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**C. Lance Terry**  
Senior Vice President &  
Principal Nuclear Officer

Ref: 10 CFR 50.55a(a)(g)(4)(iv)

CPSES-200300457  
Log # TXX-03048

March 6, 2003

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-9 TO THE UNIT 2 INSERVICE INSPECTION  
(ISI) FROM 1986 EDITION OF ASME CODE, SECTION XI, NO  
ADDENDA (SECOND INTERVAL START DATE: AUGUST 2003)**

Pursuant to 10 CFR 50.55a(a)(g)(4)(iv), TXU Generation Company LP (TXU Energy) hereby requests NRC approval of the enclosed relief request (A-9) for second ten-year inservice inspection interval for Unit 2. Relief is requested from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, 1986 Edition with no Addenda, Table IWB-2500-1, Category B-G-1 (see attachment for details) and invokes Code Case N-307-3 (enclosure 1).

TXU Energy requests approval of this relief request by August of 2003. The approval date was selected to allow for NRC review and approval prior to the fall refueling outage.

Please note that TXU Energy will be submitting the Inservice Inspection Plan in August 2003, committing to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, 1998 Edition thru the 2002 Addenda.

A047

A member of the **STARS** (Strategic Teaming and Resource Sharing) Alliance

Callaway • Comanche Peak • Diablo Canyon • Palo Verde • South Texas Project • Wolf Creek

TXX-03048

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This communication contains no new licensing basis commitments regarding CPSES. If you have any questions regarding this request, please contact Douglas W. Snow at (254) 897-8448 or Obaid Bhatta at (254) 897-5839.

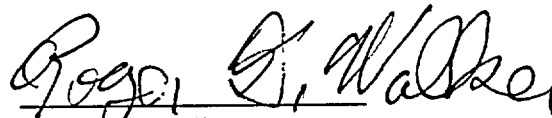
Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC,  
Its General Partner

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

By:



Roger D. Walker  
Regulatory Affairs Manager

DWS/dws  
Attachment  
Enclosure

c - E. W. Merschoff, Region IV  
W. D. Johnson, Region IV  
D. H. Jaffe, NRR  
Resident Inspectors, CPSES  
Terry Parks, Chief Inspector, TDLR  
J.C. Hair ANII, CPSES

**TXU GENERATION COMPANY LP  
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2  
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-9**

**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 and Studs. The subject items are depicted as TBX-1-1400-37 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 requires that the examinations include both a surface *and* [emphasis added] volumetric method when the studs are removed.
- 2) Exam Figure IWB-2500-12 for Item No. B6.30 requires that the examination volume be defined as the full volume of the load-bearing portion of the studs.
- 3) Table IWB-2500-1 for Item No. B6.10 requires a surface examination for closure head nuts.

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

TXU Energy proposes to use 1998 Edition, 1999 Addenda and 2000 Addenda of the ASME Section XI Table IWB-2500-1 for category B-G-1, Item No. B6.30, Closure Studs when removed. Additionally, TXU Energy proposes to use 1998 Edition, 1999 Addenda and 2000 Addenda of the ASME Section XI Table IWB-2500-1 for category B-G-1, Item No. B6.10, Closure Head Nuts.

**TXU GENERATION COMPANY LP  
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2  
SECOND TEN-YEAR INTERVAL ISI RELIEF REQUEST NO. A-9**

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PURSUANT TO 10 CFR 50.55a(g)(4)(iv) AND INVOKING CODE CASE N-307-3  
(Continued)**

Items 1) & 2): 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.

Item 3): Table IWB-2500-1 in the 2000 Addenda of the ASME Code Section XI specifies that a visual, VT-1 examination be performed. TXU Energy is proposing to use the examination requirements from Table IWB-2500-1 in the 2000 Addenda of the ASME Code Section XI for Item B6.10.

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

The 1998 Edition, 1999 Addenda and 2000 addenda of the ASME Section XI allows the method of examination proposed by TXU Energy. 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. 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

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PURSUANT TO 10 CFR 50.55a(g)(4)(iv) AND INVOKING CODE CASE N-307-3  
(Continued)**

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.

For Item 3 the 1998 Edition, 1999 Addenda and 2000 addenda of the ASME Section XI allows the use of a Visual, VT-1 in lieu of a surface examination. Therefore, the proposed change will result in an acceptable level of quality and safety.

**VI. Duration of Proposed Alternative:**

TXU Energy requests approval of this relief request by August of 2003. The approval date was selected to allow for NRC review and approval prior to the fall refueling outage.

**VII. Similar Precedents:**

1. Letter from NRC to Vogtle Electric Generating Plant dated February 20, 2002  
(TAC No. MB3242 and MB3243)
2. Letter from NRC to Edwin I. Hatch Plant dated July 2, 2002  
(TAC No. MB3060 and MB3061)

**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**

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

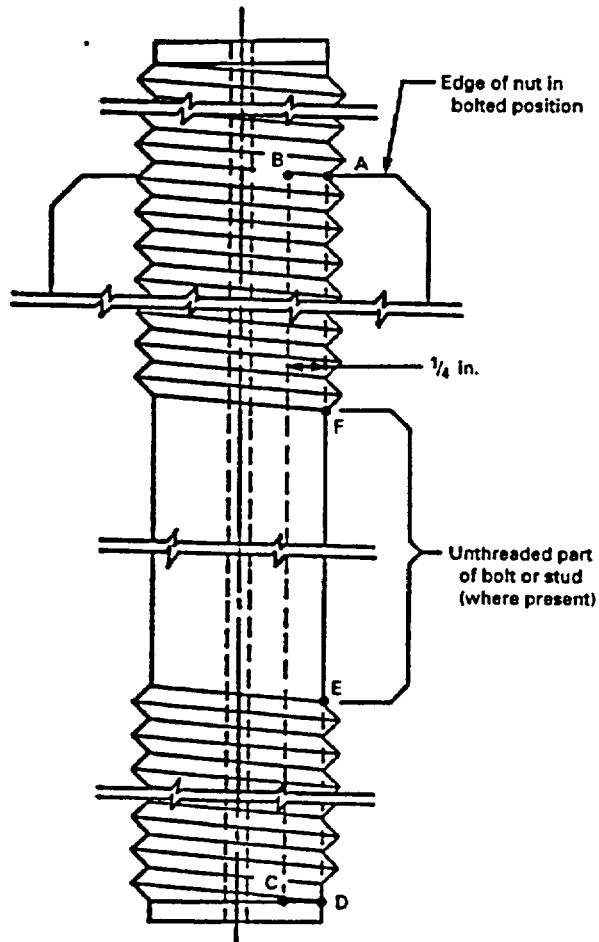


FIG. 1 REVISED EXAMINATION VOLUME