



**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

OCT 2 2000

Docket Nos. 50-336
50-423
B18218

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
Inservice Inspection on Class MC and Class CC Components
Alternative to Requirements of ASME Section XI

Pursuant to 10 CFR 50.55a(a)(3)(i), Northeast Nuclear Energy Company (NNECO) proposes to use an alternative to the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, Subsection IWE, 1998 Edition for Millstone Unit Nos. 2 and 3. This request is to allow the use of an alternative to the augmented examination requirements for surface areas of metal containments and liners of concrete containments. The proposed alternative and justification are included in Attachment 1.

NNECO believes the proposed alternative requirements shown in Attachment 1, would provide an acceptable level of quality and safety pursuant to 10 CFR 50.55a(a)(3)(i) and would not affect the level of quality or safety in the Containment Inspection Program.

NNECO has evaluated a similar request by Duke Energy⁽¹⁾ and the Nuclear Regulatory Commission (NRC) subsequent Safety Evaluation Report.⁽²⁾ The positions taken by

⁽¹⁾ Letter from M. S. Tuckman, "Request to Use an Alternative to the ASME Boiler and Pressure Vessel Code, Section XI in Accordance With 10 CFR 50.55a(a)(3)(i) Duke Energy Corporation Serial Number 98-GO-003," dated April 6, 1998.

⁽²⁾ NRC letter from H. N. Berkow, Office of Nuclear Reactor Regulation, "Relief Request from the ASME Section XI Requirement as Endorsed by 10 CFR 50.55a for Containment Inspection - Catawba Nuclear Station, Units 1 and 2; Oconee Nuclear Station, Units 1, 2, and 3; and McGuire Nuclear Station, Units 1 and 2 (TAC Nos. MA1506, MA1507, MA1516, MA1517, MA1518, MA1519, and MA1520) (Serial No. 98-GO-003)," dated October 1, 1998.

Duke and NNECO are similar. In both cases, the level of quality and safety of the respective containment inspection programs are not affected by the proposed alternatives.

NNECO respectfully requests NRC review and approval of this request by December 1, 2000, in order to support the Millstone Unit No. 3 refueling outage.

There are no regulatory commitments contained in 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

A handwritten signature in black ink, appearing to read "Stephen E. Scace", is written over a horizontal line.

Stephen E. Scace - Director
Nuclear Oversight and Regulatory Affairs

Attachment (1): Relief Request No. RR-E2 for Alternative to the Requirements of ASME
Section XI, 1998 Edition

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 No. RR-E2 for Alternative to the Requirements of
ASME Section XI, 1998 Edition

**Relief Request No. RR-E2 for Alternative to the Requirements of
ASME Section XI, 1998 Edition**

Background

In the Federal Register, dated August 8, 1996, (61 FR 41303), 10 CFR 50.55a was amended to incorporate by reference the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, 1992 Edition with the 1992 Addenda of Subsections IWE and IWL for expedited examination of containments. On August 29, 1999, the 10 CFR 50.55a rule was amended to allow the use of the 1995 Edition with the 1996 Addenda of Subsections IWE and IWL as an alternative to the 1992 Edition with the 1992 Addenda.

By letter dated April 22, 1999,⁽¹⁾ and supplemented by letters dated December 13, 1999,⁽²⁾ February 17, 2000,⁽³⁾ and February 25, 2000,⁽⁴⁾ Northeast Nuclear Energy Company (NNECO) requested approval to use the 1998 Edition of Section XI of the ASME Code, Subsections IWE and IWL, as an alternative to the requirements in 10 CFR 50.55a(b)(2). On April 21, 2000,⁽⁵⁾ NNECO received the Nuclear Regulatory Commission (NRC) Safety Evaluation Report and authorization for the use of the proposed alternative pursuant to 10 CFR 50.55a(a)(3)(i).

Pursuant to 10 CFR 50.55a(a)(3)(i), NNECO proposes to use an alternative to the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, Subsection IWE, 1998 Edition for Millstone Unit Nos. 2 and 3.

Millstone Unit Nos. 2 and 3 both have concrete containments with metallic liners, which are accessible from one side only. NNECO has completed its review of the augmented examination requirements in IWE-2500(b) and expects certain difficulties to arise with the stated requirements.

⁽¹⁾ NNECO letter from R. P. Necci, "Millstone Nuclear Power Station, Unit Nos. 2 and 3, Inservice Inspection on Class MC and Class CC Components, Alternative to Requirements of ASME Section XI," dated April 22, 1999, (B17598).

⁽²⁾ NNECO letter from R. P. Necci, "Millstone Nuclear Power Station, Unit Nos. 2 and 3, Inservice Inspection on Class MC and Class CC Components, Alternative to Requirements of ASME Section XI," dated December 13, 1999, (B17927).

⁽³⁾ NNECO letter from R. P. Necci, "Millstone Nuclear Power Station, Unit Nos. 2 and 3, Inservice Inspection on Class MC and Class CC Components, Alternative to Requirements of ASME Section XI," dated February 17, 2000, (B17985).

⁽⁴⁾ NNECO letter from R. P. Necci, "Millstone Nuclear Power Station, Unit Nos. 2 and 3, Inservice Inspection on Class MC and Class CC Components, Alternative to Requirements of ASME Section XI," dated February 25, 2000, (B18005).

⁽⁵⁾ NRC letter from J. W. Clifford, "Safety Evaluation for Alternative Associated With the Use of Subsections IWE and IWL of the ASME Code for Containment Inspection, Millstone Nuclear Power Station, Unit Nos. 2 and 3 (TAC Nos. MA5332 and MA5338)," dated April 21, 2000.

IWE-2500(b)(1) states that surface areas accessible from both sides shall be visually examined using a detailed visual examination method. As stated, surface degradation or flaws that are clearly associated with conditions from one side only would still require detailed visual examination on both sides. The requirement to perform additional examinations beyond those required to completely assess the condition do not provide an increase in safety or result in a higher quality examination.

IWE-2500(b)(2) states that surface areas accessible from one side only shall be examined for wall thinning using an ultrasonic thickness measurement method in accordance with Section V, T-544. As stated, surface degradation or flaws that are clearly associated only with the conditions from the accessible side would still require ultrasonic thickness measurement. The requirement to perform ultrasonic thickness measurements in all cases does not provide an increase in safety or result in a higher quality examination.

Systems/Components for Which Alternative is Requested:

Class MC pressure retaining components and metallic shell and penetration liners of Class CC pressure retaining components.

Code Requirements:

The requirements of the ASME Boiler and Pressure Vessel Code, Section XI, Division I, 1998 Edition, Paragraph IWE-2500(b) are as follows.

- (b) Methods for augmented examination of surface areas identified in IWE-1242 shall comply with the following criteria:
 - (1) Areas accessible from both sides shall be visually examined using a detailed visual examination method.
 - (2) Areas accessible from one side only shall be examined for wall thinning using an ultrasonic thickness measurement method in accordance with Section V, T-544.
 - (3) When ultrasonic thickness measurements are performed, grids shall be used. Gridline spacing shall comply with the requirements of Table IWE-2500-2. The number and location of the grids shall be determined by the Owner. Locations of gridline intersections to be examined may be marked on containment surfaces in lieu of marking gridlines.
 - (4) Ultrasonic thickness measurements shall be performed to determine the minimum wall thickness at locations specified in Table IWE-2500-2. Minimum wall thickness locations and locations of examined gridline intersections shall be marked such that periodic reexamination of these locations can be performed in accordance with the requirements of Table IWE-2500-1, Examination Category E-C.

Requirement from Which Alternative is Requested:

An alternative is requested to the detailed visual examination requirement of both sides of an accessible surface in IWE-2500(b)(1) and to the ultrasonic thickness measurement requirement in IWE-2500(b)(2).

Basis for Requesting Alternative:

Compliance with IWE-2500(b)(1) will require detailed visual examination on both sides of some surfaces when detailed visual examination of one side only would suffice. Compliance with IWE-2500(b)(2) will require ultrasonic thickness measurement of some surfaces when detailed visual examination of the affected side only would suffice. The requirements to perform examinations beyond what is required to completely assess the surface condition results in added work without a compensating increase in quality or safety.

Alternative Examinations:

NNECO proposes to use an alternative augmented examination approach, detailed below, for areas subject to augmented examination in accordance with IWE-1240.

1. Surface areas accessible for visual examination shall be examined by the detailed visual examination method.
2. The extent of the visual examination and any additional volumetric examination that may be required, including, but not limited to, ultrasonic thickness measurement methods in accordance with Section V, T-544, shall be specified as part of the engineering evaluation of each E-C category surface.

These alternative requirements rely upon the engineering evaluation that is performed by the IWE Responsible Engineer. This is consistent with Owner-defined acceptance criteria as allowed in the 1998 Edition and as documented previously by NNECO letters referenced above.⁽¹⁾⁽²⁾⁽³⁾

Justification for Granting Alternative:

The requirements in IWE-2500(b) and Table IWE-2500-1, Examination of Category E-C, ensure containment leak-tight or structural integrity of surfaces requiring augmented examination. The proposed alternative will continue to meet these requirements. The detailed visual examination acceptance criteria provides a conservative basis for accepting containment surfaces. The wording in the proposed alternative eliminates examinations that are not needed to provide the necessary assurance. Augmented examinations performed in accordance with the proposed alternatives provides an equivalent level of quality and safety.

Implementation Schedule:

First inspection interval for IWE exams at Millstone Unit Nos. 2 and 3.