



Log # TXX-94046
File # 916 (3/4.3)
916 (2.2)
10010
Ref. # 10CFR50.90
10CFR50.36

William J. Cahill, Jr.
Group Vice President

February 14, 1993

U. S. Nuclear Regulatory Commission
Attention: 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 94-006
ROSEMOUNT TRANSMITTERS ADDED UNCERTAINTY.

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 changes into the CPSES Units 1 and 2 Technical Specifications. The changes to the Overtemperature N-16 (OTN-16) and Pressurizer Pressure-Low Reactor Trip setpoint Allowable Values apply to Unit 2 only. The remainder of the changes apply equally to CPSES Units 1 and 2.

The proposed changes revise the CPSES Units 1 and 2 Technical Specifications as follows:

Table 2.2-1, by decreasing the Unit 2 maximum Allowable Value for OTN-16 and by increasing the Unit 2 minimum Allowable Value for Pressurizer Pressure-Low;

Specification 2.2.1, "Limiting Safety System Settings; Reactor Trip System Instrumentation Setpoints," by deleting ACTION b.1., Equation 2.2-1 and the definitions for Equation 2.2-1;

Specification 3.3.2, "Engineered Safety Features Actuation System Instrumentation; Limiting Condition for Operation," by deleting ACTION b.1., Equation 2.2-1 and the definitions for Equation 2.2-1;

Tables 2.2-1 and 3.3-3, by removing the Total Allowance (TA), Z, and Sensor Error (S) columns as well as their associated numerical values and any footnotes referenced in these columns (this removal corresponds to the removal of Equation 2.2-1 from Specifications 2.2.1 and 3.3.2);

Bases for 2.2.1 "Reactor Trip System Instrumentation Setpoints," by removing reference to Equation 2.2-1;

Bases for 3/4.3.1 and 3/4.3.2, by removing reference to Equation 2.2-1; and

9402280008 940214
PDR ADDCK 05000445
P PDR

D029
11

Administrative changes to Tables 2.2-1 and 3.3-3 where the Unit 1 and Unit 2 line items are identical, by combining the line items into a dual plant entry.

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 hazards consideration. Attachment 3 provides the affected Technical Specification pages from the operating licenses, 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 after NRC approval.

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

Should you have any questions, please contact Mr. Jose' D. Rodriguez at (214) 812-8674.

Sincerely,


William J. Cahill, Jr.

JDR/grp

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

c - Mr. L. J. Callan, Region IV
 Resident Inspectors, CPSES (2)
 Mr. T. A. Bergman, NRR
 Mr. L. A. Yandell, Region IV

Mr. D. K. Lacker
Bureau of Radiation Control
Texas Department of Public Health
1100 West 49th Street
Austin, Texas 78704

DESCRIPTION AND ASSESSMENT

This license amendment request (LAR) consists of various changes. The first is a change to the Allowable Value for the Unit 2 Pressurizer Pressure-Low and Unit 2 Overtemperature (OT) N-16 Reactor Trip Setpoints. The second is an administrative change to delete an option which allowed continued operation for a period of time when a Reactor Trip System (RTS) or Engineered Safety Features Actuation System (ESFAS) Instrumentation or Interlocks Trip Setpoint is found less conservative than the Allowable Value. The third occurs where the Unit 1 and Unit 2 line items for RTS or ESFAS Trip Setpoint and Allowable Values are the same. The change combines the Unit 1 and Unit 2 line items for administrative convenience. The affected items in Table 2.2-1, for the RTS, are 7a and 7b, 11a and 11b, 14a and 14b, and 15a and 15b. The affected items in Table 3.3-3, for the ESFAS, are 1d1 and 1d2, and 4e1 and 4e2. These changes are combined into a single LAR because they affect specification 2.2.1 and because the need for these changes was recognized at about the same time.

I. BACKGROUND

On May 27, 1993, TU Electric was informed by Rosemount Aerospace Inc. (Rosemount) that Model 1154 Series H transmitters with improved temperature performance were not meeting the published temperature specifications. The notification, required by 10CFR21, stated that the transmitter output variation over the 40°F - 130°F ranges was greater than expected. An assessment by TU Electric identified an impact on the Unit 2 Allowable Values for Pressurizer Pressure-Low and OT N16. The same channels on Unit 1 are not affected as they do not use Rosemount Transmitters.

Equation 2.2-1 ($Z + R + S \leq TA$) is used in Specifications 2.2.1 and 3.3.2 to determine the operability of a channel if its setpoint is less conservative than its Allowable Value. The channel may be considered operable if the setpoint is adjusted to be consistent with the Trip Setpoint and Equation 2.2-1 is confirmed satisfied within 12 hours. In practice, TU Electric does not use this option. If the setpoint exceeds the Allowable Value, TU Electric declares the channel inoperable, applies the applicable action requirements and calibrates the channel to restore its operability. Even though the option offered by Equation 2.2-1 is not used, it is an administrative burden to confirm and revise

the values provided for the elements in this equation (TA, Z and S) as provided in Tables 2.2-1 and 3.3-3. For example, the Rosemount temperature effect described above was another in a series of items that potentially impacted these values and required assessment and possibly a Technical Specification change. This burden can be eliminated with the deletion of this equation and the associated values in the instrumentation tables. This change is consistent with the improved Standard Technical Specifications (reference 1).

II. DESCRIPTION OF TECHNICAL SPECIFICATION CHANGE REQUEST

Overtemperature N-16, UNIT 2

The Allowable Value for Overtemperature N-16 for Unit 2 (Functional Unit 7.b of Table 2.2-1, "Reactor Trip System Instrumentation Trip Setpoints") references note 2 of Table 2.2-1. Note 2 of Table 2.2-1 prescribes that, "The...maximum Trip Setpoint shall not exceed its computed Trip Setpoint by more than...2.88% of span... ." This amendment proposes to change this note such that the maximum setpoint shall not exceed the computed Trip Setpoint by more than 2.85% of span. The Unit 1 setpoint is not affected as the associated transmitter is not a Rosemount Transmitter.

Pressurizer Pressure-Low

This amendment request also proposes to change the Allowable Value for Unit 2 Pressurizer Pressure-Low (Functional Unit 9.b of Table 2.2-1) from the current ≥ 1863.6 psig to ≥ 1865.2 psig. The OTN-16 and the Pressurizer Pressure-Low Trip Functions share a common transmitter.

Equation 2.2-1

This amendment request proposes to change Specification 2.2.1, "Limiting Safety System Settings; Reactor Trip System Instrumentation Setpoints," by deleting ACTION b.1., Equation 2.2-1 and the definitions for Equation 2.2-1. ACTION b.1. allows a channel to be considered operable when its setpoint is less conservative than its Allowable Value (if the setpoint is reset to be consistent with the Trip Setpoint and Equation 2.2-1 is met).

Similarly, the amendment proposes to change Specification 3.3.2, "Engineered Safety Features Actuation System instrumentation; Limiting Condition for Operation," by deleting ACTION b.1., Equation 2.2-1 and the definitions for Equation 2.2-1. ACTION b.1. allows a channel to be considered operable when its setpoint is less conservative than its Allowable Value (if the setpoint is reset to be consistent with the Trip Setpoint and Equation 2.2-1 is met).

This amendment request proposes to remove the Total Allowance (TA), Z, and Sensor Error (S) columns as well as their associated numerical values and all footnotes referenced in these columns from Tables 2.2-1 and 3.3-3. This removal corresponds to the removal of Equation 2.2-1 from Specifications 2.2.1 and 3.3.2.

Insofar as the amendment request proposes to remove the use of, the definition of, and the numerical values used in Equation 2.2-1 from Table 2.2-1 and from Specifications 2.2.1; the bases for 2.2.1 "Reactor Trip System Instrumentation Setpoints," are being revised to remove reference to the equation. Similarly, as the amendment request proposes to remove the use of, the definition of, and the numerical values used in Equation 2.2-1 from Table 3.3-3 and from Specification 3.3.2; the bases for 3/4.3.1 and 3/4.3.2 are being revised to remove reference to the equation. In addition, the discussion of the setpoint value after calibration is clarified by replacing the "as measured" with "as left." The term "as measured" applies both prior to and following calibration while "as left" more specifically describes the condition after calibration.

III. ANALYSIS

Overtemperature N-16

A review of the events analyzed in Chapter 15 of the Final Safety Analysis Report (FSAR) shows that, although not the primary protection against DNB limited transients, OTN-16 is protection against DNB. The calculated setpoint for Overtemperature N-16 trip is a function of coolant temperature, pressure, and axial flux difference. The CPSES Statistical Setpoint Study (SSS) identifies the uncertainties associated with the channel.

The added uncertainties reported by Rosemount increase the required allowance in the SSS for the Sensor Temperature Effect (STE). The STE represents an allowance for changes in the transmitter response when operating at a temperature different from the temperature at which it was calibrated. The STE is used to calculate both the Allowable Value and nominal trip setpoint presented in the Technical Specifications. The increased uncertainties reported by Rosemount change the Unit 2 Overtemperature N-16 Allowable Value so that, as stated in revised note 2 of Table 2.2-1, the maximum trip setpoint (Allowable Value) shall not exceed its computed Trip Setpoint by more than 2.85% of the span for Unit 2. Sufficient allowances are available such that the nominal trip setpoint is unchanged.

Reducing the maximum Allowable Value from 2.88% of span above the Trip Setpoint to 2.85% of span above the Trip Setpoint is a change in the conservative direction. The change, however, merely compensates for the increased uncertainty of the channel's transmitter due to temperature effects and actually maintains the same level of safety intended in the original Allowable Value.

Pressurizer Pressure - Low, Unit 2

The Pressurizer Pressure-Low reactor trip function protects against depressurization of the primary system while at power. The Pressurizer Pressure-Low trip will shutdown the reactor in the event of Loss of Coolant Accidents (LOCA) either small or large break, a steam generator tube rupture event, and other loss of inventory or increased cooling from the secondary side events.

The increase in the minimum Allowable Value for Unit 2 Pressurizer Pressure-Low from ≥ 1863.6 psig to ≥ 1865.2 psig is a change in the conservative direction. Pressurizer pressure could have decreased to a lower value before the trip actuated with the existing Allowable Value. The change, however, merely compensates for the increased uncertainty of the channel's uncertainty due to temperature effects and actually maintains the same level of safety intended in the original Allowable Value.

Equation 2.2-1

Currently, Specifications 2.2.1 and 3.3.2 allow adjustment of a bistable if the "as found" setpoint value is found to be less conservative than its corresponding Allowable Value. ACTION b.1. allows adjustment of the bistable to remove the difference between the Trip Setpoint and the "as found" trip value. This adjustment compensates for, but does not necessarily restore the accuracy of the channel in that the bistable is adjusted consistent with the setpoint value listed in Table 2.2-1 or Table 3.3-3 but the drift in the other channel components is not removed. This ACTION further requires that within 12 hours of making the bistable adjustment, a determination that the sum of the pre-adjustment rack drift ("R" term of Equation 2.2-1) and other uncertainty allowances in the channel ("Z" and "S" terms of Equation 2.2-1) do not exceed the Total Allowance (TA) value listed in Table 2.2-1 or Table 3.3-3.

In the alternative, ACTION b.2. requires that if a setpoint is found to be less conservative than its corresponding Allowable Value, the channel be declared inoperable, and the applicable action statements be applied until the channel is restored to operable status.

A channel is restored to operable status by performing a full channel calibration thereby removing the as found deviations in the channel. This calibration in effect will force channel operation closer to the nominal setpoint, which is a more conservative operating point.

The proposal to remove the option provided by ACTION b.1. in Specifications 2.2.1 and 3.3.2, as well as Equation 2.2-1 with its definitions and values, deletes a potentially less conservative option and assures a more conservative operating point for the RTS and ESFAS instrument setpoints than allowed by the current specifications.

IV. SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

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) Does the proposed revision involve a significant increase in the probability or consequences of an accident previously evaluated in the Safety Analyses Report?

Overtemperature N-16, Unit 2

Incorporation of the increased temperature uncertainties reported by Rosemount will change the Allowable Value of the Overtemperature N-16 trip function. The change does not affect the Safety Analysis Limits assumed in the accident analysis. Because the change only impacts the Allowable Value for a setpoint and does not affect any system designs or operations, the change does not increase the probability of an accident. Although the Allowable Value is changed in the conservative direction, the change assures that, considering the newly identified transmitter uncertainty, the trip actuates prior to the conditions assumed in the accident analyses. As such, there is no impact on the consequences of any accidents previously evaluated.

Pressurizer Pressure - Low, Unit 2

The added uncertainties change the Allowable Value of the Unit 2 Pressurizer Pressure-Low Reactor Trip function. The change does not affect the Safety Analysis Limits assumed in the accident analysis. Because the change only impacts the Allowable Value for a setpoint and does not affect the system design or operations, the change does not increase the probability of an accident. Although the Allowable Value is changed in the conservative direction, the change assures that, considering the newly identified transmitter uncertainty, the trip actuates prior to the conditions assumed for the accident analyses. As such, there is no impact on the consequences of any accidents previously evaluated.

Equation 2.2-1

The changes to Specifications 2.2.1 and 3.3.2, to Tables 2.2-1 and 3.3-3, and to the bases sections will require recalibration of the channel and removal of any accumulated errors in any function whose "as found" setpoint is found to be less conservative than its allowable value. These changes delete a potentially less conservative option and will result in actual channel operation closer to the nominal setpoint and within the allowable value band. These changes will in effect validate

one of the assumptions made in the accident analysis and will not increase the probability or consequences of any accident evaluated in the Safety Analysis Report.

Administrative Changes

The changes to combine the Unit 1 and Unit 2 line items into a dual Unit line if the Trip Setpoint and Allowable Value values are the same is administrative and meant as a human factors improvement for operator convenience. The change does not affect the operation of any equipment, the operating point of any equipment, nor any equipment hardware and thus does not increase the probability or consequences of any accident evaluated in the Safety Analysis Report.

- (2) Does the proposed revision create the possibility of a new or different kind of accident from any previously analyzed?

Overtemperature N-16 and Pressurizer Pressure - Low, Unit 2

As the proposed amendment changes only the Unit 2 Allowable Values of the Overtemperature N-16 reactor trip and the Pressurizer Pressure-Low reactor trip and does not have any physical effect on the transmitter or circuitry, there are no new or different types of accidents introduced.

Equation 2.2-1

Deletion of this equation and its associated action statements, definitions and values does not introduce any physical changes to any systems, structures, or components. The change merely assures that setpoints which are less conservative than their Allowable Value are recalibrated prior to being declared operable. These changes do not introduce any new credible failure modes which may create the possibility of a new or different accident.

Administrative Changes

Combining line items for Unit 1 and Unit 2 into a dual Unit entry for administrative purposes does not introduce any new credible failure modes which may create the possibility of a new or different accident.

- (3) Does the proposed revision involve a significant reduction in the margin of safety?

Overtemperature N-16 and Pressurizer Pressure - Low, Unit 2

Incorporation of the added temperature uncertainties of the Rosemount transmitters assures that the safety analysis limits assumed in the accident analyses for Overtemperature N-16 and Pressurizer Pressure-Low reactor trip functions for Unit 2 are met. There is no change in the acceptance criteria or the results of these analyses due to this change. Thus there is no effect on the margin of safety.

Equation 2.2-1

Deletion of Equation 2.2-1, related actions and associated definitions and values, merely eliminates one option to assure that the safety analysis assumptions are met. This option is not presently in use and the accident analyses assumptions have been and will continue to be met using the other option (to re-calibrate channels prior to restoring operability). Thus the margin of safety is unaffected.

Administrative Changes

Combining the Unit 1 and Unit 2 line items of Table 2.2-1 for RTS functions and of Table 3.3-3 for ESFAS functions into dual unit entries does not change the Trip Setpoint or the Allowable Value for the functions. The margin of safety is unaffected.

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 proposed change is not required.

VI. REFERENCES

1. NUREG-1431, "Standard Technical Specifications Westinghouse Plants," September 1992.