Mr. M. R. Blevins
Senior Vice President &
Chief Nuclear Officer
TXU Power
Attn: Regulatory Affairs Department
P. O. Box 1002
Glen Rose, TX 76043

July 8, 2005

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 2 - RELIEF FROM CERTAIN REQUIREMENTS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE (TAC NO. MC6405).

Dear Mr. Blevins:

By letter dated March 10, 2005, TXU Generation Company LP (the licensee) requested reliefs B-12, B-13, B-14, and C-8 from certain American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) Section XI requirements for Comanche Peak Steam Electric Station (CPSES), Unit 2.

The licensee states that it has determined that certain requirements of ASME Code Section XI are impractical due to physical interferences and requests approval of the proposed reliefs from the ASME Code Section XI. The current Code of Record for CPSES, Unit 2, is the 1998 Edition of the ASME Code, Section XI, 1999 and 2000 Addenda. The licensee's first interval for inservice inspection (ISI) ended on August 2, 2004. During that interval, certain components did not meet the examination requirements of the ASME Subsections IWB-2500, IWC-2500, and Code Case N-460. The proposed reliefs are requested in accordance with the provision of Section 50.55a(g)(5)(iv) of Title 10 of the Code of *Federal Regulations* (10 CFR) that requires licensees to submit requests for relief from impractical ASME Code ISI requirements within 12 months from the end of the ISI interval in which they occurred.

The U.S. Nuclear Regulatory Commission (NRC) staff has evaluated the licensee's application as documented in the enclosed safety evaluation. The NRC staff concludes that requiring the licensee to perform design modifications to achieve the Code required examination, for components for which relief is requested under B-12, B-13, B-14, and C-8, is impractical and would result in a significant burden on the licensee. The examinations of those components performed by the licensee provide adequate assurance of continued structural integrity of the components. Additionally, as required by the regulations, the licensee's application for the reliefs was filed within 12 months after the expiration of 10-year ISI interval on August 2, 2004.

Therefore, the NRC staff concludes that pursuant to 10 CFR 50.55a(g)(6)(i), the proposed relief requests B-12, B-13, B-14, and C-8 are granted for the first 10-year ISI interval. The granting of the reliefs is authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

All other ASME Code, Section XI requirements for which relief was not specifically requested and granted in this relief request remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Sincerely,

/RA/
David Terao, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-446

Enclosure: As stated

cc w/encl: See next page

All other ASME Code, Section XI requirements for which relief was not specifically requested and granted in this relief request remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

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Comanche Peak Steam Electric Station

cc:

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December 2004

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FIRST 10 -YEAR INSERVICE INSPECTION PROGRAM

RELIEF REQUEST NOS. B-12, B-13, B-14, AND C-8

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 2

TXU GENERATION COMPANY LP

DOCKET NO. 50-446

1.0 INTRODUCTION

The Inservice Inspection (ISI) of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) Class 1, Class 2, and Class 3 components is to be performed in accordance with Section XI of the ASME Code and applicable edition and addenda as required by 50.55a(g) of Title 10 of the *Code of Federal Regulations* (10 CFR), except where specific relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(I). The regulations at 10 CFR 50.55a(a)(3) state in part that alternatives to the requirements of paragraph (g) may be used, when authorized by the Nuclear Regulatory Commission (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) will meet the requirements, except the design and access provisions and the preservice 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 inservice 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 ISI Code of record for Comanche Peak Steam Electric Station (CPSES), Unit 2, for the first 10-year ISI interval is the 1986 Edition of the ASME Code Section XI, 1999 and 2000 Addenda. The first ISI interval ended on August 2, 2004.

Pursuant to 10 CFR 50.55a(g)(5)(iv), where an examination requirement by code or addenda is determined to be impractical by the licensee and is not being included in the revised ISI program as permitted by paragraph (g)(4) of the section, the basis for the determination must

ENCLOSURE

be demonstrated to the satisfaction of the Commission not later than 12 months after the expiration of the initial 120 months period of operation from the start of facility commercial operation and each subsequent 120-month interval of operation during which examination is determined to be impractical

By letter dated March 10, 2005, TXU Generating Company LP (the licensee), requested relief under Relief Request Nos. B-12, B-13, B-14, and C-8 for Comanche Peak Steam Electric Station (CPSES) from the volumetric examination coverage requirements for examination categories C-A, C-B, B-B, and C-C welds. The NRC staff's evaluation of the licensee's March 10, 2005, application follows.

2.0 INSERVICE INSPECTION PROGRAM RELIEF REQUEST NO. B-12, VOLUMETRIC EXAMINATION LIMITATIONS FOR CODE CATEGORY C-A WELD

2.1 Code Requirements for which Relief is Requested

The 1986 Edition of ASME Code, Section XI, Table IWC-2500-1, Code Category C-A, Items C1.10 and C1.20, require a volumetric examination which includes 100 percent of the weld length, once during the 10-year interval.

2.2 Component for which Relief is Requested

Residual Heat Exchanger (2-01) Head to Shell Weld (TCX-2-1120-1-1)
Residual Heat Exchanger (2-01) Shell to Flange Weld (TCX-2-1120-1-2)

2.3 Licensee's Proposed Alternative to Code

No alternative offered by the licensee

2.4 Licensee's Basis for Relief

The licensee stated that for the two subject welds, TCX-2-1120-1-1 and -2, configuration is such that the examination coverage is limited by physical interferences from the residual heat removal (RHR) heat exchanger flange, flange bolts, and welded supports. Pursuant to the requirements of 10 CFR 50.55a(g)(5)(iii), the licensee seeks relief from performing the 100 percent volumetric examination requirements of the ASME Code. In order to gain access to these welds to obtain 100 percent coverage, a design modification would be necessary which the licensee considers impractical. Approximately 80 percent coverage was obtained for weld TCX-2-1120-1-1, and 63 percent coverage was obtained for TCX-2-1120-1-2 with no eportable indications noted for either of the two welds. The licensee indicated that it was confident that the high percentage of coverage obtained with no reportable indications represents continued structural integrity of the welds.

2.5 Evaluation

The 1986 Edition of the ASME Code, Section XI, Table IWC-2500-1, Code Category C-A, Items C1.10 and C1.20, requires a volumetric examination which includes 100 percent of the weld length, once during the 10-year interval. The examination volume is defined in Figure IWC-2500-1.

The staff review of the data submitted for the subject welds noted that obstructions to complete coverage were present by the design of the component, specifically, the proximity of the heat exchanger flange and bolting to the weld(s). A review of the data provided by the licensee noted that there were no recordable indications identified with the amount of inspection coverage obtained. The staff concludes from the information provided by the licensee that the 80 percent and 63 percent coverage obtained would have identified any pattern of degradation, should one develop, and that a change of component design would be necessary to obtain the increased coverage.

Based on the above discussion, the staff considers it impractical to redesign the subject welds in order to obtain the ASME Code required 100 percent volumetric examination coverage and that the examination coverage obtained provides reasonable assurance of the structural integrity of the welds.

2.6 Conclusion

The staff concludes that requiring the licensee to perform a design modification to obtain 100 percent coverage would result in a significant burden and that the examination performed provides adequate assurance of the continued structural integrity of the welds. Therefore, relief is granted pursuant to 10 CFR 50.55a(g)(6)(I) for the first ISI interval for Relief Request No. B-12, for CPSES, Unit 2. This grant of relief is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

3.0 INSERVICE INSPECTION PROGRAM RELIEF REQUEST NO. B-13, VOLUMETRIC EXAMINATION LIMITATIONS FOR CODE CATEGORY C-B WELDS

3.1 Code Requirements for which Relief is Requested

The 1986 Edition of ASME Code, Section XI, Table IWC-2500-1, Code Category C-B, Item C2.21 and Figure IWC-2500-4(b), requires a surface and volumetric examination which includes 100 percent of the weld length, once during the ten-year interval.

3.2 Component for which Relief is Requested

Residual Heat Exchanger (2-01) Inlet Nozzle to Shell Weld (TCX-2-1120-1-3)
Residual Heat Exchanger (2-01) Outlet Nozzle to Shell Weld (TCX-2-1120-1-4)

3.3 Licensee's Proposed Alternative to Code

No alternative offered by the licensee

3.4 Licensee's Basis for Relief

The licensee stated that for the two subject welds (TCX-2-1120-1-3 and -4), the configuration is such that the examination coverage is limited by physical interferences from the RHR heat exchanger. Pursuant to the requirements of 10 CFR 50.55a(g)(5)(iii), the licensee seeks relief from performing the 100 percent volumetric examination requirements of the ASME Code. In order to gain access to these welds to obtain 100 percent coverage, a design modification would be necessary which the licensee considers impractical. Approximately 67 percent coverage of the ASME Code required volume was obtained for the subject welds with no reportable indications noted. The licensee indicated that it was confident that the high percentage of coverage obtained with no reportable indications represents continued structural integrity of the welds.

3.5 Evaluation

The 1986 Edition of the ASME Code, Section XI, Table IWC-2500-1, Code Category C-B, requires both a surface and volumetric examination which includes 100 percent of the weld length, once during the 10-year interval. The examination volume is defined in Figure IWC-2500-4(b).

The staff review of the data submitted for the subject welds noted that obstructions to complete coverage were present by the design of the component, limiting the volumetric examination coverage during the single-sided axial examinations. A review of the data provided by the licensee noted that there were no recordable indications identified with the amount of inspection coverage obtained. The staff concludes from the information provided by the licensee that the 67 percent coverage obtained would have identified any pattern of degradation, should one develop, and that a change of component design would be necessary to obtain the increased coverage.

Based on the above discussion, the staff considers it impractical to redesign the subject welds in order to obtain the ASME Code required 100 percent volumetric examination coverage and the examination coverage obtained provides reasonable assurance of the structural integrity of the welds.

3.6 Conclusion

The staff concludes that requiring the licensee to perform a design modification to obtain 100 percent coverage would result in a significant burden and that the examination performed provides adequate assurance of the continued structural integrity of the welds. Therefore, relief is granted pursuant to 10 CFR 50.55a(g)(6)(I) for the first ISI interval for Relief Request No. B-13, for CPSES, Unit 2. This grant of relief is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

4.0 INSERVICE INSPECTION PROGRAM RELIEF REQUEST NO. B-14, VOLUMETRIC EXAMINATION LIMITATIONS FOR CODE CATEGORY B-B WELDS

4.1 Code Requirements for which Relief is Requested

The 1986 Edition of ASME Code, Section XI, Table IWB-2500-1, Code Category B-B, Item B2.40 and Figure IWB-2500-6, requires a volumetric examination which includes 100 percent of the weld length, once during the 10-year interval.

4.2 Component for which Relief is Requested

Steam Generator (2-03) Channel Head to Tubesheet Weld (TCX-1-3100-3-1)
Steam Generator (2-03) Channel Head to Tubesheet Weld (TCX-1-3100-4-1)

4.3 Licensee's Proposed Alternative to Code

No alternative offered by the licensee

4.4 Licensee's Basis for Relief

The licensee stated that for the two subject welds' (TCX-1-3100-3 -1 and 4-1) configuration limits the examination coverage by physical interferences from the steam generator tubesheet flange, supports, and welded support pads. Pursuant to the requirements of 10 CFR 50.55a(g)(5)(iii), the licensee seeks relief from performing the 100 percent volumetric examination requirements of the ASME Code. In order to gain access to these welds to obtain 100 percent coverage, a design modification would be necessary which the licensee considers impractical. Approximately 78 percent coverage of the ASME Code required volume was obtained for the subject welds with no reportable indications noted. The licensee indicated that it was confident that the high percentage of coverage obtained with no reportable indications represents continued structural integrity of the welds.

4.5 Evaluation

The 1986 Edition of the ASME Code, Section XI, Table IWB-2500-1, Code Category B-B, Item B2.40 and Figure IWB-2500-6 requires a volumetric examination which includes 100 percent of the weld length, once during the 10-year interval. The examination volume is defined in Figure IWB-2500-6.

The staff review of the data submitted for the subject welds noted that obstructions to complete coverage were present by the design of the component, limiting the volumetric examination coverage due to the support columns. A review of the data provided by the licensee noted that there were no recordable indications identified with the amount of examination coverage obtained. The staff concludes from the information provided by the licensee that the 78 percent examination coverage obtained would have identified any pattern of degradation should one develop and that a change of component design would be necessary to obtain the increased examination coverage.

Based on the above discussion, the staff considers it impractical to redesign the subject welds in order to obtain the ASME Code required 100 percent volumetric examination coverage and the examination coverage obtained provides reasonable assurance of the structural integrity of the welds.

4.6 Conclusion

The staff concludes that requiring the licensee to perform a design modification to obtain 100 percent coverage would result in a significant burden and that the testing performed provides adequate assurance of the continued structural integrity of the welds. Therefore, relief is granted pursuant to 10 CFR 50.55a(g)(6)(I) for the first ISI interval for Relief Request No. B-14, for CPSES, Unit 2. This grant of relief is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

5.0 INSERVICE INSPECTION PROGRAM RELIEF REQUEST NO. C-8, SURFACE EXAMINATION LIMITATIONS FOR CODE CATEGORY C-C WELD

5.1 Code Requirements for which Relief is Requested

The 1986 Edition of ASME Code, Section XI, Table IWC-2500-1, Code Category C-C, Item C3.20 and Figure IWC-2500-5, require a surface examination which includes 100 percent of the weld length, once during the 10-year interval.

5.2 Component for which Relief is Requested

Welded Attachment to the Main Steam Piping for Support, TCX-2-2400-H2

5.3 Licensee's Proposed Alternative to Code

No alternative offered by the licensee

5.4 Licensee's Basis for Relief

The licensee stated that the subject weld, TCX-2-2400-H2, examination area is limited by physical interferences from pipe whip restraint MS-2-004-906-C67W. Pursuant to the requirements of 10 CFR 50.55a(g)(5)(iii), the licensee seeks relief from performing the 100 percent surface examination requirements of the ASME Code. In order to gain access to these welds to obtain 100 percent examination coverage, a design modification would be necessary which the licensee considers impractical. Approximately 75 percent surface examination coverage was obtained for the subject weld with no reportable indications noted. The licensee indicated that it was confident that the high percentage of coverage obtained with no reportable indications represents continued structural integrity of the welds.

5.5 Evaluation

The 1986 Edition of ASME Code, Section XI, Table IWC-2500-1, Code Category C-C, Item C3.20 and Figure IWC-2500-5, require a surface examination which includes 100 percent of the weld length, once during the 10-year interval.

The staff review of the data submitted for the subject weld noted that obstructions to complete coverage were present by the design of the component, specifically, the close proximity of the weld to whip restraint MS-2-004-906-C67W. A review of the data provided by the licensee noted that there were no recordable indications identified from the magnetic particle surface examination with the amount of coverage obtained. The staff concludes from the information provided by the licensee that the 75 percent examination coverage obtained would have identified any pattern of degradation, should one develop, and that a change of component design would be necessary to obtain the increased coverage.

Based on the above discussion, the staff considers it impractical to redesign the subject weld in order to obtain the ASME Code required 100 percent surface examination coverage and that the examination coverage obtained provides reasonable assurance of the structural integrity of the weld.

5.6 Conclusion

The staff concludes that requiring the licensee to perform a design modification to obtain 100 percent coverage would result in a significant burden and that the testing performed provides adequate assurance of the continued structural integrity of the welds. Therefore, relief is granted pursuant to 10 CFR 50.55a(g)(6)(I) for the first ISI interval for Relief Request No. C-8, for CPSES, Unit 2. This grant of relief is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: T. Steingass
Date: July 8, 2005