

November 24, 1981

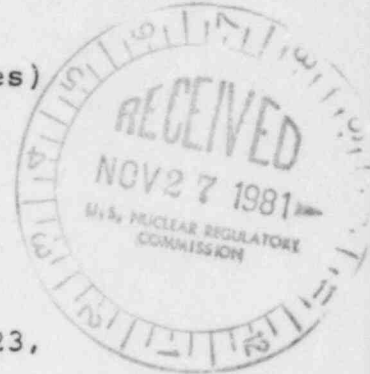
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD*81 NOV 25 A9:39

In the Matter of)	
)	
TEXAS UTILITIES GENERATING)	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)

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APPLICANTS' TRIAL BRIEF ON
CONTENTIONS 9, 25
AND BOARD QUESTION 2

Pursuant to the Board's Scheduling Order of July 23, 1981, Texas Utilities Generating Co., et al. ("Applicants"), hereby submit their trial brief on Contentions 9 and 25 and Board Question 2. 1/ These issues are scheduled to be addressed at a hearing commencing December 2, 1981. Contentions 9 and 25 concern (1) the effect of potential radioactive gaseous releases on the public, and (2) the Applicants' financial qualifications to operate Comanche Peak, respectively. Board Question 2 concerns the Applicants' operating quality assurance program.

1/ The Applicants and Intervenor Citizens for Fair Utility Regulation ("CFUR") entered into a Stipulation concerning Contention 9 on November 20, 1981, whereby CFUR agreed to withdraw the Contention. If the Board accepts the Stipulation and permits withdrawal of Contention 9 it will not be necessary to litigate it. In addition, motions are pending for summary disposition of Contentions 9 and 25. Board approval of the Stipulation on Contention 9 and/or summary disposition of that Contention or Contention 25 will eliminate those matters at the hearing.

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I. APPLICANTS' CASE ON CONTENTION 9

A. Contention 9

On June 16, 1980, the Board issued its Order Subsequent to the Prehearing Conference of April 30, 1980, in which it admitted Contention 9 (sponsored by CFUR), as follows:

Applicants have failed to make any effort to determine the effect of radioactive releases on the general public other than at the exclusion boundary. Various transport mechanisms may cause, in certain cases, the bulk of the health effects to occur some distance from the exclusion boundary.

On November 19, 1981, CFUR moved that Contention 9 be reworded as follows:

Applicants have failed to make any reasonable efforts to maintain radiation exposure to unrestricted areas as low as reasonably achievable.

Applicants assume that Contention 9 will be dismissed pursuant to the Stipulation executed by CFUR and Applicants on November 20. If Contention 9 is not dismissed, Applicants will demonstrate at the hearing that they have properly calculated, in accordance with applicable NRC regulations and guidance, the estimated doses to individuals and the population as a whole resulting from gaseous radioactive releases from Comanche Peak under both normal operating conditions and following anticipated transients or off-normal conditions. Applicants' calculations of these estimated

doses will be shown to be based on appropriate atmospheric transport and diffusion models.

B. Requirements Governing Gaseous Radioactive Effluents

NRC requirements governing releases of gaseous radioactive effluents provide that in addition to complying with the specific limits set forth in 10 CFR § 20.106 regarding the concentrations of radioactivity in effluents to unrestricted areas, the licensee should make every reasonable effort to maintain the level of radioactivity in those effluents as low as is reasonably achievable ("ALARA"). 10 CFR §§ 20.1(c), 50.34a and 50.36a. Also, Appendix I of 10 CFR Part 50 provides numerical guides for radioactive effluent design objectives and limiting conditions for operation for light-water cooled nuclear power reactors to meet the ALARA standard. Dose limits applicable to postulated releases following a hypothetical accident are set forth in 10 C.F.R. §100.11.

To implement Appendix I, the NRC Staff has developed a series of guides that set forth acceptable methods for calculating dispersion of gaseous releases and estimating the resultant doses to man. Regulatory Guide 1.111 describes the atmospheric transport and dispersion models applicable to determining effluent concentrations from routine releases. Meteorological data to be used in these calculations is to be gathered in an onsite meteorological program as described in Regulatory Guide 1.23. In addition, the models and

assumptions for estimating doses from those calculated effluent concentrations are set forth in Regulatory Guide 1.109. Also, Regulatory Guide 1.4 sets forth methods for estimating atmospheric dispersion of accidental or short-term releases of gaseous radioactive effluents and resulting doses.

C. Applicants' Position

Applicants intend to present a panel of witnesses on Contention 9. Mr. Bobby T. Lancaster will be Applicants' lead witness. His prefiled written testimony and a statement of his educational and professional qualifications were served on the parties on November 20, 1981. In addition, Messrs. Fred W. Madden, James R. Stogner and J. D. Edwards, Jr. may be called to testify with respect to particular aspects of Applicants' case on Contention 9. A copy of their educational and professional qualifications is attached to this brief. Mr. Lancaster will testify that Applicants have employed atmospheric transport and diffusion models approved by the NRC in calculating estimated individual and population doses from radioactive gaseous effluents. Those models are applied, as appropriate, to routine gaseous effluent releases and releases from postulated accidents involving the gaseous radwaste system.

Specifically, Mr. Lancaster will testify that for estimating atmospheric transport and dispersion of routine

radioactive gaseous effluents from Comanche Peak, Applicants have employed the Gaussian dispersion model described in Regulatory Guide 1.111, assuming a ground-level release mode. This model is described in Section 6.1.3.2.2 of the Environmental Report-Operating License Stage for Comanche Peak (ER-OLS). Mr. Lancaster will testify that additional factors which would affect the atmospheric transport of gaseous radioactive effluents are included in Applicants' model, including a building wake correction factor and terrain factor as described in Regulatory Guide 1.111.

In addition, Mr. Lancaster will testify that the effluent diffusion estimates for routine gaseous radioactive made by Applicants are based on an on-site meteorological data record gathered from May 15, 1972 to May 14, 1976. This meteorological program was designed in accordance with the guidance set forth in Regulatory Guide 1.23, and is described in Section 6.1.3.1 of the Applicants' ER-OLS.

With respect to the diffusion models employed for calculating dispersion of gaseous radioactive effluents from postulated accidents, Mr. Lancaster will testify that the Applicants employ two separate atmospheric dispersion models, one for releases over periods of 8 hours or less and the second for releases over periods longer than 8 hours, in

accordance with the criteria set forth in Regulatory Guide 1.4. Applicants assume under both conditions ground reflection of radioactive effluents at all points, thus doubling the concentration of the effluents expected in the free atmosphere. In addition, both models assume a release point at ground level, thereby realizing no advantage for effluent emissions from elevated release points.

With respect to Applicants' calculations of doses from routine radioactive gaseous effluents, Mr. Lancaster will testify that doses to individuals from gaseous pathways were obtained by using the GASPARG computer code which was developed by the NRC and is based on the computational techniques presented in Regulatory Guide 1.109. Further, he will testify that, using the GASPARG computer code, Applicants calculated maximum estimated doses to individuals from several pathways. These pathways are cloud submerision, ground contamination, inhalation, and vegetable, milk and meat ingestion pathways. Each dose was estimated at the location off-site for which the highest dose from each pathway was calculated. These results are discussed in ER-OLS §5.2.5.2. The specific doses to and offsite locations of the individuals expected to receive the maximum dose from each of the exposure pathways analyzed are set forth in Table 1 of Mr. Lancaster's prepared testimony.

Finally, Mr. Lancaster will testify that the resultant annual population doses from Comanche Peak will be only a small percentage of the 100 mrem/yr total-body dose from naturally occurring environmental background radiation anticipated for the population in the regions around the Comanche Peak site. As Mr. Lancaster will testify, exposure of each of the 1.45 million people that are expected to reside within a 50-mile radius of the plant in the year 2000 due to naturally occurring background radiation would result in a population dose of 1.45×10^5 man-rem. In contrast, the total-body man-rem dose from Comanche Peak to the same population in the year 2000 is expected to be 3.77 man-rem. Accordingly, the contribution to the total population dose attributable to gaseous radioactive effluents from Comanche Peak will be a negligible fraction of the population dose resulting from naturally occurring background radiation.

In sum, Applicants will demonstrate that their atmospheric transport and diffusion models for routine releases were developed in accordance with the guidance set forth in Regulatory Guide 1.111. In addition, Applicants will demonstrate that they employed the methodology in Regulatory Guide 1.109 for calculating annual doses to man from routine releases. Accordingly, Applicants will demonstrate that the methodology employed by them in calculating dispersion of

radioactive effluents and resulting doses is satisfactory for demonstrating compliance with the ALARA standard of 10 CFR Part 50, Appendix I and 10 CFR §§ 20.1(c), 50.34a and 50.36a.

II. APPLICANTS' CASE ON CONTENTION 25

A. Contention 25

The Board admitted Contention 25 in its June 16, 1980 Order Subsequent to the Prehearing Conference of April 30, 1980. That contention was proposed by Intervenor Citizens Association for Sound Energy ("CASE"). As accepted by the Board, Contention 25 alleges as follows:

Contention 25

The requirements of the Atomic Energy Act, as amended, 10 CFR 50.57(a)(4) and 10 CFR 50 Appendix C have not been met in that the Applicant is not financially qualified to operate the proposed facility.

Applicants will demonstrate at the hearing that each of the participants in Comanche Peak is qualified to finance their share of the facility operations, as required by the Atomic Energy Act and the Commission's regulations. 2/

2/ At the prehearing conference on December 1, Applicants will ask the Board to confirm that the scope of Contention 25, in accordance with its plain meaning, is limited to the issue of financial qualifications to operate Comanche Peak, and does not involve financial qualifications to decommission. If the Board so rules, then Applicants' witness Nye will delete the portion of his prepared testimony that relates to decommissioning before adopting it, so that the scope of Applicants' direct case will be confined to the issue of financial qualifications to operate.

B. Requirements Governing Financial Qualifications

The Commission's regulations governing the financial qualifications of applicants for power reactor operating licenses were promulgated pursuant to Section 182 of the Atomic Energy Act of 1954, as amended, 42 U.S.C. § 2232, which provides, as follows:

Each application for a license hereunder . . . shall specifically state such information as the Commission, by rule or regulation, may determine to be necessary to decide such of the technical and financial qualifications of the applicant . . . as the Commission may deem appropriate for the license. [42 U.S.C. §2232(a), emphasis added.]

Pursuant to Section 182, the Commission promulgated 10 CFR §50.33(f) requiring the applicant to show that it

possesses or has reasonable assurance of obtaining the funds necessary to cover the estimated costs of operation for the period of the license or for 5 years, whichever is greater, plus the estimated costs of permanently shutting the facility down and maintaining it in a safe condition. [10 C.F.R. §50.33(f).]

Further, the Commission has provided that in order to satisfy the requirements of 10 CFR §50.33(f),

[It] will ordinarily be sufficient to show at the time of the filing of the application, availability of resources sufficient to cover estimated operating costs for each of the first 5 years of operation plus the estimated costs of permanent shut-down and maintenance of the facility in safe condition. It is also expected that, in most cases, the applicant's annual financial statements contained in its published annual reports will enable the Commission to evaluate the applicant's financial capability to satisfy this requirement. [10 CFR Part 50, Appendix C.]

In Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1 (1978), the Commission examined these financial qualifications requirements and addressed the "reasonableness" standard of 10 CFR §50.33(f). The Commission explained that

a 'reasonable assurance' does not mean a demonstration of near certainty that an applicant will never be pressed for funds in the course of construction. It does mean that the applicant must have a reasonable financing plan in the light of relevant circumstances. [Seabrook, supra, 7 NRC at 18.]

The Commission did not specify in Seabrook the "relevant circumstances" with which it was concerned. Nevertheless, several factors have historically been examined based on the Commission's analysis in Seabrook and affirmance of Licensing and Appeal Board decisions on the issue of whether the applicants therein were financially qualified. In particular, Boards have reached decisions as to whether applicants were financially qualified based upon evidence provided by source of fund sheets, the prospect of future rate increases, the applicants' bond ratings, prospective interest rates, return on equity granted by the State public utilities commission, and the applicants' general fund-raising history. See Seabrook, 7 NRC at 20.

While those factors are generally as relevant in operating license proceedings as they are in construction permit proceedings such as Seabrook, at the operating license

stage more emphasis should be placed on the applicant's ability to generate revenues through the sale of electricity, rather than the applicant's ability to raise capital for construction. See Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), LBP-79-13, 9 NRC 489, 525 (1979). As to an applicant's ability to recover the costs of operation through rates, the state utility commission (and not the NRC) generally is charged with evaluating and setting rates necessary for a utility to recover operating and maintenance costs and to receive an adequate return on its investment. See, McGuire, supra, 9 NRC at 525.

The NRC has recognized the legal requirement ^{3/} that public utility commissions allow electric utilities to recover the costs of operation and maintenance through rates, including a fair rate of return. See, e.g., Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 77-78 (1977), aff'd, CLI-78-1, 7 NRC 1 (1978). Accordingly, it is proper for Boards to assume that rational regulatory policies will prevail with respect to the establishment of rates sufficient to recover operating costs.

^{3/} The Supreme Court has long recognized that the Federal Constitution requires public utility commissions to establish rates at a level which guarantees the utility the opportunity to earn a fair return on the costs of conducting the business, including operating expenses and capital charges. See FPC v. Hope Natural Gas Company, 320 U.S. 591, 603 (1944); Missouri ex. rel. Southwestern Bell Tel. Co. v. Public Service Commission, 262 U.S. 276, 291 (1923) (Mr. Justice Brandeis concurring).

See, e.g., Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), LBP-77-68, 6 NRC 1127, 1162-3 (1977), aff'd, ALAB-491, 8 NRC 245 (1978); Duke Power Co. (Cherokee Nuclear Station, Units 1, 2 and 3), LBP-77-74, 6 NRC 1314, 1330 (1977).

Finally, as to financial qualifications to decommission, the Commission has not prescribed any particular mode of decommissioning or method of financing decommissioning which applicants need follow. Accordingly, applicants first should provide a reasonable cost estimate for decommissioning the facility using a selected mode of decommissioning. Second, based on that estimate, applicants should demonstrate a reasonable plan for financing decommissioning expenses, such as recovery through the ratemaking process. See Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), LBP-79-13, 9 NRC 489, 527-28 (1979); North Anna, supra, 6 NRC at 1162-3.

C. Applicants' Demonstration of Financial Qualifications

The Applicants will demonstrate through the testimony of Mr. Erle A. Nye, Executive Vice President and Chief Financial Officer of Texas Utilities Company, and the submission of documentary evidence that they have fully met the standards established by the Commission for determining the financial qualifications of an applicant for a power reactor operating license. Mr. Nye will be Applicants' lead witness on Contention 25 (his prefiled testimony was filed on November 20, 1981) on a panel with Mr. H. Dan Farrell,

Controller of Texas Utilities Services, Inc. A copy of Mr. Farell's educational and professional qualifications is attached. Mr. Nye and Mr. Farell will testify as to the financing history of Applicants and the plans for financing the operation of Comanche Peak.

1. Future rates.

Mr. Nye will testify that of the six applicants, five are subject to the ratemaking authority of the Texas Public Utility Commission ("PUC"), viz., Texas Electric Service Company ("TESCO"), Texas Power & Light Company ("TP&L"), Dallas Power & Light ("DP&L"), Tex-La Electric Cooperative of Texas, Inc. ("Tex-La"), and Brazos Electric Power Cooperative, Inc. ("Brazos"). 4/ He will discuss the authority, rules and practices of the Texas PUC to regulate the rates of electric utilities (including cooperatives) as provided for in the Texas Public Utility Regulatory Act, Article 1446c of Vernon's Annotated Texas Statutes. 5/

4/ DP&L, TESCO and TP&L are the three operating subsidiaries of Texas Utilities Company, which is a utility holding company. Collectively, these companies own 85-2/3% of Comanche Peak. Brazos Electric Power Cooperative, Inc. ("Brazos") is an electric cooperative owned by 19 rural electric distribution cooperatives in Texas. Tex-La is also an electric cooperative and is owned by seven rural electric distribution cooperatives. Texas Municipal Power Agency ("TMPA") is a joint power agency created in 1975 under Texas law by the cities of Bryan, Denton, Garland and Greenville.

5/ The Board may take official notice of Texas State law and regulations. 10 CFR § 2.743(i); see Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-520, 9 NRC 43 (1979).

Mr. Nye will testify that Applicants plan to recover all costs of operation of Comanche Peak through revenues derived from customers in system-wide sales of electricity. 6/ He will testify that since the facility will be used solely to provide electric service to Applicants' customers, all the costs related to the facility, including operation, maintenance, depreciation and capital costs, will be recovered in the Applicants' rates as required under the leading ratemaking precedents in Texas. Consequently, there is reasonable assurance that applicants will be able to recover the costs of operating the facility for the first five years.

With respect to TMPA, Mr. Nye will testify that each municipality in the State of Texas has original jurisdiction over the regulation of electric rates and service within its corporate limits. TMPA and each of the four cities which created TMPA exercise such original jurisdiction and therefore set their own rates.

2. Historic cost recovery through rates.

Mr. Nye will testify that the Texas PUC has historically permitted Applicants DP&L, TESCO and TP&L to maintain rates

6/ Estimates of the annual costs of operation for each unit of Comanche Peak are set forth in Table 20.1 in the NRC Staff's Safety Evaluation Report, NUREG-0797. (July 1981). Applicants are in the process of updating these estimates in order to provide the most current information.

intended to permit recovery of operating costs and a return on capital, consistent with applicable State statutes and PUC regulations. A table reflecting the results of each rate case of DP&L, TESCO and TP&L before the PUC since it assumed rate jurisdiction, and rates of return on rate base and common equity authorized by the PUC in each case, is included as Attachment D to Mr. Nye's testimony. 7/

As discussed above, the NRC's evaluation of the financial qualifications of an applicant for a power reactor operating license should emphasize the applicant's ability to generate revenues through the sale of electricity, rather than the ability to raise funds for construction. McGuire, supra, 9 NRC at 525. With respect to electric utilities for which rates for the sale of electricity are established by regulatory bodies, the history of ratemaking and likelihood of future ratemaking adequate to recover costs can demonstrate the applicant's financial qualifications to operate the facility. McGuire, supra, 9 NRC at 526-27. Applicants submit that its direct case clearly demonstrates that there is reasonable assurance of obtaining the funds necessary to cover the estimated costs of operation for Comanche Peak.

7/ Tex-La and Brazos have had no rate case decided by the PUC, Tex-La because it is a new entity and Brazos because its first rate case since the PUC assumed rate jurisdiction is now pending before the PUC.

3. Decommissioning.

Mr. Nye will testify that Applicants estimated a cost of \$55 million (1981 dollars) per unit for decommissioning Comanche Peak at the end of the economic operating life using the immediate dismantlement mode. 8/ This estimate is based on the analyses presented in the report "Technology, Safety and Costs of Decommissioning a Reference Pressurized Water Reactor Power Station," NUREG/CR-0130 (June 1978) and NUREG/CR-0130, Addendum (August 1979), the NRC's reference analysis for PWR decommissioning. Further, Mr. Nye will testify that decommissioning costs are included as a component of depreciation expense to be recovered through rates.

Based on Applicants' estimate of the costs of decommissioning and their intention to recover the costs of decommissioning through the rates, Applicants submit there is reasonable assurance that Applicants will be able to obtain the funds necessary to cover the estimated costs of decommissioning. See McGuire, supra, 9 NRC at 527-28; North Anna, supra, 6 NRC at 1162-3.

8/ As noted above, supra note 3, Applicants believe that the scope of Contention 25 for trial should be confined to the strict wording of the Contention, viz., financial qualifications to operate Comanche Peak. If the Board rules otherwise and expands the scope to include decommissioning, Applicants will add Mr. Richard A. Werner, Senior Nuclear Licensing Engineer for Texas Utilities Services, Inc., to the witness panel. A copy of his educational and professional qualifications is attached hereto.

III. APPLICANTS' BRIEF ON BOARD QUESTION 2

A. Board Question 2.

The Board posed the following question in its June 16, 1980 Order Subsequent to the Prehearing Conference of April 30, 1980:

Board Question No. 2

Applicant and Staff should describe in detail the operating quality assurance program for CPSES. A description of the provisions for conduct of QA audits should be provided, including a description of how reactor operations and reactor operator training will be audited.

Applicants will present a panel of witnesses, described below, to describe the operating QA program and to respond to inquiries by the Board.

B. Requirements Governing Operating QA Programs

NRC regulations governing QA programs are set forth in 10 CFR Part 50, Appendix B. Additional guidance is set forth in NRC Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)." Also, certain aspects of the operating QA programs for nuclear power reactors are subject to the guidance established in other NRC Regulatory Guides. These Regulatory Guides are identified in Table 17.2-2 of the Comanche Peak FSAR.

C. Applicants' Position on Board Question 2

Applicants have submitted prefiled testimony of the following officer and employees of Texas Utilities Generating

Company ("TUGCO"): Messrs. B. R. Clements, Vice-President, Nuclear; David N. Chapman, Manager of Quality Assurance; Richard A. Jones, Manager of Plant Operations, and Antonio Vega, Quality Assurance Supervisor.

Mr. Clements will testify to the commitment of TUGCO management to an effective corporate QA Program and the Operations QA Plan at Comanche Peak. Mr. Chapman's testimony will describe the role of the corporate Quality Assurance Division in the corporate QA Program and the Operations QA Plan. Mr. Jones will testify to the implementation onsite of the Operations QA Plan. Finally, Mr. Vega will discuss the conduct of audits during reactor operations, including audits of reactor operations and reactor operator training.

Mr. Clements' testimony will demonstrate that TUGCO management is firmly committed to a corporate QA program and an Operations QA Plan designed to discover and correct potential problems before they can affect the safe operation of Comanche Peak. Mr. Clements will testify that as Vice President, Nuclear, he has overall responsibility for the development and implementation of the corporate QA Program and for assuring that the Operations QA Plan is established and implemented with sufficient independence to fulfill each of its QA responsibilities. Mr. Jones will testify that onsite management is similarly committed to an efficient and independent Operations QA Plan. A copy of

that Plan, the Operation Administrative Control and Quality Assurance Plan, was transmitted to the parties with Mr. Jones' prefiled testimony on November 20, 1981. Mr. Jones will describe the onsite QA organization in his testimony.

Mr. Chapman will testify to the function and responsibilities of the Quality Assurance Division located in corporate headquarters in Dallas, which he heads. He will testify that while the Manager of Plant Operations, Mr. Jones, is responsible for developing and implementing the Operations QA Plan, as Manager of Quality Assurance he is responsible for regularly assessing the adequacy of the Plan and reporting the results to the Vice President, Nuclear. He will testify that he is responsible to and reports directly to the Vice President, Nuclear. Such a reporting relationship provides for his total independence from the TUGCO staff responsible for operation of Comanche Peak, thus assuring that he has and will continue to have the authority, organizational freedom, and independence from undue influence with regard to cost and schedule.

Mr. Vega will testify as to the provisions for conduct of audits on reactor operations and reactor operating training. In particular, Mr. Vega will describe the procedures employed in the conduct of audits and the qualifications of personnel performing these audits. Mr. Vega attached to

his testimony a copy of the audit procedures to be used for audits of reactor operations and reactor operator training.

In sum, Applicants will demonstrate through their testimony and exhibits that the corporate QA Program and the Operations QA Plan for Comanche Peak satisfy NRC regulations applicable to operating QA programs and are consistent with applicable NRC guidance governing specific aspects of operating QA programs. Applicants will demonstrate a firm commitment to an efficient and independent QA program designed to identify and correct potential problems before they arise.

IV. WITNESS AND EXHIBIT LIST

Applicants intend that the following witnesses will testify at the evidentiary hearing commencing on December 2, 1981:

Contention 25 -	Erle A. Nye (prefiled testimony)
	H. Dan Farell
	Richard A. Werner (if decommissioning is included within the scope of Contention 25)
Contention 9 -	Bobby T. Lancaster (prefiled testimony)
	Fred W. Madden
	J. D. Edwards
	James R. Stogner

Board Question 2 - B. R. Clements (prefiled testimony)
David N. Chapman (prefiled testimony)
Richard A. Jones (prefiled testimony)
Antonio Vega (prefiled testimony)
David E. Deviney

In addition, Applicants intend that Homer C. Schmidt will testify to the extent that he will sponsor the Application, Final Safety Analysis Report and Environmental Report - Operating License Stage for Comanche Peak. 9/

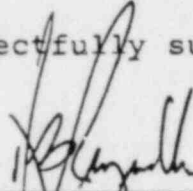
Applicants intend to offer the following documents and material into evidence:

1. Application for Comanche Peak Operating Licenses
2. Final Safety Analysis Report
3. Environmental Report - Operating License Stage
4. Rate Developments for TP&L, TESCO and DP&L (Contention 25)
5. Financial statistics for TU, DP&L, TESCO and TP&L (Contention 25)
6. Operations Administrative Control and Quality Assurance Plan (Board Question 2)

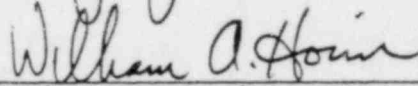
9/ Educational and professional qualifications for Messrs. Madden, Werner, Edwards, Farrell, Stogner, Deviney and Schmidt are attached hereto.

7. "Conduct of Internal, Prime, and Subcontractor Audits," TUGCO Procedure CQI-CS-4.6 (Board Question 2)

Respectfully submitted,



Nicholas S. Reynolds



William A. Horin

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1200 Seventeenth Street, N.W.
Washington, D.C. 20036
(202) 857-9800

Counsel to Applicants

November 24, 1981

DAVID E. DEVINEY

STATEMENT OF EDUCATIONAL
AND PROFESSIONAL QUALIFICATIONS

POSITION: Operations Quality Assurance Supervisor

FORMAL EDUCATION: One hundred-thirty-two college hours in Mathematics, Science, Electrical and Electronics courses at the University of Texas at Arlington, Texarkana College, and Tarrant County Junior College.

Received Associate in Applied Science degree in Electronic technology from Tarrant County Junior College.

EXPERIENCE:

1980 - Present Promoted to present position of Operations Quality Assurance Supervisor at CPSES.

1979 - 1980 Employed by TUGCO as Senior Maintenance Technician at CPSES. Duties included writing procedures for CPSES Maintenance Department, training quality control inspectors, spare parts procurement, and machine shop inspection. (6 months)

1977 - 1979 Employed by TUGCO as Product Assurance Specialist at CPSES. Duties included reviewing quality control procedures and instructions, writing procedures and instructions, and verifying implementation of procedures and instructions. Also performed vendor release inspections, vendor audits and trouble shooting of quality problems with various vendors. Qualified as lead auditor. (2 years)

1976 - 1977 Employed by Texas Utilities Generating Company as Quality Assurance Technician at CPSES. Duties included performing surveillance of all phases of construction work at Comanche Peak Steam Electric Station to verify compliance with applicable requirements. Also performed vendor release inspections and vendor audits.

1970 - 1976 Employed by U.S. Navy. Duties included maintenance and repair of all power plant electrical equipment and various supervisor responsibilities. (6 years)

1968 - 1970 Employed by Recognition Equipment, Inc. of Dallas, Texas as a Quality Control Inspector performing machined parts inspection of precision components for high speed data processing equipment. (2 years)

1966 - 1968 Employed by Lone Star Army Ammunition Plant, Texarkana, Texas as a Quality Control Inspector performing inspection of all phases of manufacturing. (2 years)

J. D. EDWARDS, JR.

STATEMENT OF EDUCATIONAL
AND PROFESSIONAL QUALIFICATIONS

POSITION: Health Physics Supervisor

FORMAL EDUCATION: BA - Math, Texas A&M University
1980, MS - Human Relations and Management,
Abilene Christian University

EXPERIENCE:

1980 - Present Health Physics Supervisor, Texas Utilities
Generating Company

1973 - 1980 Health Physicist, Texas Utilities Services Inc.

1966 - 1973 U.S. Army Engineer Reactor Group, Ft. Belvoir,
Virginia. Health Physicist and Shift Supervisor
at Nuclear Power Plant (S M-1). Health Physics
duties for both routine operations and outages -
operating pressurized water reactor:

1. Personnel dosimetry
2. Area surveys, posting and access control.
3. Air and water sampling and radiological
analysis.
4. Contamination control and decontamination.
5. Respiratory protection.
6. Radwaste packaging and shipment.
7. Spent fuel packaging and shipment.
8. Radiation protection instrument maintenance
and calibration.
9. Primary and secondary chemistry including
radiochemistry.

H. DAN FARELL

STATEMENT OF EDUCATIONAL
AND PROFESSIONAL QUALIFICATIONS

POSITION: Controller, Texas Utilities Services Inc.

FORMAL EDUCATION: 1968-1972, BBA, Accounting and Finance,
East Texas State University

EXPERIENCE:

1980-- Present Texas Utilities Services Inc.; Controller. Responsibilities include accounting, financial reporting, budgets and forecasts, financial and economic studies.

1980 Texas Power & Light Company; Administrative Assistant to Vice President - Special Projects. Responsibilities included contract negotiations, expansion planning activities, corporate planning activities, etc.

1979 Texas Power & Light Company; Manager of General Accounting. Responsible for general accounting function, budgets, general corporate taxes and income taxes.

1977 - 1979 Texas Power & Light Company; Manager of Audits and Financial Reports. Responsible for internal audit functions, financial reporting, financing functions, etc.

1976 - 1977 Texas Power & Light Company; Administrative Assistant. Responsible for coordinating regulatory activities involving the Company's relationship with the Public Utility Commission of Texas, including certification and rate case activities.

1972 - 1976 Texas Power & Light Company; experience in various aspects of the Financial and Accounting areas of the Company, including General Accounting, Financing, Plant Accounting, Construction Accounting, Financial Reporting, Taxes, Budgets, etc.

Other: Certified Public Accountant in State of Texas, Member of American Institute of Certified Public Accountants, Member of Texas Society of Certified Public Accountants, Member of Accounting Principles Committee of Edison Electric Institute.

FRED W. MADDEN

STATEMENT OF EDUCATIONAL
AND PROFESSIONAL QUALIFICATIONS

POSITION: Lead Nuclear Engineer, Technical Support

FORMAL EDUCATION: 1968-1972, B.S. Engineering Physics,
Texas Tech University

1972-1974, M.S. Nuclear Engineering,
Purdue University

EXPERIENCE:

1981 - Present Texas Utilities Services, Inc., Comanche
Peak Steam Electric Station, Glen Rose,
Texas, Lead Nuclear Engineer, Technical
Support Group. Activities include design
and engineering of TMI-related plant modi-
fications; engineering resolution of li-
censing issues; and development of analyt-
ical capabilities.

1980 - 1981 Texas Utilities Services Inc., Dallas,
Texas, Licensing Engineer. Activities
included preparation of licensing infor-
mation such as FSAR, responses to NRC
questions, and interrogatories; and review
and interpretation of regulatory criteria.

1976 - 1980 Brown & Root, Inc., Houston, Texas, Senior
Licensing Engineer. Activities included
preparation and coordination of licensing
information such as SAR's, environmental
reports and NRC questions; review and
interpretation of regulatory criteria.
Coordinator of project design review
team following TMI accident.

1974 - 1976 Bechtel Power Corporation, Los Angeles,
California, Engineer on Nuclear Analysis
staff. Activities include accident
analysis calculations; nuclear fuel cycle
analyses; radiation dose calculations;
and shielding design and analysis. Other
project activities include system design;
preparation of specifications and bid
evaluation.

PROFESSIONAL: Registered Professional Engineer
(Texas and California), American
Nuclear Society, Tau Beta Pi, Phi
Kappa Phi, Sigma Pi Sigma.

HOMER C. SCHMIDT

STATEMENT OF EDUCATIONAL
AND PROFESSIONAL QUALIFICATIONS

POSITION: Manager, Nuclear Services

FORMAL EDUCATION: 1955, BSME, Southern Methodist University

EXPERIENCE:

1977 - Present Texas Utilities Services Inc., as Manager, Nuclear Services, responsible for licensing and fuel management.

1976 - 1977 Texas Utilities Services Inc., as Project Manager-Nuclear Plants, responsible for engineering, construction, procurement, licensing and fuel management for CPSES.

1971 - 1976 Texas Utilities Generating Co. as Manager, Quality Assurance, responsible for developing and managing the quality assurance program for design, procurement and construction of Comanche Peak Steam Electric Station.

1968 - 1971 Dallas Power & Light Co. as Plant Betterment Division Head, responsible for evaluating safety, reliability and production efficiency of all DP&L generating units.

1962 - 1968 Dallas Power & Light Co. as Coordinating Engineer for the Plant Department, responsible for liaison and coordination with Engineering Department, and monitoring of field construction activities for these units.

1958 - 1962 Dallas Power & Light Co. as Plant Engineer responsible for providing in-plant evaluation of safety, reliability and production efficiencies of generating units; and maintenance of plant instrumentation and automatic control systems.

1956 - 1958 U.S. Army

JAMES R. STOGNER

STATEMENT OF EDUCATIONAL
AND PROFESSIONAL QUALIFICATIONS

POSITION: Senior Meteorologist

FORMAL EDUCATION: 1959-1963, B.S. Mathematics, Mississippi
State University
1967-1970, M.S. Meteorology, Florida
State University

EXPERIENCE:

1970 - Present

Dames & Moore, Atlanta, Georgia and
Houston, Texas (1973-1976), Manager
and Principal Investigator, Air Quality/
Meteorological Studies. Activities
include extensive experience in nuclear
evaluations such as:

- 1) Preparation of meteorological sections of Safety Analysis and Environmental Reports for Texas Utility Generating Company, Houston Lighting & Power Company, South Carolina Electric & Gas Company, and others.
- 2) Preparation of emergency assessment systems for Texas Utilities Generating Company, South Carolina Electric & Gas Company, Pennsylvania Power & Light Company, and others.
- 3) Preparation of semi-annual meteorological summaries and dose assessments required by Regulatory Guide 1.21 for Baltimore Gas & Electric Company;
- 4) Technical reviewer for the annual meteorological program being performed by Dames & Moore for the San Onofre Nuclear Generating Station;
- 5) Miscellaneous site-specific studies such as diffusion studies, cooling pond/tower analyses, backup/supplemental tower studies, ultimate heat sink analyses and others.

RICHARD A. WERNER

STATEMENT OF EDUCATIONAL
AND PROFESSIONAL QUALIFICATIONS

POSITION: Senior Nuclear Licensing Engineer

FORMAL EDUCATION: 1968, BS Physics/Mathematics, East
Texas State University
1975, MSNE, University of Missouri

EXPERIENCE:

1980 - Present Texas Utilities Services Inc. as a
Senior Nuclear Licensing Engineer

1977 - 1980 Texas Utilities Services Inc. as a
Nuclear Engineer in the Nuclear
Division. Worked in preparation of
OL application for CPSES, supervised
the preparation of the ER(OLS) and
various sections of the FSAR.

1976 - 1977 Texas Electric Service Co. as an Associate
Nuclear Engineer in the Information
Department. Performed energy issue
research with emphasis on nuclear issues.

1975 - 1976 Texas Electric Service Co. as an Associate
Nuclear Engineer assigned to Graham Power
Plant.

1973 - 1975 University of Missouri Research Reactor
Facility. As a Reactor Engineer,
responsible for the supervision of all
maintenance and facility design changes
for a 10 MWth research reactor. Also
received an AEC reactor operator license,
Docket No. 55-4844.

1969 - 1973 U.S. Navy Nuclear Power Program Engineering
Division Officer, Nuclear Submarine USS
Billfish SSN 676.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

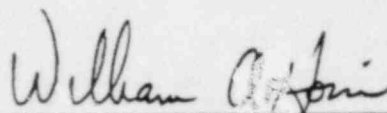
CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "Applicants' Trial Brief on Contentions 9, 25 and Board Question 2," in the above-captioned matter were served upon the following persons by deposit in the United States mail, first class postage prepaid, overnight delivery (*), this 24th day of November 1981:

- | | |
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Washington, D.C. 20555 | Chairman, Atomic Safety and
Licensing Appeal Panel
U.S. Nuclear Regulatory
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William A. Horin

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