UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

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

1. A properly designed welded connection also requires the training, experience and skill of the design engineer to provide structural design adequacy. Considering the infinite variety and combination of welded joints or connection configurations together with types of welds possible, no published standard can possibly cover all possibilities. In the final analysis, the engineer designing the weld joint must be relied upon to assure the structural adequacy of the design. Affidavit of J.C. Finneran, R.C. Iotti And J.D. Stevenson Regarding Allegations Involving AWS vs. ASME Code Provisions from ("Code Affidavit") at pp. 3-4.

2. AWS Code requirements regarding multiplication and reduction factors for skewed T-weld joints are contained in Appendix B of the AWS Code, which sets forth limitations on effective throat thickness for fillet welds in skewed T-joints designed in accordance with the AWS Code. This is but one of the parameters

effecting the load capacity of the joint. While the ASME Code does not have explicit requirements governing this area, compensatory requirements provide assurance of acceptable design conditions regarding load carrying capacity. Id. at p. 4.

3. Documentation to the QA Group in August 1982 reflects that weld designers at CPSES were using considerations virtually identical to that noted in Appendix B of AWS D1.1 regarding effective throat thickness for skewed T-joint welds. Id. at p. 6.

4. An evaluation was conducted by Applicants to verify the adequacy of design measures regarding skewed T-joint welds. The evaluation reflected that in all cases these joints met or exceeded the load capacities required by AWS. Indeed, the highest stressed weld evaluated was only stressed to 39 percent of AWS allowables. Id.

5. The SIT Report at p. 51, after an analysis of skewed T-joints, also concluded that "the design procedures being utilized by the three pipe support design groups for skewed joints are based on sound engineering practice." Id. at p. 7.

6. The AWS Code requirement regarding the limitation on angularity for skewed "T" joints is set forth in Section 2.7.1.4 of AWS D1.1. This Section establishes angle limitations for fillet welds used in skewed T-joints. These limitations do not

apply to welds qualified by test. Both the AWS D1.1 and ASME Codes permit weld procedures without such limitations provided the weld procedure used is qualified by test. Id.

7. Applicants' design practices regarding limitation on angularity for skewed T-joint welds, as set forth in CPPA-22,616, are virtually identical to those set forth in the AWS Code regarding this issue. Id.

8. ASME Code provisions provided compensatory measures to assure the adequacy of skewed T-joint welds. Id.

9. The AWS Code provisions regarding punching shear are part of empirically derived equations which take into consideration numerous other factors (e.g., axial and bending stresses in the main member) See Section 10.5.1 of the AWS Code.

10. AWS punching shear analysis requirements were introduced to deal with large tubular structures (e.g., offshore platform supports) with relatively large flange width to flange thickness ratios. These conditions do not apply to relatively small tubular members used in pipe supports at CPSES. Accordingly, punching shear is not a significant problem at CPSES. Code Affidavit at p. 8.

11. To provide assurance that punching shear was not a problem, Applicants performed a punching shear evaluation of twelve tubular pipe supports (both stepped and matched connections) selected from the worst cases provided in Case Exhibit 669B. The

evaluation reflected that in no instance was punching shear a problem, and the highest ratio of actual stress from punching shear to the AWS allowable was .57. Id. at p. 9.

12. The adequacy of Applicants' designs regarding local stress effects (e.g., punching shear) was evaluated by the SIT, and based on a sample of 100 vendor certified supports, were found to be acceptable. (See SIT Report at pp. 54-58, item 4.)

13. The AWS requirements regarding design of tube-to-tube joints with beta equal to 1.0 are set forth in Section 10.5.1.1 of AWS D1.1. Code Affidavit at p. 9.

14. The capacity of tube-to-tube connections with beta equal to one is also addresed in the ASME Code in NF Appendix XVII (paragraph 2261.2) of Section III in a manner substantially similar to the AWS Code. Id. at p. 11.

15. The ASME Code provision regarding tube-to-tube connections are requirements for applicable welding at CPSES. Id.