

November 21, 2001

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES), UNIT 1 AND  
UNIT 2 - APPROVAL OF THE RELIEF REQUESTS TO IMPLEMENT  
AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) BOILER AND  
PRESSURE VESSEL CODE (CODE) CASE N-528-1 (TAC NOS. MB2247 AND  
MB2248)

Dear Mr. Terry:

By letter dated June 19, 2001, TXU Electric (the licensee) submitted relief requests from the administrative requirements of Section III of the ASME Code for CPSES, Unit 1 and Unit 2. The licensee proposes to apply Code Case N-528-1, "Purchase, Exchange, or Transfer of Material Between Nuclear Plant Sites." Code Case N-528-1 provides an alternative to certain administrative requirements of Section III of the ASME Code when materials used for safety-related replacement applications are obtained from other nuclear plant sites.

Application of the alternative requires ASME certification documentation to be transferred with the material to the licensee, who subsequently maintains this documentation. The receiving licensee is responsible for ensuring that the material is in conformance with all other Code requirements, applicable design requirements, its Appendix B quality assurance program, and other regulatory requirements and commitments.

The requirements imposed by Code Case N-528-1 provide reasonable assurance that the alternative provides an acceptable level of quality and safety, and is authorized by law in accordance with Title 10 of the *Code of Federal Regulations*, Section 50.55a(a)(3)(i). The

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alternative, however, may be applied only for the remainder of the licensee's current 10-year inservice inspection (ISI) interval for each unit and not for the operating life of the plant as requested by the licensee. The limiting of the duration for Code Case approval is in accordance with current U.S. Nuclear Regulatory Commission staff practice. Since the ISI Program is updated to a more recent Code Edition prior to the start of each new ISI interval as described in 10 CFR 50.55(a), it is unknown whether a particular Code case is appropriate for use, and therefore, it is accepted practice for licensees to resubmit Code Relief requests along with each new ISI Program update. Our safety evaluation is enclosed.

Sincerely,

***/RA by S. Dembek for/***

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

Docket Nos. 50-445 and 50-446

Enclosure: As stated

cc: See next page

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Docket Nos. 50-445 and 50-446

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\*No legal objection

ACCESSION NUMBER: ML012840517

OFFICE	PDIV-1/PM	PDIV-1/LA	OGC/NLO* w/changes	PDIV-1/SC	IQPB***
NAME	DJaffe**	DJohnson**	RHoeffling**	SDembek for RGramm	TQuay
DATE	11/21/01	11/21/01	11/06/01	11/21/01	10/03/01

OFFICIAL RECORD COPY

Comanche Peak Steam Electric Station

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST FOR RELIEF

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1 AND UNIT 2

SECOND 10-YEAR INTERVAL INSPECTION FOR UNIT 1

FIRST 10-YEAR INTERVAL INSPECTION FOR UNIT 2

DOCKET NOS. 50-445 AND 50-446

1.0 INTRODUCTION

By letter dated June 19, 2001, TXU Electric (the licensee) submitted relief requests from the administrative requirements of Section III of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) for Comanche Peak Steam Electric Station, Unit 1 and Unit 2. The licensee proposes to apply ASME Code Case N-528-1, "Purchase, Exchange, or Transfer of Material Between Nuclear Plant Sites." Code Case N-528-1 provides an alternative to certain administrative requirements of Section III of the ASME Code, imposed by IWA-4220 (IWA-7210 in Editions and Addenda prior to 1991 Addenda; IWA-4170 for the 1991 Addenda through the 1995 Edition, no Addenda), when materials used for safety-related replacement applications are obtained from other nuclear plant sites.

The relief requests propose to adopt Code Case N-528-1 as an alternative means of satisfying certain requirements of Section XI, Subarticle IWA-7210, "Code Applicability," with respect to the possession of a Certificate of Authorization or Quality System Certificate (Materials). This Safety Evaluation addresses the acceptability of this alternative.

2.0 BACKGROUND

2.1 Regulatory Requirements (Procurement)

Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50 contains the U. S. Nuclear Regulatory Commission's (NRC's) quality assurance and quality control regulations for procurement of items to be used in safety-related applications. The NRC has provided further guidance in Regulatory Guides (RGs) 1.33 and 1.123 (References 1 and 2, respectively). References 1 and 2 endorse American National Standards Institute (ANSI) Standards N18.7-1976 and N45.2.13-1976. For replacement parts, Reference 2 also specifically endorses Section 5.2.13 of ANSI N18.7-1976. These Standards supplement 10 CFR Part 50 Appendix B criteria in providing further guidance for procurement activities. This guidance, if properly implemented, provides a measure of assurance for the suitability of equipment for safety-related applications.

Criterion III, "Design Control," of Appendix B to 10 CFR Part 50 requires licensees to select and review for suitability of application materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems, and components. Criterion IV, "Procurement Document Control," requires that procurement documents specify the applicable requirements necessary to ensure functional performance. Criterion VII, "Control of Purchased Material, Equipment, and Services," requires licensees to assure that the following are sufficient to identify whether specification requirements for the procured material and equipment have been met: source evaluation and selection, objective evidence of quality, inspection of the source, and examination of products upon delivery. The process of ensuring compliance with 10 CFR Part 50, Appendix B, must include all those activities necessary to establish and confirm the quality and suitability of the procured material and equipment for its intended safety-related application.

## 2.2 Regulatory Requirements (ASME)

Section 50.55a, "Codes and standards," of 10 CFR Part 50 requires, in part, that each operating license for a boiling or pressurized water-cooled nuclear power facility be subject to the conditions in Section 50.55a(g), "Inservice inspection requirements." Inservice examination of components and system pressure tests conducted during successive 120-month inspection intervals must comply with the requirements of the latest edition and addenda of the ASME Code incorporated by reference in Section 50.55a(b). Section 50.55a(b) incorporates the 1995 edition of Section XI, Division 1, through the 1996 addenda.

## 2.3 Alternatives to Section XI Inservice Inspection Requirements

The regulations require that inservice inspection (ISI) of certain components be performed in accordance with Section XI of the ASME Code and applicable addenda, except where alternatives have been authorized or relief has been requested by the licensee and granted by the NRC pursuant to 10 CFR 50.55a, Section (a)(3)(i), (a)(3)(ii), or (g)(6)(i). These provisions provide for relief when the applicant demonstrates that (1) the proposed alternative would provide an acceptable level of quality and safety, (2) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, or (3) the Code requirements are impractical.

The ASME Boiler and Pressure Vessel Committee publishes a document entitled "Code Cases," which is updated every three years (Reference 3). Generally, the individual Code Cases that make up this document explain the intent of Code rules or provide for alternative requirements under special circumstances. Most Code Cases are eventually superseded by revision of the Code and then are annulled by action of the ASME.

RG 1.147 (Reference 4) lists those Section XI ASME Code Cases that are generally acceptable to the NRC staff for implementation in the ISI of light-water-cooled nuclear power plants. Code Cases that are not listed in Reference 4 require supplementary provisions on an individual plant basis to attain endorsement status. The NRC staff has not generally endorsed Code Case N-528 or N-528-1 by inclusion in Reference 4 and, consequently, its acceptability must be evaluated on an individual plant basis.

## 2.4 Affected ASME Code Requirements

Article IWA-7000 of Section XI of the ASME Code, 1986 edition, no addenda (Article IWA-4000, subsequent to the 1991 addenda) provides the rules and requirements for the specification and construction of items to be used for replacement. Replacement includes the addition of components, such as valves and pumps, and system changes, such as rerouting of piping. Subarticle IWA-7210 (IWA-4170) requires that an item to be used for replacement meet the original Construction Code (Section III of the Code) and existing design requirements.

Article NCA-3000 of Section III of the ASME Code defines the responsibilities of "N" Certificate Holders. Subarticle NCA-3700 defines the responsibilities of holders of Certificates of Authorization, which is generally the organization which performs the activities to place and attach components to their support structures. The responsibilities of "N" Certificate Holders include surveying, qualifying, and auditing suppliers of subcontracted services, including material suppliers and material manufacturers. When material suppliers or material manufacturers hold a Quality System Certificate (Materials), as defined in subarticle NCA-3800, the Certificate Holder does not need to survey or audit the supplier for work within the scope of the Quality System Certificate.

## 2.5 Code Case N-528-1

Code Case N-528-1 applies to metallic material (meeting the definition of IWA-9000) that is purchased, exchanged, or transferred between nuclear plant sites. Code Case N-528-1 provides an alternative to the specific administrative requirements of Section III that refer to possession of a Certificate of Authorization or Quality System Certificate (Materials). The case was approved by the ASME Boiler and Pressure Vessel Committee on May 7, 1999.

Code Case N-528-1 provides an alternative to the requirements of NCA-3700/NCA-3800 in that the responsibilities of the "N" Certificate Holder are, in fact, imposed on the supplying plant. All documentation required by NCA-3700/NCA-3800 are provided to the receiving plant with the material.

For material that has been fabricated in accordance with specific dimensional requirements in addition to those provided in a national standard (e.g., nonwelded valve bonnet or nonwelded pump casing), Code Case N-528-1 requires the receiving licensee to include in the evaluation of suitability, required by IWA-7220 (IWA-4150), an evaluation of the material for its intended application, including any differences that might affect form, fit, or function.

The receiving licensee shall obtain, and incorporate into its plant record system, certifying documentation that the subject material was purchased in accordance with the provisions of NCA-3700/NCA-3800 and maintained in accordance with the supplier's quality assurance program.

The receiving licensee shall also obtain and incorporate into its plant records system, certification provided by the supplier that the material was not placed in service, nor subject to any operation that might affect the mechanical properties of the material. The receiving licensee shall document, on the ASME Owner's Report for Inservice Inspection (Form NIS-2), each instance in which Code Case N-528-1 was applied.

### 3.0 EVALUATION

With the exception of ASME Code Section XI administrative requirements explicitly stated by Code Case N-528-1, the licensee makes no changes to its approved 10 CFR Part 50 Appendix B program or commitments to RGs. The licensee's quality assurance program conforms to the guidance provided by References 1 and 2.

With respect to 10 CFR Part 50 Appendix B criteria, Criterion VII provides the specific regulatory requirements for control of purchased material, equipment, and services. Criterion VII requires, in part, that

“Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures shall include provisions, as appropriate, for source evaluation [emphasis added] and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery. Documentary evidence [emphasis added] that material and equipment conform to the procurement requirements shall be available at the nuclear power plant or fuel reprocessing plant site prior to installation or use of such material and equipment. This documentary evidence shall be retained at the nuclear power plant or fuel reprocessing plant site and shall be sufficient to identify the specific requirements, such as codes, standards, or specifications, met by the purchased material and equipment....”

The licensee requests relief in the specific area of source evaluation. In effect, the supplying plant fulfills the regulatory requirement for source evaluation by originally procuring the material and documentation in conformance with Section III of the ASME Code and subsequently maintaining the material in accordance with its approved Appendix B quality assurance program. In addition, Code Case N-528-1 stipulates that the documentary evidence required by Criterion VII be transferred to the receiving licensee with the material and subsequently maintained by the receiving licensee.

Other regulatory procurement requirements continue to apply. The licensee is responsible for ensuring that the material is in conformance with all other Code requirements, applicable design requirements, its Appendix B program, and other regulatory requirements and commitments. The licensee is also responsible for ensuring that the item is suitable for the intended application and documenting this evaluation.

The licensee stated in the “Alternate Examination” paragraph of their June 19, 2001, letter that it “...will perform an evaluation of material which has been fabricated in accordance with specific dimensional requirements in accordance with IWA-7220 [IWA-4150] to determine its suitability for use in its intended application, including any differences that might affect form, fit, or function.” This proposed alternative provides an acceptable level of quality and safety.

### 4.0 CONCLUSIONS

The NRC staff has evaluated Code Case N-528-1 as an acceptable alternative to certain administrative requirements of Section III, when material is purchased, exchanged, or



transferred between nuclear plant sites. The Code Case requires that the material was originally procured in compliance with ASME Code, Section III requirements, maintained in conformance with an approved 10 CFR Part 50 Appendix B program, and not subject to any operation that might affect the mechanical properties of the material.

The licensee is responsible for ensuring that the received documentation is complete and in compliance with Code requirements, that the material meets the design requirements for the intended application, and that the material conforms to the licensee's Appendix B program and all other regulatory requirements and commitments.

These requirements provide reasonable assurance that the proposed alternative provides an acceptable level of quality and safety in accordance with 10 CFR 50.55a(a)(3)(i). Therefore, the alternative provided by ASME Code Case N-528-1 is considered acceptable; however, it is acceptable only for the remainder of the licensee's current 10-year ISI interval for each unit and not the operating life of the plant, as requested by the licensee. The limiting of the duration for Code Case approval is in accordance with current NRC staff practice. Since the ISI Program is updated to a more recent Code Edition prior to the start of each new ISI interval as described in 10 CFR 50.55(a), it is unknown whether a particular Code case is appropriate for use, and therefore, it is accepted practice for licensees to resubmit Code Relief requests along with each new ISI Program update.

#### REFERENCES

1. Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, 1978.
2. Regulatory Guide 1.123, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants," Revision 1, 1977.
3. American Society of Mechanical Engineers Boiler and Pressure Vessel Code, "1995 Code Cases," published July 1, 1995, and "1998 Code Cases," published July 1, 1998.
4. Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability -- ASME Section XI, Division 1," Revision 12, May 1999.

Principal Contributor: R. McIntyre

Date: November 21, 2001