

July 3, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

APPLICANTS' STATEMENT OF MATERIAL FACTS
AS TO WHICH THERE IS NO GENUINE ISSUE
REGARDING APPLICANTS' QUALITY ASSURANCE
PROGRAM FOR DESIGN OF PIPING AND PIPE
SUPPORTS FOR COMANCHE PEAK STEAM ELECTRIC STATION

1. Each of the responsible design organizations for piping and supports at Comanche Peak has established procedures to implement the provisions of 10 C.F.R. Part 50, Appendix B and ANSI N45.2.11 to their respective applicable functions in the piping and support design process. (Affidavit Table IV.1)
2. Regulatory requirements and licensing commitments set forth in the license application are incorporated into design specifications by Gibbs & Hill for Comanche Peak for both piping (Class 2 & 3) and supports. These specifications are transmitted to the responsible design organizations for incorporation in their design process. Similarly, Westinghouse has established a specification for the design

of Class 1 (and Class 1 extension) piping. Westinghouse employed the Gibbs & Hill specification in its design of non-Class 1 auxiliary piping. (Affidavit at 16 (G&H), 25-26(W).)

3. Each of the pipe support design organizations has incorporated the Gibbs & Hill specification applicable to the design of pipe supports into their design process. This specification is incorporated into each organization's designs (including drawings, procedures, instructions and guidelines as appropriate) in accordance with established procedures. (Affidavit at 32-33 (NPS), 39 (ITTG) and 43-44 (PSE).)
4. Each design organization has implemented design control measures which include verification and/or checking of the adequacy of each design, including the initial design of the piping or support prior to release of the design for construction. These measures include documentation of the design reviewer's findings and correction of the deficiencies by the original designer. Each design organization also requires that the person performing design review may not be the same person who performed the original design, although he may be part of the same organization as the original designer. (Affidavit at 20-22 (G&H), 30 (W), 35-37 (NPS), 40-41 (ITTG), and 46-48 (PSE).)

5. During the course of construction of the piping and support system changes in design of supports are virtually unavoidable. Implementation of the changes are governed by established procedures and instructions. The most commonly employed method to implement such changes is through Component Modification Cards ("CMCs"). These changes are subject to design review, verification and approval in accordance with procedures commensurate with the design review process employed in the original design. With respect to design changes not initiated by field modifications, each organization also conducts design reviews of the change in a manner commensurate with the procedures for new designs. The design change control process for each organization provides that the organization which performed the original design to also perform the design review of the design changes. (Affidavit at 50-56.)
6. The as-built certification process for piping and support design provides assurance that the piping and support designs at Comanche Peak incorporate all design changes and that additional piping and support analyses are performed, as necessary, to assure the adequacy of the as-built designs. These design changes are also subject to design review in a manner commensurate with the design control measures applicable to initial designs. (Affidavit at 56-63.)

7. Nonconforming conditions identified in materials, parts or components through inspections conducted in accordance with Criterion XV may, in fact, have resulted from deficiencies or errors in design. However, the QC inspector who performs such inspections is not expected or required to recognize that the cause of such a deficiency is a design error. He accepts or rejects the item based on applicable acceptance criteria established by others. (Affidavit at 68-69.)
8. In accordance with Criterion III, design deficiencies such as incorrect design assumptions or errors in calculations would be detected through design verification or checking of design documentation. Such verification or checking is performed by persons with appropriate engineering knowledge. (Affidavit at 70.)
9. Identification of recurring errors is inherent in each organizations' design process. Each supervisor and design reviewer is aware of the importance of identifying recurring errors. Also, a limited number of engineers are designated as checkers to perform design review and, therefore, can readily identify recurring errors either on their own or in discussions with each other. In addition, communications between the checkers and Supervisors and actual review of the design packages by Supervisors enable them to promptly identify recurring errors. (Affidavit at 72.)

10. Each design organization is subject to an internal audit process which provides assurance that its design quality assurance program is being properly implemented. Each of the design organizations performs its audits in accordance with written procedures and/or checklists. The audits are performed by appropriately trained audit personnel who have no direct responsibility for the activities being audited. Audit results are reviewed by management personnel and follow-up action taken, as necessary. In fact, each of the design organizations has been extensively audited by their respective organization's QA department. Each of these organizations has also been audited by the TUGCO Quality Assurance Department. (Affidavit at 22-25(G&H), 26, 30-32(W), 37-39(NPS), 41-43(ITTG) and 48-49(PSE).)
11. Each organization performs review and verification of design and analysis methods in addition to the formal audit and design review process to assure the technical adequacy of that work. In some instances measures for technical "audits" of the design process have also been established. These technical "audits" are designed to identify technical deficiencies in the design activities. (Affidavit at 23(G&H), 30(W), 38-39(NPS), 42-43(ITTG) and 48-49(PSE).)
12. Prompt identification and correction of design errors is accomplished primarily through the design verification and/or checking process. This activity is performed for both original designs, design changes and through the as-

built certification process. (Affidavit at 20-22(G&H), 30(W), 35-37(NPS), 40-41(ITTG) and 46-48(PSE); 50-56, 56-63.)

13. Each organization has established procedures for the indoctrination and training of personnel employed in their design organizations. Through this process individuals are informed of the requirements for reporting potential deficiencies in accordance with the requirements of 10 C.F.R. Part 50, Appendix B, 10 C.F.R. §50.55(e) and 10 C.F.R. Part 21. Those individuals are held responsible for adherence to those requirements. This assures that persons using design documents, even those without any responsibility for design, have a responsibility and are able to identify possible design deficiencies. (Affidavit at 99-100.)
14. Each piping and support design organization has established procedures to provide assurance that significant conditions adverse to quality, as well as recurring errors or deficiencies, are reviewed to determine the cause of the conditions (including an assessment for generic implications) and that corrective action is taken to preclude repetition. These procedures provide for the documentation of potentially significant deficiencies. (Affidavit at 74-75(PSE), 79(ITTG), 83-84(NPS), 90-91(W) and 94-96(G&H).)

15. Each of the design organizations performing work for Applicants has established procedures which require the evaluation of potentially significant deficiencies for reportability pursuant to 10 C.F.R. Part 21. (Affidavit at 81(ITTG), 86-87(NPSI), 90-91 (W) and 94-95 (G&H).)
16. NRC audit findings regarding NPS weld designs were promptly addressed by NPS and corrective action taken to preclude the repetition of the deficiency. This corrective action included the modification of NPS procedures to assure satisfaction of design control measures applicable to activities performed for Comanche Peak. (Affidavit at 87-88.)

Further, added assurance of the adequacy of the welds designed by NPS, as well as other welds performed on ASME component supports regardless of the designer, is provided by ASME weld inspections which are reviewed and verified in the N-5 certification process. (Affidavit at 89-90.)