UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

AFFIDAVIT OF ANTONIO VEGA CONCERNING
BOARD QUESTIONS REGARDING QA/QC OVERSIGHT

My name is Antonio Vega. My business address is Comanche Peak Steam Electric Station ("CPSES"), P. O. Box 1002, Glen Rose, Texas 76043. I am the Site QA Manager for the design, construction and startup testing of CPSES. In that capacity, I am responsible for establishing and directing a Quality Assurance/ Quality Control program on safety-related activities to assure that the plant is safe, reliable and in compliance with regulatory requirements. A statement of my educational and professional qualifications is attached to the affidavit (Attachment A).

The purpose of this Affidavit is to respond to the Licensing Board's request for additional information concerning the status of QA/QC oversight activities on systems that may be called upon to function during fuel loading and precritical testing to protect public health and safety. The Board stated that at least four systems were included in this category, i.e., (1) boron addition and monitoring equipment, (2) reactor monitoring equipment, (3)

fuel loading equipment, and (4) reactor protection systems. Specifically, the Board requested "evidence concerning the current status of QA/QC oversight of these systems, including evidence that documentation is adequate to assure that unsatisfactory or non-conforming conditions have been corrected and evidence concerning whether or not there are allegations known to the applicants or Staff about the intimidation of QA/QC personnel who were working on these systems." Licensing Board's "Memorandum (Request for Evidence Relevant to Fuel Loading)" (August 24, 1984) at p. 2.

In response to the Board's request, an evaluation of all plant systems was conducted to determine the systems that fell into the category specified by the Board, as noted above. Ten systems/equipment groupings were identified. These systems are listed in Attachment B. With regard to these systems, a thorough review was conducted to determine if all required inspections had been conducted and verified, as applicable. This review reflected that QC inspections have been performed and documented on the necessary mechanical, electrical and instrumentation components of these systems. These inspections include in-process inspections, final inspections, as-built verification inspections, and Authorized Nuclear Inspector (ANI) inspections, as applicable. Continuing reinspections will be made as appropriate to preserve the integrity of completed inspections.

In addition, an extensive testing program on these systems has been implemented and will be completed prior to fuel load, including, as applicable, hydrostatic tests on pressure retaining systems, prerequisite testing on components to assure proper component functional operability, and preoperational testing to assure proper operation as a system. Preoperational testing provides assurance that the systems in question will operate as designed by requiring demonstration testing of the capability of the systems to meet safety-related performance requirements. A summary of the preoperational testing for each of the ten systems in question is set forth in Attachment C.

Conditions found to be unsatisfactory or non-conforming as a result of the above QA/QC oversight activities have been documented, as appropriate, on Non-conformance Reports, Inspection Reports, Test Deficiency Reports or in other prescribed manners. These methods of documentation assure positive control and tracking of such conditions to preclude inadvertent use of defective materials, components or systems. These unsatisfactory or non-conforming items are included in a computerized tracking system which is developed and administered by the TUGCo Startup organization to assure outstanding items are properly prioritized, assigned, and resolved in a timely manner.

The Startup tracking system was reviewed to assess the status of items, identified as unsatisfactory or non-conforming through QA/QC inspections or surveillances of construction and testing

activities, on the ten systems identified in Attachment B. The review reflected that all such outstanding items are scheduled to be completed prior to fuel load.

In conclusion, based on the thorough review of QA/QC oversight status described above for the affected systems, I have determined that necessary and appropriate QA/QC activities have been conducted and that non-conforming conditions are identified and tracked, as applicable, and are scheduled to be resolved prior to fuel load. Our evaluation reflects that outstanding items will be completed on a schedule to support fuel load and precritical testing activities in a manner which assures the health and safety of the public.

I turn now to the Board's second question regarding the status of QA/QC oversight (i.e., whether or not there are allegations about intimidation of QA/QC personnel who were working on these systems). I have discussed this issue with appropriate personnel in my QC organization, construction and QA/QC for operations. I also have personally reviewed the Quality Assurance Investigation Files, and have had cognizant individuals review allegations made through the QA Hotline and transmitted to us by the NRC Staff. I also instructed our counsel to review the record compiled on the

intimidation issue before the Board. Based on these discussions and reviews, I am not aware of any specific allegation about intimidation of QA/QC personnel related to any of the systems set forth in Attachment B.

Antonio Vega

Antonio Vega

County of Tarrant)
)
State of Texas)

Subscribed and sworn to before me this 13th day of September, 1984.

Janet Rodgers

Notary Public

ATTACHMENT A

ANTONIO VEGA, P.E.

STATEMENT OF EDUCATIONAL
AND PROFESSIONAL EXPERIENCE

POSITION:	TUGCo Site Quality Assurance Manager
FORMAL EDUCATION:	1961-1967, B.S. Electrical Engineering, University of Texas
EXPERIENCE:	
03/16/84-Present	Texas Utilities Generating Company (TUGCo), Comanche Peak S.E.S., Glen Rose, Texas, as TUGCo Site QA Manager. This includes responsibility for establishing and directing site QA/QC activities on safety-related components and systems to ensure CPSES is constructed as a safe, reliable plant, in full compliance with all applicable requirements.
1977-03/15/84	Texas Utilities Generating Company (TUGCo), Dallas, Texas, as Quality Assurance Services Supervisor, Quality Assurance Division. Activities include program and procedure development, and independent compliance evaluation via surveillance and audit of safety-related activities performed by TUGCo, Texas Utilities Services Incorporated (TUSI), the Architect Engineer, the Constructor and safety-related equipment suppliers.
1973-1977	Texas Utilities Services Incorporated, Dallas, Texas, as Quality Assurance Senior Engineer, Quality Assurance Division. Activities included involvement in developing the QA program, procedures, instructions, and conducting audits and inspections on TUSI, the Architect Engineer, the Constructor, and safety-related equipment suppliers.
1970-1973	Dallas Power & Light Company, Dallas, Texas, Power Plant Design Engineer, Power Plant Division, Engineering Department. Activities included conceptual and detail design of power plant power and distribution systems, protection systems and communication systems. Performed and related construction inspections.
1967-1970	Dallas Power & Light Company, Dallas, Texas, as System Protection and Controls Engineer, System Protection Section, Substation and Transmission Division, Engineering Department. Activities included conceptual and detail design of substation, transmission, and switchyard facilities, including power systems and communication systems. Performed related construction inspections.

ATTACHMENT B

SYSTEMS INVOLVING CONTESTED ACTIVITIES

- Boron Addition and Monitoring

  1. Process Sampling System
  2. Chemical and Volume Control System and Refueling Water Storage Tank
  3. Reactor Coolant System
  4. Residual Heat Removal

- Reactor Monitoring

  1. Nuclear Instrumentation

- Fuel Loading Equipment

  1. Fuel Handling and Vessel Servicing Equipment
  2. Cranes and Hoists

- Reactor Protection System

  1. Reactor Protection System
  2. Analog Control System
  3. Rod Control Equipment

PREOPERATIONAL TEST SUMMARIES

A. PROCESS SAMPLING SYSTEM

This test demonstrated the capability of the Process Sample System to provide liquid and gas samples from designated system sample locations, including the Reactor Coolant System. The test also demonstrated the proper operation of the Process Sample System isolation valves, including response to engineered safety signals within the required time.

B. CHEMICAL AND VOLUME CONTROL SYSTEM

This testing demonstrated the proper operational capabilities of all of the various portions of the Chemical and Volume Control System, including letdown, charging, and seal water injection to maintain the charging and letdown flows, the seal water injection flow to the Reactor Coolant pumps and to provide demineralizer and filter cleaning of letdown water, chemical control, purification, and makeup of the Reactor Coolant System, and boron thermal regeneration for boron concentration control of the Reactor Coolant System. Alternate flow paths for charging and miniflow, response to safety injection signals, emergency boration, and redundancy of the boration dilution were also demonstrated. Testing also demonstrated the proper operation of the Boron Dilution Protection Systems to mitigate an inadvertent dilution of the Reactor Coolant System.

C. REACTOR COOLANT SYSTEM

The testing performed on the Reactor Coolant System verified the piping system integrity and component ability to function properly at various plant conditions extending from static ambient conditions to normal plant operating temperatures and pressures. The testing included a system hydrostatic test, safety and relief valve operation and leakage verification, reactor coolant pump control circuit operability, pressurizer heater and spray valve operation, pressurizer pressure and level control system operability, and integrated plant hot functional test, and measurement of thermal expansion of various systems at normal plant operating temperatures.

D. RESIDUAL HEAT REMOVAL SYSTEM

The testing on the Residual Heat Removal System demonstrated component control and interlock functions, including response to engineered safety actuation signals, pump hydraulic performance and system hydraulic performance during the heatup and cooldown periods of the Hot Functional Testing.

E. NUCLEAR INSTRUMENTATION

This testing verified that the Nuclear Instrumentation System is capable of providing indication of signals, including appropriate power levels, generating trip functions when trip functions are bypassed, blocked, or other than normal. Included in the testing on the system was verification of the Flux Doubling Circuitry which is an integral part of the Boron Dilution Protection System.

F. FUEL HANDLING AND VESSEL SERVICING EQUIPMENT

This testing demonstrated the proper operation of all equipment used in fuel handling, access to fuel storage and core locations, and equipment used to service the reactor vessel, including lifting of the reactor vessel head, reactor vessel internals, stud tensioners and tensioner hoists.

G. FUEL HANDLING EQUIPMENT CRANES AND HOISTS

This testing demonstrated the proper operation of the cranes used in fuel movement. These tests include control and interlock functions, speed and travel movements and the required load testing.

H. REACTOR PROTECTION SYSTEM

The testing of the Reactor Protection System demonstrated the ability of the system logic to respond properly to various plant parameters and provide the correct engineered safety actuation signal, that the engineered safety feature components are directly actuated or sequenced, the proper operation of the Turbine Runback Controls, the required engineering safety features response time, and that the Technical Specification instrumentation setpoints are properly adjusted.

I. ANALOG CONTROL SYSTEM

There is no specific test for the Analog Control System. The components within the Analog Control System were tested within the scope of the specific system preoperational tests.

J. ROD CONTROL SYSTEM

There is no preoperational test specified for the Rod Control System because the system cannot be tested effectively in operational conditions until fuel is loaded. This system will be tested post-fuel load under the Initial Startup Program.