

C. Lance Terry
Group Vice President, Nuclear

Log # TXX-95076
File # 916 (2.1)
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Ref. # 10CFR50.90
10CFR50.36

May 12, 1995

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
SUBMITTAL OF LICENSE AMENDMENT REQUEST 95-03
CYCLE-SPECIFIC PARAMETER LIMITS

Gentlemen:

Pursuant to 10CFR50.90, TU Electric hereby requests an amendment to the CPSES Unit 1 Operating License (NPF-87) and CPSES Unit 2 Operating License (NPF-89) by incorporating the attached change into the CPSES Units 1 and 2 Technical Specifications. These changes apply equally to CPSES Units 1 and 2.

TU Electric proposes to remove several cycle-specific parameter limits from the Technical Specifications. These parameter limits will be added to the Core Operating Limits Report. The removal allows for the available operating and analytical margins to be used in the most efficient manner. The proposed change will result in resource savings for TU Electric and the NRC by eliminating license amendment requests now required to change the values of these parameters. The proposed change is consistent with the intent of Generic Letter (GL) 88-16 which provides guidelines for the removal of cycle-specific parameter limits from the Technical Specifications.

Attachment 2 provides a detailed description of the proposed changes, a safety analysis of the changes, and TU Electric's determination that the proposed changes do not involve a significant hazard consideration. Attachment 3 provides the affected Technical Specification pages (NUREG-1468), marked-up to reflect the proposed changes.

TU Electric requests approval of this proposed license amendment by June 30, 1995, with implementation of the technical specification changes to occur within 30 days of approval. Rapid review has been requested to ensure that sufficient time is available for the review and approval of the license amendment requests that will be required for Unit 2, Cycle 3, if these changes are not approved.

In accordance with 10CFR50.91(b), TU Electric is providing the State of Texas with a copy of this proposed amendment.

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Should you have any questions, please contact Mr. Bob Dacko at
(214) 812-8228.

Sincerely,

C. L. Terry

C. L. Terry

By: *Roger D. Walker*
Roger D. Walker
Regulatory Affairs Manager

BSD/bd

Attachments:

1. Affidavit
2. Description and Assessment
3. Affected Technical Specification page (NUREG-1468) as revised by all approved license amendments

Enclosure:

1. Generic Letter 88-16

c- Mr. L. J. Callan, Region IV
Mr. T. J. Polich, NRR
Mr. D. F. Kirsch, Region IV
Resident Inspectors, CPSES

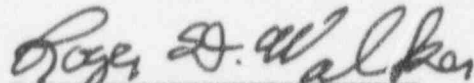
Mr. Arthur C. Tate
Bureau of Radiation Control
Texas Department of Public Health
1100 West 49th Street
Austin, Texas 78704

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	
)	
Texas Utilities Electric Company)	Docket Nos. 50-445
)	50-446
(Comanche Peak Steam Electric)	License Nos. NPF-87
Station, Units 1 & 2))	NPF-89

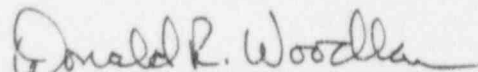
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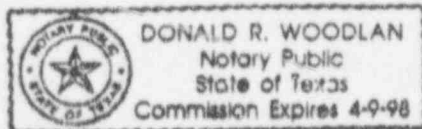
Roger D. Walker being duly sworn, hereby deposes and says that he is Regulatory Affairs Manager for TU Electric, the licensee herein; that he is duly authorized to sign and file with the Nuclear Regulatory Commission this License Amendment Request 95-03; that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.


Roger D. Walker
Regulatory Affairs Manager

STATE OF TEXAS)
)
COUNTY OF)

Subscribed and sworn to before me, on this 12th day of
May 1995.


Notary Public



DESCRIPTION AND ASSESSMENT

I. BACKGROUND

TU Electric proposes to remove several cycle specific parameter limits from the Technical Specification (TS) and to add these limits to the Core Operating Limits Report (COLR). The addition of these limits to the COLR is a result of the evolution from contractor performed reload analyses (Westinghouse) to TU Electric performed reload analyses. The content of the current COLR was primarily based on the Westinghouse determination of what plant specific parameter limits should be in the COLR to support reload analyses using their methodologies. TU Electric has largely replaced the need for Westinghouse reload methodologies through the development and subsequent NRC approval of TU Electric reload methodologies. Part of the desirability of performing in-house reload analyses is the ability to perform trade-offs between operating margins and analytical design margins, whenever appropriate, to optimize the economic performance of the plant while maintaining the required margin of safety. The removal of these parameter limits from the TS and their addition to the COLR improves the efficiency of this process.

The removal of these limits from the TS is consistent with the guidance provided in Generic Letter (GL) 88-16, "Guidance for Technical Specification Changes for Cycle-Specific Parameter Limits" (reference 1). The limits presented in the COLR may be modified, provided the requirements of Specification 6.9.1.6 are met (i.e., the modifications are determined using NRC-approved methodologies and meet all applicable limits of the plant safety analysis). The proposed changes result in resource savings for TU Electric and the NRC by eliminating the periodic license amendment requests that would be required for changes to the values of these cycle specific parameters.

The changes contained in this request are plant specific and did not result from changes recommended in the improved Standard Technical Specifications for Westinghouse Plants, NUREG-1431. The CPSES Technical Specifications remain consistent with NUREG-1431.

II. DESCRIPTION OF TECHNICAL SPECIFICATIONS CHANGE REQUEST

The affected Technical Specifications are:

1) 2.1, "Safety Limits"

The proposed changes remove the Reactor Core Safety Limits figures (Figure 2.1-1a and Figure 2.1-1b), add appropriate references to the COLR in Specification 2.1.1, and revise the corresponding BASES, (2.1.1 REACTOR CORE) by replacing the reference to Figure 2.1-1 with the title of the figure.

2) 2.2.1, "Reactor Trip System Instrumentation Setpoints"

The proposed changes remove all numerical values pertaining to the overtemperature N-16 setpoint and add a referral to the COLR. The affected items are Functional Unit 7 and Notes 1 and 2 to Table 2.2-1.

In addition, the value of the Loop design flow, denoted by "***" and the Loop minimum measured flow, denoted by "****" to Functional Unit 12, are removed and a referral to the COLR is added.

3) 3/4.1.1, "Boration Control"

The proposed changes remove the values for shutdown margin shown in Specifications 3.1.1.1, 4.1.1.1.1, 3.1.1.2, 4.1.1.2, 3.1.2.2, 3.1.2.4 and 3.1.2.6, add appropriate references to the COLR, and revise the related BASES (3/4.1.1.1 and 3/4.1.1.2 SHUTDOWN MARGIN and 3/4.1.2 BORATION SYSTEMS).

4) 3/4.2.5, "DNB Parameters"

The proposed changes remove the indicated Reactor Coolant System flow limits specified in section (c) and insert an appropriate reference to the COLR.

5) 6.9.1.6, "Core Operating Limits Report"

The proposed changes modify Specification 6.9.1.6a by adding the removed parameter limits to the list of items contained in the COLR (new items 7), 8), 9) and 10)), including a reference to the implementing Technical Specifications. Specification 6.9.1.6b is revised to add item 19), TU Electric Report, RXE-94-001, "Safety Analysis of the Postulated Inadvertent Boron Dilution Event in Modes 3, 4, and 5." This report provides NRC-approved methodology used in the analysis of required shutdown margin. In addition, Specification 6.9.1.6b items 1), 9), 13) and 17) are revised to specify the removed parameter limits and their implementing specifications.

The index is revised to delete Figures 2.1-1a and 2.1-1b and to repaginate the remaining Section 2 pages.

In summary, TU Electric proposes to revise the CPSES Technical Specifications and some of the related BASES by removing several cycle-specific parameter limits from the Technical Specifications, adding these parameters to the list of parameter limits in the COLR, and adding the appropriate references to Administrative Controls section of the Technical Specifications. The parameter limits are:

- the Reactor Core Safety Limits,
- the Reactor Trip System Instrumentation Trip Setpoints for the overtemperature N-16 reactor trip function,
- the design and minimum measured loop flow for the Reactor Coolant Flow trip function,
- the minimum shutdown margin, and,
- the minimum indicated Reactor Coolant System (RCS) flow.

III. ANALYSIS

Recognizing that the accident analyses may change from cycle-to-cycle, the NRC issued Generic Letter (GL) 88-16 which provides guidelines for the removal of cycle-specific limits of selected parameters from the Technical Specifications. In order to remove cycle-specific limits, the Generic Letter requires: (1) the addition of the definition of a named formal report that includes the cycle-specific parameter limits that have been established using NRC-approved methodology and consistent with all applicable limits of the safety analysis, (2) the addition of an administrative reporting requirement to submit the formal report on cycle-specific parameter limits to the Commission for information, and (3) the modification of individual technical specification sections to note that the cycle specific parameters shall be maintained within the limits provided in the defined formal report.

TU Electric has previously defined the Core Operating Limits Report (COLR), in Specification 1.10, as the appropriate formal report for cycle-specific parameter limits. Appropriate administrative controls requiring the use of NRC-approved methodology and providing the reporting requirements for the COLR have also been previously defined in Specification 6.9.1.6. Section II above and Attachment 3 describe the modifications to the specific affected Technical Specification sections including appropriate references to the COLR.

The cycle-specific nature of the parameter limits to be removed is discussed below:

A. Reactor Core Safety Limits

The reactor core safety limits, as shown in Figures 2.1-1a and 2.1-1b, define a region of acceptable reactor operation. This region is defined by combinations of reactor power, Reactor Coolant System (RCS) average temperature, and pressurizer pressure. The acceptable pressurizer pressures are bounded by the pressurizer pressure - high and the pressurizer pressure - low reactor trip setpoints. The region of acceptable core power is plotted as a function of RCS average temperature and pressure and is bounded by the most restrictive of the following limits:

- the overpower N-16 reactor trip setpoint;
- the combination of pressure, temperature and power which results in a calculated Departure from Nucleate Boiling Ratio (DNBR) equal to the DNBR design limit (referred to as DNB limit lines);
- the combination of pressure, temperature and power which results in boiling at the exit of the reactor vessel (referred to as vessel exit or hot leg boiling lines).

The overpower N-16 reactor trip setpoints are justified through the accident analyses performed for each reload in accordance with Technical Specification 6.9.1.6b. Both the DNB limit lines and the vessel exit boiling lines are dependent on the assumed value of the Thermal Design Flow used for a specific cycle. In addition, the DNB limit lines are dependent

on the maximum nuclear enthalpy rise hot channel peaking factor, the DNB correlation and DNBR design limit used for a specific core design. The limit on the maximum nuclear enthalpy rise hot channel factor, $F_{\Delta H}$, is currently specified in the COLR; however, for the full benefit of a modification of this limit to be realized, the reactor core safety limits must also be revised. The use of a particular DNB correlation and DNBR design limit must be in accordance with the requirements of Technical Specification 6.9.1.6b; however, several different correlations and limits may be approved for use. Thus, depending on the fuel design and the methodology used to analyze a specific core design, the assumptions on the RCS thermal design flow, and the maximum nuclear enthalpy rise hot channel factor, cycle specific DNB limit lines may be required.

B. Overtemperature N-16 Reactor Trip Setpoint

The overtemperature N-16 setpoint is calculated such that a reactor trip is initiated before conditions are reached which would violate the reactor core safety limits. In addition, an $f_1(\Delta q)$ trip reset function is provided in the N-16 setpoint equation (currently in Note 1 of Table 2.2-1) to account for axial power shapes which are more severe than those shapes considered in the development of the core safety limits. Therefore, changes in the core safety limits must be accompanied by a revision to the overtemperature N-16 setpoint equation. Separate from changes to the core safety limits, a revised core configuration may also result in axial power shapes which require a revision to the $f_1(\Delta q)$ trip reset function.

C. Shutdown Margin

The shutdown margin is based on the accident analyses performed for a specific cycle. As previously described, the accident analyses performed to justify the required shutdown margin would be performed in accordance with approved methodologies and must satisfy NRC-approved event acceptance criteria.

D. RCS Flow Rate

The actual RCS flow rate must meet or exceed the Thermal Design Flow (TDF) rate (i.e., the analytical flow rate used in accident analyses). If supported by the actual RCS flow, the TDF for a specific cycle may be increased in the accident analyses to maintain the required margin of safety while supporting the use of more cost-effective reload core designs. In addition, if it becomes necessary to plug a significant number of steam generator tubes, a reduction in the TDF may be required. Typically, the need for a TDF reduction would be identified as a result of testing performed during a refueling outage; hence, the need for a "rapid turn-around" technical specification change may be reduced by the removal of the Thermal Design Flow parameter limit from the Technical Specifications.

Values of the RCS flow rate are presented in two places in the CPSES Technical Specifications. The value of the loop TDF is specified in Table 2.2-1 in association with the low RCS flow reactor trip setpoint. The current accident analyses for the two CPSES units are based on two different methodologies for including the uncertainty in the RCS flow measurement. As a result, the CPSES Unit 1 low RCS flow reactor trip setpoint is based on the Thermal Design Flow while the CPSES Unit 2 low RCS

flow reactor trip setpoint is based on the "minimum measured flow." The proposed change would generalize the trip setpoint presented in Table 2.2-1 to read "90% of loop flow." The correct flow, minimum measured or thermal design, would be specified in the COLR for each unit consistent with the accident analyses supporting that unit.

In addition, the minimum acceptable value of total indicated RCS flow is specified in Technical Specification 3.2.5. This value is based on the total RCS flow (i.e., the sum of all four loop flows) and includes an allowance of 1.8% for the uncertainty associated with the measurement of the RCS flow. The 1.8% allowance is also specified in TS 3.2.5.

E. Administrative Controls

Consistent with the requirements of GL 88-16, the Administrative Controls section of the Technical Specifications has been revised to ensure that the removed parameter limits are contained in the COLR, and that those limits are established using NRC-approved methodology and are consistent with all applicable limits of the safety analysis. As part of the revision to this section, Specification 6.9.1.6b has been revised to add item 19), TU Electric Report, RXE-94-001-A, "Safety Analysis of the Postulated Inadvertent Boron Dilution Event in Modes 3, 4, and 5." The methodology contained in this report is used in the analysis of required shutdown margin and has been approved by the NRC as documented in reference 2.

F. Summary

The limits on the parameters which are removed from the Technical Specifications and added to the COLR must be developed or justified using NRC-approved methodologies. All accident analyses, performed in accordance with these methodologies, must meet the applicable, NRC-approved limits of the safety analysis. The removal of parameter limits from the Technical Specification and their addition to the COLR does not obviate the requirement to operate within those limits. Furthermore, any changes to these limits must be performed in accordance with Specification 6.9.1.6c. If any of the applicable limits of the safety analyses are not met, prior NRC approval of the change is required, just as is the case for a license amendment request. For the more routine modifications, where NRC-approved methodologies and limits of the safety analysis remain applicable, the potentially burdensome and lengthy process of amending the Technical Specifications may be avoided. These changes are essentially administrative and the required level of safety is maintained.

IV. SIGNIFICANT HAZARDS CONSIDERATIONS ANALYSIS

TU Electric has evaluated whether or not a significant hazards consideration is involved with the proposed changes by focusing on the three standards set forth in 10CFR50.92(c) as discussed below:

1. Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed changes remove cycle-specific parameter limits from the Technical Specifications, add them to the list of limits contained in the Core Operating Limits Report (COLR), and revise the

Administrative Controls section of the Technical Specifications. The changes do not, by themselves, alter any of the parameter limits. The changes are administrative in nature and have no adverse effect on the probability of an accident or on the consequences of an accident previously evaluated. The removal of parameter limits from the Technical Specifications does not eliminate the requirement to comply with the parameter limits.

The parameter limits in the COLR may be revised without prior NRC approval. However, Specification 6.9.1.6c continues to ensure that the parameter limits are developed using NRC-approved methodologies and that applicable limits of the safety analyses are met. While future changes to the COLR parameter limits could result in event consequences which are either slightly less or slightly more severe than the consequences for the same event using the present parameter limits, the differences would not be significant and would be bounded by the requirement of specification 6.9.1.6c to meet the applicable limits in the safety analysis.

Based on the above, removal of the parameter limits from the Technical Specifications and the addition of these limits to the list of limits in the COLR, thus allowing revision of the parameter limits without prior NRC approval, has no significant effect on the probability or consequences of an accident previously evaluated.

2. Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed changes remove certain parameter limits from the Technical Specifications and add these limits to the list of limits in the COLR, removing the requirement for prior NRC approval of revisions to those parameters. The changes do not add new hardware or change plant operations and therefore cannot initiate an event nor cause an analyzed event to progress differently. Thus, the possibility of a new or different kind of accident is not created.

3. Do the proposed changes involve a significant reduction in a margin of safety?

The margin of safety, as it relates to a parameter limit, is the difference between the acceptance criterion for that parameter and its failure value. The proposed changes do not affect the failure values for any system. Through the accident analyses, all relevant event acceptance criteria (as described in the NRC-approved analysis methodologies) are shown to be satisfied; therefore, there is no impact on an event acceptance criteria. Because neither the failure values nor the acceptance criteria are affected, the proposed change has no effect on the margin of safety.

Based on the above evaluations, TU Electric concludes that the activities associated with the proposed changes satisfy the no significant hazards consideration standards of 10CFR50.92(c) and accordingly, a no significant hazards consideration finding is justified.

V. ENVIRONMENTAL EVALUATION

TU Electric has evaluated the proposed changes and has determined that the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criterion for categorical exclusion set forth in 10CFR51.22(c)(9). Therefore, pursuant to 10CFR51.22(b), an environmental assessment of the proposed change is not required.

VI. REFERENCES

1. Generic Letter 88-16 "Guidance for Technical Specification Changes for Cycle-Specific Parameter Limits," October 4, 1988
2. NRC letter from Thomas A. Bergman to Mr. William J. Cahill, Jr., dated November 3, 1993.