Attachment B

Proposed Inservice Inspection Program

QUALITY ASSURANCE MANUAL GINNA STATION ROCHESTER GAS & ELECTRIC CORPORATION	---	REV.	PAGE 1 OF 30
	EFFECTIVE DATE: PROPOSED		
TITLE: APPENDIX B Ginna Station Inservice Inspection Program For the 1980-1989 Interval		SIGNATURE	DATE
	PREPARED BY:		
	QUALITY ASSURANCE REVIEW		
	APPROVED BY:		

Program Table of Contents

INTRODUCTION

Appendix B of this Quality Assurance Manual describes Ginna's Inservice Inspection Program for the 120 month inspection interval commencing January 1, 1980 and ending December 31, 1989. Included in this program are the following portions of systems and/or components:

- Quality Group A Components
- Quality Group B Components
- Quality Group C Components
- High Energy Piping Outside of Containment
- Steam Generator Tubing
- Reactor Coolant Pump Flywheels
- Snubbers

Following the guidance of Reference 1, Section XI of the Code, Ginna's Inservice Inspection Program adheres to the requirements of Section 50.55a of the Code of Federal Regulations, Reference 2. This program, however, excludes the controls of the Authorized Nuclear Inspector, Enforcement Authority, Reporting Systems, and N-Stamp Symbol.

The Inservice Inspection Program for Quality Groups A, B and C components, as defined in Regulatory Guide 1.26, Reference 3, is controlled by Ginna's Quality Assurance Program for Station Operation. This same program which is also in compliance with the referenced Section XI, provides the most acceptable guidelines and latest techniques currently being utilized in the performance of an inservice inspection.

Repairs to Quality Groups A, B and C components shall be performed in accordance with the Owner's Design Specification and Construction Code of the component or system. Later editions of the Construction Code or ASME Section III, either in its entirety or portions thereof, can also be used. If repair welding can not be performed in accordance with these requirements, then Article 4000 of Reference 11 will be used.

As indicated in Rochester Gas and Electric's report, Reference 4, and Augmented Inservice Inspection Program for high energy piping outside of containment has been established. The inspection program provides for volumetric examination on all circumferential butt welds situated at design break locations or at discontinuity locations where probable failure could

occur. Surveillance of these welds can detect material changes in advance of a potential failure, thereby assuring that the design basis or consequential main steam or feedwater break will not occur.

The Inservice Inspection Program for steam generator tubes was developed to meet the guidance of Reference 5. At regular intervals, tubes within each leg of the steam generator are examined and evaluated for acceptable tube wall thickness.

The Inservice Inspection Program for reactor coolant pump flywheels was developed to meet the guidance of Reference 12. At the intervals suggested, the reactor coolant pump flywheel will be examined by either the volumetric or surface examination method, and evaluated to the specified acceptance criteria.

The Inservice Inspection Program for snubbers is based on the guidance provided in Reference 13.

Identification is given in Section 10.0 of Ginna's Inservice Inspection Program for those areas which deviate from the requirements of Reference 1. Where applicable, currently approved edition and addendas of Section XI will be utilized for clarification and guidance. It is the intent of Rochester Gas and Electric Corporation to continually apply appropriate changes in the Code which improves the overall quality of Ginna's total Inservice Inspection Program.

PROGRAM

ISI 1.0 Scope and Responsibility

1.1 Components of Quality Groups A and B are listed in Tables ISI-1.1 and 1.2, respectively. Quality Group C components are identified in Appendix A of Ginna's Quality Assurance Manual. The specific components to be examined for each Quality Group shall be defined in the Examination Plans by title and/or number.

1.2 The Inservice Inspection Program for high energy piping outside of containment consists of main steam and feedwater piping welds is detailed in the Examination Plan for High Energy Piping.

1.3 The Inservice Inspection Program for steam generator tubes, which is outlined in this program, was developed to the guidance provided in Reference 5, is detailed in Ginna's station procedures.

1.4 The Inservice Inspection Program for reactor coolant pump flywheels, which is outlined in this program, was developed to the guidance provided in Reference 12, is detailed in Ginna's station procedures.

ISI 2.0 Inspection Intervals

2.1 The inservice inspection (ISI) intervals for Quality Group A components shall be ten year intervals of service commencing January 1, 1970. This program defines the ISI requirements for the second interval for Quality Group A components. The ten year examination plan shall describe the distribution of examinations within the inspection interval in accordance with IWB-2400 of Reference 1.

2.2 The first inservice inspection interval for Quality Group B components shall commence May 1, 1973. Subsequent intervals shall be ten year intervals of service commencing on January 1, 1980. This program defines the ISI requirements for the second interval for Quality Group B components. The ten year examination plan shall describe the distribution of examinations within the inspection interval in accordance with IWC-2400 of Reference 1.

2.3 The first inservice inspection interval for Quality Group C components shall commence May 1, 1973. Subsequent intervals shall be ten year intervals of service commencing on January 1, 1980. This program defines the ISI requirements for the second interval Quality Group C components. The ten year examination plan shall describe the distribution of examinations within the inspection interval in accordance with IWD-2400 of Reference 1.

2.4 The inservice inspection intervals for the high energy piping outside of containment shall be ten year intervals of service commencing May 1, 1973. The ten year examination plan shall describe the distribution of examinations within the inspection interval in accordance with the requirements of Reference 4.

2.5 The inservice inspection intervals for the examination of steam generator tubes shall not be more than 24 months. However, if over a nominal 2 year period (e.g., two normal fuel cycles) at least 2 examinations of the separate legs result in less than 10% of the tubes with detectable wall penetration (> 20%) and no significant (> 10%) further penetration of tubes with previous indications, the inspection interval of the individual legs may be extended to once every 40 months.

2.6 As permitted by IWA-2400 of Reference 1, the inservice inspection interval for Quality Groups A, B and C and high energy piping outside containment may be extended as necessary.

2.7 The inservice inspection intervals for the reactor coolant pump flywheel shall be approximately 10 year intervals of service commencing on January 1, 1970. For areas of high stress concentration at the bore and keyway, a reduced interval of approximately 3 years shall be applied. The ten year examination plan shall describe the distribution of examinations within the inspection interval in accordance with the requirements of Reference 12.

2.8 The inservice inspection intervals for snubbers shall be as specified in Section 8.0.

ISI 3.0 <u>Extent and Frequency</u>

3.1 Quality Group A components, as listed in Table ISI-1.1 shall be examined to the extent and frequency as required in Table IWB-2500 of Reference 1.

3.2 Quality Group B components, as listed in Table ISI-1.2, shall be examined to the extent and frequency as required in Table IWC-2500 of Reference 1.

3.3 Quality Group C components as described in the ten year examination plan shall be examined to the extent and frequency required in IWD-2400 and IWD-2600 of Reference 1.

3.4 High energy piping welds outside of containment shall be examined to the following extent and frequency:

3.4.1 During each period of the first inspection interval, all welds at design break locations and one-third of all welds at locations where a weld failure would result in unacceptable consequences, will be volumetrically examined.

3.4.2 During each period of succeeding intervals, one-third of all welds at design break locations and one-third of all welds at locations where a weld failure would result in unacceptable consequences, shall be volumetrically examined.

3.5 The extent and selection of steam generator tube examinations shall be as described in Sections C.4 and C.5 of Reference 5, with the interpretation that examination in a leg of all previously defective tubes ($\geq$ 20% detectable wall penetration) and up to a maximum of two hundred previously defect-free tubes ($<$ 20% detectable wall penetration) is deemed sufficient in meeting the requirements of Reference 5.

3.5.1 In the event a primary to secondary leak exceeds technical specification limit, a limited number of tubes shall be examined at the next refueling outage.

3.5.2 In the event of a seismic occurance greater than that for which the plant is designed to continue operation, Reference 6, a special examination of a limited number of tubes shall be conducted.

3.5.3 In the event of a major steam line or feedwater line break, or a loss-of-coolant accident (LOCA) which imposes a significant pressure transient on the steam generators and requires actuation of the engineered safe-guards, a special examination of a limited number of tubes shall be conducted.

3.6 The reactor coolant pump flywheel, listed in Table ISI-1.1, shall be examined to the extent and frequency as required in Reference 12.

3.7 Snubbers shall be examined to the extent and frequency as required by Section 8.0.

ISI 4.0 Examination Methods

4.1 Quality Groups A and B components shall be examined by the required visual, surface or volumetric methods. These examinations shall include one or a combination of the following: visual, liquid penetrant, magnetic particle, ultrasonic, eddy-current or radiographic examination. These methods, shall as a minimum, be in accordance with the rules of IWA-2000 of Reference 1.

4.1.1 Ultrasonic examinations shall be performed in accordance with the following:

4.1.1.1 For ferritic vessels with wall thickness of 2-1/2 inches or greater, an ultrasonic examination shall be conducted in accordance with the rules of Appendix I of Reference 1.

4.1.1.2 For ferritic piping systems, an ultrasonic examination shall be conducted in accordance with the rules of Appendix III of Reference 7.

4.1.1.3 For components other than those listed in 4.1.1.1 and 4.1.1.2, an ultrasonic examination shall be conducted in accordance with the rules of Article 5 of Reference 8.

4.1.1.4 All indications which produce a response greater than 50% of the reference level shall be recorded.

4.1.1.5 All indications which produce a response ≥ 100% of the reference level shall 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 IWA-3100 (b) of Reference 1. The length of reflectors shall be measured between points which give amplitudes equal to 100% of the reference level.

4.2 Quality Group C components shall be visually examined for leakage during a system pressure test.

4.3 High energy piping welds outside of containment shall be radiographically examined.

4.4 Steam generator tubes shall be examined by a volumetric method (e.g. eddy current) or alternative method which is acceptable.

4.5 Reactor coolant pump flywheels shall be examined by the required surface and volumetric methods, in accordance with the requirements of IWA-2200 of Reference 1.

ISI 5.0 <u>Evaluation of Examination Results</u>

5.1 The evaluation of nondestructive examination results shall be in accordance with Article IWB-3000 of Reference 1. All reportable indications shall be subject to comparison with previous data to aid in its characterization and in determining its origin.

5.2 Quality Group B Components

5.2.1 The evaluation of nondestructive examination results shall be in accordance with Article IWC-3000 of Reference 1. All reportable indications shall be subject to comparison with previous data to aid in its characterization and in determining its origin.

5.3 Quality Group C Components

5.3.1 The evaluation of the visual examination results shall be in accordance with Article IWA-5000 of Reference 1.

5.4 High Energy Piping

5.4.1 The evaluation of nondestructive examination results shall be in accordance with Reference 9.

5.5 Indications that were recorded in previous pre-service or inservice inspections and which were not characterized as propagating flaws are acceptable for continued service.

5.6 The evaluation of any corroded area shall be performed in accordance with Article IWA-5000 of Reference 11.

5.7 Steam Generator Tubes and Tube Sleeve Combinations

5.7.1 The evaluation of nondestructive examination results shall be as follows:

5.7.1.1 Plant operation may resume when all tubes and sleeves are within acceptable wall thickness criteria and the conditions of (a) and (b) are met:

(a) When less than 10 percent of previously defect-free tubes or sleeves examined, (i.e. $\leq$ 20% of wall penetration) have developed detectable wall penetrations of greater than 20%, and

(b) When previously degraded tubes or sleeves exhibit further wall penetration of < 10%.

NOTE: An acceptable tube wall thickness is one which can sustain a LOCA in combination with a seismic occurrence, for which the plant is designed to continue operation, without a loss of function to Class 1 systems, Reference 8. Sleeves may be used to provide an acceptable tube.

5.7.1.2 If no more than 3 tubes or sleeves have unacceptable wall thickness and the criteria of 5.7.1.1 are otherwise met, plant operation may resume after corrective measures have been taken. When the above criteria are not met, the situation shall be immediately reported to the Nuclear Regulatory Commission. Plant operation may resume after corrective measures are taken. All abnormal degradation of steam generator tubes shall be reported with a Licensee Event Report (LER) in accordance with Technical Specification requirements.

5.7.1.3 Steam generator tubes that have defect indications $\geq$ 40% through wall, as indicated by eddy current, shall be repaired by plugging or by sleeving.

5.7.1.4 Steam generator sleeves that have defect indications $\geq$ 30% through wall, as indicated by eddy current, shall be repaired by plugging.

ISI 6.0 Repair Requirements

6.1 Repair of Quality Groups A, B and C components shall be performed in accordance with the applicable Subsections of Reference 11.

6.2 Examinations associated with repairs or modifications shall meet the applicable design and inspection Code requirements as described in the following paragraphs:

6.2.1 Whenever Quality Groups A, B or C System modifications or repairs have been made which involve new strength welds on components greater than 2 inches diameter, the new welds shall receive both surface and 100 percent volumetric nondestructive examinations.

6.2.2 Whenever system modifications or repairs have been made which involve new strength welds on Quality Groups A, B or C components of 2 inches or less, a surface examination shall be performed.

6.3 Surface defects in Quality Groups A, B or C bolts, studs, nuts and ligaments may be removed by mechanical means provided the removal of that defect does not alter the basic configuration of the item. Bolts, studs and nuts that have defects that cannot be removed by mechanical means shall be replaced.

6.4 Repair of high energy piping welds outside of containment shall be performed in accordance with the applicable Code specified in Reference 11.

6.5 Repair of Steam Generator Tubes

6.5.1 Repair of steam generator tubes that have unacceptable defects shall be performed by using a tube plugging technique or by sleeving. If sleeving is to be performed the requirements of 6.5.3 must be implemented.

6.5.2 Preventative sleeving of tubes as part of a preventative maintenance program may also be accomplished provided the requirements of 6.5.3 are met.

6.5.3 During each steam generator inspection a maximum of 25 sleeves may be installed in each steam generator for repair or preventative maintenance. Any additional sleeve installation shall require the approval of the Nuclear Regulatory Commisssion, Nuclear Reactor Regulation Branch.

6.6 Repair of steam generator sleeves that have unacceptable defects shall be performed by using a tube plugging technique.

6.7 Repair of reactor coolant pump flywheel that have unacceptable defects shall be performed in accordance with Reference 12.

ISI 7.0 <u>System Pressure Testing</u>

7.1 General Requirements

7.1.1 System pressure test shall be conducted in accordance with Article IWA-5000 of Reference 11.

7.1.2 Repairs of corroded areas shall be performed in accordance with Section 6.0 of this program.

7.2 Quality Group A Components

7.2.1 Whenever the reactor coolant system is closed after it has been opened, the system shall be leak tested to the requirements of Article IWB-5000 of Reference 11. Temperature and pressure requirements of Figure 3.1-1, Section 3.1 of Ginna's "Technical Specifications" shall not be exceeded.

7.2.2 At or near the end of each inspection interval, a hydrostatic pressure test shall be performed on the reactor coolant system components. This test shall be conducted in accordance with the requirements of Article IWB-5000 of Reference 11. Test pressures and temperatures shall be maintained for at least four hours prior to performing the visual examination. Section 3.1 of Ginna's "Technical Specification" shall not be exceeded.

7.3 Quality Group B Components

7.3.1 At or near the end of each inspection interval, a hydrostatic pressure test shall be performed on Quality Group B Systems and Components. This test shall be conducted in accordance with the requirements of Article IWC-5000 of Reference 11. When Quality Group A systems and components are also being pressurized, the pressure and temperature shall comply with the requirements of Paragraph 7.2.2 of this Appendix. This test temperature and pressure shall be maintained for at least 10 minutes prior to the performance of the visual examination.

7.4 Quality Group C Components

7.4.1 Quality Group C components shall have system pressure test in accordance with Article IWD-5000 of Reference 11.

ISI 8.0 Snubbers

8.1 Applies to the operability of all snubbers listed in Tables 8.1 and 8.2.

8.2 Visual Inspections

8.2.1 Snubbers identified in Tables 8.1 and 8.2 shall be visually inspected in accordance with the following schedule

No. Inoperable Snubbers per Inspection Period	Subsequent Visual Inspection Period*
0	18 months ± 25%
1	12 months ± 25%
2	6 months ± 25%
3, 4	124 days ± 25%
5,6,7	62 days ± 25%
8 or more	31 days ± 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule. Further, mechanical and hydraulic snubbers may be inspected independently in accordance with the above schedule.

The initial inspection period for hydraulic snubbers under this program shall be based on results of inspections under the previous program. The initial inspection for mechanical snubber shall be performed within 12 months of approval of this program.

8.2.2 Visual inspections shall verify (1) that there are no visible indications of impaired operability, (2) visible attachments to the foundation or supporting structure are secure, and (3) in those locations where snubber movement can be manually induced without disconnecting the snubber, that

*The inspection interval shall not be lengthened more than one step at a time.

the snubber has freedom of movement and is not frozen up. Snubbers which are defined as inoperable as a result of visual inspections may be determined operable for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined operable per paragraph 8.3. However, when the fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined operable via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an empty common hydraulic fluid reservoir shall be inspected to determine whether the fluid ports are covered.

8.3 Functional Tests

8.3.1 At least once per 18 months during shutdown, at least 10% of the hydraulic snubbers in Table 8.1 shall be functionally tested either in place or in a bench test. For each snubber that does not meet the functional test acceptance criteria of paragraph 8.3.2, an additional 10% of the hydraulic snubbers shall be functionally tested.

The sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers.

Steam generator snubbers may be excluded from functional testing requirements.

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber (if it is repaired and installed in another position) and the spare snubber shall be retested. Test results of these snubbers may not be included for the re-sampling.

If any snubber selected for functional testing either fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated and if caused by manufacturing or design deficiency all snubbers of the same design subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the functional test acceptance criteria.

If a hydraulic snubber is found inoperable through a functional test, then an engineering evaluation (visual inspection and/or analysis) shall be performed on the components which are restrained by the snubber. The purpose of this engineering evaluation shall be to determine if the components restrained by the snubber were adversely affected by the inoperability of the snubber in order to ensure that the supported component remains capable of meeting the designed service.

8.3.2 The hydraulic snubber functional test shall verify that:

a. Activation (restraining action) is achieved within the specified velocity range in compression or tension.

b. Snubber bleed, or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required to not displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

8.4 Snubber Service Life Monitoring

A record of the service life of each snubber, the date at which the designated service life commences and the installation and maintenance records on which the designated service life is based shall be maintained as required by Technical Specification 6.10.2.n.

Concurrent with the first inservice visual inspection and at least once per 18 months thereafter, the installation and maintenance records for each snubber listed in Tables 8.1 and 8.2 shall be reviewed to verify that the indicated service life has not been exceeded or will not be exceeded prior to the next scheduled snubber service life

review. If the indicated service life will be exceeded prior to the next scheduled snubber service lfe review, the snubber service life shall be reevaluated or the snubber shall be replaced or reconditioned so as to extend its service life beyond the date of the next scheduled service life review. This reevaluation replacement or reconditioning shall be indicated in the records.

ISI 9.0 Records and Reports

9.1 Records and reports developed from those examinations performed in accordance with this Appendix shall be maintained in accordance with Article IWA-6000 of Reference 11.

ISI 10.0 Exemptions

10.1 Quality Groups A, B and C components exemptions are identified in Attachment A to this Appendix. However, Paragraphs IWB-1220 and IWC-1220 of Reference 1 exempt certain components from examinations, where certain conditions are met. These exemptions will be applied to the components listed on Tables ISI-1.1 and 1.2 with the result that only those non-exempt components are listed herein.

REFERENCES

1. American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (B&PVC) Section XI "Rules for Inservice Inspection of Nuclear Power Plant Components", 1974 Edition through Summer 1975 Addenda.

2. Code of Federal Regulations, Title 10, Part 50, dated January 1, 1978.

3. Nuclear Regulatory Commission, Regulatory Guide 1.26, Revision 1, dated February 1976 "Quality Group Classifications and Standards for Water, Steam, and Radioactive Waste-Containing Components of Nuclear Power Plants".

4. Rochester Gas and Electric Corporation Report "Effects of Postulated Pipe Breaks Outside the Containment Building", dated October 29, 1973.

5. Nuclear Regulatory Commission, Regulatory Guide 1.83, Revision 1, dated July 1975, "Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes".

6. Ginna's Final Safety Analysis Report, Section 2.9.3.

7. ASME, B&PVC, Section XI, 1974 Edition through Summer 1976 Addenda.

8. ASME, B&PVC, Section V, 1974 Edition through Summer 1975 Addenda.

9. USAS B31.1.0 - 1967, "Power Piping".

10. ASME, B&PVC, Section III, 1974 Edition through Summer 1975 Addenda.

11. ASME, B&PVC Section XI, 1977 Edition through Summer 1978 Addenda.

12. Nuclear Regulatory Commission, Regulatory Guide 1.14, Revision 1, dated August 1975, "Reactor Coolant Pump Flywheel Integrity".

13. Letter dated March 23, 1981 from Darrell G. Eisenhut, Director, Division of Licensing, USNRC, regarding Technical Specification Revisions for Snubber Surveillance.

TABLE ISI 1.1
QUALITY GROUP A
COMPONENTS, PARTS, AND METHODS OF EXAMINATION

ITEM No.	EXAMINATION CATEGORY TABLE IWB-2500	COMPONENTS AND PARTS TO BE EXAMINED	METHOD
		Reactor Vessel	
B1.1	B-A	Longitudinal and circumferential shall welds in core region.	Volumetric
B1.2	B-B	Longitudinal and circumferential welds in shell (other than those of Category B-A and B-C) and meridional and circumferential beam welds in bottom head and closure head (other than those of Category B-C).	Volumetric
B1.3	B-C	Vessel-to-flange and head-to-flange circumferential welds.	Volumetric
B1.4	B-D	Primary nozzle-to-vessel welds and nozzle inside tial welds.	Volumetric
B1.5	B-E	Vessel penetrations, including control rod drive and instrumentation penetrations.	Visual (IWA-5000)
B1.6	B-F	Nozzle-to-safe-end welds.	Volumetric and Surface
B6.10	B-G-1	Closure head nuts.	Surface
B6.20	B-G-1	Closure studs, in place.	Volumetric
B6.30	B-G-1	Closure studs, when removed.	Volumetric and Surface

TABLE ISI 1.1 (Cont'd)
COMPONENTS, PARTS, AND METHODS OF EXAMINATION

ITEM No.	EXAMINATION CATEGORY TABLE IWB-2500	COMPONENTS AND PARTS TO BE EXAMINED	METHOD
		Reactor Vessel	
B6.40	B-G-1	Ligaments between stud holes.	Volumetric
B6.50	B-G-1	Closure Washers, bushings.	Visual
B7.10	B-G-2	Bolts, studs and nuts.	Visual
B8.10	B-H	Integrally-welded attachments.	Surface
B1.15	B-N-1	Vessel Interior.	Visual
B1.17	B-N-3	Core-support structures.	Visual
B1.18	B-O	Control rod drive housings.	Volumetric
B1.19	B-F	Exempted components.	Visual (IWA-5000)
		Pressurizer	
B2.1	B-B	Longitudinal and circumferential welds.	Volumetric
B2.2	B-D	Nozzle-to-vessel welds and nozzle-to-vessel radiused section.	Volumetric
B2.3	B-E	Heater penetrations.	Visual (IWA-5000)
B2.4	B-F	Nozzle-to-safe-end welds.	Volumetric and Surface

TABLE ISI 1.1 (Cont'd)
COMPONENTS, PARTS, AND METHODS OF EXAMINATION

ITEM No.	EXAMINATION CATEGORY TABLE IWB-2500	COMPONENTS AND PARTS TO BE EXAMINED	METHOD
		Pressurizer	
B6.60	B-G-1	Bolts and studs, in place.	Volumetric
B6.70	B-G-1	Bolts and studs, when removed.	Volumetric and Surface
B6.80	B-G-1	Bolting.	Visual
B8.20	B-H	Integrally-welded attachments.	Surface
B2.10	B-P	Exempted components.	Visual (IWA-5000)
B7.20	B-G-2	Bolts, studs, and nuts.	Visual
		Heat Exchangers and Steam Generators	
B3.1	B-B	Longitudinal and circumferential welds, including Tube sheet-to-head or shell welds on the primary side.	Volumetric
B3.2	B-D	Nozzle-to-head welds and nozzle inside radiused section on the primary side.	Volumetric
B3.3	B-F	Nozzle-to-safe-end welds.	Volumetric and Surface
B6.90	B-G-1	Bolts and studs, in place.	Volumetric

TABLE ISI 1.1 (Cont'd)
COMPONENTS, PARTS, AND METHODS OF EXAMINATION

ITEM No.	EXAMINATION CATEGORY TABLE IWB-2500	COMPONENTS AND PARTS TO BE EXAMINED	METHOD
		Heat Exchangers and Steam Generators	
B6.100	B-G-1	Bolts and studs, when removed.	Volumetric and Surface
B6.110	B-G-1	Bolting.	Visual
B8.30, B8.40	B-H	Integrally-welded attachments.	Surface
B3.9	B-P	Exempted components.	Visual (IWA-5000)
B7.30, B7.40	B-G-2	Bolts, studs, and nuts.	Visual
		Piping Pressure Boundary	
B4.1	B-F	Safe-end to piping welds and safe-end in branch piping welds.	Volumetric and Surface
B6.150	B-G-1	Bolts and studs, in place.	Volumetric
B6.160	B-G-1	Bolts and studs, when removed.	Volumetric and Surface
B6.170	B-G-1	Bolting.	Visual
B4.5	B-J	Circumferential and longitudinal pipe welds.	Volumetric

TABLE ISI 1.1 (Cont'd)
COMPONENTS, PARTS, AND METHODS OF EXAMINATION

ITEM No.	EXAMINATION CATEGORY TABLE IWB-2500	COMPONENTS AND PARTS TO BE EXAMINED	METHOD
		Piping Pressure Boundary	
B4.6	B-J	Branch pipe connection welds exceeding six inch diameter.	Volumetric
B4.7	B-J	Branch pipe connection welds six inch diameter and smaller.	Surface
B4.8	B-J	Socket welds.	Surface
B10.10	B-K-1	Integrally welded attachments.	Surface
B11.10	B-K-2	Component supports.	Visual
B4.11	B-P	Exempted components.	Visual (IWA-5000)
B7.50	B-G-2	Bolts, studs and nuts.	Visual
		Pump Pressure Boundary	
B6.180	B-G-1	Bolts and studs, in place.	Volumetric
B6.190	B-G-1	Bolts and studs, when removed.	Volumetric and Surface
B6.200	B-G-1	Bolting.	Visual
B10.20	B-K-1	Integrally-welded attachments.	Surface
B11.20	B-K-2	Component supports.	Visual

TABLE ISI 1.1 (Cont'd)
COMPONENTS, PARTS, AND METHODS OF EXAMINATION

ITEM No.	EXAMINATION CATEGORY TABLE IWB-2500	COMPONENTS AND PARTS TO BE EXAMINED	METHOD
		Pump Pressure Boundary	
B5.6	B-L-1	Pump casing welds.	Volumetric
B5.8	B-P	Exempted components.	Visual
B7.60	B-G-2	Bolts, studs, and nuts.	Visual
---	---	Reactor Coolant Pump Flywheel.	Volumetric and Surface
		Valve Pressure Boundary	
B6.210	B-G-1	Bolts and studs, in place.	Volumetric
B6.220	B-G-1	Bolts and studs, when removed.	Volumetric and Surface
B6.230	B-G-1	Bolting.	Visual
B10.30	B-K-1	Integrally welded attachments.	Volumetric
B11.30	B-K-2	Component supports.	Visual
B6.6	B-M-1	Valve-body welds.	Volumetric
B6.8	B-P	Exempted components.	Visual (IWA-5000)
B7.70	B-G-2	Bolts, studs, and nuts.	Visual

TABLE ISI 1.2
QUALITY GROUP B
COMPONENTS, PARTS, AND METHODS OF EXAMINATION

ITEM No.	EXAMINATION CATEGORY TABLE IWC-2520	COMPONENTS AND PARTS TO BE EXAMINED	METHOD
		Pressure Vessels	
C1.1	C-A	Circumferential butt welds.	Volumetric
C1.2	C-B	Nozzle-to-vessle welds.	Volumetric
C3.10	C-C	Integrally-welded support attachments.	Surface
C4.10	C-D	Bolts and studs.	Volumetric
C3.20	C-E	Component supports.	Visual
C3.30	C-E	Supports mechanical and hydraulic.	Visual
		Piping	
C2.1	C-F, C-G	Circumferential butt welds.	Volumetric
C2.2	C-F, C-G	Longitudinal weld joints in fittings.	Volumetric
C2.3	C-F, C-G	Branch pipe-to-pipe weld joints.	Volumetric
C4.20	C-D	Bolts and studs.	Volumetric
C3.40	C-E-1	Integrally welded support attachments.	Surface
C3.50	C-E-2	Component supports.	Visual
C3.60	---	Supports mechanical and hyraulic.	Visual

TABLE ISI 1.2 (Cont'd)
COMPONENTS, PARTS, AND METHODS OF EXAMINATION

ITEM No.	EXAMINATION CATEGORY TABLE IWC-2520	COMPONENTS AND PARTS TO BE EXAMINED	METHOD
		Pumps	
C3.1	C-F, C-G	Pump casing welds.	Volumetric
C4.30	C-D	Bolts and studs.	Volumetric
C3.20	C-E-1	Integrally welded support attachments.	Surface
C3.80	C-E-2	Component supports.	Visual
C3.90	---	Supports mechanical and hydraulic.	Visual
		Valves	
C4.1	C-F, C-G	Valve body welds.	Volumetric
C4.40	C-D	Bolts and studs.	Volumetric
C3.100	C-E-1	Integrally welded support attachments.	Surface
C3.110	C-E-2	Component supports.	Visual
C3.120	---	Supports mechanical and hydraulic.	Visual

Table 8.1

Safety Related Hydraulic Snubbers

Snubber Mark No.	Piping System	Accessible or Inaccessible (A or I)
SGA-1	"A" Steam Generator	I
SGA-2	"A" Steam Generator	I
SGA-3	"A" Steam Generator	I
SGA-4	"A" Steam Generator	I
SGA-5	"A" Steam Generator	I
SGA-6	"A" Steam Generator	I
SGA-7	"A" Steam Generator	I
SGA-8	"A" Steam Generator	I
SGB-1	"B" Steam Generator	I
SGB-2	"B" Steam Generator	I
SGB-3	"B" Steam Generator	I
SGB-4	"B" Steam Generator	I
SGB-5	"B" Steam Generator	I
SGB-6	"B" Steam Generator	I
SGB-7	"B" Steam Generator	I
SGB-8	"B" Steam Generator	I
FW-3	"A" Feedwater	A
FW-5	"A" Feedwater	A
FW-25	"A" Feedwater	A
AFW-25	"A" Aux. Feedwater	A
AFW-26	"A" Aux. Feedwater	A
AFW-27	"A" Aux. Feedwater	A
AFW-28	"A" Aux. Feedwater	A
AFW-29	"A" Aux. Feedwater	A

Table 8.1 (Continued)

Safety Related Hydraulic Snubbers

Snubber Mark No.	Piping System	Accessible or Inaccessible (A or I)
AFW-31	"A" Aux. Feedwater	A
AFW-49	"A" Aux. Feedwater	A
FW-30	"B" Feedwater	A
FW-80	"B" Feedwater	A
FW-81	"B" Feedwater	A
FW-82	"B" Feedwater	A
FW-83	"B" Feedwater	A
AFW-10	"B" Aux. Feedwater	A
AFW-13	"B" Aux. Feedwater	A
SNB-265	Stm to TD Aux. Feedwater	A
MS-22	"A" Main Steam	A
MS-8	"B" Main Steam	I
MS-146 (Top)	"B" Main Steam	A
MS-146(Bottom)	"B" Main Steam	A
MS-147	"B" Main Steam	A
MS-148	"B" Main Steam	A
MS-159	"B" Main Steam	A
MS-160	"B" Main Steam	A
H-1	PRZR Relief	A
H-2	PRZR Relief	A
H-3	PRZR Relief	A
H-4	PRZR Relief	A
H-5	PRZR Relief	A

Table 8.1 (Continued)

Safety Related Hydraulic Snubbers

Snubber Mark No.	Piping System	Accessible or Inaccessible (A or I)
H-6	PRZR Relief	A
H-7	PRZR Relief	A
H-8	PRZR Relief	A
PS-2	PRZR Safety & Relief Valve	A
PS-4	PRZR Safety & Relief Valve	A
PS-5	PRZR Safety & Relief Valve	A
PS-6	PRZR Safety & Relief Valve	A
PS-8	PRZR Safety & Relief Valve	A
PS-9	PRZR Safety & Relief Valve	A
PS-10	PRZR Safety & Relief Valve	A
PS-11	PRZR Safety & Relief Valve	A

Table 8.2

Safety Related Mechanical Snubbers

Snubber No.	System Snubber Installed On, Location and Elevation	Accessible or Inaccessible (A or I)
FWU-8	"B" Feedwater	A
FWU-12	"B" Feedwater	A
MSU-2	"A" Main Steam	I
MSU-3	"A" Main Steam	I
MSU-7 (Top)	"B" Main Steam	I
MSU-7 (Bottom)	"B" Main Steam	I
BDU-16	"B" Steam Generator Blowdown	I
RHU-30	RHR to "A" RC Loop	A
RHU-33	RHR to "A" RC Loop	I
SIU-3	"B" Accumulator to "A" RC Loop	A
RHU-8	RHR to "B" RC Loop	A
SIU-47	"A" Accumulator to "B" RC Loop	A
SIU-52	"A" Accumulator to "B" RC Loop	I
CCU-43	Comp. Cooling to "B" RC Loop	I
PS-701 (Valve)	"B" Main Steam PORV	A
PS-701 (Pipe)	"B" Main Steam PORV Piping	A
PS-702 (Valve)	"A" Main Steam PORV	A
PS-702 (Pipe)	"A" Main Steam PORV Piping	A

Attachment C

The proposed changes to the Technical Specifications and Inservice Inspection (ISI) Program have been prepared in response to a letter dated March 23, 1981 from Darrell G. Eisenhut, USNRC. Details of the surveillance of mechanical and hydraulic snubbers have been incorporated into the ISI Program in an effort to minimize the information in the Technical Specifications to that reasonably required for use by the plant control room operators. This formatting choice has been reviewed with the NRC Site Resident Inspector and is consistent with previously announced NRC goals.

The proposed changes are consistent with the guidance provided with the March 23 letter. The proposed changes provide Limiting Conditions for Operation which will ensure the structural integrity of safety related systems. The inspection schedule includes requirements for periodic visual and functional testing.

In certain cases, the NRC guidance has been modified to be more applicable to the installation and practices at Ginna. These modifications are generally described below.

Since a program for visual inspections of hydraulic snubbers is already in place in response to existing Technical Specification 3.13, the first inspection interval under the proposed requirements would be based on results of the previous inspection. Thus, previous experience will determine the appropriate interval. No such Technical Specification experience base exists for mechanical snubbers. Since mechanical snubbers are now in operation, the minimum length of time required prior to the initial visual inspection shall be deleted.

Since some snubber attachments to foundations or supporting structures are embedded or covered with insulation, an appropriate provision has been added to Section 8.2.2. Also in Section 8.2.2, the sentence addressing common hydraulic fluid reservoir has been revised. Regardless of reservoir condition, operability is defined based on the fluid port being covered or uncovered. This clarification is provided for snubbers with a common reservoir.

Since there is no equipment commercially available to functionally test mechanical snubbers, this requirement has been omitted. A mechanical snubber functional test program will be considered after suitable test equipment becomes available. Section 8.3 has been modified accordingly.

In Section 8.3.1, since the number of hydraulic snubbers is relatively small, the number of snubbers to be functionally tested has been set as 10% of the total as opposed to using the expression 35 (1 + C/2). The sample to be functionally

tested is required to be representative of the total sample of hydraulic snubbers.

The steam generator snubbers need not be functionally tested or included in total number in determining the 10% to be tested. These snubbers have no internal moving parts. Snubbing action is provided by a piston with an orifice. There is no mechanism for the orifice to become plugged. Should it, however, become plugged, then the movement of the steam generator during plant heatup and cooldown would cause seal leakage. Leakage for this or any other reason would be observed during the visual inspections. Snubber lockup is not a failure mode for these snubbers. In addition, these snubbers are especially difficult to remove. Thus, it is acceptable for these snubbers to perform only the visual inspection.

In Section 8.3.1 and in Tables 8.1 and 8.2, the identifications "Especially Difficult to Remove" and "High Radiation Zones During Shutdown" have been deleted. These categories have no implications for test programs in the revised guidance provided by the March 23 letter.

The engineering evaluation required by failure of an hydraulic snubber to pass the functional test may include visual inspection to determine if the restrained component has been affected and/or engineering analysis. In all cases where the visual inspection identifies damage, analyses shall be performed.

A minor change has also been made to Technical Specification 4.2 which identifies the inspection interval for Category B and C components. The first interval began May 1, 1973. To provide for consistency with Category A inspections, the second interval started January 1, 1980. Thus, currently, the final portion of the first ten year interval and the first portion of the second ten year interval is being performed.