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Ref: 10 CFR 50.55(a)(3)

CPSES-200202752
Log # TXX-02129
File # 10010

July 18, 2002

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NO. 50-445; RELIEF REQUESTS A-3, A-4, AND A-5 TO THE UNIT 1 INSERVICE INSPECTION (ISI) FROM 1986 EDITION OF ASME CODE, SECTION XI, NO ADDENDA
(INTERVAL START DATE: AUGUST 13, 2000, SECOND INTERVAL)

Dear Sir or Madam:

Pursuant to 10CFR50.55a, TXU Generation Company LP (TXU Energy) hereby requests NRC approval of the attached relief requests. The reliefs from the ASME Code are being requested for the second interval of the inservice inspection program. The details of the 10CFR 50.55a requests are enclosed.

The relief requests (A-3, A-4, and A-5) propose to defer certain examinations (see attachments for details) until the end of the interval and invoke Code Case N-307-3 (enclosure 1) for relief A-5.

This transmittal via the attachments submits relief requests A-3, A-4, and A-5 for your review and approval by October 4, 2002.

This communication contains no new licensing basis commitments regarding Comanche Peak Steam Electric Station (CPSES) Unit 1.

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If you have any questions or need additional information regarding this matter, please feel free to contact Obaid Bhatty at (254) 897-5839 or Douglas W. Snow at (254) 897-8448.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC
Its General Partner

C. L. Terry
Senior Vice President and Principal Nuclear Officer

By:
Fred W. Madden
Nuclear Licensing Manager

OAB/dws

Attachments/Enclosure

c - E. W. Merschoff, Region IV
W. D. Johnson, Region IV
D. H. Jaffe, NRR
Resident Inspectors, CPSES
G. Bynog, TDLR
J.C. Hair ANII, CPSES

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-3

PROPOSED ALTERNATIVE PURSUANT TO 10 CFR 50.55a(a)(3)(i)

-ALTERNATIVE PROVIDES ACCEPTABLE LEVEL OF QUALITY AND SAFETY-

I. System/Component for Which Relief is Requested:

American Society of Mechanical Engineers (ASME) Section XI, "Rules for Inservice Inspection Nuclear Power Plant Components", Category B-A Pressure Retaining Welds In Reactor Pressure Vessel (RPV), Item No. B1.30 shell-to-flange weld. The subject weld is depicted as weld number TBX-1-1100-1 in the Comanche Peak Steam Electric Station Unit 1 ISI Program Plan.

II. Code Requirement:

ASME Section XI, Rules for Inservice Inspection of Nuclear Power plant Components 1986 Edition, No addenda, Subsection IWA-2232, requires volumetric examination of the RPV-to-flange weld to be in accordance with ASME Code, Section V, Article 4.

Additionally, according to the 1986 Edition of the ASME Section XI Table IWB-2500-1 for category B-A, Item No. B1.30 complete deferral of the volumetric inspection to the end of the interval is not permissible.

III. Code Requirement from Which Relief is Requested:

TXU Energy requests relief from the requirements of the 1986 Edition of the ASME Section XI Table IWB-2500-1 for category B-A, Item No. B1.30. In particular, the partial deferral of the inspection.

IV. Proposed Alternative:

TXU Energy proposes to defer the partial inspection of the subject weld and perform 100 percent of the subject inspection at the end of the current interval for Comanche Peak Steam Electric Station Unit 1 RPV shell-to-flange weld.

This relief is requested to allow the use of a Performance Demonstration Initiative (PDI) qualified procedure to complete the UT examination of the RPV vessel-to-flange weld from the vessel side of the weld, in accordance with ASME Section XI, Div. 1,1995 Edition, 1996 Addenda, Appendix VIII, Supplement 4 and 6, at or near the end of the current interval.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-3

PROPOSED ALTERNATIVE PURSUANT TO 10 CFR 50.55a(a)(3)(i)

-ALTERNATIVE PROVIDES ACCEPTABLE LEVEL OF QUALITY AND SAFETY-
(Continued)

V. Basis of Alternative for Providing Acceptable Level of Quality and Safety:

The subject weld has been examined during the pre-service inspection, and a 100 percent examination of weld TBX-1-1100-1 was performed during the last interval. There were no recordable indications identified by the volumetric examinations. Therefore, TXU Energy believes that the examinations performed provide adequate confidence that there are no matters of concerns regarding the structural integrity of the subject welds.

TXU Energy is proposing to use a remote examination at or near the end of the current interval. To perform this volumetric examination, TXU Energy will be utilizing personnel, procedures, and equipment demonstrated and qualified by PDI and in accordance with ASME Section XI, Div. 1, 1995 Edition, 1996 Addenda, Appendix VIII. Although [currently] Appendix VIII is not a requirement for this weld, the qualification process to Appendix VIII criteria demonstrates that the examination and evaluation techniques are equal or surpass the requirements of paragraph IWA-2232, "Ultrasonic Examination" of Section XI of the ASME Code and the guidance in RG 1.150.

The PDI qualified sizing method is considered more accurate than the method used in ASME Section V, Article 4. The proposed alternate UT examination technique provides an acceptable level of quality and examination repeatability as compared to the Article 4 requirements.

VI. Duration of Proposed Alternative:

This relief is requested for the second 10-year interval examination for the Comanche Peak Steam Electric Station Unit 1.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-4

PROPOSED USE OF SUBSEQUENT ASME CODE EDITION AND ADDENDA PURSUANT TO 10 CFR 50.55a(g)(4)(iv)

I. System/Component for Which Relief is Requested:

ASME Class I Reactor Pressure Vessel (RPV) Flange Ligaments. The subject item is depicted as TBX-1-1100- LIG in the Comanche Peak Steam Electric Station Unit 1 ISI Program Plan.

II. Applicable Code Edition and Addenda:

ASME Section XI, "Rules for Inservice Inspection of Nuclear Power plant Components 1986 Edition, No addenda, Table IWB-2500-1 for category B-G-1, Item No. B6.40, Threads in Flange.

III. Code Requirement from Which Relief is Requested:

Relief is requested from the 1986 Edition of the ASME Section XI Table IWB-2500-1 for category B-G-1, Item No. B6.40, Threads in Flange. This aforementioned Edition of the Code states that the deferral of inspection to the end of the interval is not permissible.

TXU Energy requests relief from the above stated requirement of the 1986 Edition of the ASME Section XI Table IWB-2500-1 for category B-G-1, Item No. B6.40, Threads in Flange, and requests deferral of this inspection to the end of the interval.

III. Proposed Subsequent Code Edition and Addenda (or Portion):

TXU Energy proposes to use 1995 Edition, 1996 Addenda of the ASME Section XI Table IWB-2500-1 for category B-G-1, Item No. B6.40, Threads in Flange, and requests deferral of this inspection to the end of the interval as permitted.

IV. Basis of Using Subsequent Code Editions and Addenda (or Portion):

The NRC staff incorporated these changes by reference in 10 CFR 50.55a(b). The changes to Table IWB-2500-1, Item No. B6.40 examination criteria do not affect other parts of the Code. The change does not eliminate the examination or the required number of ligament examinations; it only provides the option for consolidating the number of ligaments examined at any one time. Additionally, the volumetric examinations will be performed with procedures and personnel qualified in accordance with ASME Section XI, Appendix VIII as required by 10 CFR 50.55a(g)(6)(ii)(C). Therefore, the proposed change will result in an acceptable level of quality and safety.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-4

PROPOSED USE OF SUBSEQUENT ASME CODE EDITION AND ADDENDA PURSUANT TO 10 CFR 50.55a(g)(4)(iv)
(Continued)

V. Duration of Proposed Alternative:

This relief is requested for the second 10-year interval examination for the Comanche Peak Steam Electric Station Unit 1.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-5

PROPOSED USE OF SUBSEQUENT ASME CODE EDITION AND ADDENDA PURSUANT TO 10 CFR 50.55a(g)(4)(iv) AND INVOKING CODE CASE N-307-3

I. System/Component for Which Relief is Requested:

ASME Class 1 Reactor Pressure Vessel (RPV) Closure Head Nuts, Washers, and Studs. The subject items are depicted as TBX-1-1400-1 through 54 in the Comanche Peak Steam Electric Station Unit 1 ISI Program Plan.

II. Applicable Code Edition and Addenda:

ASME Section XI, "Rules for Inservice Inspection of Nuclear Power plant Components 1986 Edition, No addenda, Table IWB-2500-1 for category B-G-1, Reactor Vessel Parts.

III. Code Requirement from Which Relief is Requested:

TXU Energy requests relief from the 1986 Edition of the ASME Section XI Table IWB-2500-1, Category B-G-1 for the following:

1) Table IWB-2500-1 disallowing deferral for Items B6.20, "Closure Studs, In Place", and B6.50, "Closure Washers, Bushing".
2) Table IWB-2500-1 requirements that the examinations include both a surface ***and*** [emphasis added] volumetric method when the studs are removed.
3) Exam Figure IWB-2500-12 for Item No. B6.30 requirement that the examination volume be defined as the full volume of the load-bearing potion of the stud.

IV. Proposed Subsequent Code Edition and Addenda and Code Case:

TXU Energy proposes to use 1995 Edition, 1996 Addenda of the ASME Section XI Table IWB-2500-1 for category B-G-1, Item No. B6.40, Threads in Flange, and requests deferral of this inspection to the end of the interval as permitted.

Table IWB-2500-1 in the 2000 Addenda of the ASME Code Section XI specifies that a volumetric ***or*** [emphasis added] surface examination be performed when the RPV studs are removed. Additionally, Code Case N-307-3 further reduces the examination requirements of Section XI, Figure IWB-2500-12, Item B6.30. Code Case N-307-3 reduces the examination volume to that of a volumetric cylinder 1/4" deep from the root of the threads. TXU Energy is proposing to use the Code Case N-307-3 and the examination requirements from Table IWB-2500-1 in the 2000 Addenda of the ASME Code Section XI for Item B6.30.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-5

PROPOSED USE OF SUBSEQUENT ASME CODE EDITION AND ADDENDA PURSUANT TO 10 CFR 50.55a(g)(4)(iv) AND INVOKING CODE CASE N-307-3 (Continued)

V. Basis of Using Subsequent Code Editions and Addenda and Code Case:

The 1995 Edition, 1996 Addenda of the ASME Section XI allows the deferral of the aforementioned items to the end of the interval. The NRC staff incorporated these changes by reference in 10 CFR 50.55a(b). The changes to Table IWB-2500-1 examination criteria do not affect other parts of the Code. Moreover, the change does not eliminate the examination or the required number of examinations; it only provides the option for consolidating the number of items examined at any one time. Additionally, the volumetric examinations will be performed with procedures and personnel qualified in accordance with ASME Section XI, Appendix VIII as required by 10 CFR 50.55a(g)(6)(ii)(C). Therefore, the proposed change will result in an acceptable level of quality and safety.

With respect to the utilization of Code Case N-307-3, portions of the Code Case [as identified in revision 2] have been incorporated in the 2000 Addenda of the ASME Code Section XI. The 2000 Addenda of the Code reduces the required volume as depicted in the 1986 Edition.

In lieu of the examination requirements of Section XI, Figure IWB-2500-12, Item B6.30, Code Case N-307-3 reduces the examination volume to that of a volumetric cylinder 1/4" deep from the root of the threads. The root of the threads are stress risers and preferred sites for crack initiation. Cracks at the root of the threads would be perpendicular to straight beam UT performed from the stud ends, and the cracks would create a corner trap for angle beam UT examinations performed from a center hole in the stud. The capabilities of a UT examination finding cracks in a stud is demonstrated through procedure and personnel qualifications. These are performance-based qualifications according to the requirements of Section XI, Appendix VIII, Supplement 8.

Additionally, the examination requirements of Section XI, Table IWB-2500-1, Item B6.30, Code Case N-307-3 eliminates surface examination of the RPV closure stud when removed. The function of UT examination is to find cracks in the stud volume. These cracks, if they exist, initiate from the surface. The function of the surface examination is to find cracks on the surface. Performing both volumetric and surface examinations on a stud duplicates the intent of the examinations which is to find cracks. Of the two nondestructive examination methods, surface examinations are tedious and subjective, and performance-based UT provides demonstrated assurances for finding cracks. Therefore, elimination of the surface examination does not diminish the effectiveness in detecting cracks.

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-5

PROPOSED USE OF SUBSEQUENT ASME CODE EDITION AND ADDENDA PURSUANT TO 10 CFR 50.55a(g)(4)(iv) AND INVOKING CODE CASE N-307-3 (Continued)

VI. Duration of Proposed Alternative:

This relief is requested for the Comanche Peak Steam Electric Station Unit 1, second 10-year interval.

CASE
N-307-3

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

Approval Date: March 28, 2001

See Numeric Index for expiration and any reaffirmation dates.

Case N-307-3
Ultrasonic Examination of Class 1 Bolting, Table IWB-2500-1, Examination Category B-G-1 Section XI, Division 1

Inquiry: When ultrasonic examinations are conducted from the end of the bolt or stud or from the center-drilled hole of bolts or studs to satisfy the examination requirements of Table IWB-2500-1, Examination Category B-G-1, may the examination volume be limited to the cylindrical region defined by A-B-C-D-E-F-A in Fig. 1, and may the surface examination requirement of Table IWB-2500-1, Examination Category B-G-1, Item No. B6.30, Reactor Closure Studs when removed be eliminated?

Reply: It is the opinion of the Committee that, when conducting ultrasonic examinations from the end of the bolt or stud or from the center-drilled hole of bolts or studs to satisfy the examination requirements of Table IWB-2500-1, Examination Category B-G-1, the examination volume may be limited to the cylindrical region defined by A-B-C-D-E-F-A in Fig. 1. The surface examination requirement of Table IWB-2500-1, Examination Category B-G-1, Item No. B6.30, Reactor Vessel Closure Studs when removed, may be eliminated.

CASE (continued)

N-307-3

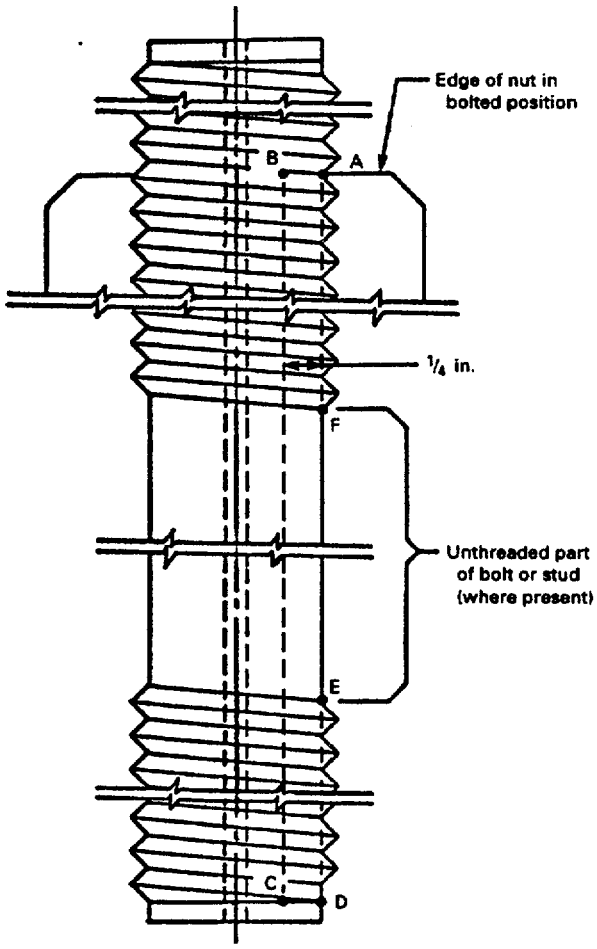

FIG. 1 REVISED EXAMINATION VOLUME