

# CATEGORY 1

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 MECREDY, R.C.      Rochester Gas & Electric Corp.  
 RECIP.NAME      RECIPIENT AFFILIATION  
 VISSING, G.S.

SUBJECT: Requests approval for use of relief request 33 re use of  
 ASME Section XI for insp of reactor pressure vessel  
 circumferential welds. Justification & proposed alternative  
 included in attachment.

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ROBERT C. MECREDY  
Vice President  
Nuclear Operations



August 6, 1998

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

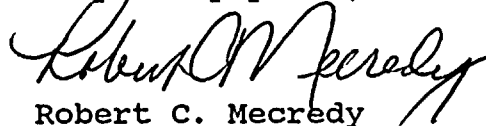
Subject: Inservice Inspection Program ASME Section XI  
Required Examinations  
Third 10-Year Interval  
Request for Relief Regarding Request No. 33  
R.E. Ginna Nuclear Power Plant  
Docket No. 50/244

Dear Mr. Vissing:

The purpose of this letter is to seek approval for the use of Relief Request number 33 concerning the use of ASME Section XI for inspection of reactor pressure vessel circumferential welds. This Relief Request identifies the reactor pressure vessel circumferential welds, and requests that Performance Demonstration Initiative (PDI) qualified techniques be utilized in the performance of these examinations.

This Relief is requested pursuant to the provisions of 10 CFR 50.55a(a)(3)(i). The proposed alternative will provide an acceptable level of quality and safety. Justification and the proposed alternative are included in the attachment to this letter. It is requested that this relief request be expedited, and NRC reply obtained before October 5, 1998, in order for it to be utilized at R.E. Ginna Nuclear Power Plant for the upcoming March 1999 outage.

Very truly yours,

  
Robert C. Mecredy

JSM/mab:502  
Attachment

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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  
Washington, D.C. 20555

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

U.S. NRC Ginna Senior Resident Inspector

ATTACHMENT 1

Rochester Gas and Electric Corporation  
Ginna Station  
Docket No. 50/244  
Third 10-Year Interval  
Request for Relief No. 33  
Reactor Pressure Vessel Circumferential Welds Appendix VIII  
Implementation

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

This Relief Request is requested for five (5) welds. Inspections of these welds are addressed by Class 1, Category B-A, Alternative Rules for the Inservice Inspection of the Reactor Pressure Vessel Circumferential Shell Welds and Vessel to Flange Weld.

<u>Weld ID</u>	<u>Type</u>
RPV-B	Upper Shell to Intermediate Shell
RPV-C	Intermediate Shell to Lower Shell
RPV-D	Lower Shell to Ring Forging
RPV-E	Ring Forging to Lower Head
RPV-A	Vessel to Flange Weld

II. Code Requirement:

ASME Code Section XI, Subsection IWB, Table IWB-2500-1, Examination Category B-A requires that volumetric examination be performed on the above Reactor Vessel Welds, as required under Code of Federal Regulations (10CFR50.55). These volumetric examinations are to be performed in accordance with IWA-2232. IWA-2232 states that the inspections "shall be conducted in accordance with Article 4 of Section V, and amended by Section XI". R. E. Ginna Nuclear Power Plant is currently committed to ASME Section XI 1986 Edition and to Section V 1986 Edition.

III. Code Requirement from Which Relief is Requested:

R.E. Ginna Nuclear Power Plant is requesting relief from the ASME Section XI Code, 1986 Edition, No Addenda, Paragraph IWA-2232 requirements which specifies that these examinations are to be conducted in accordance with Article 4 of Section V, 1986 Edition and as amended by Section XI.

#### IV. Basis for Relief:

Relief is requested pursuant to the provisions of 10 CFR 50.55a(a)(3)(i). The proposed alternative will provide an acceptable level of quality and safety.

The Electric Utility industry has developed a program to qualify ultrasonic inspection techniques. This program, Performance Demonstration Initiative (PDI), is designed to meet the intent of Appendix VIII of the ASME Code, Section XI, 1989 and later Editions. The PDI program used a variety of test blocks to evaluate transducer designs, scanning requirements and flaw sizing techniques and the personnel performing the examinations.

It is our intent to use techniques qualified to the PDI program at the Electric Power Research Institute (EPRI) NDE Center that meets the intent of Appendix VIII, Supplement 4 and 6, of the 1989 or later Edition(s) of ASME Section XI Code. These qualified flaw detection and flaw characterization techniques shall utilize current industry calibration block standards and consists of scanning the examination volume, weld and base metal.

Performance-based Ultrasonic Testing (UT) techniques provide a higher degree of reliability for detection and characterization of flaws when compared to the conventional amplitude-based UT techniques that are currently required by ASME Section XI. The performance-based demonstration requires the inspection equipment, procedures, and examiners to be tested on flawed specimen representing materials and configurations similar to those found in actual plant configurations. The NRC Staff has acknowledged the improvement achieved by performance-based UT techniques. Refer to the Federal Register Notice of December 31, 1996: 61 FR69120. Additionally, the NRC Staff has assessed the PDI program activities and found that PDI has established and executed a well-planned and effective program to test UT equipment, procedures, and examiners on selected portions of Appendix VIII, which include reactor vessel inspection technique. This assessment is documented in a letter from J. Strosnider (NRC) to B. Sheffel (PDI) dated March 6, 1996.

V. Alternate Examinations:

R.E. Ginna Nuclear Power Plant proposes to use Ultrasonic Volumetric inspection techniques to inspect the reactor vessel Circumferential shell welds and vessel to flange weld during the March 1999 outage. These inspection techniques have been demonstrated and qualified to the PDI program which meets the intent of the rules of Appendix VIII, Supplement 4 and 6, of the ASME Code, Section XI, 1989 Edition. These techniques will be used in place of the currently required Section XI, 1986 Edition, No Addenda, techniques. These examination techniques shall be performed by a vendor utilizing qualified PDI procedures.

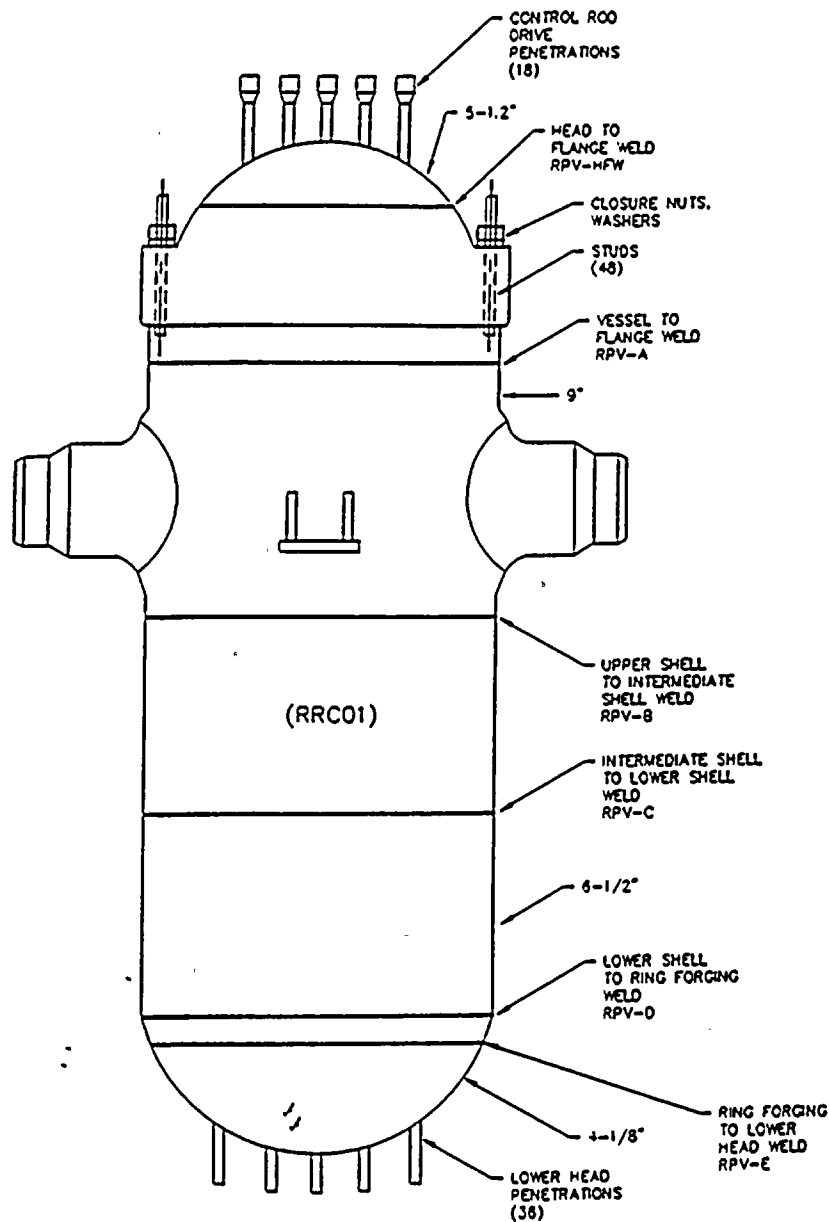
VI. Justification for the Granting of Relief:

Performance-based UT techniques provide a higher degree of reliability for detection and characterization of flaws when compared to the conventional amplitude-based UT techniques that are currently required by ASME Section XI. The NRC Staff has assessed the PDI program activities and found that PDI has established and executed a well-planned and effective program to test UT equipment, procedures, and examiners on selected portions of Appendix VIII, which include reactor vessel inspection technique. This assessment is documented in a letter from J. Strosnider (NRC) to B. Sheffel (PDI) dated March 6, 1996. This Relief Request is similar to one requested by Wisconsin Electric Power Company (WEPCO), and NRC has previously granted relief to WEPCO. Refer to letter from NRC to WEPCO dated March 17, 1998.

VII. Implementation Schedule:

These examinations will be performed during the March 1999 outage, and will complete the Third 10-year Interval inspection.

# ATTACHMENT A-1



LINE NO: REACTOR PRESS. VESSEL	CALIBRATION BLOCK:	REACTOR PRESSURE VESSEL (RRC01)		
	REF. DRAWING: 33013-1260 W679J441 W679J440	FACTORY <i>R. E. GINNA</i>	ROCHESTER GAS & ELECTRIC CORP ROCHESTER, NEW YORK	
		DRAWN BY: ABG	DRAWING NUMBER	1 REV
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