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William J. Cahill, Jr.
Group Vice President

October 23, 1992

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES) - UNIT 2
DOCKET NO. 50-446
ADVANCE FSAR SUBMITTAL - UNIT 2 ASME CODE CASE USAGE

Gentlemen:

The attachment to this letter provides an advance CPSES FSAR submittal to facilitate NRC Staff review of the subject area in support of licensing Unit 2. The attachment is organized as follows:

1. A description/justification of each change.
2. A copy of the revised FSAR pages (changes are indicated in the margin by the word "draft").

The attached material will be incorporated in CPSES FSAR Amendment 87 which is currently scheduled for December, 1992. If you have any questions regarding this submittal, please contact Mr. Carl Corbin at (214) 812-8859.

Sincerely,

William J. Cahill, Jr.
William J. Cahill, Jr.

By: *Roger D. Walker*
Roger D. Walker
Manager of Regulatory
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CBC
Attachment

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DETAILED DESCRIPTION

FSAR Page
(as amended)

Description

3.7B-4	2	<p>Added the required details concerning usage of ASME Code Case N-411 for Unit 2.</p> <p>Update :</p> <p>In accordance with the provisions of Regulatory Guide 1.84, the required details are provided regarding the usage of Code Case N-411 for Unit 2.</p> <p>FSAR Change Request Number : SA-92-781.1</p> <p>Commitment Register Number :</p> <p>Related SER : 3.7.1 SSER :25</p> <p>SER/SSER Impact : No</p>
3.9N-76	2	<p>Added the required details concerning usage of ASME Code Case N-318 for Unit 2.</p> <p>Update :</p> <p>In accordance with the provisions of Regulatory Guide 1.84, the required details are provided regarding the usage of Code Case N-318 for Unit 2.</p> <p>FSAR Change Request Number : SA-92-805.1</p> <p>Commitment Register Number :</p> <p>Related SER : 3.9.3 SSER :25</p> <p>SER/SSER Impact : No</p>
Table 3.9B-1F	2	<p>Added the required details concerning usage of ASME Code Case N-318 for Unit 2.</p> <p>Update :</p> <p>In accordance with the provisions of Regulatory Guide 1.84, the required details are provided regarding the usage of Code Case N-318 for Unit 2.</p> <p>FSAR Change Request Number : SA-92-781.2</p> <p>Commitment Register Number :</p> <p>Related SER : 3.9.3 SSER :25</p> <p>SER/SSER Impact : No</p>
Table 3.9B-1F	2	<p>Added the required details concerning usage of ASME Code Case N-318 for Unit 2.</p> <p>Update :</p> <p>In accordance with the provisions of Regulatory Guide 1.84, the required details are provided regarding the usage of Code Case N-318 for Unit 2.</p> <p>FSAR Change Request Number : SA-92-805.2</p> <p>Commitment Register Number :</p> <p>Related SER : 3.9.3 SSER :25</p> <p>SER/SSER Impact : No</p>

3.7B.1.3 Critical Damping Values

77 The specific percentages of critical damping values used for Category I structures, systems, and components are based on the materials, stress levels, and type of connections of the particular structure or component. They are determined in accordance with the recommendations of NRC Regulatory Guide 1.61 and Reference [14]. For piping systems analyzed by the response spectrum method, ASME Code Case N-411 damping values may also be used in lieu of the damping values in Regulatory Guide 1.61.

DRAFT Structure and component damping values used in the response spectrum and time history analyses are given in Table 3.7B-1. With the exception of piping stress analysis problem number 1.081, all non-NSSS piping stress analysis of safety related piping at CPSES utilizes Code Case N-411. This includes all analysis of new piping and support optimization work, as well as all pipe stress reconciliation work. Damping factors associated with foundation springs are discussed in 78 Section 3.7B.2.4. Damping values used for qualifying Westinghouse 78 piping and equipment are shown in Section 3.7N.

3.7B.1.4 Supporting Media for Seismic Category I Structures

All seismic Category I structures are founded on the firm, unweathered Glen Rose Limestone which constitutes the principal bedrock formation on the site.

Below the Glen Rose unit lies the Twin Mountains Formation, which forms a gradational contact with the Glen Rose unit and is composed principally of sandstone, limestone, and clay stone. The portion of the Glen Rose unit which provides the founding material for the Category I structures consists of argillaceous limestone with lenses and zones of calcereous clay stone. Approximately 150 to 160 ft of

3.9N.3.1.1 Design Loading Combinations

DRAFT

The design loading combinations for ASME Code Class 2 and 3 components and supports are given in Table 3.9N-4. The design loading combinations are categorized with respect to normal, upset, emergency, and faulted conditions. Stress limits for each of the loading combinations are component oriented and are presented in Tables 3.9N-5, 3.9N-6, 3.9N-7, and 3.9N-8 for tanks, inactive* pumps, active pumps, and valves, respectively. Active** pumps and valves are discussed in Section 3.9N.3.2. The component supports are designed in accordance with the ASME Code, Section III, Subsection NF. Details regarding the application and usages of Code Case N-318 are as listed in Table 3.9B-1F.

For core support structures, design loading conditions are given in Section 4.2.2.3. Loading conditions are discussed in Section 4.2.2.4.

In general, for reactor internals components and for core support structures the criteria for acceptability in regard to mechanical integrity analyses are that adequate core cooling and core shutdown must be assured. This implies that the deformation of the reactor internals must be sufficiently small so that the geometry remains substantially intact. Consequently, the limitations established on the internals are concerned principally with the maximum allowable deflections and stability of the parts in addition to a stress criterion to assure integrity of the components.

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- * Inactive components are those whose operability are not relied upon to perform a safety function during the transients or events considered in the respective operating condition category.
 - ** Active components are those whose operability is relied upon to perform a safety function (as well as reactor shutdown function) during the transients or events considered in the respective operating condition categories.

CPSES/FSAR
TABLE 3.9B-1F
(Sheet 2)

USES OF CODE CASE N-318

PIPE SUPPORT MARK NUMBER	TYPE OF WELD	NUMBER OF SIDES WELDED	78
AF-1-102-107-S33R	FILLET	THREE	78
FW-1-017-717-S525	FILLET	THREE	78
FW-1-102-700-C62R	FILLET	TWO	78
CT-1-013-405-C82S	FILLET	THREE	78
CC-1-050-7C1-A43R	PARTIAL PENETRATION	THREE	78
CT-1-074-411-C82R	FILLET	TWO	78
CT-1-039-443-C42K	FILLET	TWO	78
FW-2-018-441-C72R	FULL PENETRATION	TWO	DRAFT
AF-2-006-402-S33R	FILLET	THREE	DRAFT
CT-2-046-015-C92K	FILLET	THREE	DRAFT
CT-2-013-432-C52S	FILLET	THREE	DRAFT
CT-2-013-403-C72S	FILLET	THREE	DRAFT
CT-2-013-442-C82S	FILLET	THREE	DRAFT
CC-2-195-408-C52R	FILLET	TWO	DRAFT
CC-2-077-403-S43S	FILLET	TWO	DRAFT
SI-2-095-403-S42R	FILLET	TWO	DRAFT
H-FW-2-SB-023-003-5	FILLET	TWO	DRAFT
H-PS-2-RB-007-011-2	FILLET	TWO	DRAFT
H-MS-2-RB-011-005-2	FILLET	TWO	DRAFT
SI-2-051-415-C42K	FILLET	TWO	DRAFT
SI-2-051-421-C42R	FILLET	THREE	DRAFT
SI-2-095-415-C42R	FILLET	THREE	DRAFT
SI-2-087-416-C42K	FILLET	TWO	DRAFT
SI-2-306-404-C42R	FILLET	TWO	DRAFT
SI-2-306-416-C42R	FILLET	TWO	DRAFT
SI-2-306-420-C42R	FILLET	THREE	DRAFT

CPSES/FSAR
TABLE 3.9B-1F
(Sheet 3)

USES OF CODE CASE N-318

PIPE SUPPORT MARK NUMBER	TYPE OF WELD	NUMBER OF SIDES WELDED	78
CS-2-001-454 C42S	FILLET	TWO	DRAFT
CS-2-079-408-C42S	FILLET	TWO	DRAFT
CS-2-079-409-C42S	FILLET	TWO	DRAFT
CS-2-RB-022-703-2	FILLET	TWO	DRAFT
CS-2-079-431-C42K	PARTIAL PENETRATION	TWO	DRAFT
CS-2-RB-003-709-2	FILLET	TWO	DRAFT
PS-2-RB-024-003-2	FILLET	TWO	DRAFT
H-CH-2-SB-051-007-3	FILLET	THREE	DRAFT
H-CH-2-SB-051-008-3	FILLET	THREE	DRAFT
H-CH-2-SB-041-017-E	FILLET	THREE	DRAFT
H-CH-2-SB-042-010-3	FILLET	THREE	DRAFT
H-CH-2-SB-044-009-3	FILLET	THREE	DRAFT
H-CH-2-SB-039-001-3	FILLET	THREE	DRAFT
H-CH-2-SB-043-011-3	FILLET	TWO	DRAFT
H-CH-2-SB-044-006-3	FILLET	TWO	DRAFT
H-CH-2-SB-044-007-3	FILLET	TWO	DRAFT
H-CH-2-SB-046-003-3	FILLET	TWO	DRAFT
H-CH-2-SB-046-009-3	FILLET	TWO	DRAFT
H-RC-2-SB-007-001-3	FILLET	TWO	DRAFT
H-RC-2-AB-001-016-3	FILLET	TWO	DRAFT
H-PS-2-RB-017-007-2	FILLET	TWO	DRAFT
H-CH-2-SB-043-012-3	FILLET	TWO	DRAFT
H-CH-2-SB-044-003-3	FILLET	TWO	DRAFT
H-CH-2-SB-046-007-3	FILLET	TWO	DRAFT

CPSES/FSAR
TABLE 3.9B-1F
(Sheet 4)

USES OF CODE CASE N-318

PIPE SUPPORT MARK NUMBER	TYPE OF WELD	NUMBER OF	
		SIDES WELDED	78
H-PS-2-RB-010-003-2	FILLET	TWO	DRAFT
H-PS-2-RB-010-014-2	FILLET	TWO	DRAFT
H-PS-2-RB-010-016-2	FILLET	TWO	DRAFT
RC-2-097-403-C86S	FILLET	TWO	DRAFT
RC-2-115-417-C76S	FILLET	TWO	DRAFT
RC-2-115-419-C66K	FILLET	THREE	DRAFT
H-RC-2-SB-007-001-3	FILLET	TWO	DRAFT
H-RC-2-AB-001-016-3	FILLET	TWO	DRAFT