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**TU ELECTRIC**

April 26, 1991

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Executive Vice President

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)  
DOCKET NO. 50-445 AND 50-446  
NRC INSPECTION REPORT NO. 50-445/90-47; 50-446/90-47  
RESPONSE TO NRC REQUESTS

Gentlemen:

NRC letter from Samuel J. Collins to W. J. Cahill, Jr. dated February 26, 1991, enclosed Inspection Report 90-47 for CPSES, requested TU Electric to respond to two issues. The attachment to this letter provides TU Electric's response to these issues.

The first issue is how scaling activities will be performed on CPSES Unit 2 to assure that documentation problems are prevented or promptly identified and corrected. The second issue is how employee concerns will be handled to prevent delays in their resolution and to encourage prompt identification and correction of potential safety issues. Additionally, CASE's March 29, 1991, letter provided, for TU Electric's evaluation in preparing this response, CASE's input resulting from their review of the subject Inspection Report. The attachment, includes TU Electric's evaluation of that CASE input. As the attachment demonstrates, TU Electric has taken a number of actions to ensure the adequacy of the scaling activities for CPSES Unit 2, to enhance its programs for detecting and correcting any problems that may occur in these activities, and to strengthen its programs for encouraging CPSES employees to identify and report concerns and for resolving them.

Sincerely,

William J. Cahill, Jr.

JDR/lmb  
Attachment

c - Mr. R. D. Martin, Region IV  
Resident Inspectors, CPSES (3)  
Mr. J. W. Clifford, NRR  
Mr. M. B. Fields, NRR

TEO/

TU ELECTRIC'S RESPONSE TO NRC REQUESTS  
RELATED TO CPSES SCALING ACTIVITIES

NRC Request 1

[Y]ou are requested to provide a written explanation of how scaling activities will be performed for CPSES, Unit 2, to assure that documentation problems are prevented or promptly identified and corrected.

TU Electric Response to Request 1

The basic approach for performing scaling for CPSES Unit 2 is essentially the same as used for CPSES Unit 1. As discussed in TU Electric letter logged TXX-88373, from W. G. Council to the NRC dated April 14, 1988, full use will be made of the activities performed for CPSES Unit 1 in completing design documentation (including scaling calculations) for Unit 2. Similarly to CPSES Unit 1, the results of the scaling activities for Unit 2 will be used as an aid to the initial setup and calibration of loop instrumentation. The loop will be tested to identify and correct any of the anomalies associated with the loop instrumentation and to establish appropriate numerical values and steps for the calibration procedures. Because findings and observations were identified in several areas related to scaling activities for CPSES Unit 1, TU Electric identified a number of lessons learned and made related enhancements for performing scaling for CPSES Unit 2. In many cases, those enhancements were in effect prior to the completion of the scaling activities for Unit 1. The lessons learned and enhancements for Unit 2 are summarized below:

o Scaling Calculation Preparation Guidelines

Although there were procedures and controls in place for the preparation of scaling calculations for CPSES Unit 1, the TU Electric Technical Audit Program (TAP) found that there was no single document that defined the overall relationship of various sources and reference documents used in the preparation of the scaling calculations. The Scaling Calculation Manual (SC-8800) was revised to provide additional direction and to incorporate information from other documents. The Scaling Calculation Manual now defines its intended scope, usage, and implementation; defines the method for preparing scaling calculations; clarifies the relationship between the Manual, project procedures, and documents used in the preparation of scaling

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calculations (e.g., Westinghouse Nuclear Steam Supply System (NSSS) Design Specifications, Westinghouse Scaling Manual (WCAP-9696), and source documents such as the Precautions, Limitations and Setpoint Document (PL&S), drawings, and instrumentation specification data sheets); and provides guidelines for documentation of Programmable Read Only Memories (PROMs). The revised Scaling Calculation Manual has been reviewed by Quality Assurance (QA) audit personnel, and they closed their audit finding regarding the lack of a single program document based upon the review. Additionally, the revised Scaling Calculation Manual was successfully used for reviewing and revising the scaling calculations for CPSES Unit 1 in 1989-1990. For Unit 2, the current Unit 1 and Common Scaling Manual will be enhanced to add Unit 2 specific references, and to explain unit specific differences, if any, with respect to Design Basis Documents (DBDs), setpoint methodology, Resistance Temperature Detector (RTD) characteristics, etc.

o Preparation/Review/Issuance of Scaling Calculations

There were a number of issues involving the preparation of scaling calculations for Unit 1, including missing, unspecific, or incorrect references; typographical or transcription errors; lack of explanatory notes for mathematical manipulations; and minor mathematical errors. Although these errors did not affect the technical adequacy of the results of these scaling calculations, they did indicate a lack of attention to detail by the preparers of the scaling calculations.

TU Electric took several actions to ensure the proper preparation of CPSES scaling calculations, including the following:

For Unit 2, the appropriate Unit 1/Unit 2 and common Scaling Calculation procedures and Scaling Calculation Manual SC-8800 will be revised to provide and clarify the Unit 2 specific requirements for scaling calculation content. Emphasis will be placed on the design adequacy review and on the administrative aspects (such as proper references) of the scaling calculations.

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For Unit 2, prior to preparing scaling calculations, personnel will be trained to the requirements of the revised Scaling Calculation Manual and the project procedures that control preparation and issuance of scaling calculations. This training will include a description of relevant guidance and input documents (such as the TU Electric Scaling Calculation Manual (SC-8800) and the Westinghouse Scaling Manual (WCAP-9696)), a description of the requirements applicable to the contents of the scaling calculations, a discussion of the derivation of numerical values and a description of the responsibilities of preparers, reviewers, and supervisors for ensuring the completeness and accuracy of the scaling calculations. The training further includes lessons learned on Unit 1 (emphasis on administrative aspects of the calculation (such as avoiding transposition/typographical errors and incorrect references), hardware training to address lessons learned from NCB 1, NCB 11 and NCH cards, PROM issues, explanation of Westinghouse use of G01 and G02 groups, etc.)

o Document Control

Several instances existed in which documents related to the preparation of scaling calculations were not updated or were not distributed to holders of controlled copies or to Document Control Center (DCC) satellites. Additionally, other documents such as the Westinghouse Scaling Manual (WCAP-9696) were not maintained current or as controlled documents because the information in them was not utilized in preparing CPSES scaling calculations without first verifying its adequacy. Based upon these findings and observations, TU Electric has taken several actions to update and enhance the control of documents related to scaling calculations, including the following:

WCAP-9696 was reviewed and updated, and is now being maintained current as a controlled document for CPSES.



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Various scaling calculation input documents (including the PL&S, Westinghouse NSSS Design Specifications, and instrumentation specification data sheets) were reviewed to assure that they are acceptable for use and are being controlled through the CPSES DCC.

Other Westinghouse input documents, such as Field Change Notices (FCNs), Instrument and Control Diagrams (ICDs), and Interconnection Wiring Diagrams (IWDs) are being reviewed to identify any needed changes, and Design Change Authorizations (DCAs) will be issued as necessary to reflect these changes. These documents are controlled and maintained current in accordance with applicable project procedures.

The Westinghouse WPT transmittal letters were reviewed to assure that any attachments to the WPT letters that contained design input for scaling calculations were identified and included in the DCC. WPT letters continue to be controlled for CPSES Unit 2, including distribution of the WPTs and the respective Project Information Package (PIP) Master Index to holders of controlled copies of the PIP Master Index.

For Unit 2, vendor letters will be first processed in accordance with the appropriate vendor document processing procedure prior to being utilized for scaling calculations. Vendor design information required for scaling or references will be included in the DCC.

o Control of PROMs

Several issues existed regarding the control of PROMs. These issues included scaling calculations that did not specify the type of timer module to be installed in PROM locations, drawings and scaling calculations that did not identify both the instrument tag number and the associated PROM library, and a lack of a procedure that describes controls for programming and physically identifying PROMs. Several actions are being taken to address these findings, including the following:

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The Scaling Calculation Manual was revised to require the specific timer group number to be stipulated in the scaling calculations.

The Scaling Calculation Manual was revised to include directions for identification of PROMs with respect to scaling calculations and drawings.

A procedure was developed to control the programming and physical identification of PROMs.

The enhanced hardware training will provide the necessary training to scaling personnel on PROMs, their configuration and the operations procedure for controlling the programming and physical identification of PROMs.

TU Electric has also made several enhancements in its ability to detect and correct any problems related to the preparation of scaling calculations for CPSES Unit 2. These enhancements generally relate to the following areas:

o Review of Scaling Calculations

The existence of the deficiencies in the scaling calculations described above also indicates that the reviewers of the scaling calculations were not paying sufficient attention to details.

TU Electric has taken several actions to help ensure the adequate review of CPSES Unit 2 scaling calculations, including the following:

Engineering personnel reviewing scaling calculations receive the same training provided to the preparers of scaling calculations. The training emphasizes the need to assure that inputs are identified and traceable, that assumptions are identified and appropriate, that the overall methodology is appropriate and has been properly executed, and that the equations are correct.

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Procedures for the review of scaling calculations have been revised to include requirements to verify that the use of data is consistent, the mathematical manipulations are correct, inputs are correct, source documents are referenced, and the results of the calculation are accurate and acceptable for use.

o Management and QA Overview of Scaling Activities

Several changes have been made in the method of operation of TU Electric management and the Nuclear Overview organization. In combination with the changes discussed above, the changes will enhance the detection of any problems involving Unit 2 (including scaling activities for Unit 2). These changes include the following:

The TU Electric Quality Assurance organization for Unit 2 is aligned by functional area (e.g., construction, engineering, startup) rather than by activities (e.g., audit, surveillances and procedure review). This restructuring provides an enhanced sense of quality accountability and improvements in the performance of audits, surveillances, and procedure reviews.

Audits/surveillances have been enhanced by having them focus greater attention on performance attributes of an activity while continuing to evaluate compliance. Additionally, QA continues to use as input to the overview process such things as experience with completion of CPSES Unit 1, TU Evaluation (TUE) forms, and the output of the trending program. By using this information as input to plans for audits and surveillances, the results of audits and surveillances are more likely to identify any emerging or potential problems.

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Once problem areas or weaknesses are identified, they are being given greater attention to ensure that proper corrective action is taken. For example, the performance of engineering contractors from a quality standpoint is being appraised on a monthly basis to highlight those areas warranting improvement. Additionally, Nuclear Overview has established a quality accountability group to review significant deficiencies, to help identify their causes, and to obtain the appropriate level of management attention to resolve the deficiencies and prevent their recurrence.

In summary, TU Electric has made a number of enhancements in its scaling activities for Unit 2 in order to help prevent the type of problems that occurred in the scaling activities for CPSES Unit 1. Additionally, TU Electric has also enhanced its ability to detect and correct any problems that may occur in these activities.



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NRC Request 2

"[We] request that you provide a written response describing how employee concerns will be handled to prevent delays and to encourage prompt identification and correction of potential safety issues."

TU Electric Response to Request 2

Prior to November 1987, TU Electric had established a number of programs and had taken a number of actions to encourage employees to report any concerns they may have and to ensure that the concerns were properly resolved. These included the establishment of the SAFETEAM and HOTLINE programs, issuance of policy statements and procedures encouraging employees to report concerns and protecting those who do so, issuance of notices to and holding meetings with employees to ensure that they are aware of TU Electric's policies and procedures and to seek feedback from the employees, and providing orientation training on TU Electric's programs and policies related to employee concerns. These actions are described in more detail in various TU Electric letters to the NRC, including TXX-4838 (June 2, 1986) and TXX-4696 (February 7, 1986).

Since November 1987, TU Electric has made a number of improvements to these programs and actions. These improvements have been intended not only to encourage and facilitate the reporting of concerns by employees, but also to help ensure that identified concerns are properly resolved. These improvements, which apply to both TU Electric and onsite contractor employees, include the following:

- o In December 1987, TU Electric issued a notice to all employees at CPSES reemphasizing TU Electric's commitment to the protection of the public health and safety, and encouraging anyone with a safety concern to report it to management, SAFETEAM, or the NRC.

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- o In February 1990, the TU Electric Executive Vice President for Nuclear Engineering and Operations issued NEO Policy Statement 55. This Policy Statement stated that each individual at CPSES is responsible for being alert to potential conditions adverse to quality, for notifying appropriate levels of management of such conditions, and for correcting such conditions that are within his/her responsibility, including taking action to prevent recurrence of similar problems. This Policy Statement also emphasized that each individual must be receptive to information or suggestions regarding potential problems or concerns. This Policy Statement has been printed on a monthly basis in the "Comanche Peak Monitor."
- o In December 1989, TU Electric established a new system for identifying and reporting conditions adverse to quality. This system allows any individual to use a single form (the ONE form for CPSES Unit 1) to report any potential condition adverse to quality, including conditions applicable to hardware, abnormal events, personnel errors, procedures, or documentation. Conditions reported on ONE forms are tracked to closure and are trended to identify any potential generic concern. In June 1990, a similar system and form (the TUE Form) were established for CPSES Unit 2.
- o In December 1989, TU Electric established a multi-disciplined panel to review concerns received by SAFETEAM. The purpose of the panel is to assure that all issues identified by concernees are appropriately considered and investigated. In January 1991, the membership of this committee was expanded and its scope was modified to include concerns related to plant safety, environmental protection, plant reliability or wrongdoing received by SAFETEAM or HOTLINE, as well as allegations referred to TU Electric by NRC or other Federal or State regulatory agencies, notifications received from a contractor of concerns raised by its employees, and allegations or concerns submitted to the Stipulation Manager by CASE. An additional important aspect of the committee's function is that it assures that both line managers and other knowledgeable managers consider the potential need for immediate action to mitigate the continuation of concerns that

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may relate to plant safety, environmental protection, plant reliability or wrongdoing.

- o Several actions to provide additional training to managerial and supervisory personnel on methods for responding to and resolving employee concerns. For example, as part of the cooperative efforts between TU Electric and CASE, a series of sessions were held in 1989 at which counsel to CASE provided mid-level managers and supervisors at CPSES information on methods for dealing effectively with employee concerns. In 1990, a copy of a video cassette taping of one of these sessions was made available to each supervisor at CPSES, and the supervisors were instructed to review the tape and to discuss its contents with the employees under their supervision. Additionally, senior management meets periodically with lower and mid-level managers to emphasize the importance of identifying and correcting problems (including correction of weaknesses in controls and processes even if the activities are being performed in a technically adequate manner). Additionally, TU Electric has selected and arranged for lower and mid-level management personnel to receive INPO observer training to improve their ability in assessing their own programs at CPSES.
- o In 1989, TU Electric established several new systems for ensuring that identified conditions are properly evaluated and corrected. These systems include a formalized process for performing root cause analyses; provisions for establishing Evaluation Teams to assure the timely, thorough, and systematic evaluations of plant events and off-normal conditions; a Human Performance Enhancement System (HPES); and a formalized process for conducting Failure Analyses of significant failures and degradations of quality-related equipment.
- o In early 1989, TU Electric established the Participative Management Development System (PMDS)/Team Building concept to facilitate teamwork in approaching and solving problems.

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In summary, TU Electric has made a number of enhancements for encouraging employees to identify concerns and for resolving such concerns.

TU Electric Response to CASE Letter

In a letter to TU Electric dated March 29, 1991, CASE provided its assessment of the scaling activities for CPSES Unit 1 and offered some suggestions for enhancing the scaling activities for CPSES Unit 2. In preparing this response to the two NRC questions discussed above, TU Electric has taken into account CASE's input. TU Electric believes that the foregoing responses to the two NRC questions adequately address the two primary issues raised by CASE; namely that the preparations and review of scaling calculations for Unit 2 be appropriately controlled in accordance with 10 CFR 50 Appendix B and that enhancements be made in the audit activities for Unit 2. Additionally, with respect to CASE's suggestion that all Plant Incident Reports (PIRs) and Licensee Event Reports (LER)s be reviewed to identify potential enhancements for scaling, under existing procedures TU Electric reviews each PIR and LER at the time of issuance to determine its root causes and to take appropriate corrective and preventive actions, including any enhancements that may be warranted in scaling or other activities. Similarly, with respect to the suggestion that TU Electric should evaluate CASE's recommended enhancements to the Scaling Calculation Manual (SC-8800), such an evaluation has already been performed and the results of the evaluation are documented in Attachment 7 to TU Electric letter logged TXX-90280 from W. J. Cahill, Jr. to C. Grimes of NRC dated August 15, 1990.