QUALITY ASSURANCE MANUAL	SECT. NO. -	REV. 0	PAGE 1 OF 18
ROCHESTER GAS & ELECTRIC CORPORATION GINNA STATION	EFFECTIVE DATE: January 1, 1980		
		SIGNATURE	DATE
	PREPARED BY:	Albert K. Cuscatt	6/30/79
TITLE: Appendix B Ginna Station Inservice Inspection Program For the 1980-1989 Interval ~~Attachment A - Exemptions~~	REVIEWED BY:	C R Anderson	7/2/79
	APPROVED BY:	C R Anderson	7/2/79

Exemption I

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The Quality Group C components of the service water system provide the heat sink to various turbine and reactor auxiliary building components including various safety related heat exchangers. The service water system operates in all modes of reactor operation including cold shutdown and refueling.

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition requires that the system be subjected to a visual examination under system operating conditions every three and one-third years and a system hydrostatic test at 1.1 times the system design pressure each ten year interval.

Rochester Gas and Electric believes that the hydrostatic test requirement for the service water system is impractical due to system design and therefore request for relief from this requirement is sought.

2. BASIS FOR RELIEF

The design of the system dictates the use of an open-ended well-pit pump, whose suction cannot be blanked off to permit a full system pressure test. The portion of the system downstream of the heat exchanger is also open-ended and cannot be hydrostatically tested. The remaining section of the system is only isolatable by means of butterfly valves which were not designed to provide a leaktight boundary. With the system as such it would be impractical to expect that leakages other than at the valves could be detected.

The ample margin in cooling capacity inherently provided by system design does not dictate the need for an essentially leaktight boundary. Since the system is in constant operation, its integrity is continually monitored. Thorough inspection of the system each period at the full operating pressure is adequate to detect any gross failures in the system without degrading system safety or availability.

3. ALTERNATIVE PROVISIONS

No alternate or augmented examinations or tests are necessary in this case.

Exemption II

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENT

The rules of Article 5 of Section V recommended that UT indications which produce a response greater than 20% of the reference level be investigated to the extent that the operator can evaluate the shape, identity, and location of all such reflectors in terms of the acceptance/rejection standards of Section XI.

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through Summer 1975 Addenda requires that the provisions of Article 5 of Section V shall apply if neither Appendix I or III of Section XI are applicable. However, in the 1977 Edition of Section XI, Summer 1978 Addenda, the rules of Article 5 of Section V were amended to only require investigation of UT indication which produce a response greater than 100% of reference level.

Rochester Gas & Electric concurs with the requirements of the later Code and Addenda and therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Rochester Gas & Electric will be adopting the requirements of IWA-2232 of Section XI of the 1977 Edition of Section XI, through the Summer 1978 Addenda. This is done pursuant to

10CFR50,55a, Paragraph (g)(4)(iv), which says "Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met."

Adopting the evaluation criterion of 100% of reference level is acceptable because:

a) Indication of this level found during examinations have been sufficiently reliable to detect flaws.

b) Rochester Gas & Electric has committed to record all indication greater than 50% of reference level, thereby establishing a permanent history which can be subsequently examined.

c) Rochester Gas & Electric's inspection history at Ginna has shown that the level of "noise" or "hash" in the UT response from examinations on Quality Groups A and B systems has typically been 20%-30% and 20%-40% of reference level, respectively.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are necessary in this case.

Exemption III

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The reactor vessel and associated closure head are cladded with stainless steel on the interior surfaces. Six patches each having a 36 square inch area were selected for examination in accessible locations of the reactor vessel shell and closure head. The pressurizer and steam generators also require a 36 square inch area to be accessible for examination.

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through the Summer 1975 Addenda requires that the clad patches in the reactor vessel, pressurizer and steam generators be visually examined each interval. In addition, the closure head patches require visual plus a surface or

volumetric examination each interval. In the 1977 Edition of Section XI, Summer 1978 Addenda, the ASME Code had completely eliminated the examination categories B-I-1 and B-I-2.

Rochester Gas and Electric believes the earlier examinations are impractical since it offers no real means of checking pressure vessel integrity. Therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Analysis has shown that flaws which initiate in the pressure vessel cladding, at locations other than nozzles, do not propagate through the clad-base metal interface. Therefore, their existence does not pose a threat to pressure vessel integrity. The nozzle inner radii areas will be volumetrically examined to detect the presence of flaws which may have propagated into the base material.

Performing these examinations only constitutes a needless exposure of personnel to radiation with no compensatory increase in safety. Rochester Gas & Electric therefore, will not perform the above mentioned examinations in the remaining inspection intervals.

3. ALTERNATIVE PROVISIONS

No alternate or augmented examinations are necessary in this case.

Exemption IV

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

This relief request addresses the Section XI examination categories concerning pressure retaining bolting, that is, B-G-1 and B-G-2. Category B-G-1 in the 1974 Edition of Section XI, Summer 1975 Addenda covers bolting two-inches in diameter and greater and category B-G-2 covers bolting less than two-inches in diameter. However, in the 1977 Edition of Section XI, Summer 1978 Addenda, the bolting exactly two-inches in diameter is shifted from category B-G-1 to B-G-2 by revision of the category definition.

Rochester Gas & Electric concurs with the category definition of the later Code and Addenda and therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Rochester Gas & Electric will be adopting the requirements of Section XI of the 1977 Edition of Section XI through the Summer 1978 Addenda for examination categories B-G-1 and B-G-2. This is done pursuant to 10CFR50.55a Paragraph (g) (4)(iv) which says "Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met."

Adoption of this exemption has a minimal impact, since it includes only a small percentage of the Quality Group A bolting and will in no way effect plant safety margins.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are necessary in this case.

Exemption V

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through Summer 1975 Addenda requires that pressure retaining components within each system boundary be visually examined while subjected to system pressure tests. These test requirements are not only an important part of the inservice inspection, but also demand clarity in their application.

Rochester Gas & Electric feels the earlier hydrostatic test requirements are not as definitive as the later Edition and Addenda of Section XI, and for this reason believes misinterpretation and/or misapplication could occur. Request for relief from the earlier requirement is therefore sought.

2. BASIS FOR RELIEF

Rochester Gas & Electric will be adopting the requirements of Article-5000 of Section XI, 1977 Edition through Summer 1978 Addenda. This is done pursuant to 10CFR50.55a, Paragraph (g)(4)(iv) which says, "Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met." By adopting the more current rules, Ginna's inservice inspection program invokes a greater margin of safety by applying a clear and definitive Code.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are necessary in this case.

Exemption VI

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

Ginna has three Quality Group A valves which will require a visual examination of their internals. These valves are in the safety injection system and the residual heat removal system.

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through the Summer 1975 Addenda requires that valves exceeding four-inches in diameter be examined visually during each inspection interval. Specifically, the area of examination includes valve internal pressure boundary surfaces.

Rochester Gas & Electric, believes that this visual examination adds little or no value to the overall safety of the plant and subjects plant personnel to unnecessary radiation exposure. Therefore, a request for relief from this requirement is sought.

2. BASIS FOR RELIEF

This basis for relief request is founded on the following two points:

1) to complete the subject examination, unnecessary expenditures of man-hours and man-rem are required with essentially no compensating increase in plant safety, and

2) the structural integrity afforded by valve casing material utilized will not significantly degrade over the lifetime of the valve.

Based on data compiled from a plant similar in age and design to Ginna, it is expected that approximately 100 man-hours and 5 man-rem exposure would be required to disassemble, inspect, and reassemble these valves. Performing this visual examination under such adverse conditions, high dose rates (30-40 R/hr), and poor as-cast surface conditions, realistically provides little additional information as to the valve's casing integrity.

The valves material, a high strength cast stainless steel (ASTM A351-CF8), is widely used in the nuclear industry and has performed extremely well. The presence of some delta ferrite (typically 5% or more) substantially increases resistance to intergranular stress corrosion cracking. The delta ferrite also helps the material to resist pitting corrosion in chloride containing environments.

Rochester Gas & Electric feels that adequate safety margins are inherent in the basic valve design and that the public's health and safety will not be adversely effected by not performing a visual examination of the valve internal pressure boundary surfaces.

3. ALTERNATIVE PROVISIONS

As stated above, Rochester Gas & Electric does not believe that the visual examination required each ten year interval is warranted. However, as standard maintenance practice dictates, when these valves are disassembled for maintenance purposes, a visually examination of the internals and internal pressure boundary surfaces will be performed, to the extent practical.

Exemption VII

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

In each of the two 27.5 inch inside diameter recirculation loops, Ginna has a Quality Group A reactor coolant pump. The function of these two pumps is to provide forced circulation through the core during normal reactor operation.

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through the Summer 1975 Addenda requires that one of these recirculation pumps be examined visually during each inspection interval. Specifically, the area of examination includes all pump internal pressure boundary surfaces.

Rochester Gas & Electric believes that this visual examination adds little or no increase to the overall safety of the plant and subjects plant personnel to unnecessary radiation exposure. Therefore, a request for relief from this requirement is sought.

2. BASIS FOR RELIEF

The basis for this relief request is founded on the following two points:

1) to complete the subject examination, large expenditures of man-hours and man-rem are required with essentially no compensating increase in plant safety, and

2) the structural integrity afforded by pump casing material utilized will not significantly degrade over the lifetime of the pump.

Based on the data compiled from a plant similar in age and design to Ginna, it is expected that approximately 1000 man-hours and 50 man-rem exposures would be required to disassemble, inspect, and reassemble one pump. Performing this visual examination under such adverse conditions, high dose rates (30-40 R/hr), and poor as-cast surface condition, realistically provides little additional information as to the pump's casing integrity.

The reactor coolant pump casing material, a high strength cast stainless steel (ASTM A351-CF8), is widely used in the nuclear industry and has performed extremely well. The presence of some delta ferrite (typically 5% or more) substantially increases resistance to intergranular stress corrosion cracking. The delta ferrite also helps this material resist pitting corrosion in chloride containing environments.

Rochester Gas & Electric feels that adequate safety margins are inherent in the basic pump design and that the public's health and safety will not be adversely effected by not performing a visual examination of the pump internal pressure boundary surfaces.

3. ALTERNATIVE PROVISIONS

As stated above, Rochester Gas & Electric does not believe that the visual examination required each ten year interval is warranted. However, as standard maintenance practice dictates, when a pump of this type is disassembled for maintenance purposes a visual examination of the pump internals and internal pressure boundary surfaces will be performed, to the extent practical.

Exemption VIII

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through Summer 1975 Addenda, Categories C-C and C-E requires a surface examination be performed on 100% of the vessel supports and 10% of the supports for piping, pumps, and valves. In the 1977 Edition of Section XI, Summer 1978 Addenda, the Code requires 100% of the required areas for each support attachment be examined.

Rochester Gas & Electric believes that the later Edition and Addendas of Section XI provides more assurance of the overall structural integrity of Ginna's Quality Group B systems. Therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Rochester Gas & Electric will be adopting the requirements of Categories C-C and C-E of Section XI, 1977 Edition through Summer 1978 Addenda. This is done pursuant to 10CFR50.55a, Paragraph (g)(4)(iv) which says, "Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met." By adopting the more current rules, Ginna's inservice inspection program provides greater assurance for system integrity.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are necessary in this case.

Exemption IX

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through Summer 1975 Addenda requires that repairs be made either to ASME Section XI or the Code applicable to the construction of the component. However, in the 1977 Edition of Section XI, Summer 1978 Addenda, the Code allows the user to apply later Edition of the Construction Code or ASME Section III, either in its entirety or portions thereof.

Rochester Gas & Electric feels the earlier repair rules are not as definitive nor adaptable as the later Edition and Addenda of Section XI, and believes that by adapting the later repair rules Ginna's system can be assured of greater integrity. Therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Rochester Gas & Electric will be adopting the requirements of Article-4000 of Section XI, 1977 Edition through Summer 1978 Addenda. This is done pursuant to 10CFR50.55a, Paragraph (g)(4)(iv) which says, "Portions of editions or addenda may be used provided that all related requirements of the respective

editions or addenda are met." By adopting the more current rules, Ginna's inservice inspection program invokes a more definitive and adaptable repair program thereby ensuring greater integrity to safety related systems.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are necessary in this case.

Exemption X

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The ASME Boiler and Pressure Vessel Code, Section XI 1974 Edition through Summer 1975 Addenda Category C-D requires that 10% of the pressure retaining bolting exceeding one inch in diameter be nondestructively examined. In the 1977 Edition of Section XI, Summer 1978 Addenda, the Code requires that 100% of the pressure retaining bolting exceeding two inches in diameter be nondestructively examined.

Rochester Gas & Electric believes that the later Edition and Addendas of Section XI provides more assurance of the overall structural integrity of Ginna's Quality Group B systems. Therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Rochester Gas & Electric will be adopting the requirements of Category C-D of Section XI, 1977 Edition through Summer 1978 Addenda. This is done pursuant to 10CFR50.55a, Paragraph (g)(4)(iv) which says, "Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met." By adopting the more current rules, Ginna's inservice inspection program provides greater assurance for system integrity.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are necessary in this case.

Exemption XI

1. IDENTIFICATION OF COMPONENTS AND IMRPACTICAL CODE REQUIREMENTS

The ASME Boiler and Pressure Vessel Code, Section XI 1974 Edition through Summer 1975 Addenda, Category B-K-1 requires that 25% of weld length of the integrally welded external supports be volumetrically examined. In the 1977 Edition of Section XI, Summer 1978 Addenda, the Code requires that 100% of weld length of the integrally welded external supports be examined.

Rochester Gas & Electric believes that the later Edition and Addendas of Section XI provides more assurance of the overall structural integrity of Ginna's Quality Group A systems. Therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Rochester Gas & Electric will be adopting the requirements of Category B-K-1 of Section XI, 1977 Edition through Summer 1978 Addenda. This is done pursuant to 10CFR50.55a, Paragraph (g) (4) (iv) which says, "Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met." By adopting these more current rules, Ginna's inservice inspection program provides greater assurance for system integrity.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are necessary in this case.

Exemption XII

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through Summer 1975 Addenda requires that arrangements be made with an Authorized Inspection Agency to provide inspection services. In addition, the Code requires that certain administrative functions be performed by the "Enforcement Authority" and "Authorized Inspector".

Rochester Gas & Electric's Ginna Nuclear Generating Plant is located in the state of New York. This state has not endorsed ASME Codes and therefore does not provide administrative organization and controls such as "Enforcement Authority", "Authorized Inspector" and "Reporting Systems". However, Ginna Station's Quality Assurance Program does provide for these administrative control requirements. Therefore, Rochester Gas & Electric request that Ginna's Station Quality Assurance Program be used in lieu of Code administrative functions.

2. BASIS FOR RELIEF

Rochester Gas & Electric's program for the inservice inspection, governed by the R. E. Ginna Station Quality Assurance Manual, contains the requirements and responsibilities for implementation of the program and procedures. The procedures have been prepared and approved by the responsible organizations within Rochester Gas & Electric, (i.e., Ginna Station, Engineering, General Maintenance, Electric Meter and Laboratory and Purchasing).

Approved procedures will be implemented to control the standards for examination evaluation. These procedures include the identifications of the organization performing the inspection, description of the method of inspection to be used, acceptance and rejection criteria, and requirements for providing evidence of completion and certification of the inspection activity.

In addition, procedures are developed by Ginna Station to prescribe the disposition of nonconformances. The procedures implemented for the repairs, the retest procedures and the test results will be reviewed by the Plant Operating Review Committee. The members of this committee include technically qualified staff personnel.

Examination techniques have been established in accordance with written requirements and incorporated into written procedures. Qualifications for nondestructive test personnel are in compliance with Regulatory Guide 1.58 "Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel".

Records and reports of the inservice inspection will be developed and maintained by Rochester Gas & Electric and include such items as examination plans and schedules, examination of results and corrective actions.

The functions of the ASME authorized inspector, namely their reviews and verifications, will be performed by personnel of the Hartford Steam Boiler Inspection and Insurance Company. The qualifications of the inspectors, inspections specialists and inspection agency are in compliance with the Code.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are required in this case.

Exemption XIII

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through Summer 1975 Addenda, Article-6000 stipulates rules for records and reports of Class 1, 2 and 3 components of nuclear power plants. These rules have subsequently been revised to add clarity and guidance to the Code.

Rochester Gas & Electric feels the earlier rules of Article-6000 are not as definitive as the rules of the 1977 Edition through Summer 1978 Addenda. They believe that by adopting the later "Records and Reports" rules, Ginna's overall Inservice Inspection Program can be of better quality. Therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Rochester Gas & Electric will be adopting the requirements of Article-6000 of Section XI, 1977 Edition through Summer 1978 Addenda. This is done pursuant to 10CFR50.55a, Paragraph (g) (4) (iv) which says, "Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met." By adopting the more current rules, Ginna's inservice inspection program invokes more coherent rules in maintaining examination and test data.

3. ALTERNATIVE PROVISIONS

No alternative or augmented examinations are necessary in this case.

Exemption XIV

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

A hold-up tank in the waste disposal system for Ginna provides a means of storing contaminated water which has been used in the operation of a nuclear power plant. The waste disposal system may be required to function in all modes of reactor operation including cold shutdown and refueling.

The ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition through Summer 1975 Addenda, requires that the system be subjected to a visual examination under system operating conditions every three and one-third years and a system hydrostatic test at 1.1 times the sytem design pressure each ten year interval.

Rochester Gas & Electric believes that hydrostatically testing the rad-waste hold-up tanks puts Ginna's plant in an unsafe condition and therefore a request for relief from this requirement is sought.

2. BASIS FOR RELIEF

The design of the waste disposal system is such that contaminated water is stored in a hold-up tank until such time that the level of contamination is below the limits for discharge. At this time the hold-up tanks may be reavailable for use by emptying the stored liquid.

Several important systems within the chemical volume and control system drain into the waste disposal system hold-up tanks. These are the volume and control tank drains, reactor coolant letdown system, reactor coolant drain tank discharge, and the demineralizer system drains.

If a utility was to hydrostatically test this tank by filling them with water, the hold-up tank would be rendered useless. The plant would then be potentially put into an unsafe condition for any abnormal plant function and if startup occurred without hold-up tanks being available.

Since this hold-up tank constantly stores liquid, any degradation of the tank material would show up prior to it becoming a problem.

3. ALTERNATIVE PROVISIONS

A visual examination shall be performed once every 3 1/3 years to verify continued structural integrity.

Exemption XV

1. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

This relief request addresses the Section XI examination categories B-A and B-D for the pressure retaining welds in the and reactor vessel including the nozzle to vessel welds. Categories B-A and B-B of the 1974 Edition of Section XI, Summer 1975 Addenda requires only a partial examination of the pressure retaining welds in the reactor vessel. However, in the 1977 Edition of Section XI, Summer 1978 Addenda, requires 100% of the weld to be inspected. Also, in the 1974 Edition of Section XI, Summer 1975 Addenda the nozzle to vessel weld category B-D are required to be inspected by dividing the inspection up over the interval which is impractical because only a nozzle bore examination can be performed on two nozzles out of four, the 1977 Edition of Section XI, Summer 1978 Addenda allows for the nozzle to vessel welds to be differred to the end of the inspection interval.

Rochester Gas and Electric concurs with the category requirements as defined of the later Code and Addenda and therefore, a request for relief from the earlier requirement is sought.

2. BASIS FOR RELIEF

Rochester Gas and Electric will be adopting the requirements of Section XI of the 1977 Edition of Section XI through the Summer 1978 Addenda for examination categories B-A and B-D. This is done pursuant to 10CFR 50.55a paragraph (g)(4)(iv) which says "portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met.

During the first inpection interval 100% of the reactor vessel welds including the nozzle to vessel welds were completed. This request is in keeping with the policy of performing 100% of all welds in the reactor vessel each inspection interval. As well as being a practical approach when examining the nozzle to vessel welds so that the required examinations from two directions may be performed at the same time.

Adoption of this exemption applies more current rules to Ginna's inservice inpection program providing greater assurance for system integrity.

3. ALTERNATIVE PROVISIONS

No alternative or argumented examanination are necessary in this case.