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December 23, 1985

Mr. Foster De Reitzes Heron, Burchette, Ruckert & Rothwell 1025 Thomas Jefferson Street, N.W. Suite 700 Washington, D.C. 20007

> Re: In the Matter of Texas Utilities Electric Company, et al (Comanche Peak Steam Electric Station, Units 1 and 2) Docket Nos. 50-445, 50-446, 50-445-2, 50-446-2

Dear Foster:

Enclosed is the work specification on the retrospective audit requested by your letter of December 10, 1985.

Very truly yours,

Robert A. Wooldridge

RAW/kiw Enclosure

> 8611260272 851223 PDR ADOCK 05000445 PDR

WORK SPECIFICATION

RETROSPECTIVE AUDIT

OF THE

COMANCHE PEAK STEAM ELECTRIC STATION PROJECT

TEXAS UTILITIES GENERATING COMPANY

RETROSPECTIVE AUDIT WORK SPECIFICATION

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I - INTRODUCTION

Texas Utilities Electric Company (TUEC) is the primary owner and licensee of the Comanche Peak Steam Electric Station (CPSES), a two unit nuclear generating station under construction in Hood and Sommervell Counties, Exas. Unit 1 of CPSES is scheduled for commercial operation in 1985 and Unit 2 in 1986. Texas Utilities Generating Company (TUGCO), a division of TUEC, is the CPSES Project Manager. TUEC's share of the total cost of the project is \$3.31 billion.

TUEC will file a rate case with the Texas Public Utilities Commission (TPUC) to recover costs and expenses associated with the plant. In anticipation of this rate case, TUEC is initiating a retrospective audit of the project management decisions during construction of CPSES covering the period from determination of need for the plant through the present.

The auditor performing the retrospective audit will present findings in a detailed written report to TUEC. The auditor also may be called to provide expert testimony at public hearings in support of its findings.

Your firm is invited to submit a proposal for this study, which is due by noon on December 4, 1984. This proposal should address all areas detailed in this request. You may choose to address any additional areas which, in your opinion, also warrant review and evaluation.

II - OBJECTIVES

The principal objective of this engagement will be to obtain a comprehensive assessment of the management decisions during construction of CPSES.

The sub-objectives of this audit will be:

- e To review TUEC's original decision to construct the Comanche Peak Steam Electric Station;
- o To assess the overall performance of TUGCO in planning, engineering, constructing and licensing CPSES:
- To develop an increased understanding of the primary factors causing cost and schedule changes;
- o To address the effects each factor identified above had on construction costs and schedule changes;
- To determine TUGCO's ability to control each of these factors and related events;
- To assess the performance of TUGCO management in identifying and responding to these factors;
- o To review TUEC's decisions to continue CPSES as cost and schedule changes occurred.

The audit of CPSES will necessarily entail judgements as to the prudency of TUGCO management decisions throughout the history of the CPSES project. For the purpose of this audit, prudency will be defined as a standard of reasonableness which takes into account the existing environment, available information, and practices used by the electric utility industry at the time key management decisions were made.

III - SCOPE

The study will encompass an assessment of the management decisions during construction of the Comanche Peak Steam Electric Station. Specifically, the study should examine the following issues:

- o Decision to construct a nuclear plant
 - Load growth projections
 - Alternatives considered
 - Economic tradeoffs
 - Fuel diversification
- o CPSES Schedule and Cost
 - Review present schedule and cost projections.
 - Review the costs of the CPSES project.
 - Identify and quantify schedule and cost revisions.
 - Establish primary factors for schedule and cost revisions.
 - Compare CPSES construction and cost performance with other comparable plants built during a similar period.
- o Project Pre-mobilization Planning
 - From the date of the announcement of the CPSES project to the date of mobilization, review TUGCO's project planning efforts and early organization structure.
 - Review the process that TUGCO used to select prime contractors--Gibbs & Hill, Brown & Root, and Westinghouse.
 - Review the responsibilities that TUGCO assigned to Gibbs & Hill and Brown & Root for project planning and organization during the mobilization process.
- o Project Organization and Management
 - Review the current construction management structure, policies, and procedures.

PROJECT ORGANIZATION AND MANAGEMENT (CONT'D.)

- Review the roles, responsibilities and accountabilities of TUEC, TUGCO, Gibbs & Hill and Brown & Root as owner, Project Manager, Architect/Engineer, and Constructor respectively, as these roles evolved from project inception to the present.
- Examine the continuity of personnel assigned throughout the life of CPSES by TUGCO, Gibbs & Hill, and Brown & Root.
- Review steps taken by TUGCO to secure a solid base of nuclear experience for CPSES, and to expand it during the course of the project.
- Review the project scheduling and control process including techniques and systems utilized.
- Evaluate the coordination of engineering, materials availability, construction readiness, crafts availability, site workforce densities, and use of overtime.
- Assess the use of tracking and expediting aids.
- Review management information and reports pertaining to cost and schedule status.
- Review CPSES cost control methods.

o Contract Management

- Examine the contractor evaluation and selection processes, bid procedures, contract award procedures, project management review and approval procedures, and contract monitoring procedures.
- Review the contract terms and conditions used by TUGCO.
- Examine the reasons for amendments and renegotiations, and the process used by TUGCO to amend contracts.
- Review TUGCO management control of contractors through contractual provisions and other management practices.

o Design Engineering

- Determine the level of engineering completed prior to mobilization of construction.
- Examine the processes and control mechanisms used by TUGCO to approve design changes, and to manage the performance of design engineering.
- Review TUGCO's decision to assume control of engineering management.
- Evaluate the integration of engineering in support of both procurement and construction.
- Assess the timeliness of response to NRC directives.
- Review design coordination.

o Procurement Management

- Evaluate the bidding and procurement policies for plant equipment, building materials and supplies, construction equipment, and personnel services.
- Assess the vendor selection process.
- Determine the adequacy of delivery scheduling, and quality inspections and controls.
- Examine procedures for expediting equipment and materials delivery.
- Review the history of claims for materials, supplies and equipment.
- Determine and evaluate the disposition of salvage.

o Construction Management

- Evaluate the interface between the engineering and construction functions.
- Examine the processes by which the workforce (including craft, engineering, and administrative personnel), were monitored and controlled.
- Review TUGCO's decision to assume direct responsibility of construction manangement.

CONSTRUCTION MANAGEMENT (CONT'D.)

- Evaluate work management practices, work methods, and work supervision.
- Review work rules at CPSES and compare wage rates with other nuclear projects.
- Evaluate productivity standards and performance measurement techniques utilized to measure progress.
- Assess the process of identifying and implementing productivity improvements.
- Review the materials loss prevention and security program.

o Quality Assurance Program

- Review the organizational strategy and philosophy adopted by TUGCO for assuring quality at CPSES.
- Examine the evolution of quality assurance organizations and procedures over the life of CPSES.
- Review contractual requirements for quality assurance among prime contractors.

o Nuclear Fuel Management

- Evaluate the major contracts for obtaining finished nuclear fuel.
- Assess TUGCO's plans for management of the nuclear fuel cycle.
- Investigate the plans for spent fuel storage.

o Licensing Management

- Review how the NRC licensing process has evolved over the last five years, and its effect on the CPSES project.
- Review the impact of changes in NRC regulatory requirements over the life of the CPSES project.

LICENSING MANAGEMENT (CONT'D.)

- Examine TUGCO's management response to changes in NRC regulatory requirements and the licensing process.
- Review TUGCO's organization and responsibilities for licensing.

o Budgeting and Control

- Examine the project budgeting and control system utilized.
- Evaluate responsibility accounting, variance reporting, and cost tracking processes.
- Assess the reliability of cash requirements estimating.
- Review the extent and effectiveness of auditing activities.

o Startup Management

- Review the overall strategy and approach adopted by TUGCO for startup.
- Assess the organization structure used by TUGCO for startup.
- Examine the process used by TUGCO to turnover completed systems.

IV - INFORMATION FOR CONTRACTORS

APPROACH

The audit will be initiated in a two-part effort. In the first part, the contractor will develop the administrative procedures, work plan, schedule, and support requirements necessary to implement the technical performance of the audit. In the second part, the contractor will conduct the technical audit. This two-part approach will expedite performance of the audit with minimum disruption of ongoing construction project activities.

SCHEDULE

-	ACTIVITY	DATE DUE	
1.	Deadline for Proposal	12-04-84	
2.	Selection of auditor	12-07-84	
3.	Initiate Part I	12-11-84	
4.	Work Plan and Schedule	12-21-84	
5.	Initiate Part II, Kickoff Meeting	01-08-85	
6.	Project Progress Reports	Bi-Weekly	
7.	Interim Technical Briefing(s)	As Required	
8.	Draft of Final Report	04-29-85	
9.	Final Report	05-13-85	
10.	Provision of testimony for hearings	As Required	

REPORTS AND DELIVERABLES

- 1. Work Plan A detailed work plan for performance of the audit will be required within ten days of project initiation. The Work Plan shall be revised as necessary during the course of the project so that it remains current.
- 2. Schedule A detailed schedule will be required within ten days of project initiation. The schedule shall also be revised to remain current during the course of the project. The schedule may be integrated with the work plan.

REPORTS AND DELIVERABLES (CONT'D.)

- 3. Project Progress Reports The auditor will submit written bi-weekly progress reports to TUGCO. These reports shall provide adequate information to allow TUGCO to reach accurate conclusions regarding the current status of the work. The reports shall include, but not be limited to, a statement of work accomplished during the past period, a statement addressing the schedule of work and relative status, and a discussion of any unexpected developments and their impact on the schedule and work objective. Any other pertinent subjects should also be addressed.
- 4. Interim Technical Briefing The auditor will, as required, hold interim technical briefing(s) concerning the audit. The content of these briefings may include key facts, preliminary conclusions, emerging issues and strengths, possible future recommendations, and other relevant technical matters.
- 5. Draft Final Report Ten (10) copies of the draft final report shall be submitted to TUGCO. A period of two weeks after issuance of the draft report will be required to prepare comments on the report, and to allow for verification of facts before issuance of the final report.
- 6. Final Report Forty (40) copies of the final report, plus one reproducible original will be submitted to TUGCO.
- 7. Testimony The auditor must support his findings and conclusions with written and oral testimony, if required, in future TPUC hearings. The same principal personnel who performed the audit must provide the testimony.

TERMS AND CONDITIONS

- 1. Public Disclosure Ther will be no public disclosure of any data, findings, or conclusions by the auditor or subcontractors without specific written permission from the Company.
- 2. Disclosure of Proposal Contents Information provided in the proposal will be held in confidence, and will not be revealed or discussed outside T and its agents without auditor agreement.

TERMS AND CONDITIONS (CONT'D.)

- 3. Proposals To be considered, the proposer must submit a complete response to this Work Specification. Each proposal must be submitted in five copies. No other distribution of the proposal shall be made by the offeror. Proposal must be signed by an official authorized to bind the offeror to its provisions. Proposal must include a statement that the proposal is valid at least ninety (90) days.
- 4. Acceptance of Proposal Content TUGCO reserves the right to reject any or all proposals received, to negotiate with any respondent relating to this specification, or to cancel this specification in part or in its entirety. TUGCO reserves the right to request additional data to clarify any aspect of the proposal. This document does not commit TUGCO to award a contract to or pay any cost incurred in preparation of a proposal to this request.
- 5. Facilities and Procedures TUGCO will provide adequate work space, office equipment, and clerical support to assist the auditor at the CPSES site and in the TUGCO offices. TUGCO will have procedures for scheduling interviews and providing requested data; and the auditor will be expected to comply with all reasonable procedures.
- 6. Independence of Auditor TUGCO will not contract with any firm that has within the past two (2) years performed a financial audit, a management audit, a construction management review, or any other management consulting assistance for TUGCO, nor on behalf of any affiliate, subsidiary, holding or parent company. Proposals submitted must contain a statement that no such relationship has been in effect for the past two (2) years.
- 7. Role of the TPUC Discussions are taking place between TUGCO and the Texas Public Utilities Commission (TPUC) regarding their possible oversight role in the CPSES audit. The proposer should specifically state his willingness to perform the audit with TPUC oversight.
- 8. Termination TUGGO reserves the right to terminate this project prior to its completion by providing seven (7) days written notice to the auditor. In the event of termination, the auditor shall be paid for services rendered up to the time of termination.

EVALUATION CRITERIA

Proposals will be evaluated on the basis of technical merit and price. Evaluation factors will include, as a minimum:

- o Experience of contractor firm
- Qualifications of key individuals assigned to this audit project
- o Approach and work plan
- o Commitment to schedule
- o Exceptions to proposal requirements.
- o Total price estimate

TUGCO may require oral presentations. If given, these presentations will be evaluated in the contract award. The TUGCO evaluation process will consider all the above factors in selecting an auditor. The bid evaluation process may result in selection of other than the lowest price bidder.

V - PROPOSAL REQUIREMENTS

Each offeror's proposal will address, as a minimum, the topics in this section. The offeror's proposal may suggest alternative approaches but must clearly be responsive to the intent of Section II of this specification.

SCOPE OF WORK

- 1. Approach Describe your understanding of the purpose of the audit and your approach to its performance. Indicate clearly how your approach will achieve the audit's objectives.
- 2. Work Plan Describe the plan which will govern performance of the audit. This will include the sequence of major project activities, the specific techniques to be used in performing the audit, the records to be kept and the reports to be generated. The work plan will define the participation and support expected of TUGCO for each discrete activity of the audit, including working relationships, documentation and data sources, and access to records and personnel. It will also include a description of the analytical techniques to be used to evaluate data obtained and to render conclusions. A detailed work plan will be required within two weeks of contract award.
- 3. Organization Describe the audit team organization. Indicate the functions of each part of the organization and how the organizational structure will support achievement of the audit objectives. Identify the individuals to be assigned to key roles and the amount of time they will be assigned to the project. Substitution of named personnel will not be permitted without prior written approval of TUGCO.
- 4. Deliverables Provide a list of deliverables and a schedule for their delivery. The deliverables, as a minimum will include those identified in Section IV. The offeror may include additional deliverables which will enhance the quality of the audit project.
- 5. Schedule Include a schedule for the performance of the audit project. The schedule will commit to the requirements of Section IV. Further, the schedule will identify the major milestones for project performance and submittal of deliverables.

SUPPORT REQUIREMENTS

Identify the specific support requirements to be furnished by TUGCO to the contractor in performing the scope of work. Include such items as clerical support, administrative support, word processing, office equipment, etc. Support items not identified in the offeror's proposal will be assumed to be provided by the offeror and included in the offeror's price.

CONTRACTOR'S INFORMATION

- 1. Contact Information Provide the name, mailing address and teleph ne number of the individual to contact if further information is needed.
- 2. Company Experience Submit a statement of similar management or operational audits conducted by the consultant's company in the previous five years. Indicate specifically any audits of utilities. Studies or projects referred to should be identified and the name of the client shown, including the name, address and telephone number of the responsible official of the client company or agency who may be contacted.
- 3. Professional Experience Submit a description of the qualifications of all professional personnel to be employed on the project. Provide a summary for each individual including dates, clients, duties and level of responsibility for experience specifically relevant to the scope of this audit.
- 4. Subcontractors If any subcontractors are to be used, each shall be identified in the proposal. The work to be performed shall be described as well as the dollar value share thereof or monetary percentage of said work compared to the entire price. All such subcontracts indicated in the proposal will be deemed consented to by TUGCO upon acceptance of the proposal. Any additional or substituted subcontractors will require TUGCO's prior consent.

TERMS AND CONDITIONS

Sec. 35.2

- 1. Cost Estimate Provide the information listed below for the scope of work with the exception of Provision of Testimony:
 - a. Manpower Costs. Itemize to show the following information for each category of personnel having a different rate per hour:
 - Category; e.g., project manager, senior consultant, etc.
 - 2. Estimated hours.
 - 3. Rate per hour.
 - 4. Total cost for each category and for all manpower needs.
 - b. Out-of-Pocket Expenses Including Travel and Lodging.
 - c. Costs of Supplies and Materials.
 - d. Other Direct Costs.
 - e. General Administrative Burden or Overhead. Indicate percentage and total.
 - f. Fees.
 - g. Total Bid Price.
 - h. Period of Validity of the Bid Price (not less than 90 days).

The maximum contract price quoted by the contractor shall include all items of work defined in the proposal except for the Provision of Testimony. Should an unforeseen situation arise that requires rescheduling or that may cause a potential price increase, the situation should be described in writing to TUGCO; any resulting modification in the maximum price will be made only upon the mutual agreement between TUGCO and the contractor. Barring any unforeseen events, the contractor will deliver the performance described in its proposal within that specific price quoted.

TERMS AND CONDITIONS (CONT'D.)

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- 2. Provision of Testimonv The contractor's support of the disclosure process and provision of testimony will be on a time and materials basis. A separate budget will be established at the end of the management audit. If different than above, provide the rates for performing this scope of work. These rates shall remain in effect for a period of not less than one year from the date of proposal.
- 3. Invoices The contractor will submit a copy of a typical invoice with its proposal. As a minimum, the following supporting documentation will be required.
 - Primary contractor's record for keeping track of study charges;
 - b. Time sheets;
 - c. Travel expense documentation, i.e., receipts for hotels, airlines, rental cars, etc.;
 - d. Schedule of interviews actually conducted by the consultants during the billing period;
 - e. Billing rates for each consultant involved.
- 4. Acceptance of Terms and Conditions The proposal will include a specific statement accepting the terms and conditions identified in Part IV. Exceptions taken to the terms and conditions will be considered during the evaluation process.
- 5. Independence of Contractor The proposal shall include, for the contractor and, if any, subcontractors, a statement of compliance with the independence requirements of Section IV.

ADDITIONAL INFORMATION

Each efferor may include in its proposal any additional information not specifically requested in this work specification. Such information shall be considered in the evaluation at the discretion of TUGCO.