



Northeast
Utilities System

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270
(203) 665-5000

June 3, 1996

Docket No. 50-423
B15736
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 Specification
Table 3.3-1 (PTSCR 3-6-96)

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

Description of Proposed Changes

NNECO proposes to revise Table 3.3-1 by deleting the following statement from Action 5(b): "Entry into an OPERATIONAL MODE pursuant to Specification 3.0.4 is not permitted," and adding the following clarification to Action 5(a) and 5(b): "via dilution and rod withdrawal." The statement deletion in Action 5(b) will allow Millstone Unit No. 3, with both Shutdown Margin Monitors (SMM) inoperable, to change to a higher OPERATIONAL MODE per Technical Specification 3.0.4 while in Table 3.3-1 Action 5(a) or 5(b). The clarification to Action 5(a) and 5(b) addresses positive moderator reactivity changes associated with Mode changes.

In addition to the above change, NNECO proposes to revise Action Statements 5(a) and 5(b) to reference Technical Specification 4.1.1.2.2 for the locked valve list rather than Technical Specifications 4.4.1.4.2.3. This change should have been processed as part of Millstone Unit No. 3 Amendment Number 99⁽¹⁾, which relocated the locked valve list to Technical Specification Section 3.1, Reactivity Control Systems.

(1) U.S. Nuclear Regulatory Commission letter to J. F. Opeka, "Issuance of Amendment (TAC No. M90035)," dated December 29, 1994.

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Reason for Proposed Change

Millstone Unit No. 3 was shut down on March 30, 1996 due to a problem with the turbine-driven auxiliary feedwater pump discharge valves. Subsequent to the shutdown, a mid-cycle outage was commenced to resolve equipment problems and respond to NRC requests for information. The secondary sources in proximity to the SMM detectors are decaying as Millstone Unit No. 3 remains in its extended mid-cycle outage. It is anticipated that the SMMs will fall below a minimum count rate, about July 1, 1996, due to the decay of these sources. The Technical Specification action statement associated with both SMMs being inoperable requires the suspension of all positive reactivity changes, isolation of all dilution flow paths and increased shutdown margin surveillance frequency.

With both SMMs inoperable, the Unit cannot change Modes for plant start up due to the 3.0.4 exclusion clause of Action Statement 5(b). The proposed change will remove the exclusion clause and allow the plant to change Modes. Once the Unit has entered Mode 3, based upon previous startup experience, sufficient neutron leakage will occur to increase the SMMs channel count rate above the minimum required count rate for operability.

This proposed change is consistent with Standard Technical Specifications (NUREG 1431) as entry into a higher OPERATIONAL MODE is allowed with inoperable SMMs.

Safety Assessment

The proposed Technical Specification change will not decrease the margin of safety provided by the SMMs. With both SMMs inoperable, the following technical specification action statements must be performed:

1. Positive reactivity operations via dilution and rod withdrawal must be suspended.

The intent of this action is to stop any planned dilution of the RCS. The SMMs are not intended to monitor core reactivity during RCS temperature changes. The alarm set point is routinely re-set during the plant heat up due to the increasing count rate. During cooldowns as the count rate decreases, baseline count rates are continually lowered automatically by the SMMs. The Millstone Unit No. 3 boron dilution analysis assumes steady state RCS temperature conditions.

2. All dilution flow paths must be isolated and placed under administrative control (locked closed).

This action provides redundant protection and defense in depth (safety overlap) to the SMMs. In this configuration, a boron dilution event (BDE) cannot occur. This is the basis for not having to analyze for a BDE in Mode 6. Since the BDE cannot occur with the dilution flow paths isolated, the SMMs are not required to be operable, as operable SMMs provide no benefit.

3. The shutdown margin surveillance frequency must be increased from every 24 hours to every 12 hours. This action, in combination with the above, provides defense in depth and overlap to the loss of the SMMs.

The proposed changes will allow entry into a higher OPERATIONAL MODE with both SMMs inoperable. This is safe because the dilution flow paths will be isolated and, therefore, a boron dilution event cannot occur. Based upon previous startup experience, it is anticipated that as the unit ascends Modes, the RCS heatup will cause the SMM channel count rate to increase to above the minimum count rate for operability. Allowing the unit to increase Modes will actually return the SMMs to OPERABLE status. Once the SMM channels are above the minimum count rate for operability, the channels can be declared operable and the LCO action statement can be exited. This will allow the dilution flow paths to be returned to service in anticipation of the RCS boron concentration reduction during the approach to criticality.

The proposed Technical Specification change is consistent with the intent of the Improved Standard Technical Specifications which allow entry into higher OPERATIONAL MODES with both SMMs inoperable.

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 a SHC because the changes would not:

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

The proposed changes to Technical Specification 3.3.1, Table 3.3-1, Action 5(b) would allow Millstone Unit No. 3 to change Modes with the Shutdown Margin Monitors (SMMs) inoperable while in compliance with the Limiting Condition for Operation (LCO) governing this condition.

The SMMs are used only for the purpose of providing an alarm to allow the operator time to mitigate a boron dilution accident. The LCO action to lock all dilution flow paths

provides adequate protection to preclude a boron dilution event from occurring. The administrative controls placed upon the dilution flow paths per Technical Specification 4.1.1.2.2 are the basis for not having to analyze for a BDE in Mode 6. Consequently, the SMMS are not required to be operable in Mode 6.

With the dilution flow paths locked closed, the SMMS are not required to provide an alarm to the operators to allow them to mitigate the event, and their continued operation provides no added safety benefit. The LCO for both SMMS being inoperable does not require the plant to change Modes and therefore permits continued operation of the facility for an unlimited period of time. The proposed Technical Specification change will allow the plant to invoke Technical Specification 3.0.4 and increase modes while complying with the LCO action statements. These action statements are summarized below:

- Positive reactivity operations via dilutions and rod withdrawal are suspended. The intent of this action is to stop any planned dilutions of the RCS. The SMMS are not intended to monitor core reactivity associated with RCS temperature changes. The alarm set point is routinely re-set during the plant heat up due to the increasing count rate. During cooldowns as the count rate decreases, baseline count rates are continually lowered automatically by the SMMS. The Millstone Unit No. 3 boron dilution analysis assumes steady state RCS temperature operation. Plant cool downs, although considered positive reactivity additions, are allowed to be performed with the SMMS inoperable as the SMMS provide no protection during an RCS cool down. The SMMS are designed to monitor for dilution events, not reactivity additions as a result of cool downs. Prohibiting an RCS cool down as a result of entrance into this LCO action statement could prevent the operator from placing the plant into an overall safer condition. As such, all RCS cool downs will be allowed when the plant has entered this action statement in an effort to place the plant in a safer condition. With the administrative controls placed on the dilution flow paths, the BDE is precluded and the effects of the cool down are normal, anticipated core reactivity changes are offset by higher RCS boron concentrations.
- All dilution flow paths are isolated and placed under administrative control (locked closed). This action provides redundant protection and defense in depth (safety overlap) to the SMMS. In this configuration, a BDE cannot occur. This is the basis for not having to analyze for a BDE in Mode 6. Since the BDE cannot occur with the dilution flow paths isolated, the SMMS are not

required to be operable as the event cannot occur and operable SMMs provide no benefit.

- Increase the shutdown margin surveillance frequency from every 24 hours to every 12 hours. This action, in combination with the above, provides defense in depth and overlap to the loss of the SMMs.

It is concluded that Millstones Unit No. 3 can heat up from Mode 5 to Mode 3 while complying with the technical specification action statements of Technical Specification 3.3.1, Table 3.3-1, safely and without increasing the probability or consequences of an accident previously evaluated.

Thus, this proposed change 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 change will allow Millstone Unit No. 3 to change modes while complying with the LCO action statements. These action statements provide adequate protection to preclude a BDE from occurring. Changing Modes without the SMM OPERABLE will not create a new or different accident from any previously analyzed. The SMMs are used solely for the purpose of detecting a BDE by providing the operator with 15 minutes of mitigation response time. With the event precluded, (the dilution flow paths locked closed) the SMMs provide no additional safety benefit while in operation. Since their only function is to provide a 15 minute response time, their inoperability can not create the possibility of a different accident from occurring.

Based on the nature of the change, the change does not introduce any new failure modes or malfunctions and it does not create the potential for a new unanalyzed accident. Thus, this proposed change does 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 change does not reduce the margin of safety. The proposed change will allow Millstone Unit No. 3 to increase Modes without the SMMs OPERABLE. However the plant would only perform the Mode increase with Technical Specification administrative controls in place that essentially preclude that accident from occurring. In the proposed plant configuration, there

is no added safety benefit from having the SMMs OPERABLE during the Mode increase. As such, there is no reduction in the margin of safety.

Thus, this proposed change does not involve a significant reduction in a margin of safety.

In conclusion, based on the information provided, it is determined that the proposed change does 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.

Plant Operations Review Committee and Nuclear Safety Assessment Board Review

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

State Notification

In accordance with 10CFR50.91(b), a copy of this proposed amendment is being provided to the State of Connecticut Liaison Office.

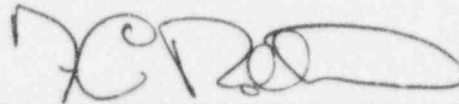
Schedule Request for NRC Approval

NNECO requests that this submittal be reviewed and approved by July 8, 1996 and that the license amendment be effective upon issuance with implementation within 60 days.

Should you have any questions regarding this submittal, please contact Mr. W. Temple at (860) 437-5904.

Very truly yours

NORTHEAST NUCLEAR ENERGY COMPANY



F. C. Rothen, Vice President
Nuclear Work Services

cc: T.T. Martin, Region I Administrator
V.L. Rooney, NRC Project Manager, M Unit No.3
A.C. Cerne, Senior Resident Inspect Stone Unit No. 3

Mr. Kevin T.A. McCarthy, Director
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
P.O. Box 5066
Hartford, CT 06102-5066

Subscribed and sworn to before me

this 3rd day of June, 1996

Sherry E. Sherman

Date Commission Expires: 8/31/98