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ROBERT C. MECREDDY  
Vice President  
Nuclear Operations

May 2, 2000

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

Subject: Inservice Inspection Program ASME Section XI Required Examinations  
Third 10-Year Interval  
Request for Relief Regarding Request No. 42 (Revision 1)  
R.E. Ginna Nuclear Power Plant  
Docket No. 50/244

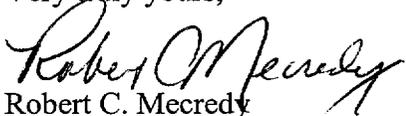
Dear Mr. Vissing:

The purpose of this letter is to seek approval for the use of Relief Request Number 42 to address volumetric examination limitations (less than 90%) associated with eight (8) Class 1 identified welds or areas of the Reactor Pressure Vessel (RPV). We are submitting Relief Request Number 42 Revision 1 to replace Revision 0 that you currently have. This revision was made to incorporate your request on 4/5/2000 for additional information.

Relief is requested for seven (7) welds or areas pursuant to the provisions of 10 CFR 50.55a(g)(5)(iii), and an exemption is requested pursuant to the provisions of 10 CFR 50.55a(g)(6)(ii)(A)(5) for one weld. The required examination coverage for the identified items is impractical ; in order to enable inspection, reactor vessel component redesign or replacement would be required. Justification concerning limitations are included in the attachment to this letter.

We request approval of this relief request by December 31, 2000.

Very truly yours,

  
Robert C. Mecreddy

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Attachment

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xc: Mr. Guy S. Vissing (Mail Stop 8C2)  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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U.S. NRC Ginna Senior Resident Inspector

## ATTACHMENT

Rochester Gas and Electric Corporation  
Ginna Station  
Docket No. 50/244  
Third 10-Year Interval  
Request for Relief No. 42 (Revision 1)  
Reactor Pressure Vessel (RPV) Weld Examination Limitations

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

This Relief/Exemption Request pertains to eight (8) Reactor Pressure Vessel welds or Inner Radius Volumetric examinations. Of these eight welds or areas, seven are required by ASME Section XI and one is required under 10 CFR 50.55a(g)(6)(ii)(A)(2). Volumetric examination of these items are limited is identified in Attachment Number 1.

II. ASME Section XI Code/10 CFR 50.55a Requirement:

ASME Section XI Code and 10 CFR 50.55a(g)(6)(ii)(A)(2) require essentially 100% of the weld length or area to be examined. ASME Section XI Code Case N-460 and 10 CFR 50.55a state that if the entire examination volume or area cannot be examined due to interference by another component or part geometry, a reduction in coverage is acceptable provided that the coverage (the lack of) is less than 10%.

III. Requirement from Which Relief/Exemption is Requested:

Relief/Exemption is requested from examining 100% of the weld length or areas for these eight (8) identified items. Examining 100% of the weld length or areas would be impractical due to original design interference. Attachment Number 1 identifies volumetric examination achievable coverage and associated limitations as well as identification as to the requirement (either ASME Section XI or 10 CFR 50.55a)

IV. Basis for Relief/Exemption:

Relief/Exemption is requested pursuant to the provisions of 10 CFR 50.55a(g)(5)(iii) and 10 CFR 50.55a(g)(6)(ii)(A)(5), in that the required examination coverage for the identified items is impractical and would require reactor vessel component redesign or replacement to enable the required inspection coverage.

The Reactor Pressure Vessel (RPV) was designed and constructed to ASME Section III, 1965 Edition. This code did not contain requirements to ensure that items be accessible for future examinations. The eight (8) items identified within Attachment Number 1 were installed utilizing this construction code which did not provide for accessibility for future ISI NDE.

The Class 1 Reactor Pressure Vessel is part of the ASME Section XI VT-2 Leakage Examination boundary. Class 1 Leakage Examinations are performed each refueling outage as required by the Code to insure pressure boundary integrity. In addition to the ASME Section XI leakage examinations, a very sensitive leak detection system, governed by Technical Specification 3.4.15, can detect minimal RCS leakage. The combination of RCS leak detection capability and the Class 1 leakage examination that is performed each refueling outage provide additional assurances in maintaining plant safety.

V. Alternate Examinations:

R.E. Ginna Nuclear Power Plant proposes that the volumetric examination coverage identified within Attachment Number 1 be acceptable in fulfilling required volumetric examination coverage.

VI. Justification for the Granting of Relief/Exemption:

The Reactor Pressure Vessel was designed and constructed to ASME Section III, 1965 Edition construction code. This code did not contain requirements to ensure that items be made accessible for future NDE examinations. Due to the original limited design accessibility, examination coverage can not be obtained to the extent required by the current ASME Code or Regulation.

All possible means were investigated to increase examination coverage. Radiographic examination is impractical due to the vessel being full of water and high background radiation would mask or prevent meaningful results. Ultrasonic technique variations were employed to maximize examination coverage utilizing latest PDI technology using both 70 degree and 45 degree shear and longitudinal waves from the vessel inside surface. The vessel OD surface was also investigated but this surface is enclosed by a permanent rivetted sheathing and asbestos insulation that has never been removed. To access welds from the outside vessel surface would require scaffolding, building enclosures, removal of the rivetted sheathing, cleaning, disposal, reinstallation of the sheathing and scaffold removal. This major activity would expose work personnel to a high radiation dose of 150 to 200 Rem. There is no current industry safety concerns associated with these welds and previous examination history show no active degraded conditions exist. No additional coverage beyond the identified coverage in Attachment Number 1 can be achieved that is practical and safe for the work force.

ASME Section XI Class 1 periodic leakage examinations are performed, and sensitive RCS leak detection capability also exists. This leak detection system and periodic system leakage examinations provide additional assurances in maintaining plant safety. The identified volumetric examination coverage for these items should be acceptable in fulfilling coverage requirements.

VII. Implementation Schedule:

These examinations have been performed, and code credit shall be taken for the Third 10-year Interval inspection, upon approval of Relief Request Number 42.

## Attachment Number 1

### Rochester Gas & Electric Corporation, Relief Request Number 42 (Rev.1)

#### Reactor Pressure Vessel (RPV) Volumetric Examination Limitations

<u>Category Number</u>	<u>Item Number</u>	<u>Summary Number</u>	<u>Weld ID</u>	<u>Description/Requirement</u>	<u>Obtained Coverage</u>	<u>Limitations</u>
B-A	B1.30	000501 000502 000503	RPV-A	Vessel to Flange Circ. Weld <u>Section XI Code Required</u>	54%	Keyways & Irradiation Slots
B-A	B1.11	000300	RPV-D	Lower Shell to Ring Forging Circ. Weld. <u>Required by 10CFR50.55a</u>	81%	Guide Lugs & Incores
B-D	B3.90	001900	N1A	Nozzle Vessel WD 028D-30M. <u>Section XI Code Required</u>	55% <sup>1</sup> 70% <sup>2</sup>	Nozzle Boss
B-D	B3.90	002500	N1B	Nozzle Vessel WD 208D-30M. <u>Section XI Code Required</u>	55% <sup>1</sup> 70% <sup>2</sup>	Nozzle Boss
B-D	B3.100	002300	N2A-IRS	Nozzle Inside Radius Section. <u>Section XI Code Required</u>	90%	Inner Radius
B-D	B3.100	002900	N2B-IRS	Nozzle Inside Radius Section. <u>Section XI Code Required</u>	90%	Inner Radius
B-D	B3.90	003100	AC-1003	Nozzle Vessel WD 108D-30M. <u>Section XI Code Required</u>	55% <sup>1</sup> 72% <sup>2</sup>	Nozzle Boss
B-D	B3.90	003400	AC-1002	Nozzle Vessel WD 288D-30M. <u>Section XI Code Required</u>	55% <sup>1</sup> 72% <sup>2</sup>	Nozzle Boss

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<sup>1</sup> Volumetric Weld Examination

<sup>2</sup> Volumetric Near Surface Examination