK	8.000	SA	C	O	16.5	PS/CS CV/RR	M1-0255	RWST to Chrg. Pump Suct.
1-CS-8350A	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8350B	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8350C	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8350D	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8367A	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY

CPSES UNIT NO. 1
TABLE NO. 16
INSERVICE TESTING/ REVISION 3
SYSTEM: CHEMICAL & VOLUME CONTROL

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	PELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-CS-8367B	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8367C	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8367D	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8368A	2	D-5	C		CK	2.000	SA	O			NT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (See Notes)
1-CS-8368B	2	D-5	C		CK	2.000	SA	O			NT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (See Notes)
1-CS-8368C	2	D-5	C		CK	2.000	SA	O			NT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (See Notes)
1-CS-8368D	2	D-5	C		CK	2.000	SA	O			NT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (See Notes)
1-CS-8377	1	B-6	C		CK	2.000	SA	C	O		CV/CS	M1-0253A	Auxiliary Spray Check Valve (SEE APPENDIX B)
1-CS-8473	3	C-4	C		CK	2.000	SA	C	O		CV/Q	M1-0257	BATP Dschg.
1-CS-8487	3	C-4	C		CK	2.000	SA	C	O		CV/Q	M1-0257	BATP Dschg.
1-HV-8220	2	E-2	B		GL	1.000	SO	O	C		MT/CS FST PIT	M1-0255	ECCS Operation (SEE APPENDIX B)
1-HV-8221	2	E-2	B		GL	1.000	SO	O	C		MT/CS FST PIT	M1-0255	ECCS Operation (SEE APPENDIX B)
1-LCV-112B	2	E-6	B		GA	4.000	MO	O	C		MT/CS PIT	M1-0255	VCT Isol. (SEE APPENDIX B)

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FIGURE 7.2

INTERIM CHANGE REQUEST

IST Plan Revision 3 **ICR No.** IST-R3-001

Reference: **Page** See Below
Table See Below
Relief Request, and/or
Component: 1AF-009, 1DD-064, 1DD-066, 1PV-4552, 1PV-4553, 1PS-193, 1PS-194, 1PS-195, 1PS-196.

Reason for Change:

1) Table of Contents: Required to be updated per this ICR.
2) 1PV-4552, 1PV-4553: These control valves were not included in the "Notes" Section.
3) 1AF-009: This valve is installed in the fill path for the Condensate Storage Tank and is required to prevent the tank from draining.
4) 1DD-064, 1DD-066: These valves are installed in the fill path for the Reactor Make-up Water Storage Tank and are required to prevent the tank from draining.
5) 1PS-193, 1PS-194, 1PS-195, 1PS-196: These valve numbers have been changed to 1PS-500, 1PS-503, 1PS-501 and 1PS-502 respectively.
6) Appendix D: Required to be updated per this ICR.

Proposed Revision:

Remove and discard the Table of Contents; "Notes" page 1; Table 4 pages 3, 4, and 5; Table 5 page 5; Table 7 page 1; Table 9 page 3; and Relief Request V-5.

1) Insert the attached, revised Table of Contents.
2) Insert the attached, revised "Notes" section and Table 5 page 5 which adds 1PV-4552 and 1PV-4553 to the IST Program.
3) Insert the attached, revised Table 4 pages 3, 4 and 5 which adds 1AF-009 to the IST Program.
4) Insert the attached, revised Table 7 page 1 which adds 1DD-064 and 1DD-066 to the IST Program. Insert the attached, revised Relief Request V-5.
5) Insert the attached, revised Table 9 page 3 which revises the valve numbers as described above.
6) Add this ICR to Appendix D.

Bruce Wadley (BW) — **Initiator**
CPE/MCS — **Department**
9/15/89 — **Date**

Approved: [X] Yes [ ] No
J DeBoni for CPE ASME Section XI Coordinator — 9/15/89 **Date**

Reason for Disapproval:

ICR No: IST-R3-001

INDEX

to IST Plan Interim Change Requests (ICRs)

ICR NO./DATE	AFFECTED PAGE(S)	DESCRIPTION OF CHANGE
IST-R3-001 09/15/89	Table of Contents	Remove page numbers from Appendix D.
	Section III, "Notes" Page 1	Add valves 1PV-4552 and 1PV-4553 to the CCW System note.
	Section III, Table 4, Pages 3, 4 and 5	Add valve 1AF-009.
	Section III, Table 5, Page 5	Add valves 1PV-4552 and 1PV-4553.
	Section III, Table 7, Page 1	Add valves 1DD-064 and 1DD-066.
	Section III, Table 9, Page 3	Correct revised valve numbers.
	Appendix A, Relief Request V-5	Add valves 1DD-064 and 1DD-066.
	Appendix D	Add ICR Index and ICR IST-R3-001.

TABLE OF CONTENTS

ICR No: IST-R3-001

NOTES

This section of the Comanche Peak Steam Electric Station IST Plan contains explanations or clarifications for the testing that is performed on some components contained in the valve tables.

Manually operated valves are not subject to exercise testing by the IST Plan. These valves are either routinely operated or are subject to normal preventive maintenance programs.

Auxiliary Feedwater System

Accumulator check valves for auxiliary feedwater valves 1-FV-2453A/B, 1-FV-2454A/B, 1-HV-2459, 1-HV-2460, 1-HV-2461, and 1-HV-2462 have been listed in the IST plan and will be tested as a single unit. This is appropriate for the design function of these valves. A pressure decay test will be performed on the accumulator units, with the upstream test connection for the accumulators vented to atmosphere. This test method will meet the intent of IWV-3420, to demonstrate the seat leak tightness of Category A valves.

Chemical and Volume Control System

Check valves 1CS-8388 A,B,C and D are normally open and remain open during post accident conditions. They are pressurized in excess of containment pressure from an ESF source which meets single failure criteria. Closure is not relied on for containment isolation.

Component Cooling Water System

Valves XPV-3583, XPV-3584, XPV-3585, XPV-3586, PCV-N116A, PCV-N116B 1PV-4552 and 1PV-4553 control the flow of component cooling water to the Control Room A/C, U.P.S. A/C and Nuclear Chiller condensers to maintain a minimum condensing pressure. These valves are exempted from inservice testing in accordance with IWV-1200 as control valves. PCV-N116A, PCV-N116B, 1PV-4552 and 1PV-4553 are required to fail open.

Containment Ventilation System

Hydrogen purge system valves 1HV-5540, 1HV-5541, 1HV-5542 and 1HV-5543 are valves in a non-essential backup system to the Hydrogen Recombiners. The Hydrogen Recombiners are the safety related components required to remove hydrogen during post accident scenarios. These valves are locked closed in modes 1, 2, 3 and 4.

Main Steam Reheat and Steam Dumps System

Manual valves 1HV-2333B, 1HV-2334B, 1HV-2335B, 1HV-2336B, 1MS-384, 1MS-387, 1MS-390, 1MS-393, 1MS-711 and 1MS-712 are listed as performing a containment isolation function in Technical Requirements Manual Table 2.1.1 have been listed in the IST plan. The position of these valves is administratively controlled.

Residual Heat Removal System

Check valves 1-RH-8705A and 1-RH-8705B provide thermal overpressurization protection for the normally isolated RHR system inlet piping.

ICR No: IST-R3-001

CPSES UNIT NO. 1
TABLE NO. 4
INSERVICE TESTING/ REVISION 3
SYSTEM: AUXILIARY FEEDWATER

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-PV-2453B	3	B-2	B		GL	3.000	AO	O	O/C		MT/Q FST PIT	M1-0206	AFW SG Isol. (See Notes)
1-PV-2454A	3	B-1	B		GL	3.000	AO	O	O/C		MT/Q FST PIT	M1-0206	AFW SG Isol. (See Notes)
1-PV-2454B	3	B-5	B		GL	3.000	AO	O	O/C		MT/Q FST PIT	M1-0206	AFW SG Isol. (See Notes)
1AF-009	3	D-1	C		CK	3.000	SA	C	C		CV/Q	M1-0206-02	CST Fill Path
1AF-014	3	B-2	C		CK	6.000	SA	C	O		CV/Q	M1-0206-01	MDAFWP Suction Check
1AF-024	3	B-3	C		CK	6.000	SA	C	O		CV/Q	M1-0206-01	MDAFWP Suction Check
1AF-032	3	B-5	C		CK	8.000	SA	C	O		CV/Q	M1-0206-01	TDAFWP Suction Check
1AF-038	3	E-4	C		CK	8.000	SA	C	O		CV/Q	M1-0206-01	AFWP Dschg. Check
1AF-045	3	E-4	C		CK	3.000	SA	C	O		CV/Q	M1-0206-01	AFWP Recirc. Check
1AF-051	3	E-3	C		CK	6.000	SA	C	O		CV/Q	M1-0206-01	AFWP Dschg. Check
1AF-057	3	E-3	C		CK	3.000	SA	C	O		CV/Q	M1-0206-01	AFWP Recirc. Check
1AF-065	3	E-2	C		CK	6.000	SA	C	O		CV/Q	M1-0206-01	AFWP Dschg. Check

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1AF-069	3	E-1	C		CK	3.000	SA	C	O		CV/Q	M1-0206-01	AFWP Recirc. Check
1AF-075	3	C-4	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	MDAFWP to SG Check (SEE APPENDIX B)
1AF-078	3	D-4	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	TDAFWP to SG Check (SEE APPENDIX B)
1AF-083	3	C-3	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	MDAFW to SG Check (SEE APPENDIX B)
1AF-086	3	D-3	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	TDAFWP to SG Check (SEE APPENDIX B)
1AF-093	3	C-1	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	MDAFW to SG Check (SEE APPENDIX B)
1AF-098	3	D-2	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	TDAFW to SG Check (SEE APPENDIX B)
1AF-101	3	C-5	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	MDAFW to SG Check (SEE APPENDIX B)
1AF-106	3	D-5	C		CK	4.000	SA	C	O/C		CV/CS	M1-0206	TDAFW to SG Check (SEE APPENDIX B)
1AF-167	3	B-5	C		CK	8.000	SA	C	O		CV/Q	M1-0206-02	AFWP Test Return Check
1AF-215/-216	3	D-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-PV-2453A)
1AF-217/-218	3	D-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-PV-2453B, 1-FV-2456)
1AF-219/-220	3	B-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-PV-2454A)

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1AF-221/-222	3	C-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01F	Accum. Check Valve (1-PV-2654B, 1-FV-2657)
1AF-223/-224	3	A-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-HV-2659)
1AF-226/-227	3	B-4	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-HV-2660)
1AF-228/-229	3	A-3	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-HV-2661)
1AF-230/-231	3	B-3	A/C		CK	0.500	SA	O	C	V-5 V-6	CV/Q LT	M1-0218-01A	Accum. Check Valve (1-HV-2662)
1AF-232/-233	3	F-2	A/C		CK	0.500	SA	C	C	V-5 V-6	CV/Q LT	M1-0218-01	ACCUMULATOR CHECK VALVE (1-HV-2652-1)
1AF-234/-235	3	F-1	A/C		CK	0.500	SA	C	C	V-5 V-6	CV/Q LT	M1-0218-01	ACCUMULATOR CHECK VALVE (1-HV-2652-2)
1AF-248	3		C		RE	0.750	SA	C			SRV	M1-0206-01	MDAFWP Suction Piping Rlf.
1AF-249	3		C		RE	0.750	SA	C			SRV	M1-0206-01	MDAFWP Suction Piping Rlf.
1AF-250	3		C		RE	0.750	SA	C			SRV	M1-0206-01	TDAFWP Suct. Piping Rlf.

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST DIAGRAM	REMARKS
1CC-1077	3	C-3	C		CK	2.000	SA	0	C	5.4	CV/RR M1-231-A	RCP Thermal Barrier Check
1CC-1078	3	C-4	C		CK	2.000	SA	0	C	5.4	CV/RR M1-231-A	RCP Thermal Barrier Check
1CC-1079/1080	3	G-4	A/C		CK	0.500	SA	0	0	V-5 V-6	CV/G M1-0216-01 LT	Accumulator Check (1-PV-4552)
1CC-1081/1082	3	G-4	A/C		CK	0.500	SA	0	0	V-5 V-6	CV/G M1-0216-01 LT	Accumulator Check (1-PV-4553)
1LV-4500	3	C-2	B		GL	3.000	AO	C	0		MT/G M1-0229-A FST PIT	CCW Surge Tank Spiy.
1LV-4500-1	3	C-1	B		GL	3.000	AO	C	0		MT/G M1-0229-A FST PIT	CCW Surge Tank Spiy.
1LV-4501	3	D-2	B		GL	3.000	AO	C	0		MT/G M1-0229-A FST PIT	CCW Surge Tank Spiy.
PCV-N116A	3	A-4	B		PL	1.000	AO	0			FST M1-0229-A	CCW to UPS A/C Unit (See Notes)
PCV-N116B	3	F-3	B		PL	1.000	AO	0			FST M1-0229-B	CCW to UPS A/C Unit (See Notes)
1-PV-4552	3	D-4	B		PL	3.000	AO	0			FST M1-0229-A	CCW to Nuclear Chiller (See Notes)
1-PV-4553	3	D-4	B		PL	3.000	AO	0			FST M1-0229-B	CCW to Nuclear Chiller (See Notes)
XPV-3583	3	E-5	B		PL	3.000	MO	0			MT M1-0229-A	CCW to Control Room A/C Unit (See Notes)
XPV-3584	3	E-6	B		PL	3.000	MO	0			MT M1-0229-B	CCW to Control Room A/C Unit (See Notes)

CPSES UNIT NO. 1
TABLE NO. 7
INSERVICE TESTING/ REVISION 3
SYSTEM: DEMINERALIZED AND REACTOR MAKEUP WATER

ICR No: IST-R3-001

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-HV-5365	2	E-2	A		GL	3.000	AO	C	C		MT/Q FST PIT LTJ	M1-0242-B	DWS Cntmt. Isol.
1-HV-5366	2	E-2	A		GL	3.000	AO	C	C		MT/Q FST PIT LTJ	M1-0242-B	DWS Cntmt. Isol.
1DD-006	3	C-6	C		CK	3.000	SA	C	C	V-5	CV/Q	M1-0241-01	Deaerated Water Trans Pumps to RWST
1DD-016	3	D-3	C		CK	1.000	SA	C	O		CV/Q	M1-0241-01	RMUP Dschg. Flow Path
1DD-018	3	E-3	C		CK	3.000	SA	C	O		CV/Q	M1-0241-01	RMUP Dschg. Flow Path
1DD-064	3	D-4	C		CK	2.000	SA	C	C	V-5	CV/Q	M1-0241-01	RWST Makeup Flow Path
1DD-065	3	C-6	C		CK	3.000	SA	C	C	V-5	CV/Q	M1-0241-01	Deaerated Water Trans Pumps to RWST
1DD-066	3	D-4	C		CK	2.000	SA	C	C	V-5	CV/Q	M1-0241-01	RWST Makeup Flow Path
1DD-430	2	E-2	A/C		RE	0.750	SA	C			LTJ	M1-0242-B	DWS Cntmt. Penet. Thermal Rlf.
XDD-044	3	D-2	C		CK	1.000	SA	C	O		CV/Q	M1-0241-01	RMUP Dschg. Flow Path
XDD-048	3	E-2	C		CK	3.000	SA	C	O		CV/Q	M1-0241-01	RMUP Dschg. Flow Path

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1PS-500	2	B-3	A/C		RE	0.750	SA	C			LTJ	M1-0228	Accum. Liquid Space Sample Cntmt. Penet. Thermal Rlf.
1PS-501	2	B-1	A/C		RE	0.750	SA	C			LTJ	M1-0228	PZR Sample (Liquid) Penet. Thermal Rlf.
1PS-502	2	B-1	A/C		RE	0.750	SA	C			LTJ	M-0228	PZR Sample (Steam) Penet. Thermal Rlf.
1PS-503	2	B-2	A/C		RE	0.750	SA	C			LTJ	M1-0228	RC HL Sample Penet. Thermal Rlf.

ICR No: IST-R3-001

RELIEF REQUEST NUMBER: V-5

SYSTEM(S): Auxiliary Feedwater
Main Steam, Reheat, and Steam Dump
Compressed Air
Emergency Diesel Generator
Component Cooling Water
Demineralized Water

VALVE NUMBER(S): 1AF-215, 1AF-216, 1AF-217, 1AF-218, 1AF-219, 1AF-220, 1AF-221, 1AF-222, 1AF-223, 1AF-224, 1AF-226, 1AF-227, 1AF-228, 1AF-229, 1AF-230, 1AF-231, 1AF-232, 1AF-233, 1AF-234, 1AF-235, 1MS-680, 1MS-681, 1MS-682, 1MS-683, 1MS-684, 1MS-685, 1MS-686, 1MS-687, 1CI-644, 1CI-645, 1CI-646, 1CI-647, 1DO-058, 1DO-059, 1DO-060, 1DO-061, 1DO-062, 1DO-063, 1DO-064, 1DO-065, 1CC-1078, 1CC-1080, 1CC-1081, 1CC-1082, 1DD-006, 1DD-064, 1DD-0065, 1DD-066

CATEGORY: A/C,C

CLASS: 3

FUNCTION: These valves provide a safety-related air supply to pneumatically operated valves, the diesel starting air receiver tanks, or are associated with the reactor makeup water storage tank.

TEST REQUIREMENT: Exercise check valves once every 3 months per IWV-3521.

BASIS FOR RELIEF: Each valve listed is one of two series check valves associated with valve accumulators, air receiver tanks, or water tanks. Due to system configuration there is no typical means, without performing modifications, to individually verify that each valve has been full stroke exercised. Performing system modifications are considered hardships that are not compensated by an increased level of quality or safety.

ALTERNATE TESTING: These series check valves will have their closure verified by positive means (such as pressure indication) such that at least one of the series check valves is closed once every three months. No additional testing needs to be performed unless there is an indication that the closure capability of the pair of valves is questionable, then both valves will be declared inoperable and either be disassembled and visually inspected or be repaired or replaced prior to being returned to service.

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FIGURE 7.2

INTERIM CHANGE REQUEST

IST Plan Revision Rev. 3 **ICR No.** IST-R3-002

Reference: **Page** See Attachment
Table See Attachment
Relief Request, and/or
Component: Relief Requests: V-6, 15.1, 16.6, 16.7, P.2, P.8, and P.11, Appendix B, Tables 0 and 16

Reason for Change: See Attachment

Proposed Revision: See Attachment

Harold G. Hobson Jr.	Technical Support	11/1/89
Initiator	**Department**	**Date**

Approved: [X] **Yes** [ ] **No** per telecon w/ M.D. Stiggs — 11/1/89

CPE ASME Section XI Coordinator — **Date**

Reason for Disapproval:

ATTACHMENT
FIGURE 7.2
INTERIM CHANGE REQUEST

Reason for Change:

1) Relief Request V-6: Revision 3 of the IST Plan recategorized the Emergency Diesel Generator air start check valves as "C", rather than "A/C". However, "Emergency Diesel Generator", was still listed on Relief Request V-6.

2) Relief Request 15.1: Overpressurization concerns require isolation of the flow path necessary to partial stroke check valves 1-8922A and 1-8922B when the RCS is depressurized.

3) Relief Request 16.6, 16.7: These valves will be tested on a cold shutdown frequency. The NRC questioned the original relief request which proposed disassembly on a refueling frequency.

4) Relief Request P.2, P.8, P.11: These Relief Requests were revised in response to an NRC inquiry on the initially proposed functional test for these pumps (SFGDS BLDG SUMPS). Vibration, flow, and pressures will now be measured during inservice testing. Pump design precludes bearing temperature measurements.

5) Appendix B: Provides additional information on testing performed on auxiliary feedwater valves as requested by NRC. Deleted cold shutdown note for valves 1-8511A and 1-8511B, valves are now tested quarterly.

6) Table 0: Revised to reflect testing specified in P.2, P.8, and P.11 for Safeguards Building Sump Pumps, in response to inquiry on Rev. 3 of the plan.

7) Table 16: The testing frequency of valves 1-8511A/B has been changed to quarterly to correspond with quarterly slave testing which defeats interlocks and strokes the valves. Testing requirements of Relief Requests 16.6 and 16.7 have also been incorporated in the Table.

Proposed Revision:

Remove and discard V-6; 15.1; 16.6; 16.7; P.2; P.8; P.11; Appendix B pages 1 through 8; Table 0, page 2; and Table 16, pages 3, 4 and 5.

1) Insert the attached, Relief Requests V-6, 15.1, 16.6, 16.7, P.2, P.8 and P.11.
2) Insert the attached, Appendix B, pages 1 through 8.
3) Insert the attached, Table 0, page 2.
4) Insert the attached, Table 16, pages 3, 4 and 5.
5) Add this ICR to Appendix D.

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to IST Plan Interim Change Requests (ICRs)

ICR NO./DATE	AFFECTED PAGE(s)	DESCRIPTION OF CHANGE
IST-R3-002 10/31/89	Section II, Table 0 page #2	Table 0 revised to note the testing program for the SFGDS BLDG SUMP PUMPS
	Section III, Table 16 pages 3, 4, 5	Testing frequency for valves 1-8511A/B changed to quarterly; Table revised to incorporate testing of Relief Requests 16.6 and 16.7.
	Appendix A, Relief Request V-6	Reivsed to reflect reclassification of Emergency Diesel Generator air start check valves.
	Appendix A, Relief Request 15.1	Revised to note limitation for performance of a partial stroke test of check valves 1-8922A/B with the RCS depressurized.
	Appendix A, Relief Request 16.6, 16.7	Class 1/2 boundary check valves to be tested during cold shutdowns.
	Appendix A, Relief Request P.2, P.8, P.11	Relief Requests revised to upgrade SGDG BLDG SUMP PUMP testing program.
	Appendix B	Cold shutdown note deleted for quarterly tested valves 1-8511A, and 1-8511B; added description of testing performed on AFW check valves.

COMANCHE PEAK STEAM ELECTRIC STATION

UNIT 1 PUMP TEST PROGRAM

TABLE 0

PROGRAM PLAN REV. NO. 3

PUMP NUMBER	PUMP NAME	CODE CLASS	TEST PARAMETERS							
			FD AND COORDINATES	SPEED	INLET PRESS	DIFF PRESS	FLOW RATE	VIB. AMP.	BRG TEMP	LUBE LVL OR PRESS
CP1-DOAPFT-02B	FUEL OIL TRANSFER	3	215 F-5	NO	NO(6)	NO(6)	YES	YES	NO(8)	NO(6)
CPX-SFAPSF-01	SPENT FUEL POOL COOLING	3	235 C-2	NO	YES	YES	YES	YES	NO(8)	YES
CPX-SFAPSF-02	SPENT FUEL POOL COOLING	3	235 C-5	NO	YES	YES	YES	YES	NO(8)	YES
CP1-DDAPRM-01	REACTOR MAKEUP TRANSFER	3	241-01 D-3	NO	YES(7)	YES	YES	YES	NO(8)	YES
CPX-DDAPRM-02	REACTOR MAKEUP TRANSFER	3	241-01 D-2	NO	YES(7)	YES	YES	YES	NO(8)	YES
CP1-WPAPSS-01	SFGD. BLDG. SUMP PUMPS (11)	3	236 C-6	NO	YES	YES	YES	YES	NO(8)	NO(2)
CP1-WPAPSS-02	SFGD. BLDG. SUMP PUMPS (11)	3	236 C-6	NO	YES	YES	YES	YES	NO(8)	NO(2)
CP1-WPAPSS-03	SFGD. BLDG. SUMP PUMPS (11)	3	236 E-6	NO	YES	YES	YES	YES	NO(8)	NO(2)
CP1-WPAPSS-04	SFGD. BLDG. SUMP PUMPS (11)	3	236 E-6	NO	YES	YES	YES	YES	NO(8)	NO(2)

(1) See Relief Request P-1; (2) See Relief Request P-2; (3) See Relief Request P-3; (4) See Relief Request P-4; (6) See Relief Request P-6; (7) See Relief Request P-7; (8) See Relief Request P-8; (9) Deleted; (10) See Relief Request P-10; (11) See Relief Request P-11.

RELIEF REQUEST NUMBER: V-6

SYSTEM(S): Auxiliary Feedwater
Main Steam, Reheat, and Steam Dump
Compressed Air
Safety Injection
Component Cooling Water

VALVE NUMBER(S): 1AF-215, 1AF-216, 1AF-217, 1AF-218, 1AF-219, 1AF-220, 1AF-221, 1AF-222, 1AF-223, 1AF-224, 1AF-225, 1AF-226, 1AF-227, 1AF-228, 1AF-229, 1AF-230, 1AF-231, 1AF-232, 1AF-233, 1AF-234, 1AF-235, 1MS-680, 1MS-681, 1MS-682, 1MS-683, 1MS-684, 1MS-685, 1MS-686, 1MS-687, 1CI-644, 1CI-645, 1CI-646, 1CI-647, 1SI-166, 1SI-167, 1SI-168, 1SI-169, 1CC-1079, 1CC-1080, 1CC-1081, 1CC-1082

CATEGORY: A/C

CLASS: 3

FUNCTION: Provide a safety-related air (and nitrogen) supply to pneumatically operated valves and the diesel starting air receiver tanks.

TEST REQUIREMENT: Category A valve leak rate testing requirements of 1WV-3421, 1WV-3424, and 1WV-3426.

BASIS FOR RELIEF: Two check valves in series are utilized at each class 3 to NNS piping boundary. Relief is requested from 1WV-3421 to individually leak test each series check valve.

Due to the system configuration there is no typical means, without performing modifications, to individually verify the leak tightness of each valve. In addition the test data for this testing will not lend itself to analysis in accordance with 1WV-3426 due to the relatively rigid acceptance criteria which will need to be applied. Performing system modifications would result in hardships that are not compensated by an increased level of quality or safety.

ALTERNATE TESTING: The respective series check valves will be leak tested in pairs. A pressure decay test or functional test will be performed to verify the pressure retaining integrity of at least one of the series check valves with the normal supply system secured and vented to atmosphere upstream of the Class 3/NNS piping boundary. No additional testing needs to be performed unless there is an indication that the leak tightness capability of the pair of valves is questionable, then both valves will be declared inoperable and either be disassembled and visually inspected or be repaired or replaced prior to being returned to service.

RELIEF REQUEST NUMBER: 15.1

SYSTEM: Safety Injection

VALVE NUMBER: 1-8022A,
1-8922B

CATEGORY: C

CLASS: 2

FUNCTION: Safety Injection Pump Discharge Isolation Check Valve

TEST REQUIREMENT: Exercise valve to position required to fulfill their function at least once every 3 months (IWV-3520).

BASIS FOR RELIEF: Power Operation - No positive means exist to full stroke exercise these valves since the only full flow path available is into the RCS and the SI pumps cannot develop sufficient discharge head to pump into the RCS. In addition, a partial stroke test cannot be performed with the RCS depressurized below 1700 psig. The safety injection test header is not available as a flow path. The safety injection pumps are required per Technical Specification 3.5.3.2 to be isolated from the RCS to prevent RCS overpressurization.

Cold Shutdown - Full stroking these valves utilizing the SI pumps to pump into the RCS could result in RCS low temperature overpressurization which would exceed the design limitations of the system and adversely affect plant safety.

ALTERNATE TESTING: Perform partial stroke quarterly when the RCS is pressurized above 1700 psig and full stroke exercise valve at each refueling outage.

RELIEF REQUEST NUMBER: 16.6

SYSTEM: Chemical and Volume Control

VALVE NUMBER: 1CS-8350A,B,C,D
1CS-8367A,B,C,D

CATEGORY: C

CLASS: 1

FUNCTION: Class 1 / Class 2 Pressure Boundary

TEST REQUIREMENT: Exercise valve to the position required to fulfill its function at least once every 3 months. Relief is also requested from the requirement to test each series check valve.

BASIS FOR RELIEF: Power Operation - These series check valves provide the ASME boundary between Class 1 RCS and Class 2 CVCS as required by ANSI N18.2a. These valves are not leak tested, and are not listed as RCS pressure isolation valves in Technical Specification Table 3.4-1. These valves perform their safety function in the closed position therefore partial stroking is not applicable. Full stroke exercising during power operation would require securing seal injection flow to the reactor coolant pumps. The interruption of this flow would result in equipment damage.

In addition, relief is requested from exercising both series check valves to the closed position, due to the absence of test connections.

ALTERNATE TESTING: Verify operability of the valves during cold shutdowns when the RCPs are secured. The series check valves will be verified closed by positive means. No additional testing needs to be performed unless there is an indication that the closure capability of the pair of valves is questionable, then both valves will be declared inoperable and either be disassembled and visually inspected or repaired or replaced prior to being returned to service.

RELIEF REQUEST NUMBER:	16.7
SYSTEM:	Chemical and Volume Control
VALVE NUMBER:	1CS-8378A,B 1CS-8379A,B
CATEGORY:	C
CLASS:	1
FUNCTION:	Charging and Alternate Charging Line Flow Path
TEST REQUIREMENT:	Exercise valve to the position required to fulfill its function at least once every 3 months.
BASIS FOR RELIEF:	Power Operation - These series check valves provide the ASME boundary between Class 1 RCS and Class 2 CVCS as required by ANSI N18.2a. These valves are not leak tested, and are not listed as RCS pressure isolation valves in Technical Specification Table 3.4-1. These valves perform their safety function in the closed position therefore partial stroking is not applicable. Full stroke exercising during power operation would require securing normal and alternate charging flow. The interruption of this flow could result in a loss of pressurizer level control and cause a plant trip. In addition, relief is requested from exercising both series check valves to the closed position, due to the absence of test connections.
ALTERNATE TESTING:	Verify operability of the valves during cold shutdowns. The series check valves will be verified closed by positive means. No additional testing needs to be performed unless there is an indication that the closure capability of the pair of valves is questionable, then both valve will be declared inoperable and either be disassembled and visually inspected or be repaired or replaced prior to being returned to service.

RELIEF REQUEST NUMBER: P-2

PUMP NUMBER: CP1-SWAPSW-01, CP1-SWAPSW-02, CP1-WPAPSS-01, CP1-WPAPSS-02, CP1-WPAPSS-03, CP1-WPAPSS-04

SYSTEM: Service Water, Vents and Drains (Safeguard Bldg. Sump Pumps)

CLASS: 3

TEST REQUIREMENT: Observe proper lubricant level or pressure. (IWP-3400)

BASIS FOR RELIEF: These pumps are submerged. The bearings for these pumps are internal and water cooled, therefore lube oil level and pressure observation is not applicable. The parameters that shall be measured as delineated in the proposed Alternate Testing, provides sufficient information for evaluating the condition of the Service Water Pumps and Safeguard Bldg. Sump Pumps and thus does not endanger life or property or the common defense and security of the public.

ALTERNATE TESTING: The other test parameter measurements indicated in Table O will be performed.

RELIEF REQUEST NUMBER: P-8

PUMP NUMBER: All pumps listed in Table 0.

SYSTEM(S): Various

CLASS: 2 and 3

TEST REQUIREMENT: Per IWP-3300, measure bearing temperature yearly.

BASIS FOR RELIEF: Relief is requested from the requirement to yearly measure pump bearing temperatures per IWP-3300 due to the design limitations for some of the pumps in the IST program which prevent direct bearing temperature measurement. Relief is further requested for the remaining pumps in the IST program. Industry data has shown that bearing temperature changes due to degrading bearings only occurs after major degradation has occurred at the bearing. Prior to this, vibration monitoring would more likely provide information to identify changes in the condition of bearings. Reliance on vibration monitoring would allow corrective actions to be taken prior to the failure of a bearing and damage to the pump. Bearing temperature measurements for the Service Water, Residual Heat Removal, Boric Acid Transfer, Safeguard Bldg. Sump Pumps, and Safety Chilled Water Pumps are not possible due to pump design.

ALTERNATE TESTING: Measure Vibration Velocity as part of a predictive maintenance program outside of the IST Program.

RELIEF REQUEST NUMBER: P-11

PUMP NUMBER: CP1-WPAPSS-01, CP1-WPAPSS-02
CP1-WPAPSS-03, CP1-WPAPSS-04

SYSTEM(S): Vents and Drains (Safeguard Bldg. Sump Pumps)

CLASS: 3

TEST REQUIREMENT: Measure the test quantities of Table IWP-3100-1 on each pump every three months during normal plant operation.

BASIS FOR RELIEF: These pumps are located in dry sumps, it is impractical to supply the required fluid inventory necessary to test these pumps on a quarterly inservice test frequency. Any water introduced into the sumps for test purposes must be treated as radwaste and disposed of accordingly. Flooding and draining the sumps every three months to perform testing creates a hardship that is not compensated for by an increased level of quality or safety.

ALTERNATE TESTING: Perform a functional test of these pumps at least once every two years, as suggested by the current ASME code on pump testing. (Reference OM-6).

APPENDIX B

VALVES TESTED AT COLD SHUTDOWNS AND REFUELING OUTAGES

The following are Category A, B, C, and A/C valves that meet the exercising requirements of ASME Section XI, and are not full-stroke exercised every three months during plant operation. These valves are full-stroke exercised during cold shutdowns. Testing these valves during power operation is not practical, due to the valve type and location or system design. These valves are listed below and grouped according to the system in which they are located.

STEAM GENERATOR FEEDWATER SYSTEM

Category B Valves

Valves 1-HV-2134, 1-HV-2135, 1-HV-2136, and 1-HV-2137, main feedwater to steam generators isolation valves, cannot be full-stroke exercised during power operation. Closing these valves to accomplish stroke time testing results in an interruption of feedwater flow, resulting in a steam generator level transient which would cause a reactor trip. These valves will be partial-stroke exercised quarterly and full-stroke exercised during cold shutdowns.

Valves 1FV-2193, 1FV-2194, 1FV-2195 and 1FV-2196, feedwater preheater bypass valves, cannot be full or partial stroke exercised during power operation. Opening these valve to accomplish stroke time testing to the closed position results in a temporary diversion of feedwater, the resultant steam generator level perturbation may result in a reactor trip. These valves will be full-stroke exercised during cold shutdowns.

Valves 1FV-2181, 1FV-2182, 1FV-2183 and 1FV-2184, feedwater split flow bypass valves, cannot be full or partial stroke exercised during power operation. These valves are interlocked with the feedwater isolation valves and function to prevent flow induced tube failures in the preheater region of the steam generator by diverting a portion of main feedwater flow to the steam generator auxiliary feedwater nozzles. Valve closure during testing diverts 100% of feedwater flow through the main feedwater nozzle. The resultant flow induced vibration could result in premature steam generator tube damage. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-HV-2185, 1-HV-2186, 1-HV-2187 and 1-HV-2188, feedwater isolation bypass valves, cannot be full or partial stroke exercised during power operation. These valves are in parallel with the feedwater isolation valves and are interlocked against opening with the feedwater isolation valves in the open position during power operation. Testing these valves at power would require defeating the system interlocks and could possibly result in unstable feedwater flow. These valves will be full-stroke exercised during cold shutdowns.

Category C Valves

Valves 1FW-70, 1FW-76, 1FW-82, and 1FW-88, Feedwater Check Valves, cannot be full or partial stroke exercised during unit operation. Stroke testing these valves to the closed position requires securing feedwater flow to the associated operating steam generator, the resultant level transient would result in a plant trip. These valves will be verified closed when feed to the associated steam generator is secured during cold shutdown.

Valves 1FW-195, 1FW-196, 1FW-197 and 1FW-198, tempering line backflow to steam generators check valves, cannot be full or partial stroke exercised during power operation. Exercising these check valves could cause potential damage to the auxiliary feedwater nozzles. The auxiliary feedwater flow necessary to stroke these valves is not preheated and therefore, would cause unnecessary thermal shock to the S/G auxiliary feedwater nozzles. A cycle of thermal shocks to these nozzles would eventually result in nozzle degradation. These valves will be full-stroke exercised to the open position during cold shutdowns.

MAIN STEAM, REHEAT AND STEAM DUMP SYSTEMS

Category B Valves

Valves 1-PV-2325, 1-PV-2326, 1-PV-2327 and 1-PV-2328, power operated relief valves cannot be full or partial stroke exercised during power operation since this would cause a secondary pressure transient. The isolation of these valves, by closing the manual inlet isolation valve, to accomplish testing in turn could challenge a main steam safety valve. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-HV-2333A, 1-HV-2334A, 1-HV-2335A and 1-HV-2336A, main steam isolation valves, cannot be full stroke exercised during power operation. Closing these valves to accomplish stroke time testing could result in an interruption of main steam flow from the associated steam generator to the high pressure turbine and could result in a plant trip. These valves will be partial stroke exercised quarterly and full-stroke exercised during cold shutdowns.

Category C Valves

Valves 1MS-142 and 1MS-143, main steam to turbine driven AFWP, cannot be exercised to their closed safety position during power operation. Full stroke testing to the open position will be accomplished quarterly by passing steam flow which is equal to or greater than the accident required flow through the valve. However, closure testing at power would require isolating the check valve under test from its respective steam generator by shutting the manual upstream isolation valve. To verify closure high pressure steam would then have to be vented upstream of the check which is a safety concern. The closure test for these check valves will be performed during cold shutdowns when testing can be safely accomplished.

AUXILIARY FEEDWATER SYSTEM

Category C Valves

Valves 1AF-075, 078, 083, 086, 098, 101 and 106, auxiliary feedwater to the steam generators, are required to open to deliver flow to the generators as well as to close to prevent a running pump from recirculating back through a non-running pump. These check valves also have a secondary function in the closed position to prevent back leakage from the main feedwater system. These valves cannot be fully or partially stroked during power operation. Exercising these check valves to the open position or to the open position and back to the closed position could result in damage to the auxiliary feedwater nozzles. The auxiliary feedwater flow necessary to stroke these valves is not preheated and, therefore, would cause an unnecessary thermal shock to these nozzles. A series of thermal shocks to the auxiliary feedwater nozzles would eventually result in nozzle degradation. These valves will be full-stroke exercised to the open position and to the closed position during cold shutdowns. Cold shutdown testing includes forward flowing through the valves with an auxiliary feedwater pump which exposes the adjacent non-running pump's check valves to a reverse differential pressure. Check valve operability, in this case, is demonstrated by verification of the required minimum flow delivered to the steam generator. It is recognized that these check valves perform their closed safety function in series with other system check valves (ie. pump discharge check valves). Thus, additional testing is performed during cold shutdowns to demonstrate closure individually. The check valves are isolated upstream and downstream and a reverse differential pressure is impressed across the valve through a test connection. Subsequently, an upstream vent is opened and a leakage observation is made to ascertain valve closure. Further, when the plant is at power, the closure of the check valves is monitored continuously. During each shift, the pump casings and discharge piping are checked for increases in temperature above ambient.

Also, temperature elements located downstream of the subject check valves are connected to indicators (0-200°F) on the main control board. The temperature indicators provide evidence of feedwater back leakage into the auxiliary feedwater system. Other temperature elements are located in the feedwater piping upstream of the normally closed check valves 1FW-0195, 0196, 0197, 0198. These elements are connected to control room alarms to warn of steam or feedwater back leakage into the normally cool portion of the feedwater system, into which the auxiliary feedwater system injects.

COMPONENT COOLING WATER SYSTEM

Category A Valves

Valves 1-HV-4696, 1-HV-4700, 1-HV-4701, 1-HV-4708 and 1-HV-4709, component cooling water containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing could cause damage to plant equipment. Closure of the valves interrupts component cooling water flow to the reactor coolant pump thermal barrier coolers, lower bearing lube oil coolers, upper bearing lube oil coolers and motor air coolers. Securing flow could result in reactor coolant pump damage. These valves will be full stroke exercised during cold shutdowns when the reactor coolant pumps have been removed from operation and component cooling water can be secured without the risk of pump damage.

Category B Valves

Valves 1-HV-4524, 1-HV-4525, 1-HV-4526 and 1-HV-4527, component cooling water to non-safeguards loop isolation valves, and 1-HV-4699, CCW supply to containment, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing could cause damage to plant equipment. Closing these valves isolates cooling to the reactor coolant pump thermal barrier coolers, lower bearing lube oil coolers, upper bearing lube oil coolers and motor air coolers. Securing flow could result in reactor coolant pump damage. In addition, flow would be secured from equipment necessary for plant operation: letdown heat exchanger, seal water heat exchanger and reactor coolant pump coolers. These valves will be full stroke exercised during cold shutdowns when the reactor coolant pumps have been removed from operation and component cooling water can be secured without the risk of pump damage.

Valves 1-FV-4650 A and B, component cooling water to ventilation chillers isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing could cause containment temperatures to exceed limitations imposed by the Technical Specifications. Securing flow to the ventilation chillers results in their tripping off, after reopening the valves, the ventilation chillers must be manually restarted. The subsequent recovery is slow and during this absence of cooling flow, containment temperatures rise due to the high heat loads. As a result, a potential to damage environmentally qualified electrical components exists. These valves will be full-stroke exercised during cold shutdowns when cooling to the ventilation chillers can be safely secured.

REACTOR COOLANT SYSTEM

Category B Valves

Valves 1-HV-3607, 1-HV-3608, 1-HV-3609 and 1-HV-3610, reactor vessel head and pressurizer vent isolation valves, cannot be full or partial stroke exercised during power operation since this would unnecessarily jeopardize the integrity of the reactor coolant system by relying on single valve isolation of the RCS pressure boundary. These valves will be full-stroke exercised during cold shutdowns.

PORV's, 1-PCV-455A and 1-PCV-456, are not required to shut down the reactor to the cold shutdown condition. They are, however, required to be available during power operation to prevent challenges to the pressurizer safety valves. They may be required during shutdown operation to provide overpressure protection. In order to minimize the consequence of a PORV sticking open, these valves will be full-stroked exercised during cold shutdowns.

COMPRESSED AIR SYSTEM

Category A Valves

Valve 1-HV-3487, instrument air to containment cannot be full or partial stroke exercised during power operation. Closing this valves to accomplish stroke time testing isolates instrument air to the containment and this air is required for plant control. Testing could result in a plant trip and/or operational transient. This valve will be full stroke exercised during cold shutdowns when instrument air to the containment can be secured without having an impact on plant operations.

VENTILATION CHILLED WATER SYSTEM

Category A Valves

Valves 1-HV-6082, 1-HV-6083 and 1-HV-5084, ventilation chilled water to and from containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing isolates all ventilation chilled water system heat loads in the containment. In addition, valve failure during testing could result in exceeding containment temperature Technical Specification limits and possibly result in damage to environmentally qualified electrical equipment. These valves will be full-stroke exercised during cold shutdowns when ventilation chilled water cooling to the containment can be safety secured.

RESIDUAL HEAT REMOVAL SYSTEM

Category A Valves

Valves 1-8701 A and B and 1-8702 A and B, RCS hot leg to RHR isolation valves, cannot be full or partial stroke exercised during power operation since these valves are interlocked with RCS pressure which prevents opening these valves when RCS pressure is greater than 425 psig. These valves will be full-stroke exercised during cold shutdowns.

Category B Valves

Valves 1-8716A and 1-8716B, RHR crosstie valves, in accordance with IE Information Notice No. 87-01, will not be exercised during power operation. Failure of either valve in the closed position, concurrent with the failure of an RHR pump results in ECCS injection flow to only two of the required four reactor coolant system cold legs. These valves will be full-stroke exercised during cold shutdowns when they can be exercised without challenging RHR ECCS capabilities.

Category C Valves

Valves 1-8730A and 1-8730B, RHR pump discharge check valves, cannot be full-stroke exercised during power operation. There is not a full flow path available to full-stroke exercise these valves at power. One potential full flow path discharges to the Reactor Coolant System. The RHR pumps, being low head injection pumps will not overcome RCS nominal operating pressure. The alternate flow path, through the normally isolated test line to the

RWST, cannot be utilized with the plant at power. The valve alignment and resultant RHR configuration represents a degraded safety condition, rendering the RHR system inoperable. IEN-87-01 "RHR Valve Misalignment Causes Degradation of ECCS in PWRs" discusses how operability testing of RHR systems at several PWRs (Westinghouse NSSS) has resulted in system configurations outside design bases at several plants. These valves will be partial-stroke exercised quarterly and full-stroke exercised at cold shutdown.

SAFETY INJECTION SYSTEM

Category A Valves

Valves 1-8809 A and B, RHR injection to RCS cold legs isolation valves, cannot be full or partial stroke exercised during power operation since this would cause a loss of the required number of cold leg, low head safety injection flow paths. In addition Technical Specification Surveillance Requirement 4.5.2.a requires these valves be in the Open position with power to the valve operators removed in Modes 1, 2, and 3. These valves will be full-stroke exercised during cold shutdowns.

Valve 1-8835, SI pump discharge to RCS cold leg injection isolation valve, cannot be full or partial stroke exercised during power operation since failure in the closed position would isolate the SI pump to all RCS cold legs injection flow paths. In addition Technical Specification Surveillance Requirement 4.5.2.a requires this valve be in the Open position with power to the valve operator removed in Modes 1, 2, and 3. This valve will be full-stroke exercised during cold shutdowns.

Valves 1-8802A, 1-8802B, and 1-8840, normally closed motor operated gate valves in hot leg injection lines, cannot be full or partial stroke exercised during power operation since Technical Specification 4.5.2.a requires these valves to be maintained in the closed position with power removed from the operators in operation Modes 1, 2, and 3. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-8811A and 1-8811B, RHR containment recirculation sump isolation valves, cannot be full or partial stroke exercised with the plant at power. The stroke test of these valves requires isolating the RHR pumps from the RWST to prevent gravity draining the RWST to the containment sump. The absence of a check valve in the RHR suction line potentially could push water into the containment sump which would then require removal. The RHR pump suction header would then have to be partially drained to prevent water back flow to the sump rendering the pumps inoperable. An additional concern involves the ability to adequately vent and fill the system after testing. The additional risks encountered and amount of time to perform testing do not justify the additional assurance gained by quarterly testing. These valves will be full stroke exercised during cold shutdown when the proper precautions can be taken without impacting operation.

Category B Valves

Valves 1-8804A and B, Charging Pump Suction from RHRS HX, cannot be full or partial stroke exercised during power operation due to interlocks. 1-8804A and 1-8804B are opened by operator action during the recirculation mode of SIS operation following a LOCA to supply the suctions of the Charging and Safety Injection Pumps. The valves are interlocked with ECCS valves 1-8813, 1-8814A and 1-8814B. These valves must be closed to open 1-8804A and 1-8804B. Valve 1-8813, as noted below, is required to be open with the plant at power to protect the SI pumps by providing a minimum flow protection path. These valves will be full-stroked during cold shutdowns.

Valve 1-8806, SI pump suction from the RWST isolation valve, cannot be full or partial stroke exercised during power operation since failure of this valve in the closed position would render both trains of SI inoperable. In addition, valve 1-8806 is required to be in the open position, with power to the valve operator removed, during Modes 1, 2, and 3 per Technical Specification 4.5.2.a. These valves will be full-stroke exercised during cold shutdowns.

Valve 1-8813, minimum flow recirculation from SI pumps common isolation valve, cannot be full or partial stroke exercised during power operation since this could render both SI pumps without minimum flow recirculation protection. In addition, Technical Specification Requirement 4.5.2.a requires the valve to be in the Open position, with power to the valve operator removed during Modes 1, 2, and 3. This valve will be full-stroke exercised during cold shutdowns.

Valves 1-8808A, 1-8808B, 1-8808C and 1-8808D, accumulator isolation valves, cannot be full or partial stroke exercised during power operation. These valves are required to be in the open position, with power to the valve operator removed in Modes 1, 2 and 3 per Technical Specification 4.5.1.1. These valves are considered passive for their safety function in the open position. Procedurally, these valves are required to be closed prior to decreasing reactor coolant pressure below 800 psig. These valves will be full stroke tested to the closed position during cold shutdowns.

CHEMICAL AND VOLUME CONTROL

Category A Valves

Valves 1-8152 and 1-8160, CVCS letdown containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke testing could cause the failure of these valves during testing which could result in the loss of pressurizer level control and a reactor trip. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-8100 and 1-8112, RCP seal leak-off containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke testing could result in equipment damage. Valve closure interrupts seal water flow from the RCP's which could result in seal damage. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-8351 A, B, C, and D, RCP seal injection containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke testing could result in equipment damage. Valve closure would isolate seal water injection flow which could result in RCP seal damage. These valves will be full-stroke exercised during cold shutdowns.

Valve 1-8105, normal charging isolation valve, cannot be full or partial stroke exercised during power operation since this would interrupt normal charging flow. Valve closure could result in loss of pressurizer level control and a plant trip. This valve will be full-stroke exercised during cold shutdowns.

Category B Valves

Valve 1-8106, normal charging isolation valve, cannot be full or partial stroke exercised during power operation since this would interrupt normal charging flow which could result in loss of pressurizer level control and a plant trip. This valve will be full-stroke exercised during cold shutdowns.

Valves 1-LCV-112 D and E, charging pump suction from RWST isolation valves, cannot be full or partial stroke exercised during power operation since this would result in defeating the chemical balance attained by normal use of the CVCS. The subsequent reactivity transient could result in an uncontrolled plant shutdown. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-LCV-112 B and C, volume control tank outlet isolation valves, cannot be full or partial stroke exercised during power operation since this would cause a loss of the following: pressurizer level control, RCP seal injection, and letdown regenerative heat exchanger cooling. These valves will be full-stroke exercised during cold shutdowns.

Valves 1-HV-8220 and 1-HV-8221 allow gases in the centrifugal and charging pumps piping to vent to the VCT and cannot be full or partial stroke exercised during power operation. These valves are interlocked with 1-LCV-112B and 1-LCV-112C, and do not have their own handswitch. These valves will be full-stroke exercised during cold shutdowns with 1-LCV-112B and 1-LCV-112C.

Valves 1-LCV-459 and 1-LCV-460, Class 1 RCS to Class 2 CVCS boundary valves, cannot be full or partial stroked during power operation since this would interrupt charging flow. Valve closure could therefore result in a loss of pressurizer level control and cause a plant trip. These valves will be full stroke exercised during cold shutdowns.

Valve 1-8145, pressurizer auxiliary spray isolation valve cannot be full or partial stroke exercised during power operation since stroke testing could result in a pressurizer pressure transient. This valve will be full-stroke exercised during cold shutdowns.

Valve 1-8104, emergency boration isolation valve cannot be full or partial stroke exercised during power operation. Stroke testing this valve to the open position could cause boric acid to be delivered to the RCS and the increase in boric acid concentration, should the valve fail open, would result in a plant trip. This valve will be full-stroke exercised at cold shutdowns.

Category C Valves

Valve 1CS-8442, emergency boration flow path check valve cannot be full or partial stroke exercised during power operation since stroking would require flow through the emergency boration flow path which would cause a reactivity transient resulting in plant shutdown. This valve will be full-stroke exercised during cold shutdowns

Valve 1CS-8377, auxiliary spray check valve cannot be full or partial stroke exercised because this requires the initiation of auxiliary spray. The initiation of auxiliary spray during power operations could cause a pressurizer pressure transient. This check valve will be full-stroke exercised during cold shutdowns, when 1-8145 is exercised.

CONTAINMENT VENTILATION

Category A Valves

Valves 1HV-5536, 1-HV-5537, 1-HV-5538 and 1-HV-5539, containment purge system valves, perform a containment isolation function. These valves cannot be full or partial stroke exercised during power operation. Technical Specification LCO 3.6.1.7 requires these valves to be locked closed in Modes 1, 2, 3 and 4. These valves will be full stroke exercised during cold shutdowns.

CPSES UNIT NO. 1
TABLE NO. 16
INSERVICE TESTING/ REVISION 3
SYSTEM: CHEMICAL & VOLUME CONTROL

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-8351A	2	D-5	B		GL	2.000	MO	O	C		MT/CS PIT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (SEE APPENDIX B)
1-8351B	2	D-5	B		GL	2.000	MO	O	C		MT/CS PIT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (SEE APPENDIX B)
1-8351C	2	D-5	B		GL	2.000	MO	O	C		MT/CS PIT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (SEE APPENDIX B)
1-8351D	2	D-5	B		GL	2.000	MO	O	C		MT/CS PIT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (SEE APPENDIX B)
1-8378A	1	B-5	C		CK	3.000	SA	O	C	16.7	CV/CS	M1-0253A	CLASS 1/2 BOUNDARY
1-8378B	1	B-5	C		CK	3.000	SA	O	C	16.7	CV/CS	M1-0253A	CLASS 1/2 BOUNDARY
1-8379A	1	B-5	C		CK	3.000	SA	O	C	16.7	CV/CS	M1-0253A	CLASS 1/2 BOUNDARY
1-8379B	1	B-5	C		CK	3.000	SA	O	C	16.7	CV/CS	M1-0253A	CLASS 1/2 BOUNDARY
1-8381	2	E-3	A/C		CK	3.000	SA	O	O/C	16.1	LTJ CV/Q	M1-0253A	CVCS Chrg. - Cntmt. Isol.
1-8481A	2	E-4	C		CK	4.000	SA	C	O/C	16.4	PS/Q CV/RR	M1-0255-01	Charging Pump Dschg.
1-8481B	2	E-5	C		CK	4.000	SA	C	O/C	16.4	PS/Q CV/RR	M1-0255-01	Charging Pump Dschg.
1 8497	2	C-2	C		CK	3.000	SA	O	C		CV/Q	M1-0255-01	Pump Discharge Check

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VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-8510A	2	E-4	C		RE	1.500	SA	C			SRV	M1-0255-01	High Head SI Miniflow Rlf.
1-8510B	2	E-5	C		RE	1.500	SA	C			SRV	M1-0255-01	High Head SI Miniflow Rlf
1-8511A	2	D-4	B		GL	2.000	MO	C	O/C		MT/Q PIT	M1-0255-01	High Head SI Miniflow Isol.
1-8511B	2	D-5	B		GL	2.000	MO	C	O/C		MT/Q PIT	M1-0255-01	High Head SI Miniflow Isol.
1-8512A	2	D-4	B		GL	2.000	MO	O	O/C		MT/Q PIT	M1-0255-01	Charging Pump Miniflow Isol.
1-8512B	2	D-4	B		GL	2.000	MO	O	O/C		MT/Q PIT	M1-0255-01	Charging Pump Miniflow Isol.
1-8546	2	C-6	C		CK	8.000	SA	C	O	16.5	PS/CS CV/RR	M1-0255	RWST to Chrg. Pump Suct.
1-CS-8350A	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8350B	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8350C	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8350D	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8367A	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY

CPSES UNIT NO. 1
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SYSTEM: CHEMICAL AND VOLUME CONTROL

VALVE NUMBER	CODE CLASS	FLOW DIAG. COORD.	SECT. XI VLV CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-CS-8367B	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8367C	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8367D	1	D-4	C		CK	2.000	SA	O	C	16.6	CV/CS	M1-0253	CLASS 1/2 BOUNDARY
1-CS-8368A	2	D-5	C		CK	2.000	SA	O			NT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (See Notes)
1-CS-8368B	2	D-5	C		CK	2.000	SA	O			NT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (See Notes)
1-CS-8368C	2	D-5	C		CK	2.000	SA	O			NT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (See Notes)
1-CS-8368D	2	D-5	C		CK	2.000	SA	O			NT	M1-0253	RCP Seal Inj. - Cntmt. Isol. (See Notes)
1-CS-8377	1	B-6	C		CK	2.000	SA	C	O		CV/CS	M1-0253A	Auxiliary Spray Check Valve (SEE APPENDIX B)
1-CS-8473	3	C-4	C		CK	2.000	SA	C	O		CV/Q	M1-0257	BATP Dschg.
1-CS-8487	3	C-4	C		CK	2.000	SA	C	O		CV/Q	M1-0257	BATP Dschg.
1-HV-8220	2	E-2	B		GL	1.000	SO	O	C		MT/CS FST PIT	M1-0255	ECCS Operation (SEE APPENDIX B)
1-HV-8221	2	E-2	B		GL	1.000	SO	O	C		MT/CS FST PIT	M1-0255	ECCS Operation (SEE APPENDIX B)
1-LCV-112B	2	E-6	B		GA	4.000	MO	O	C		MT/CS PIT	M1-0255	VCT Isol. (SEE APPENDIX B)