

Northeast
Utilities System

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May 23, 1996
Docket No. 50-423
B15719

Re: 10CFR50.90

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

Millstone Nuclear Power Station, Unit No. 3
Proposed Revision to Technical Specifications
Tables 2.2-1 and 3.3-4 (PTSCR 3-5-96)

Introduction

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License NPF-49 by incorporating the attached proposed changes into the Millstone Unit No. 3 Technical Specification Tables 2.2-1 and 3.3-4.

Description of the Proposed Changes

The proposed changes to Technical Specification Table 2.2-1 will modify the description of time constants referenced in Table Notes 1 and 3. The modification will replace the current equal sign with a notation that indicates the direction of conservatism associated with each time constant. This modification is required as our past practice was to treat these values as nominal settings and allow the instrumentation to be adjusted to within a calibration tolerance of the specified time constant. However, during recent discussions with Westinghouse, it was determined that these time constants should be treated as limiting settings and as such, the instrumentation should be adjusted conservatively with respect to these time constants. This new information indicated that our past calibration practice caused equipment to be calibrated to a value that was outside the safety analysis assumptions. The modification to these time constants presentation will ensure that future instrument adjustments will be conservative with respect to safety analysis assumptions.

Additionally, a separate review of the Technical Specifications revealed a nonconservative description of the Steam Line Pressure Negative Rate High Steam Line Isolation time constant on Table 3.3-4. The current description incorrectly states the time constant is less than or equal to 50 seconds. This wording agrees with the description of this time constant contained in NUREG 1431, Standard Technical Specifications, Westinghouse Plants, Revision 1. However, this time constant should be set equal to

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Steam Line Break accident. This time constant is not a safety analysis input assumption.

On May 1, 1996, these issues were reported to the NRC staff pursuant to 10CFR50.72(b)(ii)(B) as a condition outside the design basis of the plant.

Safety Assessment

The Trip Setpoints associated with Overtemperature ΔT on Technical Specification Table 2.2-1 are described in Note 1 to the table. The Note contains six time constants that are used to establish the setpoints. The modifications contained in this proposed change are as follows:

- Two of the time constants, τ_1 and τ_2 , are used to adjust the measured ΔT by the Reactor Coolant System Instrumentation. This proposed change will modify the setting of τ_1 which is contained in the numerator of the Lead-Lag Compensator on Measured ΔT equation, to be greater than or equal to the safety analysis assumption. The setting of τ_2 , which is contained in the denominator of the Lead-Lag Compensator on Measured ΔT equation, is being revised to be less than or equal to the safety analysis assumption. These changes will result in a conservative measurement of ΔT by the reactor coolant system instrumentation.
- Two of the time constants, τ_4 and τ_5 , compensate Over Temperature ΔT setpoint for the rate of change in T_{ave} . This proposed change will revise the setting of τ_4 , which is contained in the numerator of the Lead-Lag Compensator for T_{ave} Dynamic Compensation equation, to be greater than or equal to the safety analysis assumption. The setting of τ_5 , which is contained in the denominator of the Lead-Lag Compensator for T_{ave} Dynamic Compensation equation, is being revised to be less than or equal to the safety analysis assumption. These changes will result in a conservative Indicated ΔT at Rated Thermal Power.
- The last two time constants, τ_3 and τ_6 , are set equal to zero which corresponds to the safety analysis assumption.

The Trip Setpoints associated with Overpower ΔT on Technical Specification Table 2.2-1 are described in Note 3 to the table. The Note contains seven time constants that implement Overpower ΔT protection. The modifications contained in this proposed change are as follows:

- Six of the time constants, τ_1 through τ_6 , are identical to the constants described in Note 1 and their use in Note 3 is consistent with their use in Note 1.

- The seventh time constant, τ_7 , is used in the rate-lag compensator for T_{ave} . This proposed change will revise the setting of τ_7 , which is contained in the numerator and denominator of the Rate-Lag Compensator for T_{ave} Dynamic Compensation equation, to be greater than or equal to the safety analysis assumption. This change will result in a conservative setting of the rate-lag compensator for T_{ave} .

The time constant utilized in the Allowable Value for Steam Line Isolation, Steam Line Pressure-Negative Rate-High on Technical Specification Table 3.3-4 is described in Table Notation **. This proposed change will allow setting the time constant utilized in the rate-lag controller to greater than or equal to 50 seconds. This change will result in a conservative calibration of the rate-lag controller for Steam Line Isolation, Steam Line Pressure-Negative Rate-High.

In summary, the proposed changes relating to the time constants in Tables 2.2-1 and 3.3-4 of the Technical Specifications will not adversely affect the results of the Final Safety Analysis Report (FSAR) accident analysis and it is concluded that this change is safe. The changes do not adversely affect any equipment credited in the safety analysis. Also, there is no impact on the margin of safety as specified in the Technical Specifications.

Significant Hazards Consideration

NNECO has reviewed the proposed changes in accordance with 10CFR50.92 and has concluded that the changes do not involve a significant hazards consideration (SHC). The bases for this conclusion is that the three criteria of 10CFR50.92(c) are satisfied. The proposed changes do not involve an SHC because the changes would not:

1. Involve a significant increase in the probability or consequence of an accident previously evaluated.

The proposed Technical Specification changes will revise the mathematical notations associated with the time constants in Tables 2.2-1 and 3.3-4. The proposed changes do not modify the value of any time constant.

The proposed changes to Table 2.2-1 will replace the current equalities with inequalities in order to indicate the direction of conservatism for the time constants τ_1 , τ_2 , τ_4 , τ_5 , and τ_7 . These time constants are used in Note 1 and Note 3 for the Overtemperature ΔT and Overpower ΔT trips.

The proposed change to Table 3.3-4 will revise the direction of the inequality from "less than or equal to" to "greater than or equal to" in order to indicate the correct direction

of conservatism for the time constant for the rate-lag controller for the Steam Line Pressure-Negative Rate-High trip.

The proposed changes will modify the setpoint calibration of plant instrumentation in a manner that is consistent with the Millstone Unit No. 3 setpoints analysis since the time constants will be treated as limits with a direction of conservatism. Based on the nature of the change, there is no effect on the probability of occurrence of previously evaluated accidents.

The changes noted above related to the time constants in Tables 2.2-1 are intended to indicate that the associated time constants are limiting values. The correction to the inequality in Table 3.3-4 is made to indicate the correct direction of conservatism for this time constant. The treatment of the time constants as limiting values and the correction to Table 3.3-4 are consistent with the setpoints analysis for Millstone Unit No. 3. No changes are made to the specific time constant values. Therefore, the changes will not increase the consequences of an accident previously evaluated.

Thus, the proposed changes will not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed Technical Specification changes will revise the mathematical notations associated with the time constants in Tables 2.2-1 and 3.3-4. The proposed changes do not modify the value of any time constant.

The proposed changes to Table 2.2-1 will replace the current equalities with inequalities in order to indicate the direction of conservatism for the time constants τ_1 , τ_2 , τ_4 , τ_5 and τ_7 . These time constants are used in Note 1 and Note 3 for the Overtemperature ΔT and Overpower ΔT trips.

The proposed change to Table 3.3-4 will revise the direction of the inequality from "less than or equal to" to "greater than or equal to" in order to indicate the correct direction of conservatism for the time constant for the rate-lag controller for the Steam Line Pressure-Negative Rate-High trip.

The proposed changes, regarding the treatment of time constants as limits, will modify the operation of plant

equipment, specifically the Reactor Trip System and engineered safety features actuation system trips noted above. However, these changes regarding the treatment of time constants are consistent with the existing Millstone Unit No. 3 setpoints analysis.

Based on the nature of the changes, the changes do not introduce any new failure modes or malfunctions and do not create the potential for a new unanalyzed accident. Thus, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Involve a significant reduction in a margin of safety.

The proposed Technical Specification changes will revise the mathematical notations associated with the time constants in Tables 2.2-1 and 3.3-4. The proposed changes do not modify the value of any time constant.

The proposed changes to Table 2.2-1 will replace the current equalities with inequalities in order to indicate the direction of conservatism for the time constants τ_1 , τ_2 , τ_4 , τ_5 and τ_7 . These time constants are used in Note 1 and Note 3 for the Overtemperature ΔT and Overpower ΔT trips.

The proposed change to Table 3.3-4 will revise the direction of the inequality from "less than or equal to" to "greater than or equal to" in order to indicate the correct direction of conservatism for the time constant for the rate-lag controller for the Steam Line Pressure-Negative Rate-High trip.

The proposed changes to Technical Specification Tables 2.2-1 and 3.3-4 will ensure that the associated time constants will be calibrated in a manner that is consistent with the Millstone Unit No. 3 setpoints analysis since the time constants will be treated as limits with a direction of conservatism. Therefore, based on the nature of the changes, there is no adverse effect on the results of the FSAR accident analysis and it is concluded that these changes are safe. Additionally, the changes do not adversely effect any equipment credited in the safety analysis and do not effect the probability of occurrence of any plant accident.

The changes do not have any significant impact on the protective boundaries and there is no reduction in the margin of safety as specified in the Technical Specifications. Thus, the proposed changes do not involve a significant reduction in a margin of safety.

In conclusion, based on the information provided, it is determined that the proposed changes do not involve an SHC.

Environmental Considerations

NNECO has reviewed the proposed license amendment against the criteria of 10CFR51.22 for environmental considerations. The proposed changes do not involve an SHC, do not significantly increase the type and amounts of effluents that may be released off site, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, NNECO concludes that the proposed changes meet the criteria delineated in 10CFR51.22(c)(9) for a categorical exclusion from the requirements of an environmental impact statement.

Nuclear Safety Assessment Board Review

The Plant Operations Review Committee and Nuclear Safety Assessment Board have reviewed this proposed amendment request and concurs with the above determination.

State Notification

In accordance with 10CFR50.91(b), we are providing the State of Connecticut with a copy of this proposed amendment request to ensure their awareness of this request.

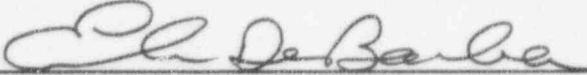
Schedule Request for NRC Approval

NNECO requests that this submittal be reviewed and approved by the NRC staff by June 30, 1996, and that the license amendment be effective upon issuance with implementation within 60 days.

If the NRC staff should have any questions or comments regarding this submittal, please contact Mr. W. J. Temple at (860) 437-5904.

Very truly yours

NORTHEAST NUCLEAR ENERGY COMPANY


E. A. DeBarba, Vice President
Nuclear Technical Services

cc: See Page 7

NOTARY

REQUIRED

cc: T. T. Martin, Region I Administrator
V. L. Rooney, NRC Project Manager, Millstone Unit No. 3
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Mr. Kevin T. A. McCarthy, Director
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Subscribed and sworn to before me

this 23rd day of may, 1996

Sherry Sherman

Date Commission Expires: 8/31/98