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William J. Cahill, Jr.
Executive Vice President

January 28, 1991

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NO. 50-445
RELIEF REQUEST FROM ASME SECTION XI
COLD SHUTDOWN FULL STROKE TESTING
OF THE RESIDUAL HEAT REMOVAL (RHR) PUMP
DISCHARGE CHECK VALVES

REF: TU Electric Letter (TXX-91046) from
William J. Cahill, Jr. to the NRC
dated January 26, 1991

Gentlemen:

Valves 1-8730A and 1-8730B are the RHR pump discharge check valves. Per the present Inservice Testing Program Plan for CPSES Unit 1, these valves are to be full stroke tested at cold shutdown. The referenced letter requested an NRR Waiver of Compliance from SURVEILLANCE REQUIREMENT 4.0.5(a) for this testing until relief from ASME Section XI could be requested, reviewed and granted. The NRC orally granted the NRR Waiver of Compliance on January 26, 1991. This letter hereby requests relief from ASME Section XI cold shutdown full stroke testing of RHR pump discharge check valves 1-8730A and 1-8730B in accordance with 10CFR50.55a(g)(5)(iii).

Attachment 1 is the relief request as it will appear in the next revision of the CPSES Unit 1 Inservice Test Program Plan. Attachment 2 is a markup of those additional pages in the CPSES Unit 1 Inservice Test Program Plan which will be revised to be consistent with this relief request.

The relief request states that these check valves cannot be full stroke exercised during cold shutdown because insufficient volume exists in the Reactor Coolant System (RCS) for injection. While this statement is true, the capability of the RHR to Reactor Water Storage Tanks (RWST) return line to safely pass the flow necessary to periodically demonstrate satisfactory valve performance during cold shutdown has not been fully assessed. This assessment is currently being done.

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If, subsequent to the granting of this requested relief, TU Electric ascertains that full stroke testing can be repetitively performed during cold shutdown via the RHR to RWST return line, TU Electric will modify or withdraw, as appropriate, this relief request and the relief request for the RHR pump suction check valves, 1-8958A and 1-8958B. The relief request for the RHR pump suction check valves has the same basis as the relief request for RHR pump discharge check valves and are in the same flow path. The NRC granted an interim period of relief for the RHR pump suction check valves in supplement 23 of the safety evaluation report for CPSES (NUREG-0797, Supplement No. 23 dated February 1990). Should these relief requests be withdrawn, TU Electric will consider CPSES Unit 1 in compliance with its technical specification surveillance requirements until the next cold shutdown of sufficient duration as described in ASME Section XI that is available to test these check valves.

Written approval of this relief request is requested by February 9, 1991, to be consistent with the duration of the NRR Waiver of Compliance as requested by the referenced letter and orally granted on January 26, 1991.

Sincerely,

William J. Cahill, Jr.

By: John W. Beck
John W. Beck
Vice President,
Nuclear Engineering

HAM/gj
Attachments

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

CPSES INSERVICE TESTING PROGRAM PLAN
REVISION 4 PAGE 37.1

RELIEF REQUEST NUMBER: 14.2
SYSTEM: RESIDUAL HEAT REMOVAL (RHR)
VALVE NUMBER(S): 1-8730A, 1-8730B
CATEGORY: C
CLASS: 2

FUNCTION: Open to provide flow to the Reactor Coolant System from the RHR pumps.

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

BASIS FOR RELIEF: POWER OPERATION - These check valves cannot be full stroke exercised during power operation because the full flow path discharges into the Reactor Coolant System.
COLD SHUTDOWN - These check valves cannot be full stroke exercised during cold shutdown because insufficient volume exists in the RCS for injection.

ALTERNATE TESTING: Perform a partial stroke quarterly. Full stroke exercise these check valves at each refueling outage.

CPSSES UNIT NO. 1
 TABLE NO. 14
 INSERVICE TESTING/ REVISION 3
 SYSTEM: RESIDUAL HEAT REMOVAL

VALVE NUMBER	SECT.	FLOW DIAG. CLASS	COORD. CAT	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-B701A		1	F-3	A	GA	12.000	MO	C	0	V-3	MT/CS PIT LTP LTJ	M1-0260	RCS Hot Leg to RHR Contmt. Isol. (SEE APPENDIX B)
1-B701B		1	F-5	A	GA	12.000	MO	C	0	V-3	MT/CS PIT LTP LTJ	M1-0260	RCS Hot Leg to RHR Contmt. Isol. (SEE APPENDIX B)
1-B702A		1	F-3	A	GA	12.000	MO	C	0	V-3	MT/CS PIT LTP	M1-0260	RCS Hot Leg RHR Isol. (SEE APPENDIX B)
1-B702B		1	F-5	A	GA	12.000	MO	C	0	V-3	MT/CS PIT LTP	M1-0260	RCS Hot Leg RHR Isol. (SEE APPENDIX B)
1-B706A		2	E-2	C	RE	3.000	SA	C			SRV LTP	M1-0260	RHR Suct. Rlf.
1-B706B		2	E-5	C	RE	3.000	SA	C			SRV LTP	M1-0260	RHR Suction Rlf.
1-B716A		2	B-3	C	GA	10.000	MO	D	0/C		MT/CS PIT	M1-0260	RHR to Hot Leg Inj. (SEE APPENDIX B)
1-B716B		2	B-4	C	GA	10.000	MO	D	0/C		MT/CS PIT	M1-0260	RHR to Hot Leg Inj. (SEE APPENDIX B)
1-B730A		2	B-3	C	CK	10.000	SA	C	0		PS/O CV/RR	M1-0260	RHR Cold Leg Check (SEE APPENDIX B)

CPSES UNIT NO. 1
 TABLE NO. 14
 INSERVICE TESTING/ REVISION 3
 SYSTEM: RESIDUAL HEAT REMOVAL

VALVE MEMBER	CODE CLASS	COORD.	FLW DIAG.	SECT. XI	PASS	TYPE	SIZE	ACT. TYPE	NORMAL POS.	SFTY FUCT POS.	RELIEF REQUEST	TEST REQ.	FLOW DIAGRAM	REMARKS
1-87308	2	B-5	C	C	OK	10.000	SA	C	C	0		PS/Q	M1-0260	RHR Cold Leg Check (SEE APPENDIX B)
1-FCV-610	2	D-1	B	B	GL	3.000	MD	0	C	C		MT/Q PIT	M1-0260	RHR Pump Recirc.
1-FCV-611	2	D-6	B	B	GL	3.000	MD	0	C	C		MT/Q PIT	M1-0260	RHR Pump Recirc.
1-RH-8705A	2	F-3	C	C	C	0.750	SA	C	C			MT	M1-0260	RHR Suction Isol. Thermal Rlf. (See Notes)
1-RH-8705B	2	F-5	C	C	OK	0.750	SA	C	C			MT	M1-0260	RHR Suction Isol. Thermal Rlf. (See Notes)

CPRES-INSERVICE TESTING PROGRAM PLAN
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PORV's, 1-PCV-435A and 1-PCV-436, are not required to shut down the reactor to the cold shutdown condition. They are, however, required to be available during power operation to prevent challenges to the pressurizer safety valves. They may be required during shutdown operation to provide overpressure protection. In order to minimize the consequence of a PORV sticking open, these valves will be full-stroke exercised during cold shutdowns.

COMPRESSED AIR SYSTEM

Category A Valves

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

VENTILATION CHILLED WATER SYSTEM

Category A Valves

Valves 1-HV-6062, 1-HV-6063 and 1-HV-6064, ventilation chilled water to and from containment isolation valves, cannot be full or partial stroke exercised during power operation. Closing these valves to accomplish stroke time testing isolates ventilation chilled water system heat loads in the containment. In addition, valve failure during testing could result in exceeding containment temperature Technical Specification limits which possibly result in damage to environmentally qualified electrical equipment. These valves will be full-stroke exercised during cold shutdowns when ventilation chilled water cooling to the containment can be safely secured.

RESIDUAL HEAT REMOVAL SYSTEM

Category A Valves

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

Category A Valves

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

Category C Valves

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

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

SAFETY INJECTION SYSTEM

Category A Valves

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

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

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

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

Category B Valves

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

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