Northeast
Nuclear Energy

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The Northeast Utilities System

SEP 16 1997

Docket No. 50-336
B16724

Re: 10CFR50.90

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

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Main Steam Line Code Safety Valves

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License DPR-65 by incorporating the attached proposed change into the Technical Specifications of Millstone Unit No. 2. The proposed change will revise Technical Specification 3.7.1.1, "Plant Systems Turbine Cycle Safety Valves."

Attachment 1 provides a discussion of the proposed changes and the Safety Assessment. Attachment 2 provides the Significant Hazards Consideration. Attachment 3 provides the marked-up version of the appropriate Technical Specification and Bases pages. Attachment 4 provides the retyped pages of the Technical Specification and associated Bases.

Environmental Considerations

NNECO has reviewed the proposed License Amendment Request against the criteria of 10CFR51.22 for environmental considerations. The proposed change removes the ability to operate in Modes 1 or 2 with inoperable main steam line code safety valves as currently specified in Technical Specifications. This change will not significantly increase the type and amounts of effluents that may be released offsite. In addition, this amendment request will not significantly increase individual or cumulative occupational radiation exposures. Therefore, NNECO has determined the proposed changes will not have a significant effect on the quality of the human environment.

A001

Conclusions

The proposed change was evaluated utilizing the criteria of 10CFR50.59 and was determined not to be an unreviewed safety question. Additionally, we have concluded the proposed change is safe.

The proposed change does not involve a significant impact on public health and safety (see the Safety Assessment provided in Attachment 1) and does not involve a Significant Hazards Consideration pursuant to the provisions of 10CFR50.92 (see the Significant Hazards Consideration provided in Attachment 2).

Plant Operations Review Committee and Nuclear Safety Assessment Board

The Plant Operations Review Committee and Nuclear Safety Assessment Board have reviewed and concurred with the determinations.

Schedule

We request issuance at your earliest convenience, with the amendment to be implemented within 30 days of issuance.

State Notification

In accordance with 10 CFR50.91(b), a copy of this License Amendment Request is being provided to the State of Connecticut.

If you should have any questions on the above, please contact Mr. Ravi Joshi at (860) 440-2080.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

M L Bowling

Martin L. Bowling, Jr.
Millstone Unit No. 2 - Recovery Officer

Sworn to and subscribed before me

this 16 day of September, 1997

Donna Lynne Williams
Notary Pubic

My Commission expires Nov. 30, 2001

Attachments (4)
cc: See Page 3

cc: H. J. Miller, Region I Administrator
D. G. McDonald, Jr., NRC Senior Project Manager, Millstone Unit No. 2
D. P. Beaulieu, Senior Resident Inspector, Millstone Unit No. 2
W. D. Travers, Ph.D, Director, Special Projects Office
W. D. Lanning, Deputy Director of Inspections - Special Projects Office
P. F. McKee, Deputy Director of Licensing - Special Projects Office

Director
Bureau of Air Management
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

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Attachment 1

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Main Steam Line Code Safety Valves
Discussion of Proposed Changes

September 1997

Proposed Revision to Technical Specifications
Main Steam Line Code Safety Valves
Discussion of Proposed Changes

Introduction

Northeast Nuclear Energy Company (NNECO) has determined it is necessary to remove the ability to operate in Modes 1 or 2 with inoperable main steam line code safety valves as currently specified in Technical Specification 3.7.1.1, "Plant Systems Turbine Cycle Safety Valves." Therefore, pursuant to 10CFR50.90, NNECO hereby proposes to amend Operating License DPR-65 by incorporating the attached proposed change into the Millstone Unit No. 2 Technical Specifications.

Background

Overpressure protection for the shell side of the steam generators and the main steam line piping up to the inlet of the turbine stop valves is provided by 16 spring loaded ASME Code safety valves which discharge to atmosphere. Eight of the safety valves are mounted on each of the steam lines outside of containment, upstream of the main steam line isolation valves. The valves are designed to limit secondary system pressure to within 110% (1100 psig) of design pressure.

During the review of the Millstone Unit No. 2 Technical Specifications for the 10CFR50.54(f) project, it was discovered that the maximum allowable power level high trip setpoints specified in Table 3.7-1 of Technical Specification 3.7.1.1 are not correct. The current values are based on a power level high trip setpoint of 107% of rated thermal power. However, the maximum allowable power level high trip setpoint was changed to 106.6% by Amendment No. 61[1]. This change to 106.6% was incorporated into the Bases for Technical Specification 3.7.1.1, but the values contained in Table 3.7-1 were not recalculated. Therefore, the values currently in Table 3.7-1 are too high, a non-conservative error.

NNECO is in the process of reanalyzing the closure of a Main Steam Isolation Valve (MSIV) and the Loss of Electrical Load (LOEL) events. The new analyses indicate that the MSIV closure will be the most limiting anticipated system operational transient with respect to peak secondary system pressure. The new analyses also indicate that the formula currently contained in the Bases of Technical Specification 3.7.1.1 may not yield reduced power level high trip setpoints that are low enough. Therefore, NNECO is proposing to remove the ability to operate in Modes 1 or 2 with inoperable main steam line code safety valves by deleting Table 3.7-1, and modifying the associated action statement. This will also require a change to the Bases of Technical Specification 3.7.1.1.

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[1] R. A. Clark letter to W. G. Counsil, Issuance of Amendment No. 61, dated October 6, 1980.

NNECO has verified that plant operation in Mode 3, with three inoperable main steam line code safety valves per steam generator, is acceptable. In Mode 3, the total relieving capacity of the remaining operable main steam line code safety valves (5 safety valves per steam generator) is sufficient to remove the maximum possible decay heat load. The remaining operable main steam line code safety valves have sufficient capacity to limit secondary system pressure to within 110% (1100 psig) of the design pressure of 1000 psig during the most severe anticipated system operational transient.

The ability to operate in Mode 3 with inoperable main steam line code safety valves will provide additional flexibility for the performance of maintenance and repairs to the main steam line code safety valves. Therefore, NNECO is proposing to change the action statement of Technical Specification 3.7.1.1 to remove the ability to operate in Modes 1 or 2 with inoperable main steam line code safety valves, and to retain the ability to operate in Mode 3 with a maximum of three inoperable main steam line code safety valves per steam generator.

Description of Proposed Change

The action statement in Technical Specification 3.7.1.1 will be replaced with the following action statements:

a. If one or more main steam line code safety valves are inoperable, restore the inoperable valve(s) to OPERABLE status within 4 hours, or be in HOT STANDBY within the next 6 hours.

b. If more than three main steam line code safety valves on a single steam generator are inoperable, be in HOT STANDBY within 6 hours, and HOT SHUTDOWN within the next 12 hours.

Table 3.7-1, "Maximum Allowable Power Level-High Trip Setpoint with Inoperable Steam Line Safety Valves During Operation with Both Steam Generators," will be deleted and replaced with "This Page Intentionally Left Blank."

Bases 3/4.7.1.1 will be changed to reflect the proposed changes to Technical Specification 3.7.1.1.

In addition to the above changes, the Bases pages will be modified to correct and update the amendment history numbers. Bases pages B 3/4 7-1 and B 3/4 7-2 were previously changed by License Amendments No. 52[2] and No. 61[3]. Bases page B 3/4 7-

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2 R. W. Reid letter to W. G. Counsil, Issuance of Amendment No. 52, dated May 12, 1979.
3 R. A. Clark letter to W. G. Counsil, Issuance of Amendment No. 61, dated October 6, 1980.

2 was also changed by License Amendment No. 63[4]. These amendment numbers will be added to the respective pages.

Safety Assessment

Technical Specification 3.7.1.1, "Plant Systems Turbine Cycle Safety Valves," currently allows operation in Modes 1, 2 and 3 with a maximum of three inoperable main steam line code safety valves per steam generator, provided the power level high trip setpoints are reduced the required amount. This proposed change will remove the ability to operate in Modes 1 or 2 with inoperable main steam line code safety valves. Operation in Mode 3 will be retained, provided no more than three main steam line code safety valves per steam generator are inoperable.

Removal of the ability to operate in Modes 1 or 2 with inoperable main line code safety valves is a more restrictive change to plant operation. The current Technical Specification allows operation in Modes 1, 2, and 3 with a maximum of three inoperable main steam line code safety valves per steam generator, provided the power level high trip setpoints are reduced the required amount. This change will only allow plant operation in Mode 3 with inoperable main steam line code safety valves, and it will no longer require the power level high trip setpoints to be reduced. When the plant is operating in Mode 3, the reactor is at least 1% subcritical (K_{eff} less than .99). Reactor power will not be able to increase to the power level high trip setpoints without an additional malfunction. Protection against such a reactor power excursion will still be provided by the power level high reactor trip. This reactor trip has a variable trip setpoint that is automatically reduced during plant shutdown. In Mode 3, this variable setpoint will be approximately 15%. This value is significantly below the value of 66.8% currently specified in Table 3.7-1 for three inoperable main steam line code safety valves per steam generator. Therefore, there is no significant impact on public health and safety.

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[4] T. M. Novak letter to W. G. Counsil, Issuance of Amendment No. 63, dated January 19, 1981.

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Attachment 2

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Main Steam Line Code Safety Valves
Significant Hazards Consideration

September 1997

Proposed Revision to Technical Specifications
Main Steam Line Code Safety Valves
Significant Hazards Consideration

Significant Hazards Consideration

In accordance with 10CFR50.92, NNECO has reviewed the proposed change and has concluded that it does not involve a Significant Hazards Consideration (SHC). The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed change does not involve an SHC because the changes would not:

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

   This proposed change will remove the ability to operate in Modes 1 or 2 with inoperable main steam line code safety valves. Operation in Mode 3 will be retained, provided no more than three main steam line code safety valves per steam generator are inoperable.

   The primary function of the main steam line code safety valves is to prevent secondary system overpressurization. These valves will also provide reactor core heat removal and design basis accident mitigation. This proposed change does not affect the length of time the plant can operate with inoperable main steam line code safety valves before compensatory actions must be taken. (Four hours is still allowed to restore the valve(s) to operable status.) This proposed change does not affect the probability of occurrence of any design basis accident and does not affect how the main steam line code safety valves function to mitigate design basis accidents. Therefore, this change does not significantly increase 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.

   This proposed change does not alter the way any structure, system, or component functions. The proposed change will conservatively change plant operation in Modes 1 and 2 by removing the ability to operate at power with inoperable main steam line code safety valves as currently specified in Technical Specification 3.7.1.1. It does not introduce any new failure modes and does not alter any assumption made in the safety analysis.

   Therefore, the change will 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.

This proposed change to Technical Specification 3.7.1.1 will remove the ability to operate in Modes 1 or 2 with inoperable main steam line code safety valves. Operation in Mode 3 will be retained, provided no more than three main steam line code safety valves per steam generator are inoperable. The operability of the main steam line code safety valves ensures that the secondary system pressure will be limited to within 110% (1100 psig) of the design pressure of 1000 psig during the most severe anticipated system operational transient. This change will not affect the operability requirements for the main steam line code safety valves and will not affect the length of time the plant can operate with inoperable main steam line code safety valves before compensatory actions must be taken. This will ensure the plant equipment required for design basis accident mitigation will be available. Therefore, there is no significant reduction in a margin of safety as defined in the Bases of Technical Specification 3.7.1.1.

The NRC has provided guidance concerning the application of standards in 10CFR50.92 by providing certain examples (March 6, 1986, 51 FR 7751) of amendments that are considered not likely to involve an SHC. The change proposed herein to remove the ability to operate in Modes 1 or 2 with inoperable main steam line code safety valves, as currently specified in Technical Specifications 3.7.1.1, is enveloped by example (ii), a change that constitutes an additional limitation, restriction, or control not presently included in the Technical Specifications.

As described above the License Amendment Request does not involve a significant increase in the probability of an accident previously evaluated, does not involve a significant increase in the consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident from any accident previously evaluated, and does not result in a significant reduction in a margin of safety. Therefore, NNECO has concluded that the proposed change does not involve an SHC.