Northeast
Utilities System

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APR 24 1996

Docket No. 50-423
B15593

Re: 10CFR50.55a

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

Millstone Nuclear Power Station, Unit No. 3
Irservice Testing Program
Request for Relief

Pursuant to 10CFR50.55a(a)(3)(i), Northeast Nuclear Energy Company (NNECO) hereby requests relief from ASME OM Code-1987 OM1, Sections 8.1, 8.1.1.8, 8.1.2.8, and 8.1.3.7 for all safety and relief valves in the Inservice Testing (IST) Program for Millstone Unit No. 3. This relief request will change the hold time between successive actuations during set pressure testing of all safety/relief valves from ten minutes to five minutes.

Relief request R-1 (Attachment 1) applies to all safety and relief valves. The current test method for set pressure testing of safety/relief valves requires a minimum of two consecutive actuations with a ten minute hold time between actuations. This relief will require a five minute hold time between successive actuations for all safety/relief valves. This IST Program change is a slightly different test method than specified by the Code, but provides a similar level of performance monitoring and will reduce test time and radiation exposure. The increased hold time between tests is not necessary to ensure repeatable results nor does it increase the accuracy of the set pressure test.

ASME OM Code-1987 OM1, Sections 8.1, 8.1.1.8, 8.1.2.8, and 8.1.3.7 require a minimum ten minute hold time between successive openings. The ASME OM Committee conducted a generic evaluation comparing five minute versus ten minute hold time between successive valve actuations with regard to set pressure when using saturated steam. The comparison is based on actual valve test data compiled over several years and includes both main steam safety and pressurizer safety relief valves. Enclosed as Attachment 2 is a summary of that comparison. Valves similar to those identified in the Attachment are currently installed at Millstone Unit No. 3. The data presented for each valve type is an averaged value

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of the standard deviation for each valve in that particular group. These averaged values are compared to the same valve group with both a five and ten minute hold time between openings. The attached summary lists average deviation in psig. Normal ranges for main steam relief valves is approximately 1200 psig and for pressurizer safety relief valves is 2500 psig. The average deviations shown are within normal gauge increments and accuracies.

Millstone Unit No. 3 is extending the inspection interval for its Inservice Test Program, in accordance with ASME Section XI subparagraph IWA-2430d. The code states "for components inspected under Program B (four successive 10-year intervals) each inspection interval may be extended by as much as one year." The new start date will be October 23, 1996. The new date coincides with the start of the second ten-year interval of the Inservice Inspection Program. This information was provided to the NRC in a letter dated November 30, 1995.[1] Millstone Unit No. 3 will update the Inservice Test Program to the requirements of the 1989 Edition of ASME Section XI, as referenced in 10CFR 50.55a(b).

Conclusion

Relief request R-1 will allow a five minute hold time between successive safety/relief valve set pressure testing rather than the prescribed ten minute hold time. The proposed method will provide an equivalent method for performing inservice testing of all safety/relief valves. A review of data on safety/relief valve testing under saturated steam service provided to the ASME OM-1 Working Group on Safety and Relief Valves has shown that there is no significant difference in set pressure determination when using a ten or five minute hold time between successive valve actuations. This information has been evaluated and endorsed by both the ASME OM-1 Safety and Relief Valve Working Group and the Subcommittee on Valves.[2]

Based on the above, Relief Request R-1 would not result in any undue risk to the health and safety of the public. NNECO believes that the information provided is sufficient to secure NRC Staff approval of the relief request. NNECO requests Staff approval of this relief request prior to the end of 1996.

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[1] NNECO letter B15427, dated November 30, 1995, J. F. Opeka to the U. S. Nuclear Regulatory Commission, "Haddam Neck Plant, Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3, Response to Request for Additional Information - Request to Use an Alternative to ASME Code, Section XI."

[2] P. J. Seniuk, Chairman OM-1, letter dated October 20, 1995, to D. Poulis, Secretary Main Committee, "Five Minute Wait Time Between Successive Relief Valve Lifts."

Should you require any additional information, please contact Mr. W. J. Temple at (860) 437-5904.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

F. R. Dacimo
Vice President

cc: T. T. Martin, Region I Administrator
V. L. Rooney, NRC 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 No. 3
Inservice Testing Program
Request for Relief

April 1996

Millstone Unit No. 3
Relief from Inservice Testing Requirements

Relief Request: R-1

Valves: All safety and relief valves

Category: C

Code Class: 1, 2, and 3

Function:

Provide overpressure protection to safety-related systems

Test Requirement:

A minimum of 10 minutes shall elapse between successive openings. (OM1-1987, paragraphs 8.1.1.8, 8.1.2.8, and 8.1.3.7)

Proposed Alternative Examinations:

Safety and relief valves will be tested with a five minute hold time between tests.

Basis for Requesting Relief:

Relief request R-1 generically applies to all safety and relief valves. The current test method for set pressure testing of safety/relief valves requires a minimum of two consecutive actuations with ten minutes between actuations. This generic relief will require a five minute hold time between successive actuations for all safety/relief valves. This IST Program change is a slightly different test method than specified by the Code, but provides a similar level of performance monitoring. This relief request will allow utilizing a five minute hold time when performing set pressure testing of safety/relief valves, and will reduce test time and potentially radiation exposure. The increased hold time between tests is not necessary to ensure repeatable results nor does it increase the accuracy of the set pressure test.

The ASME OM Committee conducted an evaluation comparing five minute versus ten minute hold time between successive valve actuations with regard to set pressure when using saturated steam. The comparison is based on actual valve test data compiled over several years and includes both main steam safety and pressurizer safety relief valves. Valves similar to those identified by the ASME OM committee are currently installed at Millstone Unit No. 3. The

data presented for each valve type is an averaged value of the standard deviation for each valve in that particular group. These averaged values are compared to the same valve group with both a five and ten minute hold period between openings. Normal range for main steam relief valves is approximately 1200 psig and for pressurizer safety relief valves is 2500 psig. The average deviations found are within normal gauge increments and accuracies.

The required hold time between tests is not necessary to ensure repeatable results. The increased hold time between tests does not increase the accuracy of the set pressure test. Temperature stabilization is important for high temperature valves. A ten minute hold time creates an excessively long test period based on the number of tests being conducted and the total time duration of the test. Temperature stabilization is not a concern for valves tested at ambient conditions.

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Attachment 2

Millstone Nuclear Power Station, Unit No. 3
Inservice Testing Program
Request for Relief

Comparison of Valve Types and Hold Times

April 1996

Summary of the Averaged Values of the Standard Deviation for Each Valve Type and Hold Period Interval

VALVE TYPE	AVERAGE DEVIATION (psig)
Crosby Main Steam Safety Valves	
10 minutes between openings	2.463
5 minutes between openings	2.358
Crosby pressurizer safety relief valves	
10 minutes between openings	5.273
5 minutes between openings	5.075
Dresser Main Steam Safety Valves	
10 minutes between openings	1.823
5 minutes between openings	2.973 *

*Note: This data came from a full flow test program rather than a limited lift.

Dresser Main Steam Safety Valves	
10 minutes between openings	3.476
5 minutes between openings	5.200

(Data compiled by Wyle Laboratories' Engineering Staff.)

Dresser Main Steam Safety Valves	
10 minutes between openings	3.696
5 minutes between openings	3.365
Target Rock Main Steam Safety Relief Valves	
10 minutes between openings	3.250
5 minutes between openings	3.069

(Data compiled by Westinghouse Safety Valve Test Facility Staff.)