



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Docket File

October 2, 1987

Docket Nos. 50-445
and 50-446

APPLICANT: Texas Utilities Electric Company (TU Electric)
FACILITY: Comanche Peak Steam Electric Station, Units 1 and 2
SUBJECT: SUMMARY OF MEETING ON AUGUST 25, 1987 - CPSES FSAR
CHANGES PIPING DESIGN

On August 25, 1987 the NRC staff and its consultants met with representatives of TU Electric (Applicant) and their contractors at the offices of Stone & Webster Engineering Corporation (SWEC) in Cherry Hill, New Jersey. The meeting notice and a list of meeting attendees are provided as Enclosures 1 and 2, respectively. The purpose of the meeting was to discuss the staff technical review of Amendment 61 of the Comanche Peak Steam Electric Station (CPSES) Final Safety Analysis Report (FSAR) related to changes to the piping design criteria. The changes to the piping design criteria previously used by Gibbs & Hill, Inc. reflected the alternative analytical methods used by SWEC in its piping requalification effort and were initially discussed in a meeting held in the NRC (Bethesda) offices on August 28, 1986.

The staff reviewed the technical acceptability of the FSAR changes and the use of specific ASME Code Cases and later Code provisions as permitted in paragraph NA-1140(f) of the ASME Boiler & Pressure Vessel Code, Section III. The staff review of the use of ASME Code Cases and later Code provisions focused primarily on the technical justifications provided in the applicant's report entitled, "Documentation of ASME III NA-1140 Review for Piping and Supports," Revision 1, dated August 10, 1987 (Enclosure 3). This report documented the applicant's review performed in order to ensure that the use of design criteria in CPPP-7* is in conformance with NA-1140(f) of the Code and, in particular, that all related Code requirements are met. The Code of Record for CPSES piping is the ASME Boiler and Pressure Vessel Code Section III, 1974 Edition, including Summer 1974 Addenda Subsections NC/ND. The Code of Record for CPSES pipe supports is the 1974 Edition including Winter 1974 Addenda Subsection NF.

The representatives from SWEC presented an overview of the piping design criteria changes which is provided in Enclosure 4 to this memorandum.

As a result of discussions with the applicant, the staff identified several unresolved items where additional information and further staff review is required as discussed below.

*CPPP-7, "Design Criteria for Pipe Stress and Pipe Supports," Revision 3, dated February 23, 1987.

1. Flexibility and Stress Intensification Factors (1983 Edition-Winter 1984 Addenda Subparagraph "NC/ND-3673.2(b)")

The SWEC piping stress analysis used the later Code provision for stress intensification factors (SIF) for branch connections, butt welds, and socket welds. An independent review by S. E. Moore was documented in a paper entitled, "ASME Code Stress Intensification Factors for Comanche Peak Steam Electric Station Units 1 and 2." The staff has not yet completed its review of the S. E. Moore paper. Upon completion of that review, the staff will discuss the acceptability of the paper in a safety evaluation.

2. Overall Review of Related Code Requirements

The staff will continue its review of related requirements affected by later Code provisions.

Upon completion of review in this area, the staff will provide its conclusions in a safety evaluation.

3. Intervening Elements in Relation to Jurisdictional Boundaries (1980 Edition Paragraph NF-1133)

This Code provision allowed non-support items in the component support load path when designed to other standards. The staff required additional information about where this Code provision was applied and how the Owner ensured that the intervening elements are adequately designed.

4. Minimum Required Hydrostatic Test Pressure (1974 Edition-Winter 1975 Addenda Paragraph NC-6221)

The Winter 1975 Addendum revised the minimum post-installation hydrostatic test pressure from 1.5 times to 1.25 times the design pressure. The staff questioned how and where this later Code provision would be implemented.

5. Design Requirements for Welds on Linear Supports (1980 Edition-Winter 1982 Addenda Paragraph NF-3324.5)

The staff raised a question concerning design requirements for welds on plate-and-shell supports. SWEC stated that plate-and-shell supports are not used in pipe support design. The staff will follow-up this item as part of its implementation review.

6. Lamellar Tearing (1977 Edition-Winter 1978 Addenda Paragraph XVII-2211, Paragraph NF-3321.1, Paragraph NF-3226)

This Code provision had been revised to reduce the potential for Lamellar tearing. The applicant controls the potential for lamellar tearing through ultrasonic examinations in susceptible welds. The staff requested three (3) examples of moment limiting components where UT had been performed and the UT results.

7. Building Settlement Loads on Piping

The FSAR Table 3.9B-18 was revised to delete "single non-repeated anchor movements due to building settlement." The staff requested technical justification for deleting this loading condition.

The applicant is in the process of responding to the above unresolved staff questions. The staff will conduct a follow-up public meeting with the applicant to discuss their responses. The resolutions to these items will be addressed in a future audit report or safety evaluation.

Original signed by

David Terao
Comanche Peak Project Division
Office of Special Projects

Enclosures:

1. Meeting Notice
2. List of Meeting Attendees
3. Report entitled "Documentation of ASME III
NA-1140 Review for Piping and Supports,"
Revision 1, dated August 10, 1987
4. Meeting Agenda dated August 25, 1987

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Units 1 and 2

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August 17, 1987

MEMORANDUM FOR: Christopher I. Grimes, Director
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Office of Special Projects

THRU: Hans E. Schierling, Assistant Director
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Office of Special Projects

FROM: Annette Vietti-Cook, Project Manager
Comanche Peak Project Division
Office of Special Projects

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	Consultants (Teledyne)	

Annette Vietti-Cook, Project Manager
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cc: See next page

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ENCLOSURE 2

CPSES FSAR CHANGES RELATED TO PIPING DESIGN CRITERIA
MEETING ON AUGUST 25, 1987

List of Attendees

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D. M. Rencher

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