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# TECHNICAL REPORT

TR-6710-2

TECHNICAL EVALUATION REPORT

ON

COMANCHE PEAK RESPONSE TEAM  
RESULTS REPORT REVISION 1 FOR  
ISSUE SPECIFIC ACTION PLAN ISAP VII.a.4  
AUDIT PROGRAM AND AUDITOR QUALIFICATIONS

JULY 16, 1987

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FOREWORD

Under contract with the NRC, Teledyne Engineering Services, was directed to conduct a review of specific Comanche Peak Response Team Issue Specific Action Program Results Reports, to determine if the applicant adequately addressed issues of concern identified by the NRC in previous Supplemental Safety Evaluation Reports. Included in the NRC's direction were tasks that required TES to:

- o Review the Results Reports and if questions arise provide the NRC with a Request For Additional Information (RFAI).
- o Evaluate the applicant's responses to the RFAI and provide a report to the NRC.
- o Upon completion of the review of the Results Reports and RFAI responses develop, and submit to the NRC, a Technical Evaluation Report, in a prescribed format for each Results Report.

The TES evaluation of the Results Report Revision 1 for ISAP VII.a.4, "Audit Program - Auditor Qualifications", follows:

U.S. NUCLEAR REGULATORY COMMISSION  
DIRECTOR OF COMANCHE PEAK PROJECT DIVISION  
OFFICE OF SPECIAL PROJECTS  
WASHINGTON, D.C. 20555


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 TELEDYNE ENGINEERING SERVICES

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## 1.0 INTRODUCTION

This Issue Specific Action Plan (ISAP) VII.a.4, "Audit Program and Auditor Qualifications," addresses the concerns raised by the NRC's Technical Review Team (TRT) in its assessment of Allegation AQ-132 as reported on page 0-233 in the NRC's Supplemental Safety Evaluation Report-11 (SSER). The concern is further identified in the TRT QA/QC Group's comprehensive report of its findings in SSER-11, Appendix P, Section 4.7, pages P-31 through P-34. The plan also addresses a concern which arose from the TRT Mechanical and Piping Group's assessment of Allegation AQP-23 reported in SSER-10 page N-251 and the NRC RIV Inspection Report 50-445/84-32 which issued a Notice of Violation (NOV) that cited TUEC for failure to establish and implement a comprehensive system of planned and periodic audits.

The concern was initially presented to the Applicant as a QA/QC issue in the enclosure to the NRC's letter to the Applicant dated January 8, 1985. (D. G. Eisenhutt to M. D. Spence - Ref. SSER 11 page 0277 and page 0279 Item B). Item B reported:

"During the peak site construction period of 1981-2, TUEC employed only four auditors, all of whom had questionable qualifications in technical disciplines. Although charged with overview of all site construction and associated vendors, these Dallas based auditors provided only limited QA surveillance of construction activities."

The NRC requested the Applicant to evaluate the TRT's findings and consider their implications on construction quality and submit, to the NRC, a written program for completing a detailed and thorough assessment of the QA Issues presented in the enclosure to the letter. Additionally, the letter stated:

"The TRT considers the construction QA/QC findings to be generic to both Units 1 and 2 and your program plan and schedule should

address both units. This program plan shall: (1) address the root cause of each finding and its generic implications on safety-related systems, programs, or areas, (2) address the collective significance of these deficiencies, and (3) propose an action plan from TUEC that will ensure that such problems do not occur in the future." (SSER-11 page 0278).

## 2.0 CPRT APPROACH

To address and respond to the NRC's concerns regarding the audit program, and questionable auditor qualifications the CPRT issued ISAP VII.a.4 on June 21, 1985. The Staff's review of the ISAP Revision 0 resulted in comments which were presented in the NRC's September 30, 1985 letter to the applicant, and the applicant responded to the NRC in a letter dated November 22, 1985. ISAP Revision 1, issued January 24, 1986 reflected the applicant's commitments in their November 22, 1985 letter. Revision 1 responded to the NRC's requested actions regarding the determination of impact on construction quality, explained the use of the results report in TUGCO's reply to the NOV, and clarified some poorly defined activities to be evaluated by the Review Team. The ISAP's commitments in Revision 0 were neither increased nor diminished by Revision 1.

The scope of this action plan is to evaluate the adequacy of the TUGCO QA Audit Program from its inception to the present, determine the effect of any identified inadequacies on the Quality Assurance Program and/or the physical plant, and to recommend appropriate corrections and/or improvements to the current program. This evaluation was accomplished through a review which addressed QA audit planning, scheduling, preparation, performance, reporting, follow up, closeout, and audit QA personnel.

The CPRT performed the following four tasks:

1. All revisions of the program and procedures pertaining to the QA Audit Program that have been in effect at CPSES were reviewed to identify commitments and the degree to which the written program

conformed to these commitments. Included in this evaluation are the CPSES PSAR/FSAR (Appendices 1A(N) and 1A(B), Chapter 17.1, and QA branch questions and answers); TUGCO Corporate Quality Assurance Program; CPSES Project Quality Assurance Plan (Design and Construction); and the TUEC Quality Procedures/ Instructions manual.<sup>1</sup> (Ref. ISAP Section 4.1.2.1)

2. Reports, documentation, and data generated during TUEC's implementation of the program were reviewed by the CPRT on a selective basis to evaluate the effectiveness of implementation. The selection of items for this review were based on the concerns identified by the NRC, significant revisions to commitments program description and/or organization, and questionable areas identified during the review. Specific topics addressed include: audit planning criteria; published and as run schedules; audit plans and checklists; audit reports; audit deficiency follow-up; audit team member qualifications and staffing levels; organizations performing audit activities; and application of audit activities to hardware versus program/procedures. The object of this evaluation was to develop a conclusion concerning the adequacy of program assessment provided by the Audit Program. The information derived from this evaluation was used as input recommendations for revisions to the current program as appropriate. (Ref. ISAP Section 4.1.2.2).
3. This task described conditional actions required by the RT should audit program deficiencies or weaknesses related to construction activities be identified. They will be evaluated to determine whether action beyond that specified in ISAP VII.c is required to identify potential areas of concern regarding

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<sup>1</sup> The Quality Procedures/Instruction manual are those of the Dallas based QA group responsible for the audit program.

construction quality. Should such actions be required, a detailed plan will be developed and this ISAP will be revised to describe the methodology. In addition, should any identified audit program deficiencies apply to off-site TUGCO suppliers, a program will be developed to determine the acceptability of the suppliers' quality assurance programs for the applicable equipment and services during the period in question. This program, if required, will utilize external sources of information such as other utility or architect-engineer audits, the Coordinated Agency for Supplier Evaluation, and the NRC "White Book". If suppliers are identified for which the adequacy of the QA program cannot be determined, a detailed plan will be developed to resolve the concern and this ISAP revised to describe the methodology. (Ref. ISAP Section 4.1.2.3).

4. TUEC's current QA Audit Program including Auditor Qualifications, was evaluated against licensing commitments contained in the Final Safety Analysis Report (FSAR) to determine the adequacy of the TUGCO written program and the qualifications of the audit staff and staffing levels for the remaining construction phase of Unit 2 and for the operations phase. (Ref. ISAP Section 4.1.2.4).

Additional elements of the plan (Ref. ISAP Sections 4.1.2.5 and 4.1.2.6) require that Results Report provide recommendations for corrective action and/or program improvements as appropriate, and copies of the Results Report for this ISAP were provided to TUGCO for their consideration in responding to the NOV.

Standards/Acceptance Criteria (Ref. ISAP Section 4.4) state that the audit activities shall be in compliance with 10CFR50 Appendix B Criterion XVIII and the applicable codes and standards relating to the FSAR paragraph 17.1.18. The plan describes seven principal attributes to be applied in the RT's determinations of compliance/acceptance.

Decisions, (Ref. ISAP Section 4.5) concerning the number of individual reports, records and files to be reviewed, and the level of detail to which they were reviewed, were based on the quantity and quality of data obtained as implementation of the ISAP proceeded. Sufficient data were evaluated to support the conclusions reached as to the acceptability of the program against the acceptance criteria contained in ISAP Section 4.4.

### 3.0 EVALUATION

#### 3.1 Evaluation of CPRT Approach

This evaluation finds that the issue and the NRC's concerns are identified correctly. The ISAP (Ref. Section 1.0) contains a description of the issue that correlates with the TRT's findings presented in SSER-11, Appendix P, Section 4.7, on pages P-31 through P-34.

The FSAR, Chapter 17, commits TUGCO to a Quality Assurance Program in compliance with 10CFR50 Appendix B, and development of a Project Quality Assurance Plan. FSAR Section 17.1.18 provides the general detail of the audit program which is then implemented by procedures/instructions prepared and issued by the organizations participating in the QA Program. Appendices 1A(N) and 1A(B) discuss the CPSES position on Regulatory Guides as they apply to CPSES design and construction. The (TUGCO) Dallas Quality Assurance procedures/instructions provide the direction and controls for implementation of the audit program. TES finds the documents are appropriate to identify the commitments necessary to the evaluation of the audit program and procedures in effect at CPSES. The methodology is a viable approach to the identification of discrepancies in the written audit program (ISAP Section 4.1.2.1 First Task).

TES' evaluation of task 2 finds that the types of documents reviewed by the CPRT are the same types assessed by the TRT and were the sources of the TRT's identified concerns. The basis for the selection of the items evaluated is appropriate since it focused on the NRC's concerns, and

considered significant revisions to commitments, program description and/or organizations, and questionable areas identified during the review. The topics addressed in the evaluation are essentially those required by the FSAR Section 17.1.18 and 10CFR50 Appendix B Criterion XVIII. TES finds that the methodology is adequate and appropriate for the implementation of task 2. (Ref. ISAP Section 4.1.2.2).

Task 3 (Ref. ISAP Section 4.1.2.3) described the methodology to be applied by the CPRT should audit program deficiencies or weaknesses related to construction activities be identified. TES finds that the methodology is appropriate to determine whether expansion of the plan is necessary or a new plan or program is required. Additionally TES finds that this provisional action complies with the CPRT Program Plan Appendix B, page 3, first paragraph.

The current audit program, including auditor qualifications, were evaluated against licensing commitments contained in the FSAR (Ref. ISAP Section 4.1.2.4). The commitments were identified by the implementation of the first task in this action plan and all of the audit program and procedure revisions were reviewed. Therefore, TES concurs that the methodology for implementing the fourth task is adequate and appropriate.

With regard to the ISAP Sections 4.1.2.5 and 4.1.2.6, the preparation and content of ISAP Results Report is an element of the CPRT Program Plan that is described in Attachment 5 to that Plan (page 36). Recommendations for corrective action are also an element of the Program Plan and are addressed in Appendix H to that Plan. The NRC's NOV 84/32 cited a number of examples (see ISAP Section 3.0) that demonstrated TUEC's failure to establish and implement a comprehensive system of planned and periodic audits. Since the evaluations under this plan address the cited examples, TES considers it appropriate that the results of this action plan should be considered or utilized by TU Electric in their response to the NOV.

It is TES' opinion that the Decision Criteria (Ref. ISAP Section 4.6) are adequate for the RT's determination that the ISAP's implementation will support the CPRT's conclusions.

#### 4.0 CONCLUSION

TES' evaluation found that this ISAP correctly identified the NRC's concerns pertaining to auditor qualifications and TUEC's failure to implement an effective QA audit program. The scope of the plan provided sufficient breadth to address the issue. The plan provides adequate and appropriate methodology for the reviews and evaluations to identify the FSAR commitment, assess the Audit Program's compliance with the commitments and assess the program's adequacy and effective implementation. TES concludes that the methodology is appropriate and sufficient to enable the CPRT to identify deficiencies, recommend appropriate corrective actions and form conclusions regarding the audit program's compliance to the FSAR commitments. Accordingly, TES concludes that this ISAP described an in depth approach to evaluate and resolve the issue and is responsive to the NRC's requested action.