

September 3, 2003

Mr. C. Lance Terry
Senior Vice President &
Principal Nuclear Officer
TXU Energy
Attn: Regulatory Affairs Department
P. O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 2 - RELIEF REQUEST
NO. A-9, FROM THE REQUIREMENTS OF THE AMERICAN SOCIETY OF
MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE,
SECTION XI, CONCERNING SECOND 10-YEAR INSERVICE INSPECTION
INTERVAL (TAC NO. MB7946)

Dear Mr. Terry:

By letter dated March 6, 2003, as supplemented by letter dated July 1, 2003, TXU Energy (the licensee) submitted Relief Request A-9 for Comanche Peak Steam Electric Station (CPSES), Unit 2. Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(g)(4)(iv) the licensee requested approval of a relief for the second 10-year inservice inspection (ISI) interval from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), 1986 Edition with no Addenda, Table IWB-2500-1, Category B-G-1. In addition, the licensee requested approval of an alternative to use 1998 Edition with 1999 Addenda and 2000 Addenda of the ASME Code. The July 1, 2003, supplemental letter removed a reference to Code Case N-307-3.

The Nuclear Regulatory Commission Staff has reviewed the licensee's request and concluded that, because the ASME Code, 1998 Edition, 2000 Addenda, has been incorporated by reference in 10 CFR 50.55a(b), the alternative proposed by the licensee provides an acceptable level of quality and safety. Therefore, the licensee's request to use ASME Code, 1998 Edition, 2000 Addenda, Table IWB-2500-1, Category B-G-1, reactor vessel head closure studs, washers, bushings, and nuts, is authorized for the second 10-year ISI interval for CPSES,

Mr. C. Lance Terry

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Unit 2. All other requirements of the ASME Code, Section III and XI, for which relief has not been specifically requested, remain applicable; including third party review by the Authorized Nuclear Inservice Inspector.

Sincerely,

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No.: 50-446

cc: See next page

Mr. C. Lance Terry

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JClark, EDO

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*No significant change from input

**See previous concurrence

ADAMS Accession No.: ML032470041

Subject to changes noted

NRR-028

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|--------|--------------|-----------|----------|----------|-----------|
| OFFICE | PDIV-1/PM | PDIV-1/LA | EMCB/SC | OGC | PDIV-1/SC |
| NAME | MThadani:sab | DJohnson | SCoffin* | CMarco** | RGramm |
| DATE | 9/03/03 | 9/03/03 | 08/11/03 | 9/03/03 | 9/03/03 |

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SECOND 10-YEAR INSERVICE INSPECTION PROGRAM INTERVAL

REQUEST FOR RELIEF

TXU GENERATION COMPANY LP

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 2

DOCKET NO. 50-446

1.0 INTRODUCTION

By letter dated March 6, 2003, as supplemented by letter dated July 1, 2003, TXU Energy (the licensee) submitted Relief Request A-9 for Comanche Peak Steam Electric Station (CPSES), Unit 2. Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(g)(4)(iv) the licensee requested approval of a relief for the second 10-year inservice inspection (ISI) interval from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), 1986 Edition with no Addenda, Table IWB-2500-1, Category B-G-1. In addition, the licensee requested approval of an alternative to use 1998 Edition with 1999 Addenda and 2000 Addenda of the ASME Code. The July 1, 2003, supplemental letter removed a reference to Code Case N-307-3.

2.0 REGULATORY REQUIREMENTS

ISI of the ASME Code, Class 1, 2, and 3 components is to be performed in accordance with Section XI of the ASME Code, and applicable addenda, as required by 10 CFR 50.55a(g), except where specific relief has been granted by the Commission, pursuant to 10 CFR 50.55a(g)(6)(i). Section 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if the applicant demonstrates that:

- (i) the proposed alternatives would provide an acceptable level of quality and safety or;
- (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code, Class 1, 2, and 3 components (including supports), shall meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that ISI examination of components and system pressure tests conducted during the first 10-year ISI interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code, incorporated by reference in 10 CFR 50.55a(b), 12 months prior to the start of the 120-month interval, subject to the

limitations and modifications listed therein. The code of record for the CPSES, Unit 2, second 10-year ISI interval is the 1986 Edition of the ASME Code.

3.0 TECHNICAL EVALUATION

REQUEST FOR RELIEF NO. A-9

Code Requirement for Which Relief is Requested:

The 1986 Edition of the ASME Code, Section XI, Table IWB-2500-1, Category B-G-1, requires the following:

- (1) Examinations of the reactor closure head studs include both a surface and volumetric method when removed.
- (2) Examination Figure IWB-2500-12 for Item No. B6.30, pertaining to the reactor closure head studs, requires that the examination volume be defined as the full volume of the load-bearing portion of the studs.
- (3) Item No. B6.10 requires a surface examination for closure head nuts.

System/Component(s) for Which Relief is Requested:

ASME Class 1, Reactor Pressure Vessel Closure Head Nuts and Studs. The subject items are depicted as TBX-1-1400-37 through 54 in the CPSES, Unit 2, ISI Program Plan.

Licensee's Proposed Alternative Examination (As stated):

TXU Energy requests to use 1998 Edition, 1999 Addenda and 2000 Addenda, of the ASME Section XI, Table IWB -2500-1 for category B-G-1, Items B6.10, B6.20, B6.30, B6.40, and B6.50, for the reactor vessel head pressure retaining bolting and all associated requirements, if any, as allowed by 10 CFR 50.55a(g)(4)(iv).

Licensee's Basis for Requesting Relief (As stated):

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.

Staff Evaluation:

The licensee proposes to use the ASME Code, 1998 Edition, 2000 Addenda, of the ASME Section XI, Table IWB-2500-1, for category B-G-1, reactor vessel closure studs and nuts. The ASME Code, 1998 Edition, 2000 Addenda, has been incorporated by reference in 10 CFR 50.55a(b). Additionally, the licensee proposed that 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).

The 1986 Edition, Table IWB-2500-1, Category B-G-1, Item B6.10, closure head nuts, requires a surface examination, where as the later Editions and Addenda require a VT-1 visual examination. For Item B6.30, the 1986 Edition requires surface and volumetric examinations of the closure studs when removed, where as the later Edition and Addenda requires surface or volumetric examination. In addition, for Item B6.30, the 1986 Edition defines the examination volume as the full volume, where as the later Edition and Addenda defines it as 0.25-inch from the threads which are stress risers and preferred sites for crack initiation. For Items B6.20 (Closure Studs - volumetric in place), B6.40 (Threads in Flange - volumetric), and B6.50 (Closure Washers, Bushings - surface examinations) there is no change in the examination method. In the later Edition and Addenda, the examinations can be deferred to the end of the interval.

The staff has reviewed the changes in the 1998 Edition, 2000 Addenda, which were incorporated by reference in 10 CFR 50.55a(b) and finds that the licensee's proposed alternative provides reasonable assurance of quality and safety.

4.0 CONCLUSION

Based on the above evaluation, the NRC staff concludes that, because the ASME Code, 1998 Edition, 2000 Addenda, has been incorporated by reference in 10 CFR 50.55a(b), the alternative proposed by the licensee provides an acceptable level of quality and safety. Therefore, the licensee's request to use ASME Code, Section XI, 1998 Edition, 2000 Addenda, Table IWB-2500-1, Category B-G-1, reactor vessel head closure studs, washers, bushings, and nuts, may be authorized for the second 10-year ISI interval for CPSES, Unit 2. All other requirements of the ASME Code, Section III and XI, for which relief has not been specifically requested remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: T. K. McLellan

Date: September 3, 2003

Comanche Peak Steam Electric Station

cc:

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