

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
TEXAS UTILITIES ELECTRIC)	Docket Nos. 50-445 and
COMPANY, <u>et al.</u>)	50-446
)	
(Comanche Peak Steam Electric)	(Application for
Station, Units 1 and 2))	Operating Licenses)

APPLICANTS' STATEMENT OF MATERIAL FACTS
AS TO WHICH THERE IS NO GENUINE ISSUE

1. Seismic loading is the design determining force for virtually all piping supports of concern at CPSES. Affidavit of J.C. Finneran, R.C. Iotti and R.D. Wheaton Regarding Safety Factors ("Affidavit") at 3.
2. A conservatively quantified margin of safety associated with some factors affecting seismic design is on the order of 46 (Id. at Table 2, p. 43) and consists of the following items:
 - a. Seismic Hazard Evaluation - 2.4 (Id. at 9-10)
 - b. Composite Ground Motion - 1.5 (Id. at 10-11)
 - c. Synthetic Time-History - 1.2 (Id. at 11-12)
 - d. Site-Structure Interaction Analysis - 1.5 (Id. at 18-21)
 - e. Damping - 1.38 (Id. at 22-25)
 - f. Uncoupled Analysis - 1.1 (Id. at 25-26)
 - g. Envelope Support Excitation Approach - 1.1 (Id. at 27-28)

- h. Broadened Floor Response Spectra - 1.1 (Id. 28-29)
 - i. Orthogonal Input Motions - 1.1 (Id. at 29-30)
 - j. Modal Combination Rules - 1.2 (Id. at 30-32)
 - k. Material Overstrength - 1.8 (Id. at 35-36)
 - l. Static Reserve Strength (Code Margin) - 1.43 to 10.41
(assume 1.43 for calculation) (Id. at 36)
 - m. Dynamic Reserve Strength - 1.5 (Id. at 37)
3. Additional design margins of safety which exist and add an additional level of margin, but were not quantified and set forth in 4 above, include the following:
- a. Enveloping of SSI Results (Id. at 21-22)
 - b. Inelastic Deamplification (Id. at 32-34)
 - c. Oversized Members (Id. at 37-38)
 - d. Redundancy (Id. at 4-5)
4. Numerous studies of the effects of seismic events on major structures support the conclusion that seismic design margins are significant. Id. at Attachment 2.
5. Loads from sources other than a seismic event (i.e., static and other dynamic loads) are generally well known, and in many instances the impacts of such loads are tested, e.g., hydrostatic tests, hot functional tests, and operational tests. See e.g., Chapter XIV of the FSAR for a list of tests that have been and will be conducted. Id. at 3-4.
6. Many safety margins which apply to seismic design apply equally well to static and other dynamic loads. Id.

7. The minimum safety factor conservatively quantified for dynamic loads other than those resulting from a seismic event is on the order of 5.0 (Id. at 41) and includes the specific factors noted in items 2e, f, i, j, k, l and m, above. Id. This safety factor does not include margins inherent in the computation of dynamic loads. Id.

8. The minimum safety factor conservatively quantified for static loads is 1.68 (Id. at 41) and includes the specific factors noted in items 2k and l, above. Id.