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10 CFR 50.55a

RS-01-238

October 19, 2001

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket Number 50-461

Subject: Revision of Relief Requests CIP 6111 and 4207 Related to the Requirements of 10 CFR 50.55a(g), "Inservice Inspection Requirements"

Reference: Letter from J. M. Heffley (AmerGen Energy Company, LLC) to U.S. Nuclear Regulatory Commission (NRC), "Submittal of Relief Requests CIP 6111 and 4207 Related to the Requirements of 10 CFR 50.55a(g), "Inservice Inspection Requirements," dated July 23, 2001

In the referenced letter, AmerGen Energy Company, LLC (i.e., AmerGen), requested approval of two relief requests for use at Clinton Power Station (CPS), Unit 1. As a result of an NRC staff question associated with the review of these relief requests, Relief Request CIP 6111 has been revised to provide additional clarifying information regarding who can authorize the alternate inspection requirements. In addition, this submittal also corrects the applicable time period for which the relief is requested in both Relief Requests CIP 6111 and 4207. The proposed changes to the original submittal are indicated by a revision bar in the attached relief requests.

Should you have any questions concerning this letter, please contact Mr. J. L. Peterson at (217) 937-2810.

Respectfully,

for K. A. Ainger
Director - Licensing
Mid-West Regional Operating Group

Attachment

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Clinton Power Station

A047

ATTACHMENT

Relief Request CIP 6111
Revision 0

COMPONENT IDENTIFICATION

Code Class:	CC
Examination Category:	L-A
Item Number:	L1.11
Description:	Alternate Visual Examination Requirements for Minimum Illumination and Maximum Direct Examination Distance of Class CC Components.
Component Numbers:	All components subject to the rules and requirements for Inservice Inspection of Class CC Concrete Components, Examination Category L-A, Concrete, Item L1.11 as applicable to IWL-2310, Visual Examination and Personnel Qualification and IWA-2210, Visual Examinations.

CODE REQUIREMENT

American Society of Mechanical Engineers (ASME) Section XI, 1992 Edition, 1992 Addenda, IWL-2310, Visual Examination and Personnel Qualification and IWA-2210, Visual Examinations require specific minimum illumination and maximum direct examination distance for all concrete surfaces.

CODE REQUIREMENT FOR WHICH RELIEF IS REQUESTED

Relief is requested from Paragraph IWA-2210, Visual Examination Requirements for minimum illumination and maximum direct examination distance of Class CC components under Paragraph IWL-2310.

BASIS FOR RELIEF

Relief is requested in accordance with 10 CFR 50.55a, "Codes and standards," paragraph (a)(3)(ii). Compliance with the specified requirements of this section would result in unnecessary examination requirements or unusual difficulty without a compensating increase in the level of quality and safety.

10 CFR 50.55a was amended in June 1996 to require the use of the 1992 Edition, 1992 Addenda, of Section XI when performing containment examinations. In addition to the requirements of Subsection IWL, the rulemaking also imposed the requirements of Subsection IWA of the 1992 Edition, 1992 Addenda, of ASME Section XI for minimum illumination and maximum direct examination distance of Class CC components, specifically for the examination of concrete under Paragraph IWL-2510.

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At Clinton Power Station, accessibility to higher portions of the containment building itself make it a hardship to meet Section XI maximum direct examination distance and minimum illumination requirements. The installation of extensive temporary scaffold systems or a climbing scaffold system to access these portions of the containment would be necessary. These scaffolds would provide limited access due to containment geometry restrictions as well as structural and equipment interferences. The installation and removal of these scaffolds would increase both worker radiation exposure and risk to personnel safety in order to meet Paragraph IWA-2210 requirements.

The NRC staff received seven comments that were consolidated into Public Comment # 2.3 in Part III of Attachment 6A to SECY-96-080. The Staff response to these concerns is as follows, "Comments received from ASME members on the containment committees indicate that the newer, more stringent requirements of IWA-2210 were not intended to be used for the examination of containments and were inadvertently included in Subsection IWL. The NRC agrees that remote examinations are the only practical method for inspecting much of the containment surface area. 10 CFR 50.55a(b)(2)(ix)(B) has been added to the final rule which contains alternative lighting and resolution requirements which may be used in lieu of the requirements contained in IWA-2210-1 for Subsection IWE components." This revision to this rule does not provide alternative requirements, however it does indicate that the maximum distance may be increased and the minimum illumination may be decreased provided the indications can be detected under the chosen conditions. The procedure and equipment to be used will be demonstrated capable of detecting the indications under the chosen conditions to the satisfaction of the Authorized Nuclear Inservice Inspector and the Station Level 3 Visual Examiner certified in accordance with the ASME Section XI.

This proposed relief is similar to that approved by the NRC for the Braidwood Station (Reference 1) dated October 26, 1998.

PROPOSED ALTERNATIVE PROVISIONS

When performing the remote visual examinations required by Subsection IWL, Paragraph IWL-2510, the maximum direct examination distance specified in Table IWA-2210-1 may be extended, and the minimum illumination requirements specified in Table IWA-2210-1 may be decreased provided that the conditions or indications for which the visual examination is performed can be detected at the chosen distance and illumination.

Demonstrations will be performed on indications representing actual inspection conditions to determine the resolution and illumination required to ensure that indications of interest are visually detectable. This alternative provides sufficient evidence of adequate illumination and distance.

APPLICABLE TIME PERIOD

This alternative is requested for the remaining duration of the first inspection interval for Clinton Power Station, Unit 1.

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Relief Request CIP 6111
Revision 0

REFERENCE

(1) Letter from A. Mendiola (U. S. NRC) to O. Kingsley (Commonwealth Edison Company), "Evaluation of the Second 10-Year Inservice Inspection Program Plan Requests for Relief – Braidwood Station, Units 1 and 2 (TAC Nos. MA7267 and MA7268)", dated January 4, 2000.

ATTACHMENT

Relief Request 4207
Revision 0

COMPONENT IDENTIFICATION

Code Class:	Class 1
Reference:	ASME Section XI, 1989 Edition, Table IWB-2500-1
Examination Categories:	B-A
Item Number:	B1.10, B1.20
Description:	Alternative requirements to Appendix VIII, Supplement 4, "Qualification Requirements for the Clad/Base Metal Interface of Reactor Vessel"
Component Numbers:	Reactor pressure vessel (RPV) longitudinal and circumferential shell welds and RPV head welds

CODE REQUIREMENT

10CFR 50.55a, "Codes and standards," paragraph (b)(2) incorporates by reference, the 1995 Edition and Addenda through 1996 of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for use in preparing inservice inspection programs.

Subparagraph 3.2(c) of Section XI of the ASME Code, Appendix VIII, Supplement 4, requires that the UT performance demonstration results be plotted on a two-dimensional plot with the measured depth plotted along the ordinate axis and the true depth plotted along the abscissa axis. For qualification, the plot must satisfy the following statistical parameters: (1) the slope of the linear regression line is not less than 0.7; (2) the mean deviation of flaw depth is less than 0.25 inches; and (3) the correlation coefficient is not less than 0.70.

CODE REQUIREMENT FOR WHICH RELIEF IS REQUESTED

Relief is requested from the statistical parameters identified in Subparagraph 3.2(c) of Section XI of the ASME Code, Appendix VIII, Supplement 4.

BASIS FOR RELIEF

Pursuant to 10CFR50.55a, paragraph (a)(3)(i), relief is requested from the statistical parameters identified in Subparagraph 3.2(c) of Section XI of the ASME Code, Appendix VIII, Supplement 4. The basis of the relief requests is that the proposed alternatives would provide an acceptable level of quality and safety.

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Relief Request 4207
Revision 0

On September 22, 1999, the NRC published a final rule in the Federal Register (64 FR 51378) to amend 10 CFR 50.55a(b)(2), to incorporate by reference the 1995 Edition and addenda through the 1996 Addenda, of Section XI of the ASME Code. The change included the provisions of Subparagraph 3.2(a), 3.2(b) and 3.2(c) of Section XI of the ASME Code, 1995 Edition with the 1996 Addenda, Appendix VIII, Supplement 4.

Additionally, the September 22, 1999 Federal Register amended 10 CFR 50.55a(b)(2)(xv)(C)(1). The amended 10 CFR 50.55a(b)(2)(xv)(C)(1), requires a depth sizing acceptance criterion of 0.15 inch Root Mean Square (RMS) to be used in lieu of the requirements of Subparagraph 3.2(a) and 3.2(b) of Section XI of the ASME Code, Appendix VIII, Supplement 4.

On March 26, 2001, the NRC published a correction to the September 22, 1999 final rule in the Federal Register (66 FR 16390). The NRC identified that an error had occurred in the published wording of 10 CFR 50.55a(b)(2)(xv)(C)(1). The corrected 10 CFR 50.55a(b)(2)(xv)(C)(1), requires a depth sizing acceptance criterion of 0.15 inch RMS to be used in lieu of the requirements of Subparagraph 3.2(a) and a length sizing requirement of 0.75 inch RMS to be used in lieu of the requirements of 3.2(b) of Section XI of the ASME Code, Appendix VIII, Supplement 4.

The statistical parameters to be used in flaw sizing specified in Subparagraph 3.2(c) of Section XI of ASME Code, 1995 Edition with the 1996 Addenda, Appendix VIII, Supplement 4, rely upon the depth sizing acceptance criteria used in Subparagraph 3.2 (a) and the length sizing acceptance criteria used in Subparagraph 3.2(b). For Supplement 4, UT performance demonstrations, the linear regression line of the data required by Subparagraph 3.2(c) is not applicable because the performance demonstrations are performed on test specimens with flaws located on the inner 15% through-wall. Additionally, the Subparagraph 3.2(c) specified value for evaluating the mean deviation of flaw depth is too lenient for evaluating flaw depths within the inner 15% of wall thickness. We propose to use the 10 CFR 50.55a(b)(2)(xv)(C)(1) RMS calculations of Subparagraph 3.2(a), which utilizes an RMS value of 0.15 inch, and the RMS calculations of Subparagraph 3.2(b), which utilizes an RMS value of 0.75 inch, in lieu of the statistical parameters of Subparagraph 3.2(c).

This proposed relief is similar to that approved by the NRC for the Millstone Nuclear Station (Reference 1) dated January 26, 2001.

PROPOSED ALTERNATIVE PROVISIONS

The RMS calculations of Subparagraph 3.2(a) of Section XI of the ASME Code, Appendix VIII, Supplement 4, which utilize and RMS value of 0.15 and the RMS calculations of Subparagraph 3.2(b), which utilizes and RMS value of 0.75 shall be used in lieu of the statistical parameters of Subparagraph 3.2(c) of Section XI of the ASME Code, Appendix VIII, Supplement 4.

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Relief Request 4207
Revision 0

APPLICABLE TIME PERIOD

This alternative is requested for the remaining duration of the second inspection interval for Clinton Power Station, Unit 1.

REFERENCE

(1) Letter from J. W. Clifford (U.S. NRC) to R. G. Lizotte (Northeast Nuclear Energy Company), "Millstone Nuclear Power Station, Unit Nos. 2 and 3 – Request for Relief (TAC Nos. MA9857 and MA9858)," dated January 26, 2001.