TXU Power
Comanche Peak Steam
Electric Station
P. O. Box 1002 (E01)
Glen Rose, TX 76043
Tel: 254 897 5209
Fax: 254 897 6652
mike.blevins@txu.com

Mike Blevins
Senior Vice President &
Chief Nuclear Officer

Ref: #10CFR50.55a

CPSES-200502480
Log # TXX-05204

December 15, 2005

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NO. 50-446
RELIEF REQUEST A-1 FOR THE UNIT 2 INSERVICE INSPECTION FOR APPLICATION OF AN ALTERNATIVE TO THE ASME BOILER AND PRESSURE VESSEL CODE SECTION XI EXAMINATION REQUIREMENTS FOR CLASS 1 AND 2 PIPING WELDS (INTERVAL START DATE – AUGUST 3, 2004, SECOND INTERVAL)

REF: TXX-01026 dated February 15, 2001, from C. L. Terry to the NRC

Gentlemen:

In accordance with the provisions of 10 CFR 50.55a(a)(3)(i), TXU Generation Company LP (hereafter TXU Power) requests relief from the ASME Section XI code examination requirements for inservice inspection of Class 1 and 2 piping welds (Categories B-F, B-J, C-F-1, and C-F-2) for Comanche Peak Steam Electric Station (CPSES) Unit 2.

The CPSES risk-informed inservice inspection (RI-ISI) program plan was submitted via the referenced letter for Unit 1 Second Interval and Unit 2 First Interval. As an alternative to the code requirements a risk-informed process will continue to be used for selection of Class 1 and Class 2 piping welds for examination for the Second Interval of Unit 2.

A047

TXU Power requests NRC approval of this relief request by June 30, 2006 to support the CPSES Unit 2 refueling outage 2RF09 which is currently scheduled to begin October 2006.

Should you have any questions, please contact Mr. Jack Hicks at (254) 897-6725.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC
Its General Partner

Mike Blevins

By: Fred W. Madden
Fred W. Madden
Director, Regulatory Affairs

JCH
Attachment

c - B. S. Mallett, Region IV
M. C. Thadani, NRR
Resident Inspectors, CPSES
T. Parks, Chief Inspector, TDLR

TXU Power
Comanche Peak Steam Electric Station (CPSES) Unit 2
Second 10-Year Interval
10CFR50.55a Request Number A-1

Proposed Alternative
In Accordance with 10CFR50.55a(a)(3)(i)

Alternative Provides Acceptable Level of Quality and Safety

1. **ASME Code Components Affected**

All Code Class 1 and 2 piping welds previously subject to the requirements of ASME Section XI, Table IWB-2500-1 (Examination Categories B-F and B-J) and Table IWC-2500-1 (Examination Categories C-F-1 and C-F-2).

2. **Applicable Code and Edition**

The CPSES Unit 2 ISI program is based on the 1998 Edition of ASME Section XI with the 2000 Addenda.

3. **Applicable Code Requirement**

Table IWB-2500-1, Examination Category B-F and Category B-J
Table IWC-2500-1, Examination Category C-F-1 and Category C-F-2

4. **Reason For Request**

The continued use of a risk-informed process as an alternative for the selection of Class 1 and Class 2 Piping Welds for examination is requested for the Second Interval of Unit 2.

5. **Proposed Alternative and Basis for Use**

As an alternative to the Code Requirement, a Risk-Informed process will continue to be used for selection of Class 1 and Class 2 Piping Welds for examination.

The Unit 2 ISI program for the examination of Class 1 and Class 2 piping welds is currently in accordance with a risk-informed process developed based on EPRI TR-112657, Revision B-A ,with identified differences, and with additional guidance taken from ASME Code Case N-578. A request to utilize this process was submitted on February 15, 2001. The NRC approved this request on September 28, 2001 (TAC Nos. MB1201 and MB1202). In the original submittal, TXU Electric committed to review and adjust the risk ranking of piping segments as a minimum on an ASME period basis. The first period of implementation of the RI-ISI program was the third period of Interval 1, which ended August 2, 2004. To satisfy the periodic review requirements, an evaluation and update was performed in accordance with the Nuclear Energy Institute document 04-05, "Living Program Guidance

TXU Power
Comanche Peak Steam Electric Station (CPSES) Unit 2
Second 10-Year Interval
10CFR50.55a Request Number A-1 (continued)

Proposed Alternative
In Accordance with 10CFR50.55a(a)(3)(i)

Alternative Provides Acceptable Level of Quality and Safety

To Maintain Risk-Informed Inservice Inspection Programs For Nuclear Plant Piping Systems", published in April, 2004.

In accordance with NEI 04-05, the following aspects were considered during the review:

- Plant Examination Results
- Piping Failures
  -Plant Specific Failures
  -Industry Failures
- PRA Updates
- Plant Design Changes
  -Physical Changes
  -Programmatic Changes
  -Procedural Changes
- Changes in Postulated Conditions
  -Physical Conditions
  -Programmatic Conditions

The updated program resulting from this review is the subject of this proposed alternative.

In accordance with the guidance provided by NEI 04-05, Table 1 is provided identifying the number of welds added to and deleted from the originally approved RI-ISI program. The additions to the original program are attributable to two specific actions:

1) An update to the PRA was performed at the end of 2004. Although the revision to the PRA model occurred after the end of the Interval, it was decided to include the revision in this evaluation and update. Consequence segments 1-SI01, 1-ACC03A, 1-ACC03B, 1-RHR08A, 1-FW-03A, 1-FW-03B, 1-FW-03C, and 1-FW-03D changed consequence rank from Medium to High. As a result of this change, fourteen piping segments changed from a risk rank of Low to a risk rank of Medium.

2) During the first ISI interval, the ISI Program was based on the 1986 Edition of ASME Section XI. For the second ISI interval, the ISI Program is in accordance

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Second 10-Year Interval
10CFR50.55a Request Number A-1 (continued)

Proposed Alternative
In Accordance with 10CFR50.55a(a)(3)(i)

Alternative Provides Acceptable Level of Quality and Safety

with the 1998 Edition through 2000 Addenda of ASME Section XI. One of the changes in the new edition and addenda of the Code is that the exemption size for Class 2 auxiliary feedwater piping decreased from 4" NPS to 1½" NPS. As a result, the 4" NPS Class 2 auxiliary feedwater lines from the outboard isolation valves to where they connect to the four main feedwater lines were added to the ISI Program and consequently added to the RI-ISI Program.

A new Risk Impact Analysis was performed, and the revised program continues to represent a risk reduction when compared to the last deterministic Section XI inspection program. The original program represented a reduction of 9.73E-09 in regards to CDF and 3.91E-09 in regards to LERF, while the revised program represents a reduction of 6.91E-09 in regards to CDF and 4.26E-09 in regards to LERF. The smaller reduction in CDF is due primarily to a decreased Upper Bound CDF in the revised PRA. The previous value was 1.16E-02, while the revised value is 7.52E-03.

The Risk-Informed process continues to provide an adequate level of quality and safety for selection of the Class 1 and Class 2 Piping Welds for examination. Therefore, pursuant to 10CFR50.55a(a)(3)(i) it is requested that the proposed alternative be authorized.

6. Duration of Proposed Alternative

The alternative will be used for CPSES Unit 2 until the end of that unit's second ten-year ISI program inspection interval, subject to the review and update guidance of NEI 04-05. The second inspection interval is currently scheduled to end August, 2014.

7. Precedent

1) Comanche Peak Units 1 and 2 (Reference SER dated September 28, 2001, TAC Nos. MB1201 and MB1202)

Table 1

CPSES Unit 2 - Inspection Location Selection Comparison Between Original Approved and Revised RI-ISI Program by Risk Category												
System[1]	Risk		Consequence Rank	Failure Potential		Code Category	Original			Updated		
	Category	Rank		DMs	Rank		Weld Count	RI-ISI	Other[2]	Weld Count	RI-ISI	Other[2]
RCS	2	High	High	TASCS, TT	Medium	B-J	6	2		6	2	
RCS	2	High	High	TASCS	Medium	B-J	13	6[3]		13	6[3]	
RCS	2	High	High	TT	Medium	B-F	1	0		1	0	
						B-J	11*	1		11	1	
RCS	4	Medium	High	None	Low	B-F	20	14[4]		20	14[4]	
						B-J	193	26[5]		193	26[5]	
RCS	5	Medium	Medium	TASCS	Medium	B-J	19	2		19	2	
RCS	5	Medium	Medium	TT	Medium	B-J	40**	5		40	5	
RCS	6	Low	Medium	None	Low	B-J	50	0		50	0	
RCS	7	Low	Low	None	Low	B-J	15	0		15	0	
CVCS	5	Medium	Medium	TT	Medium	B-J	1	1		1	1	
CVCS	6	Low	Medium	None	Low	B-J	60	0		60	0	
						C-F-1	213	0		213	0	
CVCS	6	Low	Low	TT	Medium	B-J	8	0		8	0	
CVCS	7	Low	Low	None	Low	B-J	42	0		42	0	
SIS	4	Medium	High	None	Low	B-J	85	7		85	7	
						C-F-1	99	11		241	26	
SIS	5	Medium	Medium	IGSCC	Medium	B-J	12	2		12	2	

Typographical errors in Original: *6 should have been 11, **45 should have been 40; no impact on results.

Table 1 (Cont'd)

CPSES Unit 2 - Inspection Location Selection Comparison Between Original Approved and Revised RI-ISI Program by Risk Category

System[1]	Risk		Consequence Rank	Failure Potential		Code Category	Original			Updated		
	Category	Rank		DMs	Rank		Weld Count	RI-ISI	Other[2]	Weld Count	RI-ISI	Other[2]
SIS	6	Low	Medium	None	Low	B-J	82	0		82	0	
						C-F-1	598	0		456	0	
SIS	6	Low	Low	IGSCC	Medium	B-J	20	0		20	0	
SIS	7	Low	Low	None	Low	B-J	126	0		126	0	
						C-F-1	104	0		104	0	
RHRS	4	Medium	High	None	Low	B-J	12	1		12	1	
						C-F-1	246	25		246	25	
RHRS	6	Low	Medium	None	Low	C-F-1	5	0		5	0	
CSS	4	Medium	High	None	Low	C-F-1	11	2		11	2	
CSS	6	Low	Medium	None	Low	C-F-1	178	0		178	0	
CSS	7	Low	Low	None	Low	C-F-1	239	0		239	0	
FWS	4 (1)	Medium (High)	High	None (FAC)	Low (High)	C-F-2	0	0		112	12	
FWS	5 (3)	Medium (High)	Medium	TASCS, (FAC)	Medium (High)	C-F-2	8	1		8	1	
FWS	6 (3)	Low (High)	Medium	None (FAC)	Low (High)	C-F-2	442	0		330	0	
MSS	6	Low	Medium	None	Low	C-F-2	167	0		167	0	

Table 1 (Cont'd)

CPSES Unit 2 - Inspection Location Selection Comparison Between Original Approved and Revised RI-ISI Program by Risk Category

System[1]	Risk		Consequence Rank	Failure Potential		Code Category	Original			Updated		
	Category	Rank		DMs	Rank		Weld Count	RI-ISI	Other[2]	Weld Count	RI-ISI	Other[2]
AFW	4 (1)	Medium (High)	High	None (FAC)	Low (High)	C-F-2	0[6]	0[2]		81	9	

Notes

1. Systems were described in Table 3.1-2 of the original submittal, with the exception of AFW - Auxiliary Feedwater. This ASME Code Class 2 system consists of 4 segments with 81 elements.
2. The column labeled "Other" is generally used to identify augmented inspection program locations that are credited beyond those locations selected per the RI-ISI process, as addressed in Section 3.6.5 of EPRI TR-112657. This option was not applicable for the CPSES RI-ISI application. The "Other" column has been retained in this table solely for uniformity purposes with other RI-ISI application template submittals.
3. 2 of these 6 welds were added to address the Class 1 selection percentage criteria described in Section 3.6.4.2 of EPRI TR-112657. See Section 3.5 of the original submittal for details.
4. 7 of these 14 welds were added to address the Class 1 selection percentage criteria described in Section 3.6.4.2 of EPRI TR-112657. See Section 3.5 of the original submittal for details.
5. 11 of these 26 welds were added to address the Class 1 selection percentage criteria described in Section 3.6.4.2 of EPRI TR-112657. See Section 3.5 of the original submittal for details.
6. Due to a change in ASME Section XI Code criteria, 4" NPS Class 2 auxiliary feedwater piping was added to the ISI Program, and therefore the RI-ISI Program, for the first time during the third ISI interval. As such, there were no welds associated with this piping during the original RI-ISI application.