Northeast
Nuclear Energy

Rope Ferry Rd. (Route 156), Waterford, CT 06385

Millstone Nuclear Power Station
Northeast Nuclear Energy Company
P.O. Box 128
Waterford, CT 06385-0128
(860) 447-1791
Fax (860) 444-4277

The Northeast Utilities System

JAN 18 1999

Docket No. 50-336
B17623

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
Secondary Containment Bypass Leakage

Introduction

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License DPR-65 by incorporating the attached proposed changes into the Technical Specifications of Millstone Unit No. 2. NNECO is proposing to change Technical Specification 3.6.1.2, "Containment Systems - Containment Leakage." The Bases for this Technical Specification will be modified to address the proposed changes.

NNECO also proposes to amend Operating License DPR-65 by incorporating the attached change to the Millstone Unit No. 2 Final Safety Analysis Report (FSAR). The proposed changes to the FSAR are associated with the proposed changes to Technical Specification 3.6.1.2.

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. Attachment 4 provides the retyped pages of the Technical Specifications. Attachment 5 provides the changes to the Millstone Unit No. 2 FSAR.

Environmental Considerations

NNECO has reviewed the proposed License Amendment Request against the criteria of 10CFR51.22 for environmental considerations. The proposed changes will reduce the combined leakage rate limit allowed through the secondary containment bypass leakage paths, remove the list of secondary containment bypass leakage paths from

the Technical Specifications, and add additional secondary containment bypass leakage paths to the FSAR. These changes do not significantly increase the type and amounts of effluents that may be released off site. 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 10CFR50.59 and were determined to involve an unreviewed safety question. The proposed changes to the secondary containment bypass leakage rate Technical Specification will result in a decrease in the calculated off-site doses following a design basis LOCA. However, the proposed changes will result in an increase in the calculated doses to the Control Room Operators following a design basis LOCA. The new calculated doses to the Control Room Operators do not exceed the limits contained in 10CFR50, Appendix A, General Design Criteria (GDC) 19.

Since the new calculated doses to the Control Room Operators following a design basis LOCA do not exceed the GDC 19 limits, NNECO has concluded the proposed changes are safe. In addition, 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 10CFR50.92 (see the Significant Hazards Consideration provided in Attachment 2). Therefore, NNECO requests the NRC review and approve the proposed changes to the Millstone Unit No. 2 Technical Specifications and FSAR through an amendment to Operating License DPR-65, pursuant to 10CFR50.90.

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

There are no regulatory commitments contained within this letter.

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

Sworn to and subscribed before me

this 18 day of January, 1999

Notary Public

My Commission expires LORETTA F. GOODSON NOTARY PUBLIC Commission Expires November 30, 2001

Attachments (5)

cc: H. J. Miller, Region I Administrator
S. Dembek, NRC Project Manager, Millstone Unit No. 2
D. P. Beaulieu, Senior Resident Inspector, Millstone Unit No. 2
W. M. Dean, Director, Millstone Project Directorate
W. D. Lanning, Director, Millstone Inspections
J. P. Durr, Chief, Inspections Branch, Millstone Inspections
E. V. Imbro, Director, Millstone ICAVP Inspections

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
Secondary Containment Bypass Leakage
Discussion of Proposed Changes

January 1999

Proposed Revision to Technical Specifications
Secondary Containment Bypass Leakage
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 Technical Specifications of Millstone Unit No. 2. NNECO is proposing to change Technical Specification 3.6.1.2, "Containment Systems - Containment Leakage." The Bases for this Technical Specification will be modified to address the proposed changes.

NNECO also proposes to amend Operating License DPR-65 by incorporating the attached changes to the Millstone Unit No. 2 Final Safety Analysis Report (FSAR). The proposed changes to the FSAR are associated with the proposed changes to Technical Specification 3.6.1.2.

NNECO has identified additional secondary containment bypass leakage paths that are not listed in Technical Specification Table 3.6-1, "Secondary Containment Bypass Leakage Paths." These additional leakage paths should be added to Table 3.6-1. However, Generic Letter (GL) 91-08, "Removal of Component Lists from Technical Specifications," provides guidance that component lists, like those contained in Table 3.6-1, can be removed from Technical Specifications. GL 91-08, which specifically addresses secondary containment bypass leakage paths, states that the identification of the secondary containment bypass leakage path penetrations in the Final Safety Analysis Report (FSAR) is sufficient. No further clarification to the Technical Specification is necessary to remove the list. Therefore, NNECO is proposing to remove the list from Technical Specifications. In addition, NNECO is updating the FSAR (Attachment 5) to include the additional secondary containment bypass leakage paths identified.

The current off-site dose calculations following a design basis loss of coolant accident (LOCA) assume a secondary containment bypass leakage rate of 0.017 L_a. The current control room dose calculations following a design basis LOCA assume a secondary containment bypass leakage rate of 11 cc/hr. These values for secondary containment bypass leakage rates were used in the revised off-site and control room dose calculations that were recently submitted to the NRC for review and approval by the letter dated September 28, 1998.[1] As a result of identifying additional secondary containment bypass leakage paths, NNECO has again revised the off-site and control room dose calculations. These revised calculations use a secondary containment bypass leakage rate of 0.0072 L_a. This value is consistent with the proposed change to

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(1) M. L. Bowling, Jr. letter to U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, Proposed Revision to Technical Specifications, Control Room Ventilation System," dated September 28, 1998.

the Technical Specification limit for secondary containment bypass leakage. As a result of this change, the calculated off-site doses following a design basis LOCA have decreased, but the calculated control room doses following a design basis LOCA have increased.

The revised calculation for control room doses following a design basis LOCA has also been changed to assume that the secondary containment bypass leakage is released from containment, instead of the Millstone Unit No. 2 stack as currently specified in Table 3.6-1. This will also result in an increase in the calculated control room doses since the use of a different release point will result in the use of different X/Q values. The off-site dose calculation assumes the release is from containment instead of the Millstone Unit No. 2 stack because the distance to the off-site boundary results in no significant difference between the two release locations. This is consistent with the guidance contained in Standard Review Plan (SRP) 6.5.3, "Fission Product Control Systems and Structures," Revision 2, July 1981.

Technical Specification Changes

The limit for secondary containment bypass leakage specified in Technical Specification 3.6.1.2.c will be reduced from < 0.017 L_a to < 0.0072 L_a. This new limit is consistent with the value of secondary containment bypass leakage used in the revised off-site and control room dose calculations following a design basis LOCA.

Technical Specification 3.6.1.2.c will be modified by replacing "identified in Table 3.6-1 as" with "that are." This will allow Table 3.6-1 to be removed. The removal of this table from Technical Specifications and the proposed wording change are consistent with the guidance contained in GL 91-08. It is not necessary to maintain a list of the secondary containment bypass leakage paths in Technical Specifications. The Millstone Unit No. 2 FSAR (Section 5.3.4) provides the necessary information to determine the secondary containment bypass leakage paths that must be considered to ensure that the combined leakage rate limit contained in Technical Specification 3.6.1.2.c is met.

Technical Specification 3.6.1.2 Table 3.6-1, "Secondary Containment Bypass Leakage Paths," will be removed and the phrase "This Page Intentionally Deleted" will be added to Page 3/4 6-5.

The Bases for Technical Specification 3.6.1.2 will be modified to indicate that the Millstone Unit No. 2 FSAR contains a list of the containment penetrations that have been identified as secondary containment bypass leakage paths.

FSAR Changes

FSAR Section 5.3.4, "Through-Line Leakage Evaluation," will be changed to include the additional secondary containment bypass leakage paths that have been identified. The criteria used to determine the secondary containment bypass leakage paths will be

modified to be consistent with the criteria used in the evaluation that identified the additional leakage paths.

The discussion of the use of a leakage rate of 11 cc/hr for the control room dose calculations will be modified. The revised control room dose calculations will assume a total secondary containment bypass leakage rate consistent with the proposed change to Technical Specification 3.6.1.2. The proposed changes to FSAR Section 5.3.4 are contained in Attachment 5.

As a result of these proposed changes, the calculated off-site and control room doses following a design basis LOCA will change. The calculated doses are specified in FSAR Section 14.8.4, "Radiological Consequences of the Design Basis Accident." A revision to this section of the FSAR has been submitted to the NRC by the letter dated September 28, 1998.[2] This submittal will be revised to incorporate the proposed total secondary containment bypass leakage rate and the associated change to the calculated off-site and control room doses following a design basis LOCA.

Table 1 summarizes the revised off-site radiological consequences of the design basis LOCA at Millstone Unit No. 2 based on a secondary containment bypass leakage rate limit of < 0.0072 L_a.

Table 1
Summary of Off-Site Doses for Loss of Coolant Accident
(FSAR Table 14.8.4-2)

Location	Thyroid (rem)	Whole Body (rem)
EAB	34.6	2.36
LPZ	13.1	0.908

Table 2 summarizes the revised radiological consequences of the design basis LOCA at Millstone Unit No. 2 to the Millstone Unit No. 2 Control Room Operators based on a secondary containment bypass leakage rate limit of < 0.0072 L_a.

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(2) M. L. Bowling, Jr. letter to U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, Proposed Revision to Technical Specifications, Control Room Ventilation System," dated September 28, 1998.

Table 2
Summary of Dose to Millstone Unit No. 2 Control Room Operators for Loss of Coolant Accident
(FSAR Table 14.8.4-5)

Release	Thyroid (rem)	Whole Body (rem)	Beta Skin Dose (rem)
Millstone Unit No. 2 LOCA	28.7	0.755	2.74

The radiological consequences for the design basis LOCA at Millstone Unit No. 2 do not exceed the Exclusion Area Boundary (EAB) and Low Population Zone (LPZ) dose limits of 10CFR100 (300 rem thyroid and 25 rem whole body). The dose to the Control Room Operators does not exceed the 10CFR50, Appendix A, General Design Criteria (GDC) 19 limits of 30 rem thyroid, 5 rem whole body, and 30 rem to the skin.

Safety Summary

The proposed change to lower the limit for secondary containment bypass leakage, as specified in Technical Specification 3.6.1.2.c, from < 0.017 L_a to < 0.0072 L_a will reduce the off-site doses associated with the design basis LOCA. The proposed change to raise the limit for secondary containment bypass leakage from 11 cc/hr to < 0.0072 L_a will increase the dose to the Control Room Operators following a design basis LOCA. The proposed change to assume that the secondary containment bypass leakage is released from containment, instead of the Millstone Unit No. 2 stack as currently specified in Technical Specification Table 3.6-1, will also result in an increase in the calculated control room doses since the use of a different release point will result in the use of different X/Q values. However, the revised off-site and control room dose calculations, using the proposed combined secondary containment bypass leakage limit, demonstrate that the limits of 10CFR100 and GDC 19 are met. In addition, these proposed changes will result in the use of the same limit for secondary containment bypass leakage when determining the radiological consequences (off-site and control room) of a design basis LOCA.

The proposed wording change to Technical Specification 3.6.1.2.c, and the associated removal of Table 3.6-1, will not change the requirement to verify total secondary containment bypass leakage is within the limit assumed in the determination of the radiological consequences of the design basis LOCA. Control of the penetrations that have been identified as secondary containment bypass leakage paths will be maintained by the process used to change the Millstone Unit No. 2 FSAR. This process ensures that appropriate changes to the FSAR are evaluated in accordance with 10CFR50.59 to determine if NRC approval is required prior to implementing the change. This process also ensures that the NRC is informed of FSAR changes via regular updates to the FSAR. The removal of Table 3.6-1 from Technical

Specifications and the proposed wording change are consistent with the guidance contained in GL 91-08.

The identification and addition of more secondary containment bypass leakage paths to the FSAR will have no impact on the calculated off-site and control room doses following a design basis LOCA since the combined leakage through all secondary containment bypass leakage paths is limited to the proposed value contained in Technical Specification 3.6.1.2. The addition of bypass leakage paths does not change the combined leakage limit, which is now used in the off-site and control room dose calculations.

The Bases for Technical Specification 3.6.1.2 will be modified to indicate that the Millstone Unit No. 2 FSAR contains a list of the containment penetrations that have been identified as secondary containment bypass leakage paths.

The proposed changes will have no adverse effect on plant operation or accident mitigation equipment. The plant response to the design basis accidents will not change. Therefore, there will be no adverse impact on public health and safety.

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Attachment 2

Millstone Nuclear Power Station, Unit No. 2
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Significant Hazards Consideration

January 1999

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Secondary Containment Bypass Leakage
Significant Hazards Consideration

Significant Hazards Consideration

In accordance with 10CFR50.92, 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 10CFR50.92(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 to lower the limit for secondary containment bypass leakage, as specified in Technical Specification 3.6.1.2.c, from < 0.017 L_a to < 0.0072 L_a will reduce the off-site doses associated with the design basis LOCA. The proposed change to raise the limit for secondary containment bypass leakage from 11 cc/hr to < 0.0072 L_a will increase the dose to the Control Room Operators following a design basis LOCA. However, the revised off-site and control room dose calculations, using the proposed combined secondary containment bypass leakage limit, demonstrate that the limits of 10CFR100 and 10CFR50, Appendix A, General Design Criteria (GDC) 19 are met. In addition, these proposed changes will result in the use of the same limit for secondary containment bypass leakage when determining the radiological consequences of a design basis LOCA.

   The proposed wording change to Technical Specification 3.6.1.2.c, and the associated removal of Table 3.6-1, will not change the requirement to verify total secondary containment bypass leakage is within the limit assumed in the determination of the radiological consequences of the design basis LOCA. Control of the penetrations that have been identified as secondary containment bypass leakage paths will be maintained by the process used to change the Millstone Unit No. 2 FSAR. This process ensures that appropriate changes to the FSAR are evaluated in accordance with 10CFR50.59 to determine if NRC approval is required prior to implementing the change. This process also ensures that the NRC is informed of FSAR changes via regular updates to the FSAR. The removal of Table 3.6-1 from Technical Specifications and the proposed wording change are consistent with the guidance contained in GL 91-08.

   The identification and addition of more secondary containment bypass leakage paths to the FSAR will have no impact on the calculated off-site and control room doses following a design basis LOCA since the combined leakage through

all secondary containment bypass leakage paths is limited to the proposed value contained in Technical Specification 3.6.1.2. The addition of bypass leakage paths does not change the combined leakage limit, which is now used in the off-site and control room dose calculations.

The Bases for Technical Specification 3.6.1.2 will be modified to indicate that the Millstone Unit No. 2 FSAR contains a list of the containment penetrations that have been identified as secondary containment bypass leakage paths.

The proposed changes do not alter the way any structure, system, or component functions. These changes do not affect any equipment that can cause a design basis accident to occur. There will be no adverse effect on any design basis accident previously evaluated or on any equipment important to safety. The reduction in the allowable secondary containment bypass leakage limit will result in a decrease in the calculated off-site doses associated with the design basis LOCA. The use of the proposed secondary containment bypass leakage limit will increase the calculated doses to the Control Room Operators following a design basis LOCA. However, the calculated doses meet the criteria of 10CFR100 and GDC 19. Therefore, there will be no 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 changes will not alter the plant configuration (no new or different type of equipment will be installed) or require any new or unusual operator actions. They do not alter the way any structure, system, or component functions and do not alter the manner in which the plant is operated. The proposed changes do not introduce any new failure modes. Also, the response of the plant and the operators following these accidents is essentially unaffected by the change. The criteria used by the plant operators to terminate containment spray following a design basis LOCA will change from containment pressure to either time or pressure, whichever requires longer operation. This will ensure that containment spray remains in operation long enough to achieve the assumed iodine decontamination. However, the operator action to terminate containment spray will remain the same. 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 to lower the Technical Specification limit for secondary containment bypass leakage, to remove Table 3.6-1, and to add more secondary containment bypass leakage paths to the FSAR will have no adverse effect on equipment important to safety. The equipment will continue to function as

assumed in the design basis accident analysis. These changes will ensure that the secondary containment bypass leakage paths are identified and tested to verify that the total secondary containment bypass leakage does not exceed the Technical Specification limit. This will ensure that the expected off-site and control room doses following a design basis LOCA are within the limits specified in 10CFR100 and GDC 19. Therefore, there will be no significant reduction in the margin of safety as defined in the Bases for the Technical Specification affected by these proposed changes.

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. Although the changes proposed herein are not enveloped by a specific example, this License Amendment Request does not impact 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.