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 VISSING, G.S.

SUBJECT: Requests relief per 10CFR50.55a(a)(3)(ii) from certain requirements of Section XI of ASME BP&V Code for ISI Program. Relief requests 37, 38 & 39 encl.

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ROBERT C. MECREDY  
Vice President  
Nuclear Operations

January 11, 1999

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Attn: Guy S. Vissing  
Project Directorate I-1  
Washington, D.C. 20555

Subject: Inservice Inspection Program ASME Section XI  
Required Examinations for First 10-Year Interval  
for Containment (IWE and IWL)  
Requests for Relief No. 37, 38, 39  
R.E. Ginna Nuclear Power Plant  
Docket No. 50/244

References: EPRI "Containment Inspection Program Guide"  
GC-110698, September 1998, and selected Relief  
Requests:

- (1) Davis-Besse Relief Request E-1
- (2) Davis-Besse Relief Request E-6
- (3) Davis-Besse Relief Request E-7

Dear Mr. Vissing:

In the Federal Register, dated August 8, 1996 (61 FR 41303), the NRC amended its regulations to incorporate by reference the 1992 Edition and Addenda of Subsections IWE and IWL of Section XI of the ASME Code. Subsections IWE and IWL give the requirements for inservice inspection (ISI) of Class MC (metallic containment) and Class CC (concrete containment). These requirements are now applicable for R. E. Ginna Nuclear Power Plant.

The purpose of this letter is to request relief pursuant to 10 CFR 50.55a(a)(3)(ii) from certain requirements of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. Rochester Gas and Electric is a participant in the Electric Power Research Institute (EPRI) project for the preparation of a Generic IWE/IWL Program and Industry Guide. This program was described to the NRC in a meeting on October 23, 1997, between the NRC, EPRI, and NEI, and several utilities. As a result from these meetings as well as the publication of the EPRI "Containment Inspection Program Guide" GC-110698, dated September 1998, Rochester Gas and Electric is submitting three (3) relief requests. Relief

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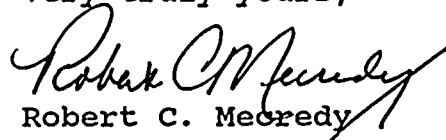
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Requests Number 37 through 39 are based on the generic relief requests contained in the EPRI "Containment Inspection Program Guide". NRC approval of these relief requests is documented in the referenced submittal. More detailed comments are provided in Attachments 1, 2 and 3 to this letter.

1. Relief Request Number 37 requests relief from Section XI of the ASME Code, 1992 Edition, 1992 Addenda, Code Items E5.10 and E5.20, which require a visual examination of metal containment seals and gaskets. Examination of most seals and gaskets require the joints to be disassembled. Containment seal and gasket joints will be proven adequate through the performance of 10 CFR Appendix J testing.
2. Relief Request Number 38 requests relief from Section XI of the ASME Code, 1992 Edition, 1992 Addenda, Subarticles IWE-2420(b) and IWE-2420(c), which require repaired areas be examined during the next inspection period. Repairs restore the component to an acceptable condition for continued service. Successive examinations should not be required for repaired areas.
3. Relief Request Number 39 requests relief from Section XI of the ASME Code, 1992 Edition, 1992 Addenda, Code Item E8.20, which requires a bolt torque or tension test for bolted connections that have not been disassembled and reassembled during the inspection interval. The leak tightness of bolted connections will be verified through the performance of 10 CFR 50 Appendix J testing.

Relief Requests, justification, and the proposed alternatives are included in the attachments to this letter. These relief requests will be included in the Inservice Inspection Program for R.E. Ginna Nuclear Power Plant for the Third Interval Program (which ends December 31, 1999) and the Fourth Interval Program (which begins January 1, 2000). NRC approval of these relief requests is desired before the end of June, 1999, to ensure these programs are in compliance with NRC requirements before the end of the Third Interval.

Very truly yours,

  
Robert C. Meedy

Attachments - 3

xc: Mr. Guy S. Vissing (Mail Stop 14B2)  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
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U.S. NRC Ginna Senior Resident Inspector

ATTACHMENT 1

Rochester Gas and Electric Corporation  
Ginna Station  
Docket No. 50/244  
First 10-Year Interval for Containment Inspection Program  
Request for Relief No. 37  
Containment Inspection Seals and Gaskets

I. System/Component(s) for Which Relief is Requested:

Seals and gaskets of Class MC pressure retaining components and metallic liners of Class CC components, Examination Category E-D, Item Numbers E5.10 and E5.20 of IWE-2500, Table IWE-2500-1, ASME Section XI, 1992 Edition, 1992 Addenda. Several hundred seals and gaskets are affected by this relief request.

II. Code Requirement:

IWE-2500, Table IWE-2500-1 requires seals and gaskets on airlocks, hatches, and other devices to be visually examined, VT-3, once each interval to assure containment leak-tight integrity.

III. Code Requirement from Which Relief is Requested:

Relief is requested from performing the Code-required visual examination, VT-3, on the above identified metal containment seals and gaskets.

IV. Basis for Relief:

10 CFR 50.55a was amended in the Federal Register (61 FR 41303) to require the use of the 1992 Edition, 1992 Addenda, of Section XI when performing containment examinations. The penetrations discussed below contain seals and gaskets.

A. Electrical Penetrations

Electrical penetrations use a header plate attached to a containment penetration nozzle flange with redundant O-rings between the header plate and flange face.

Modules through which electrical conductors pass are installed in the header plate. One type, manufactured by Amphenol, uses seals and gaskets to assure leak tight integrity. A second type, manufactured by Conax, uses a set of compression fittings. Replacement modules for the Amphenol penetrations use a combination of O-rings and compression fittings. Each penetration is pressurized with dry nitrogen to maintain and monitor integrity and to prevent the intrusion of moisture into the penetration. These seals and gaskets cannot be inspected without disassembly of the penetration to gain access to the seals and gaskets.

B. Containment Personnel and Equipment Hatches

The Personnel and Equipment Hatches utilize an inner and outer door with gasket surfaces to ensure a leak tight integrity. These hatches also contain other gaskets and seals such as the handwheel shaft seals, electrical penetrations, blank flanges, and equalizing pressure connections which require disassembly to gain access to the gaskets and seals.

Seal and gasket joints receive a 10 CFR 50 Appendix J test. As noted in 10 CFR 50 Appendix J, the purpose of Type B tests is to measure leakage of containment or penetrations whose design incorporates resilient seals, gaskets, sealant compounds, and electrical penetrations fitted with flexible metal seal assemblies. Examination of seals and gaskets require the joints, which are proven adequate through Appendix J testing, be disassembled. For electrical penetrations, this would involve a pre-maintenance Appendix J test, de-termination of cables at electrical penetrations if enough cable slack is not available, disassembly of the joint, removal and examination of the seals and gaskets, reassembly of the joint, re-termination of the cables if necessary, post maintenance testing of the cables, and a post maintenance Appendix J test of the penetration. The work required for the Containment Hatches would be similar except for the de-termination, re-termination, and testing of cables. This imposes the risk that equipment could be damaged. The 1992 Edition, 1993 Addenda, of Section XI recognizes that disassembly of joints to perform these examinations is not warranted. Note 1 in Examination Category E-D was modified in the 1995 Edition of Section XI to state that seal or gasket connections need not be disassembled solely for performance of examinations. However, without disassembly, most of the surface of the seals and gaskets would be inaccessible.

For those penetrations that are routinely disassembled, a Type B test is required upon final assembly and prior to start-up. Since the Type B test will assure the leak tight integrity of primary containment, the performance of the visual examination would not provide an increase in the level of safety or quality.

Seals and gaskets are not part of the containment pressure boundary under current Code rules (NE-1220 (b)). The airlocks and hatches containing these materials are tested in accordance with 10 CFR 50, Appendix J. If increased leakage is identified during these Appendix J tests, the cause of leakage would be investigated. If increased leakage were due to degradation of the seal or gasket material, corrective measures would be applied and the component retested. Repair or replacement of seals and gaskets is not subject to Code (1992 Edition, 1992 Addenda) rules in accordance with Paragraph IWA-4111(b)(5) of ASME Section XI.

The visual examination of seals and gaskets in accordance with IWE-2500, Table IWE-2500-1 is a burden without any compensating increase in the level of safety or quality.

Relief is requested in accordance with 10 CFR 50.55a(a)(3)(ii). Compliance with the original requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Testing the seal and gasket joints in accordance with 10 CFR 50, Appendix J will provide adequate assurance of the leak-tight integrity of the seals and gaskets.

V. Alternate Examinations:

The leak testing of seal and gasket joints will be in accordance with 10 CFR 50, Appendix J. No additional alternative examinations to the visual examination, VT-3, of the seals and gaskets will be performed.

VI. Justification for the Granting of Relief:

This Relief Request is similar to Relief Request E-1 submitted by Davis-Besse as one of the EPRI "Containment Inspection Program Guide" Pilot Plant Relief Requests. This Relief Request will minimize Ginna operating and maintenance cost without decreasing the level of quality and safety.

VII. Implementation Schedule:

Relief is requested for the first inspection interval for the IWE Containment Inspection Program (1996 - 2008). Note that this interval overlaps the Third and Fourth 10-Year Interval inspections of the Ginna Inservice Inspection Program.



## ATTACHMENT 2

Rochester Gas and Electric Corporation  
Ginna Station  
Docket No. 50/244  
First 10-Year Interval for Containment Inspection Program  
Request for Relief No. 38  
Containment Inspection Successive Examinations after Repair

I. System/Component(s) for Which Relief is Requested:

All Class MC, Paragraphs IWE-2420(b) and IWE-2420(c) successive examination requirements for components found acceptable for continued service.

II. Code Requirement:

Paragraphs IWE-2420(b) and IWE-2420(c) of the 1992 Edition, 1992 Addenda of ASME Section XI requires that when component examination results require evaluation of flaws, evaluation of areas of degradation, or repairs in accordance with Article IWE-3000, and the component is found to be acceptable for continued service, the areas containing such flaws, degradation, or repairs shall be reexamined during the next inspection period listed in the schedule of the inspection program of Paragraph IWE-2411 or Paragraph IWE-2412, in accordance with Table IWE-2500-1, Examination Category E-C.

III. Code Requirement from Which Relief is Requested:

Relief is requested from the requirements of Paragraphs IWE-2420(b) and IWE-2420(c) to perform successive examination of repairs.

IV. Basis for Relief:

10 CFR 50.55a was amended in the Federal Register (61 FR 41303) to require the use of the 1992 Edition, 1992 Addenda, of Section XI when performing containment examinations. The purpose of a repair is to restore the component to an acceptable condition for continued service in accordance with the acceptance standards of Article IWE-3000. Paragraph IWA-4150 requires the owner to conduct an evaluation of the suitability of the repair including consideration of the cause of failure.

If the repair has restored the component to an acceptable condition, it is overly conservative to require successive examinations. Other paragraphs of the ASME Code recognize this requirement as overly conservative. If the repair was not suitable, then the repair does not meet code requirements and the component is not acceptable for continued service. Neither Paragraph IWB-2420(b), Paragraph IWC-2420(b), nor Paragraph IWD-2420(b) requires a repair to be subject to successive examination requirements. Furthermore, if the repair area is subject to accelerated degradation, it would still require augmented examination in accordance with Table IWE-2500-1, Examination Category E-C. The successive examination of repairs in accordance with Paragraphs IWE-2420(b) and IWE-2420(c) constitutes a burden without a compensating increase in quality or safety.

In their resolution to public comment #3.3, the NRC stated:

"The purpose of IWE-2420(b) is to manage components found to be acceptable for continued service (meaning no repair or replacement at this time) as an Examination Category E-C component... If the component had been repaired or replaced, then the more frequent examination would not be needed."

Relief is requested in accordance with 10 CFR 50.55a(a)(3)(ii). Compliance with the original requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The requirement to perform successive examinations following repairs has been removed in the 1997 Addenda of ASME Section XI. This addenda has been approved by the ASME Main Committee and has been published.

V. Alternate Examinations:

Successive examinations in accordance with Paragraphs IWE-2420(b) and IWE-2420(c) are not required for repairs made in accordance with Article IWA-4000.

VI. Justification for the Granting of Relief:

This Relief Request is similar to Relief Request E-6 submitted by Davis-Besse as one of the EPRI "Containment Inspection Program Guide" Pilot Plant Relief Requests. This Relief Request will minimize Ginna operating and maintenance cost without decreasing the level of quality and safety.

VII. Implementation Schedule:

Relief is requested for the first inspection interval for the IWE Containment Inspection Program (1996 - 2008). Note that this interval overlaps the Third and Fourth 10-Year Interval inspections of the Ginna Inservice Inspection Program.

ATTACHMENT 3

Rochester Gas and Electric Corporation  
Ginna Station  
Docket No. 50/244  
First 10-Year Interval for Containment Inspection Program  
Request for Relief No. 39  
Containment Inspection Bolt Torque or Tension Testing

I. System/Component(s) for Which Relief is Requested:

Class MC pressure retaining bolting.

II. Code Requirement:

ASME Section XI, 1992 Edition with the 1992 Addenda, Table IWE-2500-1, Examination Category E-G, Pressure Retaining Bolting, Item E8.20. Bolt torque or tension testing is required on bolted connections that have not been disassembled and reassembled during the inspection interval.

III. Code Requirement from Which Relief is Requested:

Relief is requested from ASME Section XI 1992 Edition with the 1992 Addenda Table IWE-2500-1 Examination Category E-G, Pressure Retaining Bolting, Item E8.20. Bolt torque or tension testing is required on bolted connections that have not been disassembled and reassembled during the inspection interval.

IV. Basis for Relief:

10CFR50.55a was amended in the Federal Register (61 FR 41303) to require the use of the 1992 Edition, 1992 Addenda, of Section XI when performing containment examinations. Bolt torque or tension testing is required on bolted connections that have not been disassembled and reassembled during the inspection interval. Determination of the torque or tension value would require that the bolting be un-torqued and then re-torqued or re-tensioned. The performance of the Type B test itself proves that the bolt torque or tension remains adequate to provide a leak rate that is within acceptable limits. The torque or tension value of bolting only becomes an issue if the leak rate is excessive. Once a bolt is torqued or tensioned, it is not subject to dynamic loading that could cause it to experience significant change.

Verification of torque or tension values on bolted joints that are proven adequate through Appendix J testing and visual inspection is adequate to demonstrate that design function is met. Torque or tension testing is not required on any other ASME Section XI, Class 1, 2, or 3 bolted connections or their supports as part of the inservice inspection program. Also, all penetrations at R.E. Ginna Nuclear Power Plant are seated with pressure (not unseated).

Relief is requested in accordance with 10 CFR 50.55a(a)(3)(ii). Compliance with the original requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

V. Alternate Examinations:

The following examinations and tests required by Subsection IWE ensure the structural integrity and the leak-tightness of Class MC pressure retaining bolting, and, therefore, no additional alternative examinations are proposed:

- (1) Exposed surfaces of bolted connections shall be visually examined in accordance with requirements of Table IWE-2500-1, Examination Category E-G, Pressure Retaining Bolting, Item No. E8.10, and
- (2) Bolted connections shall meet the pressure test requirements of Table IWE-2500-1, Examination Category E-P, All Pressure Retaining Components, Item E9.40, and
- (3) A general visual examination of the entire containment once each inspection period shall be conducted in accordance with 10 CFR 50.55a(b)(2)(x)(E).

VI. Justification for the Granting of Relief:

This Relief Request is similar to Relief Request E-7 submitted by Davis-Besse as one of the EPRI "Containment Inspection Program Guide" Pilot Plant Relief Requests. This Relief Request will minimize Ginna operating and maintenance cost without decreasing the level of quality and safety.

## VII. Implementation Schedule:

Relief is requested for the first inspection interval for the IWE Containment Inspection Program (1996 - 2008). Note that this interval overlaps the Third and Fourth 10-Year Interval inspections of the Ginna Inservice Inspection Program.