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Nuclear Energy

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The Northeast Utilities System

OCT 2 2000

Docket Nos. 50-336
50-423
B18233

RE: 10 CFR 50.55a(a)(3)(i)

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

Millstone Nuclear Power Station, Unit Nos. 2 and 3
Supplement to Previous Submittals Requesting Relief From
ASME Section XI for the Inservice Test Program

By letters dated June 1, 2000,[1] and August 25, 2000,[2] Northeast Nuclear Energy Company (NNECO) submitted requests for relief from the requirements of 10 CFR 50.55a(f) for performing testing in accordance with the American Society of Mechanical Engineers (ASME) Code, Section XI. Attachments 1 through 4 of this letter revise the portions of these previously submitted requests that are associated with manual valve and pump analysis inservice test requirements. NNECO concluded that this revision to the previously submitted letters was necessary to modify the requested frequency for testing of the manual valves and to remove reference to an alert range associated with the alternatives proposed in the pump analysis Relief Requests.

10 CFR 50.55a(a)(3) allows that alternatives to specific provisions of the Code may be used when approved by the Director, Office of Nuclear Reactor Regulation. Accordingly, pursuant to 10 CFR 50.55a(a)(3)(i), NNECO hereby requests approval of the alternatives as detailed in Attachments 1 through 4. The alternatives described herein are determined to provide a commensurate level of quality and safety as allowed under 10 CFR 50.55a(a)(3)(i).

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(1) NNECO letter to NRC, "Millstone Nuclear Power Station, Unit No. 2, Inservice Test Program Request for Relief from ASME Section XI," dated June 1, 2000, (B18099).

(2) NNECO letter to NRC, "Millstone Nuclear Power Station, Unit No. 3, Inservice Test Program Request for Relief from ASME Section XI," dated August 25, 2000, (B18201).

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It is requested that NRC approval be provided by December 31, 2000, to support timely implementation of these Relief Requests prior to the next planned refueling outage scheduled for February 2001.

There are no regulatory commitments contained within this letter.

Should you have any questions regarding this matter, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Stephen E. Scace - Director
Nuclear Oversight and Regulatory Affairs

Attachments (4): Relief Request (R-2) for In-Service Test Requirements - Manual Valves
Relief Request (R-4) for In-Service Test Requirements - Manual Valves
Relief Request (PR-2) for In-Service Test Requirements - Pump Analysis
Relief Request (PR-5) for In-Service Test Requirements - Pump Analysis As Corrective Action

cc: H. J. Miller, Region I Administrator
J. I. Zimmerman, NRC Project Manager, Millstone Unit No. 2
S. R. Jones, Senior Resident Inspector, Millstone Unit No. 2
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3
A. C. Cerne, Senior Resident Inspector, Millstone Unit No. 3

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Attachment 1

Millstone Nuclear Power Station, Unit Nos. 2 and 3

Relief Request (R-2) for In-Service Test Requirements
Manual Valves

Relief Request (R-2) for In-Service Test Requirements
Manual Valves

Relief Request: R-2 (Millstone Unit No. 2)

System: Main Steam (MS),
Reactor Building Closed Cooling (RB),
Auxiliary Feedwater (FWA),
Containment Spray (CS)

Valves:

2-CN-29A	2-FW-56B	2-RB-56A	2-RB-107B
2-CN-29B	2-RB-39	2-RB-56B	2-RB-107C
2-CN-30	2-RB-41	2-RB-56C	
2-FW-56A	2-RB-43	2-RB-107A	

Code Class: 2/3

Category: B

Function: Valves 2-CN-29A, 2-CN-29B and 2-CN-30 perform the following function: Close to allow suction flow path from the fire main.

Valves 2-FW-56A and 2-FW-56B perform the following function: Open to allow manual control of Auxiliary Feedwater.

Valves 2-RB-39, 2-RB-41, 2-RB-43, 2-RB-56A, 2-RB-56B, 2-RB-56C, 2-RB-107A, 2-RB-107B, and 2-RB-107C perform the following function: Close when entering post accident long term cooling or to isolate a faulted RB header.

Test Requirement: Active Category B valves shall be tested nominally every three (3) months (OM-10, paragraph 4.2.1.1).

Basis For Relief: The Reactor Building Closed Cooling (RB), and Auxiliary Feedwater system (FWA) valves are manual valves. The predominant degradation and failure mechanisms (motor failures, electrical failures, switch settings, etc) associated with power operated valves (MOVs, AOVs) do not exist for manual valves. These valves are normally open (except two Auxiliary Feedwater valves that are closed) and are closed to prevent loss of system inventory. The two Auxiliary Feedwater valves are normally closed and are opened to allow flow.

These valves are not operated during power operation except for surveillance testing. Testing these valves on a quarterly frequency solely to meet the requirements of ASME/ANSI 1987, OMa 1988 provides limited value. Quarterly testing is unnecessary for detecting valve degradation, does not decrease the potential for a component failure and the proposed alternative testing will provide a level of safety comparable to the current Code testing.

Alternate Testing: Manually full stroke exercise the valves at least once every 18 months. The 25 percent grace period allowed for other Technical Specification surveillances will be allowed for this frequency to facilitate scheduling of the surveillance due to plant conditions or other constraints.

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Attachment 2

Millstone Nuclear Power Station, Units No. 2 and 3

Relief Request (R-4) for In-Service Test Requirements
Manual Valves

Relief Request (R-4) for In-Service Test Requirements
Manual Valves

Relief Request: R-4 (Millstone Unit No. 3)

System: Various

Valves:

3CCP*V965	3CHS*V273	3FWA*V998
3CCP*V966	3CHS*V291	3FWA*V999
3CCP*V981	3FWA*V2	3QSS*V1
3CCP*V986	3FWA*V16	3QSS*V2
3CHS*V270	3FWA*V30	3QSS*V5
3CHS*V271	3FWA*V997	3QSS*V6
3CHS*V272		

Category: A/B

Code Class: 2/3

Function: Valves 3CCP*V965, V966, V981 and V986 are closed to prevent diversion of flow (through failed Radiation monitor piping or to Charging Pump Cooling (CCE) or Safety-Injection Pump Cooling (CCI) surge tanks) in the event of a fail closed Air-Operated Valve (AOV) fails open due to spurious actuation under adverse environmental conditions and during a seismic event.

Valves 3CHS*V270, V271, V272 and V273 are repositioned to provide seal flow in the event 3CHS*HCV182 fails to operate properly and provide a borated water flow path during a Safety Grade Cold Shutdown.

Valve 3CHS*V291 is opened to cross-tie Boric Acid Tanks (BAT) to meet Technical Specification emergency boration requirements.

Valves 3FWA*V2, V16, V30, V997, V998 and V999 are closed to provide moderate energy line break (MELB) isolation of a pipe "break" (crack) in the Auxiliary Feedwater system piping downstream of De-aerated Water Storage Tank (DWST) suction line isolations in the Engineered Safety Features (ESF) building.

Valves 3QSS*V1, V2, V5 and V6 are closed to provide MELB isolation of a pipe "break" (crack) in Quench Spray system (QSS) piping between suction line isolations and discharge isolations.

Test Requirement: Active category A and B valves shall be tested nominally every three months. (OM-10 paragraph 4.2.1.1).

Basis For Relief: The Chemical and Volume Control (CHS), Reactor Building Component Cooling (CCP) and Auxiliary Feedwater (FWA) system valves are manual valves. Except for the charging system valves, these valves are normally open and are closed if necessary to prevent loss of system inventory. The charging valves are closed/opened as necessary to allow flow in the event power operated valve 3CHS*MOV182 fails. Valve 3CHS*V291 is opened to cross-tie BAT tanks to meet Technical Specification emergency boration requirements.

The above valves are not normally operated during power operation except for surveillance testing, though some are used as maintenance isolations. The predominant degradation and failure mechanisms (motor failures, electrical failures, switch settings, etc) associated with power operated valves (MOVs, AOVs) do not exist for these manual valves. Testing these valves on a quarterly frequency solely to meet the requirements of ASME/ANSI 1987, OMa 1988 Addenda, does not provide any added value. Quarterly testing is unnecessary for detecting degradation of manual valves and does not decrease the potential for a component failure. The valves have been successfully tested per the Code since startup in June of 1998. There have not been any failures in any components ability to perform its safety function. The proposed alternate testing will provide a comparable level of quality and safety as the current Code required testing.

The QSS valves are also manual valves. These valves are normally open and are closed if necessary to prevent loss of system inventory. These valves are not operated during power operation except for surveillance testing and 3QSS*V2 and V6 are used as maintenance isolations. As stated above for the other valves, the predominant degradation and failure mechanisms associated with power operated valves do not exist for these manual valves and quarterly testing is unnecessary for detecting degradation. These valves have been tested per the Code since startup in June of 1998. The valves have been evaluated for adverse conditions. Valves 3QSS*V1 and V5 are outside and maintenance history has shown the environment to be

harsh (winter conditions). Per the proposed alternate testing, these two valves will be tested once each refuel. A maintenance work history review did not identify any problems with valves 3QSS*V2 and V6. The proposed alternate testing will provide a comparable level of quality and safety as the current Code required testing.

Alternate Testing: Manually full stroke exercise the valves at least once every 18 months. The 25 percent grace period allowed for other Technical Specification surveillances will be allowed for this frequency to facilitate scheduling of the surveillance due to plant conditions or other constraints.

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Attachment 3

Millstone Nuclear Power Station, Unit Nos. 2 and 3

Relief Request (PR-2) for In-Service Test Requirements
Pump Analysis

Relief Request (PR-2) for In-Service Test Requirements
Pump Analysis

Relief Request: PR-2 (Millstone Unit No. 2)

System: Various

Pumps: All IST pumps

Code Class: 2/3

Function: Provide the required flow at the necessary head to the associated system header.

Test Requirement: If deviations fall within the alert range of Table 3, the frequency of testing specified in paragraph 5.1 shall be doubled until the cause of the deviation is determined and the condition corrected. If deviations fall within the required action range of Table 3, the pump shall be declared inoperable until the cause of the deviation has been determined and the condition corrected (OM-6, paragraph 6.1).

Basis for Relief: By allowing an analysis of the pump's overall performance, premature maintenance of a pump that is subject to normal and gradual degradation over time or other test anomalies can be avoided provided the pump can be determined to be fully capable of reliably performing its intended safety function. The 1995 Edition of the ASME OM Code provides an alternative corrective action should a pump's performance enter the required action range. Paragraph 6.2.2 permits an analysis of the pump's performance and establishment of new reference values.

By adopting the 1995 ASME Code requirements, for this specific instance, the frequency of pump maintenance, with concurrent equipment outage and applicable Limiting Condition for Operation (LCO) time, can be reduced with little or no adverse affect on plant safety as determined by the acceptance of the 1996 addenda of the ASME Code.

This proposed alternate test is consistent with the response to question 3.3.2 in the Summary of Public Workshop on Inspection Procedure 73756.

Alternate Testing: When a pump's test parameters fall within the required action range and the pump's overall performance has been determined to be acceptable by analysis, a new set of reference values may be established. The supporting analysis will include verification of the pump's operational readiness and the pumps continued performance in between testing intervals. The pump's analysis will address both component and system level evaluations of operational readiness, a description of the cause of the change in pump performance, an evaluation of all trends indicated by the data and an evaluation of applicable maintenance performed on the pump. This analysis will be documented in the record of tests.

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Attachment 4

Millstone Nuclear Power Station, Unit Nos. 2 and 3

Relief Request (PR-5) for In-Service Test Requirements
Pump Analysis As Corrective Action

Relief Request (PR-5) for In-Service Test Requirements
Pump Analysis As Corrective Action

Relief Request: PR-5 (Millstone Unit No. 3)

System: Various

Pumps: All IST pumps

Code Class: 2/3

Function: Provide the required flow at the necessary head to the associated system header.

Test Requirement: If deviations fall within the alert range of Table 3, the frequency of testing specified in paragraph 5.1 shall be doubled until the cause of the deviation is determined and the condition corrected. If deviations fall within the required action range of Table 3, the pump shall be declared inoperable until the cause of the deviation has been determined and the condition corrected (OM-6, paragraph 6.1).

Basis For Relief: By allowing an analysis of the pump's overall performance, premature maintenance of a pump that is subject to normal and gradual degradation over time or other test anomalies can be avoided provided the pump can be determined to be fully capable of reliably performing its intended safety function. The 1995 Edition of the ASME OM Code provides an alternative corrective action should a pump's performance enter the required action range. Paragraph 6.2.2 permits an analysis of the pump's performance and establishment of new reference values.

By adopting the 1995 ASME Code requirements, for this specific instance, the frequency of pump maintenance, with concurrent equipment outage and applicable Limiting Condition for Operation (LCO) time, can be reduced with little or no adverse affect on plant safety as determined by the acceptance of the 1996 addenda of the ASME Code.

This proposed alternate test is consistent with the response to question 3.3.2 in the Summary of Public Workshop on Inspection Procedure 73756.

Alternate Testing: When a pump's test parameters fall within the required action range and the pump's overall performance has been determined to be acceptable by analysis, a new set of reference values may be established. The supporting analysis will include verification of the pump's operational readiness and the pump's continued performance in between testing intervals. The pump's analysis will address both component and system level evaluations of operational readiness, a description of the cause of the change in pump performance, an evaluation of all trends indicated by the data and an evaluation of applicable maintenance performed on the pump. This analysis will be documented in the record of tests.