Northeast
Nuclear Energy

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The Northeast Utilities System

AUG 12 1998

Docket No. 50-336
B17385

Re: 10 CFR50.90

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

Millstone Nuclear Power Station, Unit No. 2
Changes to Technical Specifications
Updating List of Documents Describing the Analytical Methods Specified in Technical Specification 6.9.1.8b

Pursuant to 10 CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License DPR-65 by incorporating the attached proposed changes into the Millstone Unit No. 2 Technical Specifications. The proposed changes will update the list of documents, describing the analytical methods used to determine the core operating limits, specified in Technical Specification 6.9.1.8b.

Siemens Power Corporation revised the originally approved steam line break methodology[1] to correct a deficiency identified in the methodology. The report describing the revised methodology[2] was submitted for NRC approval in June of 1998. The revised methodology was used to perform Millstone Unit No. 2 plant specific analysis for post-scram main steam line break analysis[3] which is enclosed with this letter as Attachment 6. The proposed changes affect Technical Specification 6.9.1.8b, "Core Operating Limits Report."

Attachment 1 provides a discussion of the proposed changes and the Safety Summary. Attachment 2 provides the Significant Hazards Consideration. Attachment 3 provides the marked-up version of the appropriate pages of the current Technical Specifications.

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(1) EMF-84-93(P)(A), Revision 0 and Supplement 1, "Steamline Break Methodology for PWRs, Advanced Nuclear Fuels Corporation," March 1989.

(2) J. F. Mallay, Siemens Power Corporation, to Chief, Planning, Program and Management Support Branch, NRC, "Request for Review of ANF-84-093(P) Revision 1, 'Steamline Break Methodology for PWRs'," June 30, 1998.

(3) EMF-98-036, Revision 1, "Post-Scram Main Steam Line Break Analysis for Millstone Unit 2," July 1998, Siemens Power Corporation.

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Attachment 4 provides the retyped pages of the Technical Specifications. Attachment 5 provides the list of regulatory commitments made by NNECO in this proposed revision to Technical Specifications. Attachment 6 provides the Millstone Unit No. 2 plant specific main steam line break analysis, "EMF-98-036, Revision 1, Post-Scram Main Steam Line Break Analysis for Milistone Unit 2, July 1998, Siemens Power Corporation."

Environmental Considerations

NNECO has reviewed the proposed License Amendment Request against the criteria of 10 CFR51.22 for environmental considerations. The proposed changes will update the list of documents, describing the analytical methods used to determine the core operating limits, specified in Technical Specification 6.9.1.8b. These changes 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.

Conclusions

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

The proposed changes do not involve a significant impact on public health and safety (see the Safety Summary provided in Attachment 1) and do not involve a Significant Hazards Consideration pursuant to the provisions of 10 CFR50.92 (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 60 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, Jr.
Recovery Officer - Technical Services

Subscribed and sworn to before me

this 12th day of August 1998

Barbara J. Dietrich

Date Commission Expires: 1/31/2000

Attachments

cc: H. J. Miller , Region I Administrator
D. G. McDonald, Jr., NRC Project Manager, Millstone Unit No. 2
D. P. Beaulieu, Senior Resident Inspector, Millstone Unit No. 2
E. V. Imbro, Acting Director, Special Projects Office
W. D. Lanning, Deputy Director of Inspections - Special Projects Office
W. M. Dean, Acting Deputy Director of Licensing - Special Projects Office

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Attachment 1

Millstone Nuclear Power Station, Unit No. 2
Change to Technical Specifications
Updating List of Documents Describing the Analytical Methods Specified in Technical Specification 6.9.1.8b
Discussion of Changes

August 1998

Change to Technical Specifications
Updating List of Documents Describing the Analytical Methods Specified in Technical Specification 6.9.1.8b
Discussion of Proposed Changes

Introduction

Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License DPR-65 by incorporating the attached proposed changes into the Millstone Unit No. 2 Technical Specifications. The proposed changes will update the list of documents, describing the analytical methods used to determine the core operating limits, specified in Technical Specification 6.9.1.8b.

Description of Proposed Change

The proposed changes will update the references to the Siemens methodology given in Technical Specification 6.9.1.8.b. The revised references can be separated into three categories:

1. The analysis methodology is unchanged but the reference has been clarified by identifying the specific revision, supplements and dates for the references. This applies to current references 6.9.8.1b 1, 2, 3, 5, 6, 7, 8 and 9. These current references have been revised. Reference 10 is part of the current references since current reference 6 has been split into reference 6 and reference 7 in the revised list.

2. The analysis methodology is unchanged and the reference is being added for completeness. This applies to the proposed references 6.9.8.1b 11, 12, 13, 14 and 15.

3. The analysis methodology is being changed. This applies to reference 6.9.8.1b 4 addressing the steam line break analysis methodology.

The proposed changes will also remove the sentence on page 6-19 starting with "The acceptable Millstone 2...." and ending with "...dated October, 1988."

Siemens Power Corporation (SPC) has revised the originally approved steam line break methodology[1] to correct a deficiency identified in the methodology. The revised methodology[2] has been used to perform Millstone Unit No. 2 plant specific analysis to

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(1) EMF-84-93(P)(A), Revision 0 and Supplement 1, "Steamline Break Methodology for PWRs," Advanced Nuclear Fuels Corporation, March 1989.

(2) J. F. Mallay, Siemens Power Corporation, to Chief, Planning, Program and Management Support Branch, NRC, "Request for Review of ANF-84-093(P) Revision 1, 'Steamline Break Methodology for PWRs'," June 30, 1998.

update the current post-scram main steam line break analysis[3] (Attachment 6). This analysis is necessary to resolve an issue associated with the peaking factors applied in the steam line break analysis identified in Licensee Event Report 98-007-00[4]. This methodology may also be utilized to analyze transients associated with changes in steam flow such as the inadvertent opening of a steam generator relief or safety valve, excess steam flow and Main Steam Isolation Valve (MSIV) closure. The only change in the ANF-RELAP based methodology is that the XTGPWR neutronics calculations are now coupled to the XCOBRA-IIIC thermal-hydraulic calculations by transferring the XCOBRA-IIIC nodal moderator densities into XTGPWR and iterating between XTGPWR and XCOBRA-IIIC until the power distribution converges-rather than adjusting the XTGPWR core inlet flows until the XTGPWR density distribution is conservative relative to the XCOBRA-IIIC density distribution. The modification is necessary to assure the proper interface between the two computer programs. The use of the revised methodology still provides a conservative simulation of the steam line break accident[5] and constitutes an improvement over the previous methodology.

The sentence on page 6-19, starting with "The acceptable Millstone 2...." and ending with "...dated October, 1988," references the document ANF-88-126, "Millstone Unit 2 Cycle 10 Safety Analysis Report," which has been outdated because of the above mentioned changes in the methodology. Therefore, the removal of this sentence is necessary to be consistent with methodology changes.

Safety Summary

The proposed changes will update the references to the Siemens methodology given in Technical Specification 6.9.1.8.b. The proposed changes include:

a. Adding clarifications and specific revision numbers to current references 6.9.8.1b 1, 2, 3, 5, 6, 7, 8 and 9. Reference 10 is part of the current references since current reference 6 has been split into reference 6 and reference 7 in the revised list. The analysis methodology is unchanged for these references.

b. Addition of references 11, 12, 13, 14 and 15 to the proposed references in 6.9.8.1b for completeness.

c. Changing reference 6.9.8.1b 4 to reflect a change in the steam line break analysis methodology.

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(3) EMF-98-036, Revision 1, "Post-Scram Main Steam Line Break Analysis for Millstone Unit 2," July 1998, Siemens Power Corporation.

(4) Millstone Nuclear Power Station Unit 2, Licensee Event Report 98-007-00, Reanalysis of Main Steam Line Break Indicates Possible Fuel Failures, May 8, 1998.

(5) EMF-84-093(P), Revision 1, "Steam Line Break Methodology for PWRs," June 1998, Siemens Power Corporation.

d. Removing the sentence on page 6-19 that starts with "The acceptable Millstone 2...." and ends with "...dated October, 1988."

Siemens Power Corporation (SPC) has revised the originally approved steam line break methodology to correct a deficiency identified in the methodology. The revised methodology has been used to perform Millstone Unit No. 2 plant specific analysis to update the current post-scram main steam line break analysis. This analysis is necessary to resolve an issue associated with the peaking factors applied in the steam line break analysis identified in Licensee Event Report 98-007-00. The use of the revised methodology still provides a conservative simulation of the steam line break accident and constitutes an improvement over the previous methodology. The removal of the sentence on page 6-19 is necessary to be consistent with methodology changes. Therefore, the proposed changes will have no adverse effect on plant safety.

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Attachment 2

Millstone Nuclear Power Station, Unit No. 2
Change to Technical Specifications
Updating List of Documents Describing the Analytical Methods Specified in Technical Specification 6.9.1.8b
Significant Hazards Consideration

August 1998

Proposed Revision to Technical Specifications
Updating List of Documents Describing the Analytical Methods Specified in
Technical Specification 6.9.1.8b
Significant Hazards Consideration

Significant Hazards Consideration

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

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

   The proposed change in reference 4 of Technical Specification Section 6.9.1.8b revises the steam line break analysis methodology to be applied to Millstone Unit No. 2 and clarifies the references to the Siemens topical reports. The other changes are clarifications or additions for completeness and do not represent a change in the approved methodology for Millstone Unit No. 2. The change in methodology is associated with the interface between XTGPWR, the neutronics code, and XCOBRA-IIIC, the thermal hydraulics code. It has no impact on plant equipment operation. Since the change only affects the analysis of the events, it cannot affect the likelihood or consequences of these events. Therefore, this change will not significantly increase the probability or consequences of an accident previously evaluated.

   The sentence on page 6-19, starting with "The acceptable Millstone 2...." and ending with "...dated October, 1988," references the document ANF-88-126, "Millstone Unit 2 Cycle 10 Safety Analysis Report," which has been outdated because of the above mentioned changes in the methodology. The removal of this sentence is necessary to be consistent with methodology changes. Therefore, this change will 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.

   The proposed change in reference 4 of Technical Specification Section 6.9.1.8b revises the steam line break analysis methodology to be applied to Millstone Unit No. 2 and clarifies the references to the Siemens topical reports. The other changes are clarifications or additions for completeness and do not represent a change in the approved methodology for Millstone Unit No. 2. The proposed

change in reference 4 of Technical Specification Section 6.9.1.8b will not alter the plant configuration (no new or different type of equipment will be installed) or require any new or unusual operator actions. It does not alter the way any structure, system, or component functions and does not alter the manner in which the plant is operated.

The sentence on page 6-19, starting with "The acceptable Millstone 2...." and ending with "...dated October, 1988," references an outdated document. The removal of this sentence is necessary to be consistent with methodology changes. This change does not alter the way any structure, system, or component functions and does not alter the manner in which the plant is operated.

The changes do not introduce any new failure modes. Therefore, the proposed changes 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.

The proposed change in reference 4 of Technical Specification Section 6.9.1.8b revises the steam line break analysis methodology to be applied to Millstone Unit No. 2 and clarifies the references to the Siemens topical reports. The other changes are clarifications or additions for completeness and do not represent a change in the approved methodology for Millstone Unit No. 2. The change in steam line break methodology is associated with the interface between XTGPWR, the neutronics code, and XCOBRA-IIIC, the thermal hydraulics code. The change will result in a better correlation between the two computer codes, which is the intent of the iteration process. This will result in more accurate results while still maintaining a conservative modeling of the event. The most significant impact is on the low RCS flow cases associated with loss of offsite power. These cases are not limiting when compared to the offsite power available cases. The improved references will clearly identify the approved Siemens Topical Reports applicable to Millstone Unit No. 2 and will ensure that methodology changes will be identified and submitted to the NRC for approval as required. The sentence on page 6-19, starting with "The acceptable Millstone 2...." and ending with "...dated October, 1988," references an outdated document. The removal of this sentence is necessary to be consistent with methodology changes.

Therefore, the proposed changes will not result in a significant reduction in the margin of safety as defined in the Bases for Technical Specifications covered in this License Amendment Request.

The NRC has provided guidance concerning the application of standards in 10 CFR50.92 by providing certain examples (March 6, 1986, 51 FR 7751) of amendments that are considered not likely to involve an SHC. The changes proposed

herein to update the references in Technical Specification 6.9.1.8b are not covered by any specific example.

As described above, this 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 changes do not involve an SHC.