Filed: April 26, 1988

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

before the

ATOMIC SAFETY AND LICENSING BOARD

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

ANSWERS TO BOARD'S 14 QUESTIONS
(Memo; Proposed Memo of April 14, 1986)
Regarding Action Plan Results Report VII.a.9

In accordance with the Board's Memorandum; Proposed Memorandum and Order of April 14, 1986, the Applicants submit the answers of the Comanche Peak Response Team ("CPRT") to the 14 questions posed by the Board, with respect to the Results Report published by the CPRT in respect of CPRT Action Plan VII.a.9, "Adequacy of Purchased Safety-related Material and Equipment."

Opening Request:

Produce copies of any CPRT-generated checklists that were used during the conduct of the action plan.

Response:

Attached are checklists for reinspection/documentation review for 81 items of equipment and material. These checklists, which include implementing inspection instructions

necessary for conduct of the reinspections and documentation reviews, are contained in the verification packages. Also attached are the checklists used to conduct the evaluation of the current CPSES procurement program.

Question No. 1:

1. Describe the problem areas addressed in the report. Prior to undertaking to address those areas through sampling, what did Applicants do to define the problem areas further? How did it believe the problems arose? What did it discover about the QA/QC documentation for those areas? How extensive did it believe the problems were?

Response:

ISAP VII.a.9 was developed to address an NRC concern that the scope of CPRT evaluations did not verify material and equipment compliance with procurement/design requirements. As a result, Rev. 0 of ISAP VII.a.9 was issued in March 1986.

Rev. 0 was limited in scope to documentation reviews of CPSES receipt inspection and warehouse storage records. After Rev. 0 was issued, TU Electric identified a concern, based primarily on problems identified during reinspections of safety-related electrical penetrations, that vendor-supplied equipment might not comply with procurement/design requirements.

As a result of these concerns, Rev. 1 to ISAP VII.a.9 was issued in September 1986. The scope of Rev. 1 included selection and evaluation of a sample of equipment and material to determine compliance with procurement and design requirements. The evaluation included both reinspections and documentation reviews. Rev. 1 also included an evaluation of the current TU

Electric and Brown & Root procurement and warehouse storage programs.

The QA/QC Review Team took no action to define further the problems experienced with electrical penetrations, as TU Electric was establishing an appropriate corrective action plan to resolve these problems. Rather, an overall evaluation approach, as defined in Rev. 1 of the ISAP, was developed and implemented.

The evaluation determined that QA/QC documentation that was required to have been submitted by vendors was generally available and adequate. In some cases, additional documentation that was not required to have been submitted by vendors was sought by the QA/QC Review Team and, in the majority of cases, obtained in an adequate form.

Question No. 2:

2. Provide any procedures or other internal documents that are necessary to understand how the checklists should be interpreted or applied.

Response:

The reinspection/documentation review checklists attached to these responses in answer to the opening request include implementing inspection instructions that were necessary to understand how the checklists should be interpreted or applied.

The checklists used to evaluate the current CPSES procurement program were written by the persons who conducted the evaluation. They were used as tools for conducting the evaluation and for ensuring that no important points were overlooked, and no instructions for their use were required.

Question No. 3:

3. Explain any deviation of checklists from the inspection report documents initially used in inspecting the same attributes.

Response:

The reinspection/documentation review checklists used by the QA/QC Review Team were developed independently from those used by TU Electric and Brown & Root for vendor surveillance and receipt inspection. In general, the QA/QC Review Team checklists were more detailed and comprehensive than the TU Electric checklists. (It should be noted that vendor surveillance and receipt inspections did not normally consist of a 100% inspection of each procured item. Reliance was traditionally placed on vendors' QA programs, and inspections of hardware were normally conducted on a spot-check or sampling basis.) The QA/QC Review Team reinspections approached, as closely as possible, a 100% reinspection. Therefore, it was not unexpected that the QA/QC Review Team's checklists were more detailed in many cases than the original TU Electric and Brown & Root checklists.

Question No. 4:

4. Explain the extent to which the checklists contain fewer attributes than are required for conformance to codes to which Applicants are committed to conform.

Response:

In general, all code requirements that were verifiable by reinspection or document review were included in the checklists. Certain requirements could not be verified because they were not recreatable or were inaccessible.

The reinspection/documentation review packages identify attributes that were excluded from checklists. Attributes were excluded because they were inaccessible or non-recreatable, or the attributes involved requirements that did not affect the fit, form, or function of the item being evaluated.

Question No. 5:

5. (Answer Question 5 only if the answer to Question 4 is that the checklists do contain fewer attributes.) Explain the engineering basis, if any, for believing that the safety margin for components (and the plant) has not been degraded by using checklists that contain fewer attributes than are required for conformance to codes.

Response:

Please see the response to question 4.

Question No. 6:

6. Set forth any changes in checklists while they were in use, including the dates of the changes.

Response:

All changes to the checklists are documented in the working files that support the results of ISAP VII.a.9. Changes were made for such purposes as to give additional clarification to inspectors, to incorporate additional information received from vendors, and, in some cases, because the equipment originally selected was inaccessible. The reasons for changes are clearly documented in the working files, with the exception of obvious innocuous changes.

Question No. 7:

7. Set forth the duration of training in the use of checklists and a summary of the content of that training, including field training or other practical training. If the training has changed or retraining occurred, explain the reason

for the changes or retraining and set forth changes in duration or content.

Response:

All inspectors who conducted ISAP VII.a.9 reinspections and documentation reviews were certified to the requirements of USNRC Regulatory Guide 1.58, Revision 2, and ANSI N45.2.6-1978. In addition, inspectors were required to familiarize themselves with each inspection package before they conducted any inspections and to indicate by their signatures that they had been given the opportunity to have any questions answered by the ISAP QA/QC Engineer or the QA/QC Review Team Inspection Supervisor. The same process, including obtaining the inspectors' signatures in the package, was followed after completion of inspections. Because most inspection packages were unique, no general training courses were held, nor would they have been of any practical benefit. Rather, reliance was placed on maintaining an ongoing dialog between the inspectors and the package preparers so that any questions or lack of understanding on the part of the inspectors could be quickly resolved before or, if required, during inspections.

Question No. 8:

8. Provide any information in Applicants' possession concerning the accuracy of use of the checklists (or the inter-observer reliability in using the checklists). Were there any time periods in which checklists were used with questionable training or QA/QC supervision? If applicable, are problems of inter-observer reliability addressed statistically?

Response:

Most of the inspectors who conducted ISAP VII.a.9 reinspections had been the subject of overview inspections conducted during implementation of ISAP VII.c, "Construction Reinspection/ Documentation Review Plan." Based on the proven performance records of these inspectors, the overview inspection program was not applied to the ISAP VII.a.9 reinspections. However, eight surveillances were conducted during which implementation of ISAP VII.a.9 checklists was witnessed. The results of these surveillances were satisfactory.

At no time were checklists used with questionable training or questionable QA/QC supervision.

Question No. 9:

9. Summarize all audits or supervisory reviews (including reviews by employees or consultants) of training or of use of the checklists. Provide the factual basis for believing that the audit and review activity was adequate and that each concern of the audit and review teams has been resolved in a way that is consistent with the validity of conclusions.

Response:

Following is a list of QA/QC Review Team audits that evaluated ISAP VII.a.9 activities:

Audit	Date	Results
86-08	Nov. 1986	Satisfactory
86-09	Dec. 1986	Satisfactory
87-01	Jan. 1987	Satisfactory
87-02	Feb. 1987	Satisfactory
87-04	May 1987	Satisfactory

Audit 86-08 verified that inspection personnel were certified in accordance with Regulatory Guide 1.58 and ANSI N45.2.6 requirements.

Following is a list of QA/QC Review Team surveillances that evaluated ISAP VII.a.9 activities:

Surveillance	Date	Results
II 8704	Mar. 1987	2 open items
II 8706	Apr. 1987	1 unresolved item
II 8708	Apr. 1987	Satisfactory
II 8713	June 1987	Satisfactory
II 8716	June 1987	Satisfactory
II 8717	July 1987	Satisfactory
II 8718	July 1987	Satisfactory
II 8720	Sep. 1987	Satisfactory

Surveillances II 8708, II 8716, and II 8720 listed above all addressed qualification, training, and certification of personnel implementing ISAP VII.a.9. All previously open and unresolved items are closed. The following additional surveillances all involved the witness of personnel performing reinspection functions:

Surveillance	Date	Results
III 8701	Feb. 1987	Satisfactory
III 8702	Mar. 1987	Satisfactory
III 8703	Apr. 1987	Satisfactory
III 8704	May 1987	Satisfactory
III 8705	May 1987	Satisfactory
III 8706	June 1987	Satisfactory
III 8707	June 1987	Satisfactory
III 8708	July 1987	Satisfactory

Question No. 10:

10. Report any instances in which draft reports were modified in an important substantive way as the result of management action. Be sure to explain any change that was objected to (including by an employee, supervisor, or consultant) in writing or in a meeting in which at least one supervisory or management official or NRC employee was present. Explain what the earlier drafts said and why they were modified. Explain how dissenting views were resolved.

Response:

No substantive modifications were made to Results Report drafts as a result of management action.

Question No. 11:

11. Set forth any unexpected difficulties that were encountered in completing the work of each task force and that would be helpful to the Board in understanding the process by which conclusions were reached. How were each of these unexpected difficulties resolved?

Response:

After the ISAP VII.a.9 evaluation was completed and just before the Results Report was issued, TU Electric declared a reportable condition under the provisions of 10CFR50.55(e) for four solid state safeguards system sequencers. The reported

discrepant conditions at CPSES concerned deficient insulated crimped lugs in the electrical wiring of the sequencers. The decision that these conditions were reportable was based upon the failure of an uninsulated crimped lug connection in a similar sequencer at another operating power station.

Two of the four sequencers had been evaluated during implementation of ISAP VII.a.9, and no significant problems involving the crimped lug connections had been identified. As a result of the TU Electric reported conditions, the ISAP Issue Coordinator had the QA/QC Review Team Level III Electrical Inspector conduct a reinspection of 10% of the electrical terminations previously reinspected on the Unit 2 sequencer. Rework was already under way on the Unit 1 sequencer that had previously been reinspected, making it inaccessible for additional reinspections or evaluations.

During the reinspections, the Level III inspector discovered that many of the electrical terminations contained in the sequencer were not included in the inspection package and that the QA/QC Review Team inspector who conducted the original inspection had in some cases failed to identify that the wrong type of electrical lugs were installed. A review of the inspection package confirmed that the package preparer had failed to include a substantial percentage of the terminations in the package.

As a result of the problems identified during the 10% reinspection, several corrective actions were identified, as follows:

1. All inspection packages prepared by the individual who prepared the sequencer packages were 100% reviewed. No problems other than those in the sequencer packages were identified.
2. A review and evaluation of all ISAP VII.a.9 inspection packages completed by the original inspector who failed to identify the use of incorrect lugs was conducted. This inspector had rejected incorrect lugs during inspections of other items. The evaluation determined that the other items had been properly inspected for this characteristic by this inspector.
3. The inspection package for the Unit 2 sequencer was revised to include the uninspected electrical terminations. The additional terminations were reinspected and the results evaluated.

Based upon the results of the completed corrective actions described above, the problems identified with the sequencer inspection packages were determined to be isolated to those two packages. As explained in Section 5.3 of the Results Report, determination was made that the original conclusions reached by the QA/QC Review Team were valid; consequently, they remained unchanged.

No other unexpected difficulties were encountered during implementation of the ISAP.

Question No. 12:

12. Explain any ambiguities or open items in the Results Report.

Response:

No ambiguities or open items remain in the ISAP VII.a.9 Results Report.

Question No. 13:

13. Explain the extent to which there are actual or apparent conflicts of interest, including whether a worker or supervisor was reviewing or evaluating his own work or supervising any aspect of the review or evaluation of his own work or the work of those he previously supervised.

Response:

The CPRT instituted an objectivity evaluation procedure that required personnel involved in CPRT activities carefully to examine possible areas of conflict and to signify whether a conflict existed. No worker or supervisor has reviewed, evaluated, or supervised any aspect of the review or evaluation of his own work. No conflicts of interest exist.

Question No. 14:

14. Examine the report to see that it adequately discloses the thinking and analysis used. If the language is ambiguous or the discussion gives rise to obvious questions, resolve the ambiguities and anticipate and resolve the questions.

Response:

We believe that no ambiguities exist and that no obvious questions are unanswered.

Respectfully submitted,

J. D. Christensen
Action Plan VII.a.9
Issue Coordinator

J. L. Hansel
Review Team Leader

The CPRT Senior Review Team has reviewed the foregoing responses and concurs in them.

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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TEXAS UTILITIES ELECTRIC COMPANY et al.	)	
(Comanche Peak Steam Electric Station, Units 1 and 2)	)	(Application for an Operating License)

CERTIFICATE OF SERVICE

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