COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE TESTING PLAN FOR PUMPS AND VALVES
FIRST INTERVAL

REVISION 2

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COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2

INSERVICE TESTING PLAN FOR PUMPS AND VALVES

FIRST INTERVAL

1.0 GENERAL INFORMATION

1.1 Introduction

The Inservice Testing Plan for Pumps and Valves, hereafter referred to as the IST Plan, has been prepared to summarize the test program for certain pumps and valves pursuant to the requirements of the Code of Federal Regulations, 10CFR50.55a(f)(4). This testing plan is applicable to CPSES Units 1 & 2. The content and distribution of the IST Plan are controlled and users are cautioned to verify the control status of their copy prior to use. To obtain a copy of this document, contact Distribution Control at the Main Document Control Center, Extension 8387.

1.2 Code Edition and Addenda

This IST Plan meets the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition (no addenda), Subsections IWA (as applicable), IWP (as modified by 10CFR50.55a(f)(4)), and IWV (as modified by 10CFR50.55a(f)(4) and (b)(2)(vii)), except in specifically identified instances where an alternative to the Code requirements is proposed or where it has been determined that conformance with certain Code requirements is impractical. In these instances, a request for relief from the Code requirement(s), including proposed alternatives to the requirement(s), has been prepared for Nuclear Regulatory Commission review and approval pursuant to 10CFR50.55a(a)(3) or (f)(5). 2

See Section 2.0, "Inservice Pump Testing Plan", and Section 3.0, "Inservice Valve Testing Plan" for a more detailed discussion of Code edition.

1.3 Dates of Test Interval

Implementation of this 1989 Edition IST Plan will be completed on CPSES Unit 1 before that unit is returned to power following the third refueling outage and at that time will supercede in its entirety the original Unit 1 Inservice Testing Plan for Pumps and Valves developed for the first inspection interval. The original Unit 1 IST Plan was implemented per the requirements of the 1986 Edition of Section XI. This 1989 Edition IST Plan constitutes an update of the original Unit 1 IST Plan to a later approved Code edition as allowed by 10CFR50.55a(f)(4)(iv) and as approved by the NRC staff. This IST Plan will remain in effect for Unit 1 for the 120 month interval following the date of issuance of the Unit 1 operating license (February 8, 1990). 2

This IST Plan was implemented on CPSES Unit 2 upon issuance of that unit's operating license and will remain in effect for Unit 2 for the 120 month interval following the date of issuance of the Unit 2 operating license (February 2, 1993). 2

If, in the future, it is determined to be advantageous to place both Unit 1 and Unit 2 on the same schedule for periodic 120 month IST Plan updates, then the Unit 2 IST program may be updated coincident with the required update to the Unit 1 program. Alternatively, the Unit 1 IST program may be updated coincident with the required update to the Unit 2 program. This would effectively extend the first test interval for Unit 1 beyond the required 120 months and would therefore require a NRC staff approved exemption from regulation 10CFR50.55a(f)(4)(ii) prior to 120 months from the date of issuance of the Unit 1 operating license. 2

1.4 Approval Status

This IST Plan was submitted to the NRC staff on July 2, 1992 via TXX-92302 requesting: 2

1. Approval to update the Unit 1 IST program to the requirements of the 1989 Edition of ASME Section XI as described in this IST Plan; 2

2. Approval of a proposed schedule for phasing in the implementation of this IST Plan for Unit 1; and, 2

3. Approval of the Relief Requests contained in Appendix A of this IST Plan for use in the testing of Unit 1 and Unit 2. 2

By safety evaluation dated January 29, 1993 for Unit 1 and NUREG-0797, Supplemental Safety Evaluation Report (SSER) No. 26 dated February, 1993 for Unit 2, the NRC staff granted the following approvals. 2

1. Approval to update the Unit 1 IST program to the requirements of the 1989 Edition of ASME Section XI and approval to test Unit 2 to the requirements of the Code. (Approval had not specifically been requested to test Unit 2 to the requirements of the 1989 Code since regulation 10CFR50.55a already seemed to permit it; approval was granted nonetheless.) 2

2. Approval of the schedule described in Section 1.3 above for phasing in the implementation of this IST Plan for Unit 1. 2

3. Approval of the Relief Requests contained in Appendix A of this IST Plan for use in the testing of Unit 1 and Unit 2 with the exception of Relief Request V5 which was denied. (See Appendix A for specific information.) 2

As pointed out in the safety evaluation and SSER, the NRC staff review of this IST Plan did not include verification that all pumps and valves within the scope of 10CFR50.55a and ASME Section XI are contained in the IST program. Additionally, for the components included in the IST program, all applicable testing requirements were not verified. 2

1.5 References

1. Code of Federal Regulations, 10CFR50.55a, "Codes and Standards".

2. ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition. (Subsections IWA, IWP, IWV and Appendix F)

3. ASME/ANSI OM-1987, Part 1, "Requirements for Inservice Performance Testing of Nuclear Power Plant Pressure Relief Devices".

4. ASME/ANSI OMa-1988 and OMb-1989, Part 6, "Inservice Testing of Pumps in Light-Water Reactor Power Plants". (Addenda to ASME/ANSI OM-1987)

5. ASME/ANSI OMa-1988, Part 10, "Inservice Testing of Valves in Light-Water Reactor Power Plants". (Addenda to ASME/ANSI OM-1987)

6. USNRC Generic Letter No. 89-04, "Guidance on Developing Acceptable Inservice Testing Programs", April 3, 1989.

7. USNRC, "Minutes of the Public Meetings on Generic Letter 89-04", October 25, 1989.

8. USNRC Staff Guidance Letter, "NRC Staff Guidance for Complying with Certain Provisions of 10CFR50.55a(g), Inservice Inspection Requirements", November 1976.

9. USNRC Staff Guidance Letter, "NRC Staff Guidance for Preparing Pump and Valve Testing Program Descriptions and Associated Relief Requests Pursuant to 10CFR50.55a(g)", January 1978.

10. NUREG-0800, "USNRC Standard Review Plan", July 1981. (Section 3.9.6, Inservice Testing of Pumps and Valves)

11. Karassik, Igor J., et al. Pump Handbook, second edition. New York: McGraw-Hill Book Company, 1986.

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE PUMP TESTING PLAN
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Pump Identification	Flow Diagram	Code Class	Pump Type	Test Parameters: Speed	Discharge Pressure	Differential Pressure	Flow Rate	Pump Bearing Vib.	Driver Bearing Vib.	Test Schedule	
Reactor Makeup Water											
CP1-DOAPRM-01	M1-0241-01	3	C/DC	N/A	N/A	X	X	X	N/A	3 MO.	
CPX-DOAPRM-01	M1-0241-01	3	C/DC	N/A	N/A	X	X	X	N/A	3 MO.	
CP2-DOAPRM-01	M2-0241	3	C/DC	N/A	N/A	X	X	X	N/A	3 MO.	
Fuel Oil Transfer											
CP1-DOAPFT-01	M1-0215-F	(2)	PD/ROT	N/A	X(1)	N/A	X(1)	X(1)	N/A	3 MO.	2
CP1-DOAPFT-02	M1-0215-F	(2)	PD/ROT	N/A	X(1)	N/A	X(1)	X(1)	N/A	3 MO.	
CP1-DOAPFT-03	M1-0215-G	(2)	PD/ROT	N/A	X(1)	N/A	X(1)	X(1)	N/A	3 MO.	
CP1-DOAPFT-04	M1-0215-G	(2)	PD/ROT	N/A	X(1)	N/A	X(1)	X(1)	N/A	3 MO.	
CP2-DOAPFT-01	M2-0215-F	(2)	PD/ROT	N/A	X(1)	N/A	X(1)	X(1)	N/A	3 MO.	
CP2-DOAPFT-02	M2-0215-F	(2)	PD/ROT	N/A	X(1)	N/A	X(1)	X(1)	N/A	3 MO.	
CP2-DOAPFT-03	M2-0215-G	(2)	PD/ROT	N/A	X(1)	N/A	X(1)	X(1)	N/A	3 MO.	
CP2-DOAPFT-04	M2-0215-G	(2)	PD/ROT	N/A	X(1)	N/A	X(1)	X(1)	N/A	3 MO.	
Residual Heat Removal											
TBX-RHAPRH-01	M1-0260	2	C/CC	N/A	N/A	X	X	N/A	X	3 MO.	
TBX-RHAPRH-02	M1-0260	2	C/CC	N/A	N/A	X	X	N/A	X	3 MO.	
TCX-RHAPRH-01	M2-0260	2	C/CC	N/A	N/A	X	X	N/A	X	3 MO.	
TCX-RHAPRH-02	M2-0260	2	C/CC	N/A	N/A	X	X	N/A	X	3 MO.	
Spent Fuel Pool Cooling											
CPX-SFAPSF-01	M1-0235	3	C/DC	N/A	N/A	X	X	X	N/A	3 MO.	
CPX-SFAPSF-02	M1-0235	3	C/DC	N/A	N/A	X	X	X	N/A	3 MO.	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE PUMP TESTING PLAN
TABLE O

NOTES

1. See Relief Request P1 for substitute ranges for test parameters for Fuel Oil Transfer Pumps.

2. The Fuel Oil Transfer Pumps were not commercially available as ASME BPV Code, Section III, Class 3; however, the normal commercial design was upgraded to "equivalent" ASME Section III, Class 3 quality requirements through seismic testing, qualification, and documentation. | 2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
VALVE TABLE INDEX (Page 1 of 3)

VALVE TYPES

AN - Angle
BA - Ball
BF - Butterfly
CK - Check
DA - Diaphram
GA - Gate
GL - Globe
PL - Plug
RE - Relief
SCK - Stop Check
SF - Safety
VB - Vacuum Breaker

ACTUATOR TYPES

AO - Air Operator
HO - Hydraulic Operator
MA - Manual Operator
MO - Motor Operator
SA - Self Actuated
SO - Solenoid Operator

VALVE FUNCTIONS

A - Active
P - Passive

SAFETY FUNCTION POSITIONS

O - Open
C - Closed

VALVE CATEGORIES

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

Category B - Valves for which seat leakage in the closed position is inconsequential for fulfillment of their required safety function(s).

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

Category D - Valves which are actuated by an energy source capable of only one operation, such as rupture disks or explosively actuated valves, for fulfillment of their required safety function(s). (There are no Category D valves or pressure relief devices in the CPSES IST Plan.)

Note: Seat tightness determination is performed as part of the performance test for Category C pressure relief devices (SRV) and may be performed as a method of close exercise test for check valves (CV). However, pressure relief devices and check valves are further classified as Category A only if some safety analysis criteria exist for valve seat leakage such as for pressure relief devices or check valves performing containment isolation functions or reactor coolant system pressure isolation functions. 2

TEST PARAMETERS

Leak Test

LT - Leak test Category A valve (other than containment isolation valves) per the requirements of OM Part 10, para. 4.2.2.3.

LTJ - Leak test Category A containment isolation valve per the requirements of OM Part 10, para. 4.2.2.2 (i.e., 10CFR50, Appendix J) and additional requirements of OM Part 10, paras. 4.2.2.3(e) and (f) as required by 10CFR50.55a(b)(2)(vii).

Exercise Test

MT - Exercise power operated Category A or B valve full-stroke to its safety function position(s) and measure stroke time per the requirements of OM Part 10, para. 4.2.1.

ET - Exercise manual Category A or B valve full-stroke to its safety function position(s) per the requirements of OM Part 10, para. 4.2.1.

CV - Exercise Category C check valve full-stroke to its safety function position(s) per the requirements of OM Part 10, para. 4.3.2.

CVD - Disassemble Category C check valve to verify operability per the requirements of OM Part 10, para. 4.3.2.4(c).

PS - Exercise Category A or B valve or Category C check valve part-stroke towards its safety function position(s) per the requirements of OM Part 10, paras. 4.2.1 or 4.3.2, as applicable. Part-stroke close exercising is not applicable to check valves.

SRV - Performance test Category C safety, relief or vacuum breaker valve per the requirements of OM Part 10, para. 4.3.1 (i.e., applicable portions of OM Part 1).

DT - Test Category D valve per the requirements of OM Part 10, para. 4.4.

TEST PARAMETERS (Continued)

Fail Safe Test

FO - Fail safe test Category A or B valve in the open direction per the requirements of OM Part 10, para. 4.2.1.6.

FC - Fail safe test Category A or B valve in the closed direction per the requirements of OM Part 10, para. 4.2.1.6.

Position Indicator Test

PIT - Test Category A, B, C or D valve position indication per OM Part 10, para. 4.1.

TEST SCHEDULES

Q - Perform exercise test (and fail safe test, if applicable) nominally every three months.

CS - Perform exercise test (and fail safe test, if applicable) during each cold shutdown. Such exercise is not required if the time period since the previous full-stroke exercise is less than three months. Valve exercising during cold shutdown shall commence within 48 hours of achieving cold shutdown, and continue until all testing is complete or the plant is ready to return to power. For extended outages, testing need not be commenced in 48 hours provided all valves required to be tested during cold shutdown will be tested prior to plant startup.

RF - Perform exercise test (and fail safe test, if applicable) during each refueling outage.

TS - Perform test at the applicable Technical Specification frequency.

NYR - Perform test at least once every N years. For leak tests (LT) and position indicator tests (PIT), N equals two years. For pressure relief device performance tests (SRV), N nominally equals five years or ten years for Class 1 or Class 2 & 3 devices respectively. However, other test frequencies may apply for pressure relief devices. See OM Part 1, paras. 1.3.3 and 1.3.4.

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 1 - AUXILIARY FEEDWATER
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
HV-2462	M1-0206 (B-5) M2-0206 (B-5)	GL/AO	3	3	B	A	O/C	N/A	MT/Q	FO/Q	PIT/ 2YR	AFW to SG Flowpath/AFW to Faulted SG Flow Isolation	
LV-2478	M1-0206-2 (E-1) M2-0206-2 (E-1)	GL/AO	3	3	B	P	C	N/A	N/A	N/A	PIT/ 2YR	Non-Safety Makeup Line Isolation	
HV-2480	M1-0206-1 (B-2) M2-0206-1 (B-2)	GA/MO	6	3	B	A	O	N/A	MT/Q	N/A	PIT/ 2YR	AFW Pump Emergency Supply Flowpath	2
HV-2481	M1-0206-1 (B-4) M2-0206-1 (B-4)	GA/MO	6	3	B	A	O	N/A	MT/Q	N/A	PIT/ 2YR	AFW Pump Emergency Supply Flowpath	2
HV-2482	M1-0206-1 (B-4) M2-0206-1 (B-4)	GA/MO	8	3	B	A	O	N/A	MT/Q	N/A	PIT/ 2YR	AFW Pump Emergency Supply Flowpath	2
HV-2484	M1-0206-2 (D-4) M2-0206-2 (D-4)	BF/MO	12	3	B	A	C	N/A	MT/Q	N/A	PIT/ 2YR	Condensate System to Condensate Storage Tank Isolation to Preclude Tank Overpressurization	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 1 - AUXILIARY FEEDWATER

NOTES

1. AF-0075, AF-0078, AF-0083, AF-0086, AF-0093, AF-0098, AF-0101, AF-0106, AFW to Steam Generator Header Check Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full or part-stroke open exercised during plant operation because such testing would unnecessarily subject the steam generator nozzles to thermal transients from the cool auxiliary feedwater for which they are not designed and could result in steam generator level transients. The valves cannot be exercised closed during plant operation for the same reasons. However, the valves are verified to be closed periodically during plant operation through upstream temperature monitoring of the piping and pumps.

2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 2 - COMPONENT COOLING WATER
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
1CC-1080	M1-0216-1 (F-4)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1CC-1081	M1-0216-1 (F-4)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1CC-1082	M1-0216-1 (F-4)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2CC-1090	M2-0231-A (F-2)	RE/SA	3/4 X 1	2	A/C	A	O/C	LTJ/TS	SRV/ 10YR	N/A	N/A	Containment Penetration Thermal Relief/Containment Isolation
2CC-1091	M2-0216-B (D-1)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2CC-1092	M2-0216-B (D-1)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2CC-1093	M2-0216-B (D-1)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2CC-1094	M2-0216-B (D-1)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
X-PV-3583	M1-0229-A (E-5)	PL/MO	3	3	B	A	N/A (5)	N/A	N/A	N/A	N/A	Control Room A/C Condenser Cooling Flow Control
X-PV-3584	M1-0229-A (D-6)	PL/MO	3	3	B	A	N/A (5)	N/A	N/A	N/A	N/A	Control Room A/C Condenser Cooling Flow Control

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 2 - COMPONENT COOLING WATER

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
X-PV-3585	M1-0229-B (B-6)	PL/MO	3	3	B	A	N/A (5)	N/A	N/A	N/A	N/A	Control Room A/C Condenser Cooling Flow Control
X-PV-3586	M1-0229-B (C-6)	PL/MO	3	3	B	A	N/A (5)	N/A	N/A	N/A	N/A	Control Room A/C Condenser Cooling Flow Control
LV-4500	M1-0229-A (C-2) M2-0229 (C-1)	GL/AO	3	3	B	A	O/C	N/A	MT/Q	FC/Q	PIT/ 2YR	Surge Tank Emergency Makeup Flowpath/Isolation
LV-4500-1	M1-0229-A (C-1) M2-0229 (C-1)	GL/AO	3	3	B	A	O	N/A	MT/Q	FO/Q	PIT/ 2YR	Surge Tank Emergency Makeup Flowpath
LV-4501	M1-0229-A (D-2) M2-0229 (D-1)	GL/AO	3	3	B	A	O/C	N/A	MT/Q	FC/Q	PIT/ 2YR	Surge Tank Emergency Makeup Flowpath/Isolation
HV-4512	M1-0229-A (F-1) M2-0229 (C-3)	BF/MO	24	3	B	A	C	N/A	MT/Q	N/A	PIT/ 2YR	Train A to Train B Crosstie Isolation
HV-4513	M1-0229-A (G-1) M2-0229 (E-3)	BF/MO	24	3	B	A	C	N/A	MT/Q	N/A	PIT/ 2YR	Train A to Train B Crosstie Isolation
HV-4514	M1-0229-B (A-4) M2-0229 (C-6)	BF/MO	24	3	B	A	C	N/A	MT/Q	N/A	PIT/ 2YR	Train A to Train B Crosstie Isolation

2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 2 - COMPONENT COOLING WATER

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
HV-4515	M1-0229-B (A-4) M2-0229 (D-6)	BF/MO	24	3	B	A	C	N/A	MT/Q	N/A	PIT/ 2YR	Train A to Train B Crosstie Isolation	
HV-4524	M1-0229-A (F-1) M2-0229 (D-4)	BF/MO	24	3	B	A	C	N/A	MT/CS (6)	N/A	PIT/ 2YR	Non-Safety Loop Flowpath Isolation	
HV-4525	M1-0229-A (F-1) M2-0229 (D-4)	BF/MO	24	3	B	A	C	N/A	MT/CS (6)	N/A	PIT/ 2YR	Non-Safety Loop Flowpath Isolation	
HV-4526	M1-0229-B (A-5) M2-0229 (D-6)	BF/MO	24	3	B	A	C	N/A	MT/CS (6)	N/A	PIT/ 2YR	Non-Safety Loop Flowpath Isolation	
HV-4527	M1-0229-B (A-5) M2-0229 (D-6)	BF/MO	24	3	B	A	C	N/A	MT/CS (6)	N/A	PIT/ 2YR	Non-Safety Loop Flowpath Isolation	
FV-4536	M1-0229-A (F-2) M2-0229 (A-1)	BF/AO	10	3	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	CCW Flowpath Boundary	2
FV-4537	M1-0229-B (B-2) M2-0229 (G-1)	BF/AO	10	3	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	CCW Flowpath Boundary	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 3 - CHILLED WATER (SAFETY)
PAGE 1 OF 1

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
CH-0300	0311 (D-3)	CK/SA	1	3	C	A	O	N/A	CV/Q	N/A	N/A	Surge Tank Emergency Makeup Flowpath	
CH-0301	0311 (F-3)	CK/SA	1	3	C	A	C	N/A	CV/Q	N/A	N/A	Surge Tank Emergency Makeup Flowpath Boundary	
CH-0302	0311 (D-3)	GL/MA	1	3	B	A	O/C	N/A	ET/Q	N/A	N/A	Surge Tank Emergency Makeup Flowpath/Isolation	
CH-0305	0311 (E-3)	GL/MA	1	3	B	A	O/C	N/A	ET/Q	N/A	N/A	Surge Tank Emergency Makeup Flowpath/Isolation	
HV-6720	0311 (D-3)	GL/AO	1	3	B	A	O	N/A	MT/Q	FO/Q	PIT/ 2YR	Surge Tank Emergency Makeup Flowpath	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 4 - CHEMICAL and VOLUME CONTROL

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
HV-8220	M1-0255 (E-2) M2-0254 (D-2)	GA/SO	1	2	B	A	C	N/A	MT/CS (1)	FC/CS	PIT/ 2YR	ECCS Flowpath Boundary & Isolation of VCT Cover Gas from Charging Pumps' Suction Header (upon low VCT level)	2
HV-8221	M1-0255 (E-2) M2-0254 (D-2)	GA/SO	1	2	B	A	C	N/A	MT/CS (1)	FC/CS	PIT/ 2YR	ECCS Flowpath Boundary & Isolation of VCT Cover Gas from Charging Pumps' Suction Header (upon low VCT level)	2
CS-8350A	M1-0253 (D-4) M2-0255-1 (C-6)	CK/SA	2	1	C	A	C	N/A	CV/CS (3) RR V5	N/A	N/A	Reactor Coolant Pressure Boundary	
CS-8350B	M1-0253 (D-4) M2-0255-1 (G-6)	CK/SA	2	1	C	A	C	N/A	CV/CS (3) RR V5	N/A	N/A	Reactor Coolant Pressure Boundary	
CS-8350C	M1-0253 (D-4) M2-0255-1 (G-3)	CK/SA	2	1	C	A	C	N/A	CV/CS (3) RR V5	N/A	N/A	Reactor Coolant Pressure Boundary	
CS-8350D	M1-0253 (D-4) M2-0255-1 (C-3)	CK/SA	2	1	C	A	C	N/A	CV/CS (3) RR V5	N/A	N/A	Reactor Coolant Pressure Boundary	
8351A	M1-0253 (D-5) M2-0255 (D-5)	GL/MO	2	2	B	A	C	N/A	MT/CS (3)	N/A	PIT/ 2YR	Containment Isolation	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 4 - CHEMICAL and VOLUME CONTROL
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
8378A	M1-0253-A (B-5) M2-0255 (G-3)	CK/SA	3	1	C	A	O	N/A	CV/Q (8)	N/A	N/A	Boration Flowpath	2
							C	N/A	CV/CS (2) RR V5	N/A	N/A	Reactor Coolant Pressure Boundary	
8378B	M1-0253-A (B-5) M2-0255 (G-3)	CK/SA	3	1	C	A	O	N/A	CV/Q (8)	N/A	N/A	Boration Flowpath	2
							C	N/A	CV/CS (2) RR V5	N/A	N/A	Reactor Coolant Pressure Boundary	
8379A	M1-0253-A (B-5) M2-0255 (G-3)	CK/SA	3	1	C	A	O	N/A	CV/Q (8)	N/A	N/A	Boration Flowpath	2
							C	N/A	CV/CS (2) RR V5	N/A	N/A	Reactor Coolant Pressure Boundary	
8379B	M1-0253-A (B-5) M2-0255 (G-3)	CK/SA	3	1	C	A	O	N/A	CV/Q (8)	N/A	N/A	Boration Flowpath	2
							C	N/A	CV/CS (2) RR V5	N/A	N/A	Reactor Coolant Pressure Boundary	
8381	M1-0253-A (E-3) M2-0255 (E-2)	CK/SA	3	2	A/C	A	O	N/A	CV/Q	N/A	N/A	Boration Flowpath	
							C	LTJ/TS	CV/CS (2)	N/A	N/A	Containment Isolation	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 4 - CHEMICAL and VOLUME CONTROL

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
CS-8487	M1-0257 (C-4) M1-0257 (C-6)	CK/SA	2	3	C	A	O/C	N/A	CV/Q	N/A	N/A	Boration Flowpath/Boration Flowpath Boundary	
8497	M1-0255-1 (D-2) M2-0254 (F-4)	CK/SA	3	2	C	A	C	N/A	CV/Q	N/A	N/A	ECCS Flowpath Boundary	
8510A	M1-0255-1 (D-4) M2-0254 (F-5)	RE/SA	1-1/2 X 2	2	C	A	O/C	N/A	SRV (9)	N/A	N/A	High Head Safety Injection Pump Miniflow Path/ECCS Recirculation Flowpath Boundary	2
8510B	M1-0255-1 (D-4) M2-0254 (F-6)	RE/SA	1-1/2 X 2	2	C	A	O/C	N/A	SRV (9)	N/A	N/A	High Head Safety Injection Pump Miniflow Path/ECCS Recirculation Flowpath Boundary	2
8511A	M1-0255-1 (D-4) M2-0254 (E-5)	GL/MO	2	2	B	A	O/C	N/A	MT/Q	N/A	PIT/ 2YR	High Head Safety Injection Pump Miniflow Path/ECCS Recirculation Flowpath Boundary	
8511B	M1-0255-1 (D-4) M2-0254 (E-6)	GL/MO	2	2	B	A	O/C	N/A	MT/Q	N/A	PIT/ 2YR	High Head Safety Injection Pump Miniflow Path/ECCS Recirculation Flowpath Boundary	
8512A	M1-0255-1 (D-4) M2-0254 (F-6)	GL/MO	2	2	B	A	C	N/A	MT/Q	N/A	PIT/ 2YR	ECCS Recirculation Flowpath Boundary	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 4 - CHEMICAL and VOLUME CONTROL

NOTES

5. CS-8442, Emergency Boration Line Check Valve, is full-stroke exercised at cold shutdowns. This valve cannot be full or part-stroke open exercised during plant operation because initiating flow through this valve introduces high concentration boric acid to the RCS via the charging system resulting in a reactivity transient and possibly a reactor shutdown.

6. 8481A & B, Charging/High Head Safety Injection Pumps Discharge Check Valves, are part-stroke open exercised every three months and are full-stroke open exercised at refueling outages. These valves cannot be full-stroke open exercised during plant operation or during cold shutdowns because the full flow path discharges into the RCS. During plant operation, the high RCS pressure will not allow the maximum required injection flowrate to be achieved. The valves cannot be full-stroke exercised at cold shutdowns because the high flowrates required could challenge the RCS Cold Overpressure Mitigation System as well as impose hydraulic transients on the charging system and on the Reactor Coolant Pump seals which can cause them to cock.

7. 8546, Charging/High Head Safety Injection Pumps Suction from the RWST Check Valve, is part-stroke open exercised at cold shutdowns, full-stroke open exercised at refueling outages and full-stroke close exercised at cold shutdowns. (Part-stroke close exercising is not applicable.) This valve cannot be full or part-stroke exercised during plant operation because initiating flow through this valve introduces high concentration boric acid to the RCS via the charging system resulting in a reactivity transient and possibly a reactor shutdown. Further, during plant operation the high RCS pressure will not allow the maximum required injection flowrate to be achieved. The valves cannot be full-stroke exercised at cold shutdowns because the high flowrates required could challenge the RCS Cold Overpressure Mitigation System as well as impose hydraulic transients on the charging system and on the Reactor Coolant Pump seals which can cause them to cock.

8. Charging service is alternated approximately every refueling outage between the normal charging line (containing check valves 8378A and 8378B) and the alternate charging line (containing check valves 8379A and 8379B) such that neither flowpath will be exposed to more than 60% of the thermal transients associated with stoppage and restart of charging flow. In accordance with OM Part 10, para. 4.3.2.5, the pair of check valves in the charging line which is out of service need not be open exercise tested quarterly as they are only relied on to perform their open boration path function when they are designated to be in service. However, they must be open exercise tested within 3 months prior to placing the charging line back in service. 2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 4 - CHEMICAL and VOLUME CONTROL

NOTES

The check valves in both the normal and alternate charging lines are relied on to perform their closed reactor coolant pressure boundary function at all times when this function is required. Therefore, the close exercise test schedule must be maintained for all four check valves, regardless of which charging line is designated to be in service. | 2

9. Under the provisions of 10CFR50.55a(f)(6)(ii), the NRC staff has imposed augmented inservice test requirements for relief valves 1-8510A, 1-8510B, 2-8510A, 2-8510B. As directed by the safety evaluation dated January 29, 1993 for Unit 1 and NUREG-0797, SER Supplement 26 for Unit 2, the following frequency requirements shall apply (in lieu of the OM Part 1, para. 1.3.4 frequency requirements) for performance testing the subject valves. | 2

   A. One valve from each unit shall be performance tested each fuel cycle. Both valves from each unit shall be performance tested within any two fuel cycles. | 2

   B. If the tested valve from a given unit fails the set pressure determination portion of the performance test, then the other valve from that unit shall be performance tested. If the tested valve from a given unit fails one of the other criteria of the performance test (i.e., visual examination, seat tightness determination or balancing device integrity verification), then the cause shall be evaluated and the need to test the other valve from that unit shall be determined. | 2

   C. Both valves from a given unit shall be performance tested following any system actuation which results in the valves discharging. This performance test shall be performed at the next cold shutdown of sufficient duration to perform these activities. | 2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 7 - DIESEL GENERATOR AUXILIARIES
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule				Remarks
								Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	
DO-0058	M1-0215-D (F-1) M2-0215-D (F-1)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation
DO-0059	M1-0215-D (F-5) M2-0215-D (F-5)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation
DO-0060	M1-0215-E (F-1) M2-0215-E (F-1)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation
DO-0061	M1-0215-E (F-5) M2-0215-E (F-5)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation
1DO-0062	M1-0215-D (F-5)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation
1DO-0063	M1-0215-D (E-1)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation
1DO-0064	M1-0215-E (F-5)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation
1DO-0065	M1-0215-E (E-1)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 7 - DIESEL GENERATOR AUXILIARIES

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
2DO-0074	M2-0215-D (E-1)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation	
2DO-0075	M2-0215-D (F-5)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation	
2DO-0076	M2-0215-E (E-1)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation	
2DO-0077	M2-0215-E (F-5)	CK/SA	1-1/2	3	C	A	C	N/A	CV/Q RR V2	N/A	N/A	Safety-Related Air Receiver to Non-Safety Air Supply Isolation	
DO-0104	M1-0215-H (F-3) M2-0215-H (F-3)	CK/SA	1	3	C	A	C	N/A	CV/Q	N/A	N/A	Jacket Water Flowpath Boundary	
DO-0107	M1-0215-H (E-4) M2-0215-H (E-4)	(1)	8	3	B	A	N/A (1)	N/A	N/A	N/A	N/A	Jacket Water Temperature Control	
DO-0157	M1-0215-B (C-6) M2-0215-B (C-6)	CK/SA	6	3	C	A	O	N/A	CV/Q	N/A	N/A	Lube Oil Flowpath	1
DO-0158	M1-0215-B (C-6) M2-0215-B (C-6)	CK/SA	6	3	C	A	C	N/A	CV/Q	N/A	N/A	Lube Oil Flowpath Boundary	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 7 - DIESEL GENERATOR AUXILIARIES
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
DO-0204	M1-0215-J (F-3) M2-0215-J (F-3)	CK/SA	1	3	C	A	C	N/A	CV/Q	N/A	N/A	Jacket Water Flowpath Boundary	
DO-0207	M1-0215-J (E-4) M2-0215-J (E-4)	(1)	8	3	B	A	N/A (1)	N/A	N/A	N/A	N/A	Jacket Water Temperature Control	
DO-0257	M1-0215-C (C-6) M2-0215-C (C-6)	CK/SA	6	3	C	A	O	N/A	CV/Q	N/A	N/A	Lube Oil Flowpath	1
DO-0258	M1-0215-C (C-6) M2-0215-C (C-6)	CK/SA	6	3	C	A	C	N/A	CV/Q	N/A	N/A	Lube Oil Flowpath Boundary	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE B - FEEDWATER

NOTES

1. FW-0070, FW-0076, FW-0082, FW-0088, Main Feedwater Header Check Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full-stroke exercised during plant operation because close testing the valves requires isolating feedwater flow. This would result in severe steam generator level transients and, most likely, a turbine and reactor trip. Part-stroke close testing is not applicable.

2. FW-0191, FW-0192, FW-0193, FW-0194, Feedwater Preheater Bypass Check Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full-stroke exercised during plant operation because running the AFW pumps to close test the valves imposes an excessive number of thermal transients on the steam generator nozzles for which they were not designed. Part-stroke close exercising is not applicable.

3. FW-0195, FW-0196, FW-0197, FW-0198, Feedwater Preheater Bypass Check Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full-stroke exercised during plant operation because running the AFW pumps to open test the valves imposes an excessive number of thermal transients on the steam generator nozzles for which they were not designed.

4. HV-2134, HV-2135, HV-2136, HV-2137, Feedwater Isolation Valves, are part-stroke exercised quarterly and are full-stroke exercised at cold shutdowns. These valves cannot be full-stroke exercised during plant operation because closing the valves interrupts feedwater flow resulting in severe steam generator level transients and, most likely, a turbine and reactor trip.

5. FV-2181, FV-2182, FV-2183, FV-2184, Feedwater Split Flow Bypass Valves, are part-stroke exercised quarterly and are full-stroke exercised at cold shutdowns. These valves cannot be full-stroke exercised during plant operation because cycling the valves imposes an excessive number of thermal transients on the steam generator auxiliary nozzles for which they were not designed. Also, isolating flow to the steam generator auxiliary nozzles causes flow to the steam generator main nozzles to exceed design specifications resulting in preheater tube vibration and possibly premature tube failure. The fail-safe test for these valves is performed in conjunction with the full-stroke exercise test at cold shutdowns because the part-stroke exercise test during plant operation does not remove valve actuating power from the actuators.

6. HV-2185, HV-2186, HV-2187, HV-2188, Feedwater Isolation Bypass Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full or part-stroke exercised during plant operation because they are interlocked to remain closed while the Feedwater Isolation Valves are open.

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 9 - MAIN STEAM
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
MS-0021	M1-0202 (C-4) M2-0202 (C-4)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0022	M1-0202 (C-4) M2-0202 (C-4)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0023	M1-0202 (D-4) M2-0202 (D-4)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0024	M1-0202 (D-4) M2-0202 (D-4)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0025	M1-0202 (E-4) M2-0202 (E-4)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0026	M1-0202 (B-3) M2-0202 (B-3)	GA/MA	8	2	B	A	C	N/A	ET/Q	N/A	N/A	Steam Generator Tube Rupture Isolation (Isolates PORV) 2

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
MS-0058	M1-0202 (C-2) M2-0202 (C-2)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0059	M1-0202 (C-2) M2-0202 (C-2)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0060	M1-0202 (D-2) M2-0202 (D-2)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0061	M1-0202 (D-2) M2-0202 (D-2)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0062	M1-0202 (E-2) M2-0202 (E-2)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0063	M1-0202 (B-2) M2-0202 (B-2)	GA/MA	8	2	B	A	C	N/A	ET/Q	N/A	N/A	Steam Generator Tube Rupture Isolation (Isolates PORV) 2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 9 - MAIN STEAM
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
MS-0093	M1-0202 (C-1) M2-0202 (C-1)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0094	M1-0202 (C-1) M2-0202 (C-1)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0095	M1-0202 (D-1) M2-0202 (D-1)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0096	M1-0202 (D-1) M2-0202 (D-1)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0097	M1-0202 (E-1) M2-0202 (E-1)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation
MS-0098	M1-0202 (B-1) M2-0202 (B-1)	GA/MA	8	2	B	A	C	N/A	ET/Q	N/A	N/A	Steam Generator Tube Rupture Isolation (Isolates PORV) 2

Valve Number	Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
MS-0129	M1-0202 (C-5) M2-0202 (C-5)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation	
MS-0130	M1-0202 (C-5) M2-0202 (C-5)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation	
MS-0131	M1-0202 (D-5) M2-0202 (D-5)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation	
MS-0132	M1-0202 (D-5) M2-0202 (D-5)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation	
MS-0133	M1-0202 (E-5) M2-0202 (E-5)	SF/SA	6 X 8	2	C	A	O/C	N/A	SRV/ 5YR (1)	N/A	PIT/ 2YR	Overpressure Protection & Steam Vent Flowpath (for residual heat removal)/ Steam Line Isolation & Containment Isolation	
MS-0134	M1-0202 (B-5) M2-0202 (B-4)	GA/MA	8	2	B	A	C	N/A	ET/Q	N/A	N/A	Steam Generator Tube Rupture Isolation (Isolates PORV)	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 9 - MAIN STEAM
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
MS-0142	M1-0202 (B-5) M2-0202 (B-5)	CK/SA	4	3	C	A	O/C	N/A	CV/Q	N/A	N/A	TDAFW Pump Steam Supply Flowpath/TDAFW Pump Steam Supply Flowpath Boundary
MS-0143	M1-0202 (B-6) M2-0202 (B-6)	CK/SA	4	3	C	A	O/C	N/A	CV/Q	N/A	N/A	TDAFW Pump Steam Supply Flowpath/TDAFW Pump Steam Supply Flowpath Boundary
2MS-0663	M2-0218-1 (F-2)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2MS-0664	M2-0218-1 (F-2)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2MS-0665	M2-0218-1 (F-1)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2MS-0666	M2-0218-1 (F-1)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2MS-0667	M2-0218-1 (F-1)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2MS-0668	M2-0218-1 (F-1)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
2MS-0669	M2-0218-1 (F-2)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 9 - MAIN STEAM
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
2MS-0670	M2-0218-1 (F-2)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1MS-0680	M1-0218-1 (F-3)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1MS-0681	M1-0219-1 (F-3)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1MS-0682	M1-0218-1 (F-3)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1MS-0683	M1-0218-1 (F-3)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1MS-0684	M1-0218-1 (F-4)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1MS-0685	M1-0218-1 (F-4)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1MS-0686	M1-0218-1 (F-4)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation
1MS-0687	M1-0218-1 (F-4)	CK/SA	1/2	3	A/C	A	C	LT/2YR RR V3	CV/Q RR V2	N/A	N/A	Safety-Related Air Accumulator to Non-Safety Air Supply Isolation

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
PV-2325	M1-0202 (B-3) M2-0202 (B-3)	GL/AO	8	2	B	A	O/C	N/A	MT/Q	FC/Q	PIT/ 2YR	Steam Vent Flowpath (for residual heat removal)/ Containment Isolation
PV-2326	M1-0202 (B-2) M2-0202 (B-2)	GL/AO	8	2	B	A	O/C	N/A	MT/Q	FC/Q	PIT/ 2YR	Steam Vent Flowpath (for residual heat removal)/ Containment Isolation
PV-2327	M1-0202 (B-1) M2-0202 (B-1)	GL/AO	8	2	B	A	O/C	N/A	MT/Q	FC/Q	PIT/ 2YR	Steam Vent Flowpath (for residual heat removal)/ Containment Isolation
PV-2328	M1-0202 (B-4) M2-0202 (B-4)	GL/AO	8	2	B	A	O/C	N/A	MT/Q	FC/Q	PIT/ 2YR	Steam Vent Flowpath (for residual heat removal)/ Containment Isolation
HV-2333A	M1-0202 (F-4) M2-0202 (F-4)	GL/HO	32 X 34	2	B	A	C	N/A	PS/Q MT/CS (2)	FC/Q	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2333B	M1-0202 (F-4) M2-0202 (F-4)	GL/MA	4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2334A	M1-0202 (F-2) M2-0202 (F-2)	GL/HO	32 X 34	2	B	A	C	N/A	PS/Q MT/CS (2)	FC/Q	PIT/ 2YR	Steam Line Isolation & Containment Isolation

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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
HV-2334B	M1-0202 (F-2) M2-0202 (F-2)	GL/MA	4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2335A	M1-0202 (F-1) M2-0202 (F-1)	GL/HO	32 X 34	2	B	A	C	N/A	PS/Q MT/CS (2)	FC/Q	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2335B	M1-0202 (F-1) M2-0202 (F-1)	GL/MA	4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2336A	M1-0202 (F-5) M2-0202 (F-5)	GL/HO	32 X 34	2	B	A	C	N/A	PS/Q MT/CS (2)	FC/Q	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2336B	M1-0202 (F-5) M2-0202 (F-5)	GL/MA	4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2397	M1-0202-2 (F-2) M2-0202-2 (F-2)	GL/AO	3	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & HELB Isolation & AFW Flowpath Boundary
HV-2397A	M1-0202-2 (F-2) M2-0202-2 (F-2)	GL/AO	3	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	HELB Isolation & AFW Flowpath Boundary

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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule				Remarks
								Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	
HV-2398	M1-0202-2 (F-3) M2-0202-2 (F-3)	GL/AO	3	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & HELB Isolation & AFW Flowpath Boundary
HV-2398A	M1-0202-2 (F-3) M2-0202-2 (F-3)	GL/AO	3	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	HELB Isolation & AFW Flowpath Boundary
HV-2399	M1-0202-2 (F-4) M2-0202-2 (F-4)	GL/AO	3	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & HELB Isolation & AFW Flowpath Boundary
HV-2399A	M1-0202-2 (F-4) M2-0202-2 (F-4)	GL/AO	3	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	HELB Isolation & AFW Flowpath Boundary
HV-2400	M1-0202-2 (F-5) M2-0202-2 (F-5)	GL/AO	3	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & HELB Isolation & AFW Flowpath Boundary
HV-2400A	M1-0202-2 (F-5) M2-0202-2 (F-5)	GL/AO	3	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	HELB Isolation & AFW Flowpath Boundary
HV-2401A	M1-0202-2 (C-2) M2-0202-2 (C-2)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	AFW Flowpath Boundary

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
HV-2401B	M1-0202-2 (C-3) M2-0202-2 (C-3)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	AFW Flowpath Boundary
HV-2402A	M1-0202-2 (C-2) M2-0202-2 (C-2)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	AFW Flowpath Boundary
HV-2402B	M1-0202-2 (C-3) M2-0202-2 (C-3)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	AFW Flowpath Boundary
HV-2403A	M1-0202-2 (B-5) M2-0202-2 (B-5)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	AFW Flowpath Boundary
HV-2403B	M1-0202-2 (B-6) M2-0202-2 (B-6)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	AFW Flowpath Boundary
HV-2404A	M1-0202-2 (C-5) M2-0202-2 (C-5)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	AFW Flowpath Boundary
HV-2404B	M1-0202-2 (C-6) M2-0202-2 (C-6)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	AFW Flowpath Boundary

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule				Remarks
								Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	
HV-2405	M1-0202-2 (F-2) M2-0202-2 (F-2)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & AFW Flowpath Boundary
HV-2406	M1-0202-2 (F-3) M2-0202-2 (F-3)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & AFW Flowpath Boundary
HV-2407	M1-0202-2 (F-4) M2-0202-2 (F-4)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & AFW Flowpath Boundary
HV-2408	M1-0202-2 (F-5) M2-0202-2 (F-5)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & AFW Flowpath Boundary
HV-2409	M1-0202 (E-4) M2-0202 (E-4)	GL/AO	2	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2410	M1-0202 (E-3) M2-0202 (E-3)	GL/AO	2	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Steam Line Isolation & Containment Isolation

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TABLE 9 - MAIN STEAM
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule				Remarks
								Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	
HV-2411	M1-0202 (E-2) M2-0202 (E-2)	GL/AO	2	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2412	M1-0202 (E-5) M2-0202 (E-5)	GL/AO	2	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Steam Line Isolation & Containment Isolation
HV-2452-1	M1-0202 (A-6) M2-0202 (A-6)	GL/AO	4	2	B	A	O/C	N/A	MT/Q	FO/Q	PIT/ 2YR	TDAFW Pump Steam Supply Flowpath/Containment Isolation
HV-2452-2	M1-0202 (A-5) M2-0202 (A-5)	GL/AO	4	2	B	A	O/C	N/A	MT/Q	FO/Q	PIT/ 2YR	TDAFW Pump Steam Supply Flowpath/Containment Isolation

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 11 - RESIDUAL HEAT REMOVAL
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
8708A	M1-0260 (E-2) M2-0260 (E-2)	RE/SA	3 X 4	2	A/C	P	O/C	LTJ/TS	SRV/ 10YR (4)	N/A	N/A	RCS Overpressure Protection/RHR Flowpath Boundary & Containment Isolation	
8708B	M1-0260 (E-5) M2-0260 (E-5)	RE/SA	3 X 4	2	A/C	P	O/C	LTJ/TS	SRV/ 10YR (4)	N/A	N/A	RCS Overpressure Protection/RHR Flowpath Boundary & Containment Isolation	
8716A	M1-0260 (B-3) M2-0260 (B-3)	GA/MO	10	2	B	A	O/C	N/A	MT/CS (6)	N/A	PIT/ 2YR	ECCS Injection Flowpath/ECCS Recirculation Flowpath Boundary	2
8716B	M1-0260 (B-4) M2-0260 (B-4)	GA/MO	10	2	B	A	O/C	N/A	MT/CS (6)	N/A	PIT/ 2YR	ECCS Injection Flowpath/ECCS Recirculation Flowpath Boundary	2
8717	M1-0260 (A-4) M2-0260 (A-4)	GA/MA	8	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8730A	M1-0260 (B-3) M2-0260 (B-3)	CK/SA	10	2	C	A	O/C	N/A	CV/CS (5)	N/A	N/A	ECCS & RHR Flowpath/ECCS Injection Flowpath Boundary	
8730B	M1-0260 (B-5) M2-0260 (B-5)	CK/SA	10	2	C	A	O/C	N/A	CV/CS (5)	N/A	N/A	ECCS & RHR Flowpath/ECCS Injection Flowpath Boundary	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 11 - RESIDUAL HEAT REMOVAL

NOTES

1. HV-4178 and HV-4179 are part of Process Sampling System and HV-4182 is part of Post Accident Sampling System but are included in this table because their safety functions are more closely associated with Residual Heat Removal System.

2. The test frequency requirements of Technical Specification 4.4.5.2.2 apply for leak testing of 8701A, 8701B, 8702A, 8702B, which are more restrictive than the test frequency requirements of OM Part 10, para. 4.2.2.3(a). | 2

3. 8701A, 8701B, 8702A, 8702B, RHR Suction Isolation Valves from the RCS Hot Legs, are full-stroke exercised at cold shutdowns. These valves cannot be full or part-stroke exercised during plant operation because they are interlocked to remain closed to prevent overpressurizing the relatively low pressure Residual Heat Removal System from the high pressure Reactor Coolant System.

4. 8708A and 8708B, RHR Suction Relief Valves, are Passive and are therefore exempt from performance testing. (Reference OM Part 10, Table 1.) Technical Specification 4.4.8.3.2(c), however, requires that these valves be performance tested to the requirements of ASME Section XI.

5. 8730A and 8730B, RHR Pump Discharge Check Valves, are full-stroke open exercised at cold shutdowns. These valves cannot be full-stroke open exercised during plant operation because the normal flowpath discharges into the relatively higher pressure Reactor Coolant System. Also, the alternate flowpath through the RHR to RWST return line cannot be used during plant operation since opening this line defeats both trains of the Low Pressure Safety Injection System. Part-stroke open exercising these valves during plant operation is not practicable. The only possible flowpath is through the SI test header which yields flowrates too small (approx. 5 gpm) to be meaningful for assessing the operational readiness of these valves. The valves are full-stroke close exercised at cold shutdowns at the same frequency as the open exercising for the reasons described above.

6. 8716A and 8716B, RHR Train A & B Pump Discharge Crosstie Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full-stroke exercised during plant operation because the closure of either valve coincident with the failure of an RHR pump would render the system capable of providing flow to only two RCS cold legs during post-LOCA injection, whereas the design bases for the Emergency Core Cooling System assume flow to all four cold legs. (Reference IE Information Notice No. 87-01.) 8716A and 8716B cannot be part-stroke exercised because their control systems are such that the valves are either fully open or fully closed. | 2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 13 - SAFETY INJECTION
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
8802A	M1-0263-A (A-2) M2-0262 (F-2)	GA/MO	4	2	B	A	O/C	N/A	MT/CS (3)	N/A	PIT/ 2YR	ECCS to Hot Legs Flowpath/ ECCS to Cold Legs Flowpath Boundary & Containment Isolation & Passive Pipe Break Isolation
8802B	M1-0263-A (A-3) M2-0262 (F-5)	GA/MO	4	2	B	A	O/C	N/A	MT/CS (3)	N/A	PIT/ 2YR	ECCS to Hot Legs Flowpath/ ECCS to Cold Legs Flowpath Boundary & Containment Isolation & Passive Pipe Break Isolation
8804A	M1-0261 (F-5) M2-0261 (A-6)	GA/MO	8	2	B	A	O/C	N/A	MT/CS (4)	N/A	PIT/ 2YR	ECCS Recirculation Flowpath/Passive Pipe Break Isolation
8804B	M1-0263-A (F-3) M2-0262 (B-4)	GA/MO	8	2	B	A	O/C	N/A	MT/CS (4)	N/A	PIT/ 2YR	ECCS Recirculation Flowpath/Passive Pipe Break Isolation 2
8806	M1-0263-A (G-2) M2-0262 (A-2)	GA/MO	8	2	B	A	C	N/A	MT/CS (3)	N/A	PIT/ 2YR	ECCS Flowpath Boundary (during Recirculation)
8807A	M1-0261 (E-5) M2-0261 (B-6)	GA/MO	6	2	B	A	O/C	N/A	MT/Q	N/A	PIT/ 2YR	ECCS Recirculation Flowpath/Passive Pipe Break Isolation

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks
SI-8819B	M1-0263 (C-4) M2-0263 (D-4)	CK/SA	2	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Cold Legs Flowpath/Reactor Coolant Pressure Boundary & Containment Isolation
SI-8819C	M1-0263 (B-4) M2-0263 (E-4)	CK/SA	2	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Cold Legs Flowpath/Reactor Coolant Pressure Boundary & Containment Isolation
SI-8819D	M1-0263 (B-4) M2-0263 (F-4)	CK/SA	2	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Cold Legs Flowpath/Reactor Coolant Pressure Boundary & Containment Isolation
8821A	M1-0263-A (C-3) M2-0262 (E-3)	GA/MO	4	2	B	A	O/C	N/A	MT/Q	N/A	PIT/ 2YR	ECCS to Cold Legs Flowpath/ ECCS to Hot Legs Flowpath Boundary & Passive Pipe Break Isolation
8821B	M1-0263-A (C-4) M2-0262 (E-4)	GA/MO	4	2	B	A	O/C	N/A	MT/Q	N/A	PIT/ 2YR	ECCS to Cold Legs Flowpath/ ECCS to Hot Legs Flowpath Boundary & Passive Pipe Break Isolation
8823	M1-0263 (E-3) M2-0263 (B-3)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & ECCS Flowpath Boundary 2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
8824	M1-0263 (E-2) M2-0263 (B-2)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & ECCS Flowpath Boundary	2
8825	M1-0263 (E-1) M2-0263 (B-2)	GL/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & ECCS Flowpath Boundary	2
8835	M1-0263-A (A-5) M2-0262 (F-3)	GA/MO	4	2	B	A	O/C	N/A	MT/CS (3)	N/A	PIT/ 2YR	ECCS to Cold Legs Flowpath/ ECCS to Hot Legs Flowpath Boundary & Containment Isolation & Passive Pipe Break Isolation	
8840	M1-0263-B (A-3) M2-0263-A (F-2)	GA/MO	10	2	A	A	O/C	LTJ/TS	MT/CS (3)	N/A	PIT/ 2YR	ECCS to Hot Legs Flowpath/ ECCS to Cold Legs Flowpath Boundary & Containment Isolation & Passive Pipe Break Isolation	
8841A	M1-0263 (C-1) M2-0263 (E-1)	CK/SA	6	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Hot Legs Flowpath/ Reactor Coolant Pressure Boundary & Containment Isolation	1
8841B	M1-0263 (C-2) M2-0263 (E-2)	CK/SA	6	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Hot Legs Flowpath/ Reactor Coolant Pressure Boundary & Containment Isolation	1
8843	M1-0261 (B-2) M2-0261 (E-4)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & ECCS Flowpath Boundary	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
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TABLE 13 - SAFETY INJECTION
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule				Remarks	
								Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test		
8879A	M1-0263 (D-4) M2-0263 (C-4)	GL/AO	3/4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8879B	M1-0263 (C-5) M2-0263 (E-5)	GL/AO	3/4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8879C	M1-0263 (B-5) M2-0263 (F-5)	GL/AO	3/4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8879D	M1-0263 (B-6) M2-0263 (E-6)	GL/AO	3/4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8880	M1-0262 (G-1) M2-0263-B (A-1)	GL/AO	1	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
8881	M1-0263 (E-1) M2-0263 (B-1)	GL/AO	3/4	2	B	A	C	N/A	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & ECCS Flowpath Boundary	2

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COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 13 - SAFETY INJECTION
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
8882	M1-0261 (B-3) M2-0261 (F-3)	GL/AO	3/4	?	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8888	M1-0263-A (B-2) M2-0262 (E-2)	GL/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & ECCS Flowpath Boundary	2
8889A	M1-0263 (B-2) M2-0263 (F-2)	GL/AO	3/4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8889B	M1-0263 (B-1) M2-0263 (E-1)	GL/AO	3/4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8889C	M1-0263 (B-1) M2-0263 (F-1)	GL/AO	3/4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8889D	M1-0263 (B-3) M2-0263 (F-3)	GL/AO	3/4	2	B	P	C	N/A	N/A	N/A	PIT/ 2YR	ECCS Flowpath Boundary	
8890A	M1-0263 (E-4) M2-0263 (B-4)	GL/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & ECCS Flowpath Boundary	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule				Remarks
								Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	
8890B	M1-0263 (E-5) M2-0263 (G-5)	GL/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation & ECCS Flowpath Boundary
SI-8900A	M1-0261 (A-2) M2-0261 (G-4)	CK/SA	1-1/2	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Cold Legs Flowpath & Boration Flowpath/Reactor Coolant Pressure Boundary
SI-8900B	M1-0261 (A-1) M2-0261 (G-4)	CK/SA	1-1/2	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Cold Legs Flowpath & Boration Flowpath/Reactor Coolant Pressure Boundary
SI-8900C	M1-0261 (A-3) M2-0261 (G-5)	CK/SA	1-1/2	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Cold Legs Flowpath & Boration Flowpath/Reactor Coolant Pressure Boundary
SI-8900D	M1-0261 (A-2) M2-0261 (G-5)	CK/SA	1-1/2	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Cold Legs Flowpath & Boration Flowpath/Reactor Coolant Pressure Boundary
SI-8905A	M1-0263 (C-2) M2-0263 (D-2)	CK/SA	2	1	A/C	A	O/C	LT/TS (1)	CV/RF (6)	N/A	N/A	ECCS to Hot Legs Flowpath/ Reactor Coolant Pressure Boundary & Containment Isolation

2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 13 - SAFETY INJECTION

NOTES

1. The test frequency requirements of Technical Specification 4.4.5.2.2 apply for leak testing of 8815; 8818A, B, C, D; SI-8819A, B, C, D; 8841A, B; SI-8900A, B, C, D; SI-8905A, B, C, D; 8948A, B, C, D; 8949A, B, C, D; 8956A, B, C, D. The Technical Specification 4.4.5.2.2 test frequency requirements are more restrictive than the test frequency requirements of OM Part 10, para. 4.2.2.3(a). 2

2. 8801A and B, High Head Safety Injection Isolation/Containment Isolation Valves, are full-stroke exercised at refueling outages. These valves cannot be full-stroke exercised during plant operation because opening the valves results in unnecessary thermal transients on the RCS cold leg nozzles for which they are not designed and imposes hydraulic transients on the charging system and on the Reactor Coolant Pump seals which can cause them to cock. The valves cannot be full-stroke exercised at cold shutdowns because opening the valves admits high flow to the RCS through the relatively low resistance Safety Injection flowpath and could challenge the RCS Cold Overpressure Mitigation System as well as impose hydraulic transients on the Reactor Coolant Pump seals which can cause them to cock. 8801A and B cannot be part-stroke exercised because their control systems are such that the valves are either fully open or fully closed.

3. 8802A & B, SI Pumps to Hot Legs Valves; 8806, SI Pumps Suction from RWST Valve; 8808A, B, C, D, Accumulator Discharge Valves; 8809A & B, RHR Pumps to Cold Legs Valves; 8813, SI Pumps Miniflow Valve; 8835, SI Pumps to Cold Legs Valve; 8840, RHR Pumps to Hot Legs Valve, are full-stroke exercised at cold shutdowns. These valves cannot be full or part-stroke exercised during plant operation because moving the valves from their safe positions causes both trains of an ECCS subsystem to be rendered inoperable. (Consequently, these valves are required by Technical Specification 4.5.2(a) to be in their safe positions with power to their actuators removed at all times during plant operation.)

4. 8804A & B, High Head and Intermediate Head Pumps Suction from the RHR Heat Exchangers Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full or part-stroke exercised during plant operation because they are interlocked to remain closed until the Safety Injection Pumps miniflow line is isolated post-accident. As stated in Note 3 above, isolation of the Safety Injection Pumps miniflow line during plant operation causes both trains of that ECCS subsystem to be rendered inoperable.

5. 8811A & B, Recirculation Sumps to RHR Pumps Isolation/Containment Isolation Valves, are full-stroke exercised at cold shutdowns. Full or part-stroke exercising of these valves during plant operation is not practicable due to the precautions necessary to conduct the test. The exercise test for these valves involves draining a major portion of the respective RHR train (to prevent backfilling the Recirculation Sump) thus creating hundreds of gallons of liquid radwaste and long out-of-service times for the system. The subsequent system fill and vent is best facilitated by running the RHR pump and flowing through flowpaths which are not available during plant operation.

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 13 - SAFETY INJECTION

NOTES

6. 8815, SI-8900A, B, C, D, 8969A, High Head Safety Injection Flowpath Check Valves; SI-8819A, B, C, D, SI-8905A, B, C, D, 8922A & B, 8926, 8949A, B, C & D and 8969B, Intermediate Head Safety Injection Flowpath Check Valves; 8841A & B, Low Head Safety Injection Flowpath (to the Hot Legs) Check Valves are full-stroke exercised at refueling outages. These valves cannot be full or part-stroke open exercised during plant operation or during cold shutdowns because the flowpaths discharge into the RCS. 1

In the case of the High Head subsystem, the valves cannot be full-stroke exercised during plant operation because the high RCS pressure will not allow the maximum required injection flowrate to be achieved. Part-stroke exercising during plant operation is not practicable because any flow through the valves results in unnecessary thermal transients on the RCS cold leg nozzles for which they are not designed and imposes hydraulic transients on the charging system and on the Reactor Coolant Pump seals which can cause them to cock. The check valves in the high head injection path cannot be full-stroke exercised at cold shutdowns because the high flowrates could challenge the RCS Cold Overpressure Mitigation System as well as impose hydraulic transients on the charging system and on the Reactor Coolant Pump seals which can cause them to cock. Part-stroke exercising at cold shutdowns is not practicable because the high head injection flowpath is not designed for throttled operation.

In the case of the Intermediate Head and Low Head subsystems, the valves cannot be full or part-stroke exercised during plant operation because the relatively higher pressure of the Reactor Coolant System will not allow forward flow through these paths. (An exception to this is valve 8926 which lies in the SI Pumps' miniflow path and thus is part-stroke open exercised quarterly during pump tests.) Part-stroke exercising certain check valves during plant operation via the SI test header is not practicable because this path yields flowrates too small (approx. 5 gpm) to be meaningful for assessing the operational readiness of these valves. The check valves in the intermediate head injection paths cannot be full-stroke exercised at cold shutdowns using the Safety Injection Pumps because the resulting high flowrates and pressures could challenge the RCS Cold Overpressure Mitigation System. The check valves in the low head injection paths to the hot legs and the check valves in the combined low head and intermediate head injection paths to the hot legs (8949B & C) are not practicable to test at cold shutdowns because forward flow will disturb these Reactor Coolant Pressure Boundary Isolation Valves. Doing so requires leak testing the valves per the Technical Specification requirements identified in Note 1 above. This leak testing is not practicable to perform at cold shutdowns due to its complexity and critical path nature. Such testing would prevent the immediate return of a shutdown unit to power operation which is contrary to the intent of OM Part 10, paragraph 4.3.2.2.g. Part-stroke exercising these valves at cold shutdowns is not practicable because the flowpaths are not designed for throttled operation. 1

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
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TABLE 13 - SAFETY INJECTION

NOTES

The subject check valves are full-stroke close exercised at refueling outages at the same frequency as the full-stroke open exercise for the reasons described above. (Close exercising of valve 8926 is not practicable following its quarterly part-stroke open exercise. To do so would defeat both trains of the intermediate head subsystem. Therefore valve 8926 is also full-stroke close exercised at refueling outages coincident with its full-stroke open exercise.)

7. 8818A, B, C, D, 8948A, B, C, D, 8958A & B, Low Head Safety Injection Flowpath Check Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full or part-stroke open exercised during plant operation because the relatively higher pressure of the Reactor Coolant System will not allow forward flow through these paths. (The flowpath through the RHR to RWST return line can be used at times to full-stroke exercise 8958A & B however this path cannot be used during plant operation since opening this line defeats both trains of the Low Pressure Safety Injection System.) Part-stroke exercising certain of these check valves during plant operation via the SI test header is not practicable because this path yields flowrates too small (approx. 5 gpm) to be meaningful for assessing the operational readiness of these valves. 1

   The subject check valves are full-stroke close exercised at cold shutdowns at the same frequency as the full-stroke open exercise for the reasons described above.

8. 8956A, B, C, D, Safety Injection Accumulators Flowpath Check Valves, are disassembled at refueling outages to verify operability. These valves cannot be full or part-stroke open exercised during plant operation because the relatively higher pressure of the Reactor Coolant System will not allow forward flow through the valves. Part-stroke exercising during plant operation via the SI test header is not practicable because this path yields flowrates too small (approx. 5 gpm) to be meaningful for assessing the operational readiness of these valves. The check valves cannot be full-stroke exercised at cold shutdowns because the resulting high flowrates could challenge the RCS Cold Overpressure Mitigation System. Part-stroke exercising these valves at cold shutdowns is not practicable because the flowpaths are not designed for throttled operation. Full-stroke exercising these valves with flow during refueling outages is not practicable because rapid blowdown of the Safety Injection Accumulators causes a cooling transient to occur in the gas space of the accumulators for which they are not designed.

   The subject check valves are not close exercised during plant operation or cold shutdowns for the reasons described above.

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 17 - MISC. CONTAINMENT ISOLATION VALVES (1)

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
Buildings and Structures													
1BS-0015	M1-0245 (D-3)	BA/MA	3/4	N/A (2)	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	
2BS-0015	M2-0245 (E-4)	RE/MA	3/4 X 1	2	A (3)	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	2
2BS-0016	M2-0245 (C-4)	GL/MA	3/8	2	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	
2BS-0017	M2-0245 (C-4)	GL/MA	3/8	2	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	
BS-0025	M1-0245 (D-1) M2-0245 (D-2)	BA/HO	3	2	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	2
1BS-0029	M1-0245 (E-2)	BA/MA	3/4	N/A (2)	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	
2BS-0029	M2-0245 (D-3)	RE/MA	3/4 X 1	2	A (3)	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	2
BS-0030	M1-0245 (C-1) M2-0245 (C-2)	BA/HO	3	2	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	2
2BS-0039	M2-0245 (D-4)	GL/MA	3/8	2	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 17 - MISC. CONTAINMENT ISOLATION VALVES (1)

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
2BS-0040	M2-0245 (D-4)	GL/MA	3/8	2	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	2
1BS-0044	M1-0245 (B-2)	BA/MA	3/4	N/A (2)	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	
2BS-0044	M2-0245 (C-3)	RE/MA	3/4 X 1	2	A (3)	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	
1BS-0056	M1-0245 (B-3)	BA/MA	3/4	N/A (2)	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	
2BS-0056	M2-0245 (B-4)	RE/MA	3/4 X 1	2	A (3)	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	
BS-0202	M1-0245 (A-5) M2-0245-A (B-3)	BA/MA	2	2	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	2
BS-0203	M1-0245 (C-5) M2-0245-A (E-3)	BA/MA	2	2	A	P	C	LTJ/TS	N/A	N/A	N/A	Containment Isolation	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 17 - MISC. CONTAINMENT ISOLATION VALVES (1)
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
HV-4170 (7)	M1-0228 (B-2) M2-0228 (B-2)	AN/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
HV-4171	M1-0228 (B-3) M2-0228 (B-3)	AN/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	2
HV-4172	M1-0228 (B-3) M2-0228 (B-3)	AN/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	2
HV-4173	M1-0228 (B-3) M2-0228 (B-3)	AN/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	2
HV-4174	M1-0228 (B-3) M2-0228 (B-3)	AN/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	2
HV-4175	M1-0228 (C-2) M2-0228 (C-2)	AN/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	

Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
HV-4176	M1-0228 (C-1) M2-0228 (C-1)	AN/AO	3/4	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
Radiation Monitoring													
HV-5544	M1-0301-A (C-1) M2-0301-A (C-1)	GL/SO	1	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
HV-5545	M1-0301-A (D-1) M2-0301-A (D-1)	GL/SO	1	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
HV-5546	M1-0301-A (C-2) M2-0301-A (C-2)	GL/SO	1	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
HV-5547	M1-0301-A (D-2) M2-0301-A (D-2)	GL/SO	1	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
Containment HVAC													
HV-5536	M1-0301 (F-2) M2-0301 (E-2)	BF/AO	48	2	A	A	C	LTJ/TS	MT/CS (8)	FC/CS	PIT/ 2YR	Containment Isolation	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 17 - MISC. CONTAINMENT ISOLATION VALVES (1)
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Cate-gory	Func-tion	Safety Func. Pos.	Test Parameters/Schedule				Remarks	
								Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test		
HV-5537	M1-0301 (E-2) M2-0301 (D-2)	BF/AO	48	2	A	A	C	LTJ/TS	MT/CS (8)	FC/CS	PIT/ 2YR	Containment Isolation	2
HV-5538	M1-0301 (F-3) M2-0301 (E-3)	BF/AO	48	2	A	A	C	LTJ/TS	MT/CS (8)	FC/CS	PIT/ 2YR	Containment Isolation	2
HV-5539	M1-0301 (E-3) M2-0301 (D-3)	BF/AO	48	2	A	A	C	LTJ/TS	MT/CS (8)	FC/CS	PIT/ 2YR	Containment Isolation	2
HV-5548	M1-0301 (F-3) M2-0301 (E-4)	BF/AO	18	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
HV-5549	M1-0301 (E-3) M2-0301 (D-4)	BF/AO	18	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	
Containment Hydrogen Purge													
HV-5540	M1-0301 (C-2) M2-0301 (B-2)	BF/MO	12	2	A	A	C	LTJ/TS	MT/CS (8)	N/A	PIT/ 2YR	Containment Isolation	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 17 - MISC. CONTAINMENT ISOLATION VALVES (1)
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Valve Number	Flow Diagram (Coord.)	Valve/ Actuator Type	Size	Code Class	Category	Function	Safety Func. Pos.	Test Parameters/Schedule: Leak Test	Exercise Test	Fail Safe Test	Position Indicator Test	Remarks	
HV-5541	M1-0301 (D-2) M2-0301 (C-2)	BF/MO	12	2	A	A	C	LTJ/TS	MT/CS (8)	N/A	PIT/ 2YR	Containment Isolation	2
HV-5542	M1-0301 (C-4) M2-0301 (B-4)	BF/MO	12	2	A	A	C	LTJ/TS	MT/CS (8)	N/A	PIT/ 2YR	Containment Isolation	2
HV-5543	M1-0301 (D-4) M2-0301 (C-4)	BF/MO	12	2	A	A	C	LTJ/TS	MT/CS (8)	N/A	PIT/ 2YR	Containment Isolation	2
HV-5562	M1-0301 (D-2) M2-0301 (C-2)	BF/MO	12	2	A	A	C	LTJ/TS	MT/CS (8)	N/A	PIT/ 2YR	Containment Isolation	2
HV-5563	M1-0301 (D-4) M2-0301 (C-4)	BF/MO	12	2	A	A	C	LTJ/TS	MT/CS (8)	N/A	PIT/ 2YR	Containment Isolation	2
Liquid Waste Processing													
LCV-1003	M1-0264 (G-2) M2-0264 (G-2)	GL/AO	3	2	A	A	C	LTJ/TS	MT/Q	FC/Q	PIT/ 2YR	Containment Isolation	

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 17 - MISC. CONTAINMENT ISOLATION VALVES

NOTES

1. The valves in this table are valves in systems which perform no nuclear safety function other than containment isolation.

2. 1BS-0015, 1BS-0029, 1BS-0044, 1BS-0056 are non-ASME valves. However they are included in the Inservice Valve Testing Plan in accordance with Generic Letter 89-04, Attachment 1, Position 10 because they are containment isolation valves which are included in the 10CFR50 Appendix J Program.

3. 2BS-0015, 2BS-0029, 2BS-0044, 2BS-0056 are relief valves and would normally therefore be classified as Category A/C. In this application, however, they are being used as lever operated manual valves which spring return to closed and not for self-actuated overpressure relief. For this reason they are classified as Category A.

4. CH-0024, HV-6082, -6083, -6084, Non-Safety Chilled Water Containment Isolation Valves, are full-stroke exercised at cold shutdowns. These valves cannot be full-stroke exercised during plant operation because securing flow to test the valves would interrupt cooling to the Ex-core Neutron Detectors and other essential equipment, possibly causing damage. HV-6082, -6083, -6084 cannot be part-stroke close exercised because their control systems are such that the valves are either fully open or fully closed. Part-stroke close exercising is not applicable to check valve CH-0024.

5. CI-0030, Instrument Air Containment Isolation Check Valve, is full-stroke exercised during refueling outages. This valve cannot be full-stroke exercised during plant operation or cold shutdowns because the exercise test necessarily isolates (for an extended period of time) the instrument air supply to components inside containment which are required for plant control and could result in a plant trip or transient. Part-stroke close exercising is not applicable.

6. HV-3487, Instrument Air Containment Isolation Valve, is full-stroke exercised during cold shutdowns. This valve cannot be full-stroke exercised during plant operation because exercising the valve interrupts the instrument air supply to components inside containment which are required for plant control and could result in a plant trip or transient. The stroke length (and stroke time) of HV-3487 is so short that any part-stroke exercise attempt would effectively be a full-stroke and thus is not performed for the same reasons.

7. PS-0503, HV-4168, HV-4169 and HV-4170 are scoped in Process Sampling System but are also used by Post Accident Sampling System.

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE VALVE TESTING PLAN
TABLE 17 - MISC. CONTAINMENT ISOLATION VALVES

NOTES

8. HV-5536, -5537, -5538, -5539, Containment Purge Isolation Valves and HV-5540, -5541, -5542, -5543, -5562, -5563, Hydrogen Purge Isolation Valves are full-stroke exercised at cold shutdowns. These valves cannot be full or part-stroke exercised during plant operation because they have not been demonstrated capable of closing during a LOCA or steam line break accident. Consequently, Technical Specification 3.6.I.7 requires these valves to be locked closed during plant operation to ensure that excessive quantities of radioactive materials will not be released via the Containment Ventilation System. | 2

RELIEF REQUEST NO.	P1
SYSTEM	Diesel Generator Auxiliaries
PUMP NUMBER	CP1-DOAPFT-01 CP1-DOAPFT-02 CP1-DOAPFT-03 CP1-DOAPFT-04 CP2-DOAPFT-01 CP2-DOAPFT-02 CP2-DOAPFT-03 CP2-DOAPFT-04
CLASS	3
DESCRIPTION	Diesel Generator Fuel Oil Transfer
TEST REQUIREMENT	-OM Part 6, para. 6.1, "Acceptance Criteria" -OM Part 6, Table 3b, "Ranges for Test Parameters"

REFERENCES

1. Zudans, John J. "Introduction to ASME/ANSI OMa-1988, Part 6: Inservice Testing of Pumps in Light-Water Reactor Power Plants and Technical Differences Between Part 6 and ASME Section XI, Subsection IWP." Proceedings of the Symposium on Inservice Testing of Pumps and Valves. Washington, DC, August 1-3, 1989, pp. 25-58.

2. Sage, Lawrence. "Introduction to ASME/ANSI OMa-1988, Part 6: Basis of the New Vibration Measurement Criteria and Requirements of Part 6." Proceedings of the Symposium on Inservice Testing of Pumps and Valves. Washington, DC, August 1-3, 1989, pp. 59-74.

3. International Standards Organization Standard: "Mechanical Vibration of Machines with Operating Speeds from 10 to 200 rev/s - Basis for Specifying Evaluation Standards," ISO 2372, First Edition - 1974-11-01.

BASIS FOR RELIEF

Unlike earlier editions of ASME Section XI, OM Part 6 emphasizes the use of bearing vibration measurements as the primary indicator of pump degradation and places less emphasis on hydraulic measurements. Further, OM Part 6 introduces the classification of pumps by type. According to References 1 and 2, pump classification is introduced in recognition of the fact that the quality of vibration measurements varies among pump types. By classifying pumps, different test requirements and acceptance criteria can be specified depending on type. For example, vertical line shaft pump bearings are generally inaccessible

BASIS FOR RELIEF (continued)

for vibration monitoring. So to compensate, OM Part 6 imposes more stringent hydraulic acceptance criteria for these pumps and additionally requires that vibration monitoring be done on the driver bearings.

Another pump type which incurs a "penalty" in hydraulic acceptance criteria in OM Part 6 is reciprocating positive displacement pumps. Reciprocating pumps are characterized by pulsating flow and high, oscillating inertia forces due to the back and forth motion of the pressure producing members. Therefore, diagnosing the mechanical condition of reciprocating pumps using vibration measurements is somewhat difficult and to compensate, OM Part 6 specifies a reduced range of hydraulic acceptance criteria for these pumps.

Throughout OM Part 6 the terms "positive displacement pump" and "reciprocating pump" are used interchangeably. However, from Reference 2 it is clear that the pump type being addressed is the reciprocating **variety** of positive displacement pumps. Unfortunately, OM Part 6 ignores the other variety of positive displacement pumps, rotary pumps, and in doing so seems to apply the test requirements and acceptance criteria intended for reciprocating pumps to all positive displacement pumps. The Fuel Oil Transfer Pumps are rotary positive displacement pumps which do not share the inherent difficulties and limitations of bearing vibration diagnostics which reciprocating pumps experience. On the contrary, these low inertia, untimed multiple-rotor screw pumps are characterized by low mechanical vibration, pulsation-free axial flow and bearing loadings which do not vary through the pumping cycle. The bearings are quite accessible as the pump bores themselves effectively form continuous hydrodynamic fluid film bearings along the entire length of the rotors. The mechanical condition of screw pumps can be well understood through vibration monitoring.

Reference 2 discusses the pump classification methodology used by the O&M Task Group on Vibration Monitoring in preparing OM Part 6. That task group drew heavily on guidance from Reference 3 in classifying pump types. Of the six classes of pumps recognized in the ISO standard, the group determined that most pumps in nuclear power plant applications fell into one of two ISO classes: Class III or Class V. The primary difference

BASIS FOR RELIEF (continued)	between these classes is that Class III comprises rotating machines whereas Class V comprises reciprocating machines. These ISO classifications were translated into OM Part 6 as two major pump types: centrifugal and reciprocating positive displacement. (Note that vertical line shaft pumps are a special case of centrifugal pumps.) The subject screw type pumps were not specifically considered for classification by the task group. Nonetheless, they are inadvertently classified with reciprocating pumps in OM Part 6 due to the use of the general term "positive displacement". The Fuel Oil Transfer Pumps are most closely ISO Class III pumps and should therefore be subject to the applicable requirements and criteria for centrifugal pumps in OM Part 6.
SUBSTITUTE TEST	For the purpose of determining the Acceptable Range, Alert Range and Required Action Range for Fuel Oil Transfer Pump flow rate (Q), the ranges specified in OM Part 6, Table 3b for centrifugal pump flow rate shall be used. For the purpose of determining the Acceptable Range, Alert Range and Required Action Range for Fuel Oil Transfer Pump discharge pressure (P), the ranges specified in OM Part 6, Table 3b for centrifugal pump differential pressure shall be used. For the purpose of determining the Acceptable Range, Alert Range and Required Action Range for Fuel Oil Transfer Pump vibration (V), the ranges specified in OM Part 6, Table 3a for centrifugal pump vibration shall be used. For the purpose of making Fuel Oil Transfer Pump vibration measurements, the requirements of OM Part 6, para. 4.6.4(a) shall apply.
NRC APPROVAL STATUS	Approved. Reference safety evaluation dated January 29, 1993 for Unit 1. Reference NUREG-0797, SER Supplement 26 for Unit 2. 2

RELIEF REQUEST NO.	V1
SYSTEM	(See VALVE NUMBER)
VALVE NUMBER	Main Steam 2MS-0021 2MS-0022 2MS-0023 2MS-0024 2MS-0025 2MS-0058 2MS-0059 2MS-0060 2MS-0061 2MS-0062 2MS-0093 2MS-0094 2MS-0095 2MS-0096 2MS-0097 2MS-0129 2MS-0130 2MS-0131 2MS-0132 2MS-0133 Reactor Coolant 2-8010A 2-8010B 2-8010C
CATEGORY	C
CLASS	2 (Main Steam); 1 (Reactor Coolant)
DESCRIPTION	Main Steam Safety Valves; Pressurizer Safety Valves
TEST REQUIREMENT	-OM Part 1, para. 7.2, "Testing After Installation Prior to Initial Electric Power Generation" (General requirement) -OM Part 1, para. 7.2.1.1 (Class 1 Safety Valves): "Within 6 months prior to initial fuel loading, each valve shall have its set pressure verified. Set pressure verification shall be determined by pressurizing the system up to the valve set pressure and opening the valve, or the valve may be tested at or below normal system operating pressures with an assist device." -OM Part 1, para. 7.2.2.1.a (Main Steam Safety Valves): "After system heatup, but prior to initial reactor criticality, each valve shall be subjected to the following tests. 1. Set pressure verification shall be determined by pressurizing the system up to the valve set pressure and opening the valve, or the valve may be tested at or below normal system operating pressure with an assist device. 2. Compliance with the Owner's seat tightness criteria shall be verified."
BASIS FOR RELIEF	The primary intent of the subject Code paragraphs is to require testing of Class 1 (Pressurizer) and Main Steam Safety Valves shortly before a Pressurized Water Reactor plant is initially started up. This requirement is reasonable when one considers the safety significance of these valves and the fact that years may elapse between

BASIS FOR RELIEF (continued)

the manufacturer's shop test and the time the valves are first placed in service. However, the Code also seems to imply that the required testing, for this specific instance only, should be done with the valves in-place. While in-place testing may apparently offer a convenience in that valve removal and reinstallation is averted, removal of the valves from the system for testing (at a testing lab), can yield equally valid test results and offer some distinct advantages.

In particular, valve maintenance and adjustment can be accomplished more easily in the testing lab environment. For example, the Pressurizer and Main Steam Safety Valves are known to experience seat leakage after cycling. After set pressure verification the valves often must be disassembled (while retaining spring compression) so that the disc insert and nozzle seating surfaces can be lapped. If the set pressure verification was performed in-place, the subsequent seat leakage repairs would entail cooldown and depressurization of the Reactor Coolant and Main Steam Systems. Following valve repair and reassembly the systems would then have to be heated back up and repressurized to conduct a valve seat leakage retest. (Recall that OM Part 1 requires seat leakage testing to be done under the same temperature conditions and using the same fluid media as for the set pressure verification.)

Pressurizer and Main Steam Safety Valve testing and maintenance can be performed at a testing lab, on the other hand, and thereby eliminate the need to cycle the entire reactor plant. The test lab facilities allow the exact operating conditions (fluid media, temperature stability and ambient temperature) of the valves to be simulated for testing and provide easy access to the valves should any maintenance be required. Actual set pressure on steam can be verified at a testing lab without utilizing an assist device. The additional activities associated with testing the valves at a lab such as valve removal, shipping and reinstallation can be accomplished safely by applying the procedural and quality controls normally required for such work. The valves are rigged, boxed, and shipped in the vertical position and are receipt inspected both at the testing lab and upon their return to the plant. Reinstallation involves the routine closure of gasketed joints which is verified subsequently through inservice leakage testing.

BASIS FOR RELIEF (continued)	Based on the above, a valid OM Part 1 performance test of the Pressurizer and Main Steam Safety Valves can be had through either in-place testing or testing in a lab.
SUBSTITUTE TEST	For the purpose of accomplishing Main Steam and Pressurizer Safety Valve testing prior to initial electric power generation, the following requirements will apply: 1. Within 6 months of initial fuel loading, each Pressurizer Safety Valve shall have its set pressure verified. 2. Either before or after installation and within 6 months prior to initial reactor criticality, each Main Steam Safety Valve shall be subjected to the following tests: a) set pressure verification b) compliance with the Owner's seat tightness criteria shall be verified.
NRC APPROVAL STATUS	Approved. Reference NUREG-0797, Supplement 25 for Unit 2. This Relief Request is not applicable to Unit 1. 2

RELIEF REQUEST NO. V2

SYSTEM (See VALVE NUMBER)

VALVE NUMBER

Auxiliary Feedwater

1AF-0215/0216	1AF-0217/0218	1AF-0219/0220
1AF-0221/0222	1AF-0223/0224	1AF-0226/0227
1AF-0228/0229	1AF-0230/0231	1AF-0232/0233
1AF-0234/0235		
2AF-0221/0222	2AF-0223/0224	2AF-0226/0227
2AF-0228/0229	2AF-0230/0231	2AF-0232/0233
2AF-0234/0235	2AF-0236/0291	2AF-0237/0238
2AF-0239/0240		

Component Cooling Water

1CC-1079/1080	1CC-1081/1082
2CC-1091/1092	2CC-1093/1094

Instrument Air (Control Room HVAC)

1CI-0644/0645	1CI-0646/0647

Diesel Generator Auxiliaries

1DO-0058/0063	1DO-0059/0062
1DO-0060/0065	1DO-0061/0064
2DO-0058/0074	2DO-0059/0075
2DO-0060/0076	2DO-0061/0077

Main Steam

1MS-0680/0681	1MS-0682/0683
1MS-0684/0685	1MS-0686/0687
2MS-0663/0664	2MS-0665/0666
2MS-0667/0668	2MS-0669/0670

Safety Injection (Reactor Coolant)

1SI-0166/0167	1SI-0168/0169
2SI-0166/0167	2SI-0168/0169

CATEGORY A/C, C

CLASS 3

DESCRIPTION	These check valves form the boundary between the non-safety Instrument Air or Nitrogen supply systems and the safety-grade accumulator and receiver tanks. The tanks provide an emergency air or nitrogen supply to certain safety-related components. The check valves are required to close upon failure of the air or nitrogen supply system in order to contain the compressed gas in the tanks.
TEST REQUIREMENT	-OM Part 10, para. 4.3.2, "Exercising Tests for Check Valves".
BASIS FOR RELIEF	Each valve listed above is one of two check valves in series at the inlet to a safety-grade accumulator or receiver tank. In each case, only one check valve is required in order to meet the safety class interface criteria of ANSI N18.2a-1975. However, two check valves are provided for added reliability, not for redundancy. The safety-related components served by the accumulator and receiver tanks are redundant to other similar components which have their own dedicated safety-grade air supplies. As long as one of the check valves in the pair is capable of closure, then the safety analysis assumptions for the pair of check valves are met. Some of the check valve pairs do not have provisions for testing each valve individually. However, the closure capability of each pair of check valves can be verified.
SUBSTITUTE TEST	Each pair of series check valves will be exercise tested at the required frequency by some positive means to verify the closure capability of at least one of the valves. No additional exercise testing will be performed unless there is an indication that the closure capability of the pair of valves is questionable. In that case, both valves will be declared inoperable and not returned to service until they are either repaired or replaced.
NRC APPROVAL STATUS	Approved. Reference safety evaluation dated January 29, 1993 for Unit 1. Reference NUREG-0797, SER Supplement 26 for Unit 2. 2

RELIEF REQUEST NO. V3

SYSTEM (See VALVE NUMBER)

VALVE NUMBER

Auxiliary Feedwater

1AF-0215/0216	1AF-0217/0218	1AF-0219/0220
1AF-0221/0222	1AF-0223/0224	1AF-0226/0227
1AF-0228/0229	1AF-0230/0231	1AF-0232/0233
1AF-0234/0235		
2AF-0221/0222	2AF-0223/0224	2AF-0226/0227
2AF-0228/0229	2AF-0230/0231	2AF-0232/0233
2AF-0234/0235	2AF-0236/0291	2AF-0237/0238
2AF-0239/0240		

Component Cooling Water

1CC-1079/1080	1CC-1081/1082
2CC-1091/1092	2CC-1093/1094

Instrument Air (Control Room HVAC)

1CI-0644/0645	1CI-0646/0647

Main Steam

1MS-0680/0681	1MS-0682/0683
1MS-0684/0685	1MS-0686/0687
2MS-0663/0664	2MS-0665/0666
2MS-0667/0668	2MS-0669/0670

Safety Injection (Reactor Coolant)

1SI-0166/0167	1SI-0168/0169
2SI-0166/0167	2SI-0168/0169

CATEGORY A/C

CLASS 3

DESCRIPTION These check valves form the boundary between the non-safety Instrument Air or Nitrogen supply systems and the safety-grade accumulator and receiver tanks. The tanks provide an emergency air or nitrogen supply to certain safety-related components. The check valves are required to close upon failure of the air or nitrogen supply system in order to contain the compressed gas in the tanks.

TEST REQUIREMENT -OM Part 10, para. 4.2.2, "Valve Seat Leakage Rate Test".

BASIS FOR RELIEF	Each valve listed above is one of two check valves in series at the inlet to a safety-grade accumulator or receiver tank. In each case, only one check valve is required in order to meet the safety class interface criteria of ANSI N18.2a-1975. However, two check valves are provided for added reliability, not for redundancy. The safety-related components served by the accumulator and receiver tanks are redundant to other similar components which have their own dedicated safety-grade air supplies. As long as one of the check valves in the pair is capable of meeting its leakage rate criteria, then the safety analysis assumptions for the pair of check valves are met. Some of the check valve pairs do not have provisions for testing each valve individually. However, the leakage rate of each pair of check valves can be verified.
SUBSTITUTE TEST	Each pair of series check valves will be leakage rate tested at the required frequency to verify acceptable seat leak-tightness of at least one of the valves. No additional leakage rate testing will be performed unless there is an indication that the seat leak-tightness of the pair of valves is questionable. In that case, both valves will be declared inoperable and not returned to service until they are either repaired or replaced.
NRC APPROVAL STATUS	Approved. Reference safety evaluation dated January 29, 1993 for Unit 1. Reference NUREG-0797, SER Supplement 26 for Unit 2. 2

RELIEF REQUEST NO.	V4
SYSTEM	Containment Spray
VALVE NUMBER	1CT-0142 1CT-0145 1CT-0148 1CT-0149 2CT-0142 2CT-0145 2CT-0148 2CT-0149
CATEGORY	A/C, C
CLASS	2
DESCRIPTION	-Containment Spray Header Check Valves (CT-0142, CT-0145) -Containment Spray Pump Suction Check Valves from the Recirculation Sumps (CT-0148, CT-0149)
TEST REQUIREMENT	-OM Part 10, para. 4.3.2.4(c), "...disassembly every refueling outage to verify operability of check valves may be used."
BASIS FOR RELIEF	The subject valves are burdensome to disassemble and inspect every refueling outage. A significant amount of borated and potentially contaminated water must be drained from the system and disposed of to accomplish the disassemblies. Further, disassembly of these large valves diverts considerable manpower away from the refueling activity. The valves are all of the same design (manufacturer, size, model number, and materials of construction) and have the same service conditions including valve orientation. No wear related degradation is anticipated for these valves because they are all located in portions of the system which do not experience flow during normal operation. Due to the similarities between these valves, the condition of the valve inspected during the Substitute Test will be representative of the other valves in the group.
SUBSTITUTE TEST	Verify operability of the subject check valves through disassembly and inspection of one of the four valves in each unit at each refueling outage for that unit. The disassembled valve will be verified to be capable of full-stroking and it will be verified that the internals of the valve are structurally sound (no loose or corroded parts). Also, the disk will be manually exercised.

SUBSTITUTE TEST (continued)	A different valve from each unit will be disassembled, inspected and manually full-stroke exercised at each successive refueling outage until the entire group for that unit has been tested. If the disassembled valve is not capable of being full-stroke exercised or there is binding or failure of valve internals, the remaining valves in the group for that unit will also be disassembled, inspected, and manually full-stroke exercised during the same outage. Once this is completed, the sequence of disassembly will be repeated unless extension of the interval can be justified.	
NRC APPROVAL STATUS	This Relief Request is pre-approved by Generic Letter 89-04, Attachment 1, Position 2. (Also reference safety evaluation dated January 29, 1993 for Unit 1 and NUREG-0797, SER Supplement 26 for Unit 2.)	2

RELIEF REQUEST NO.	V5
SYSTEM	Chemical and Volume Control
VALVE NUMBER	1CS-8350A/1CS-8367A, 1CS-8350B/1CS-8367B, 1CS-8350C/1CS-8367C, 1CS-8350D/1CS-8367D, 1-8378A/1-8378B, 1-8379A/1-8379B 2CS-8350A/2CS-8367A, 2CS-8350B/2CS-8367B, 2CS-8350C/2CS-8367C, 2CS-8350D/2CS-8367D, 2-8378A/2-8378B, 2-8379A/2-8379B
CATEGORY	C
CLASS	1
DESCRIPTION	RCP Seal Injection Lines and Charging/Alternate Charging Lines/Reactor Coolant Pressure Boundary Isolation Check Valves
TEST REQUIREMENT	-OM Part 10, para. 4.3.2, "Exercising Tests for Check Valves".
BASIS FOR RELIEF	Each pair of valves listed above constitutes two check valves in series at a CVCS/RCS interface. Two Safety Class 1 check valves are provided in accordance with the safety class interface criteria of ANSI N18.2a-1975 in order to isolate the interfacing Class 2 system. Either of the check valves provided can perform this function. The system design, however, does not include the test connections necessary to close exercise test each of the series check valves individually. The system design does include sufficient test connections to verify the check function of each pair of valves (i.e., verification that at least one of the valves will close). Offsetting the inability to separately test each series check valve are the following design features: 1. Both of the Class 1 check valves at each interface lie within the secondary shield wall inside containment and thus are afforded protection from dynamic events and missiles generated elsewhere in containment. 2. The interfacing portions of the CVCS system are designed and constructed as Safety Class 2 and are seismically qualified.

BASIS FOR RELIEF (continued)

3. The interfacing portions of the CVCS system are designed for pressures greater than or equal to RCS pressure.

4. Upstream of each of the subject check valve pairs, the interfacing CVCS lines contain a separate Containment Isolation check valve and power operated valve which are close exercise tested individually.

SUBSTITUTE TEST

Each pair of series check valves will be exercise tested at the required frequency by some positive means to verify the closure capability of at least one of the valves. No additional exercise testing will be performed unless there is an indication that the closure capability of the pair of valves is questionable. In that case, both valves will be declared inoperable and not returned to service until they are either repaired or replaced.

NRC APPROVAL STATUS

Denied. The substitute testing described above may continue to be implemented until startup from the third refueling outage for Unit 1 and until startup from the first refueling outage for Unit 2. However, by July 1, 1993 either this relief request must be revised and resubmitted for NRC staff approval or a test method must be developed for verifying each valve's closed function and the relief request withdrawn. Reference safety evaluation dated January 29, 1993 for Unit 1. Reference NUREG-0797, SER Supplement 26 for Unit 2. | 2

RELIEF REQUEST NO.	V6
SYSTEM	Demineralized and Reactor Makeup Water
VALVE NUMBER	1DD-0006/1DD-0065 1DD-0064/1DD-0066 2DD-0002/2DD-0006 2DD-0008/2DD-0009
CATEGORY	C
CLASS	3
DESCRIPTION	These check valve pairs form the boundary between the non-safety Demineralized Water System or Waste Processing System and the safety-grade Reactor Makeup Water Storage Tank (RMWST) to preclude draining the RMWST upon failure of the non-safety systems.
TEST REQUIREMENT	OM Part 10, para. 4.3.2, "Exercising Tests for Check Valves".
BASIS FOR RELIEF	Each pair of valves listed above constitutes two check valves in series at a Class 3/Non-Safety piping interface. Two Safety Class 3 check valves are provided in accordance with the safety class interface criteria of ANSI N18.2a-1975 in order to isolate the interfacing non-safety system. Either of the check valves provided can perform this function. The system design, however, does not include the test connections necessary to close exercise test each of the series check valves individually. The system design does include sufficient test connections to verify the check function of each pair of valves (i.e., verification that at least one of the valves will close). Offsetting the inability to separately test each series check valve is the availability of the other unit's RMWST. Each unit's RMWST normally provides inventory for makeup to various safety-related systems in that unit via the Reactor Makeup Water Pumps. The two unit [illegible] Makeup Water Pumps, however, are cross-connected (but normally isolated) at their suctions, discharges and miniflow lines such that either the Unit 1 RMWST or the Unit 2 RMWST can be aligned to supply any of the Reactor Makeup Water users in either unit. In the unlikely event that one unit's tank contents are lost through a makeup line failure in combination with the failure of both makeup line check valves to close, the other unit's tank would be unaffected.

SUBSTITUTE TEST	Each pair of series check valves will be exercise tested at the required frequency by some positive means to verify the closure capability of at least one of the valves. No additional exercise testing will be performed unless there is an indication that the closure capability of the pair of valves is questionable. In that case, both valves will be declared inoperable and not returned to service until they are either repaired or replaced.	
NRC APPROVAL STATUS	Approved. Reference safety evaluation dated January 29, 1993 for Unit 1. Reference NUREG-0797, SER Supplement 26 for Unit 2.	2

RELIEF REQUEST NO.	V7
SYSTEM	Safety Injection
VALVE NUMBER	1-8956A 1-8956B 1-8956C 1-8956D 2-8956A 2-8956B 2-8956C 2-8956D
CATEGORY	A/C
CLASS	1
DESCRIPTION	Check valves in the ECCS flowpath from the Safety Injection Accumulators to the Reactor Coolant System/Reactor Coolant System pressure isolation valves.
TEST REQUIREMENT	-OM Part 10, para. 4.3.2.4(c), "...disassembly every refueling outage to verify operability of check valves may be used."
BASIS FOR RELIEF	The subject valves are burdensome to disassemble and inspect every refueling outage. Because of their location below the RCS cold leg elevations and the fact that no positive isolation provisions exist between these valves and the RCS, the RCS must be maintained in a reduced inventory condition for the duration of the valve disassemblies. Also, the main Residual Heat Removal System flowpaths (for which these check valves form a boundary) and portions of the Safety Injection System must be removed from service and drained to facilitate the valve disassemblies. Draining of these systems produces significant amounts of liquid radwaste which must subsequently be processed. The valve disassembly activity itself can result in significant personnel radiation exposures depending on fuel performance and due to the valves' close proximity to the reactor coolant loops. Further, disassembly of these large valves diverts considerable manpower away from the refueling activity. The valves are all of the same design (manufacturer, size, model number, and materials of construction) and have the same service conditions including valve orientation. No wear related degradation is anticipated for these valves because they are all located in portions of the system which do not experience flow during normal operation. Due to the similarities between these valves, the condition of the valve inspected during the Substitute Test will be representative of the other valves in the group.

SUBSTITUTE TEST	Verify operability of the subject check valves through disassembly and inspection of one of the four valves in each unit at each refueling outage for that unit. The disassembled valve will be verified to be capable of full-stroking and it will be verified that the internals of the valve are structurally sound (no loose or corroded parts). Also, the disk will be manually exercised. A different valve from each unit will be disassembled, inspected, and manually full-stroke exercised at each successive refueling outage until the entire group for that unit has been tested. If the disassembled valve is not capable of being full-stroke exercised or there is binding or failure of valve internals, the remaining valves in the group for that unit will also be disassembled, inspected, and manually full-stroke exercised during the same outage. Once this is completed, the sequence of disassembly will be repeated unless extension of the interval can be justified.	
NRC APPROVAL STATUS	This Relief Request is pre-approved by Generic Letter 89-04, Attachment 1, Position 2. (Also reference safety evaluation dated January 29, 1993 for Unit 1 and NUREG-0797, SER Supplement 26 for Unit 2.)	2

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1 & 2
INSERVICE TESTING PLAN FOR PUMPS AND VALVES
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