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10 CFR 50.55a(g)(5)

NUCLEAR ENGINEERING & SERVICES DEPARTMENT

January 24, 1992

Docket No. 50-352

License No. NPF-39

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: Limerick Generating Station, Unit 1 and Common
First Ten Year Interval Inservice Inspection (ISI) Program
Submittal of Relief Requests and Revised Edition of the
of the Program Plan Document

Gentlemen:

By letter dated October 23, 1985, we submitted the Limerick Generating Station (LGS), Unit 1 and Common, First Ten Year Interval Inservice Inspection (ISI) Program (i.e., Specification 8031-P-500) and Augmented Inservice Inspection (AISI) Program (i.e., Specification 8031-P-501). The NRC reviewed and subsequently approved the LGS, Unit 1 and Common, First Ten Year Interval ISI and AISI Programs as documented in its letter dated March 4, 1988.

The LGS Unit 1 and Common, First Ten Year Interval ISI and AISI Programs have been upgraded to satisfy the requirements specified in the 1986 Edition of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel (B&PV) Code Section XI, for the remaining portion of the inspection interval (i.e., after completion of the third refueling outage). This upgrade was strictly voluntary and was initiated to allow Unit 1 to utilize the same Edition of the ASME Section XI Code as that required for Unit 2. In addition, other revisions to the Unit 1 Program were made in order to reflect organizational changes, plant modifications, and to improve document format. Furthermore, the LGS Unit 1 and Common ISI Program is now similar in format to the Unit 2 program which was submitted by our letter dated February 26, 1990.

As a result of upgrading the Programs, Specifications 8031-P-500 and 8031-P-501 have been superseded by Specification NE-42. Enclosure 1 of this letter contains an "Uncontrolled" copy of Volume 1 of the Program document which is the latest edition of the LGS, Unit 1 and Common, First Ten Year Interval ISI Program (i.e., Specification NE-42,

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Revision 1). This document is being submitted for your information and use. Attachment 1 of the enclosed Specification NE-42, Revision 1, contains a report which identifies the extent of examinations which were completed during the first three (3) refueling outages at Unit 1, in accordance with the 1980 Edition through Winter 1981 Addenda of the ASME Section XI Code requirements. This report also documents the logic used to determine the scope of examinations needed to be performed during the remainder of the first ten year inspection interval in order to satisfy the requirements of the 1986 Edition of ASME Section XI Code for Unit 1.

In addition, enclosed for your review and approval are five (5) new relief requests and two (2) revised relief requests for the LGS Unit 1 and Common, First Ten Year Interval ISI Program. These relief requests are being submitted in accordance with 10 CFR 50.55a(g)(5) and are provided in Enclosure 2 of this letter. An ISI Program relief request summary identifying and describing the new and revised relief requests is also contained in Enclosure 2. These relief requests have been included in the enclosed ISI Program document; however, their implementation is pending NRC approval.

As a result of implementing Specification NE-42, the format for the ISI Program relief requests has been revised. Since the relief request format has changed, no revision markings are identified in the margin of the revised relief requests. However, a description of the proposed changes is provided in the enclosed summary. No other ISI Program relief requests have been revised, except in format.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,



G. J. Beck
Manager
Licensing Section

Enclosures

cc: T. T. Martin, Administrator, USNRC, Region I (w/ enclosures)
T. J. Kenny, USNRC Senior Resident Inspector, LGS (w/ enclosures)

ENCLOSURE 2

Limerick Generating Station
Unit 1 and Common
First Ten Year Interval
Inservice Inspection (ISI) Program
Relief Requests

Relief Request
Summary

Summary of Changes to the LGS 1 First Interval

ISI Program Relief Requests

This report identifies all relief requests applicable to the Limerick Generating Station, Unit 1 First Interval ISI Program as identified in Specification NE-42, Rev. 1. These Relief Requests are divided into three(3) categories as defined below:

- Category A: New Relief Request not previously submitted to the USNRC.
- Category B: Relief Request previously submitted to and approved by the USNRC as part of the original first interval ISI program, Specification 8031-P-500.
- Category C: Relief Requests previously submitted to and approved by the USNRC as part of Specification 8031-P-500, which have been revised. These revisions included changes of scope by addition or deletion of welds/components, or changes to alternate provisions from that originally submitted.

The Relief Requests are listed by their new identification number, examination category, and item number or subject topic, as applicable. Categories B and C include a description which identifies the original Relief Request number from 8031-P-500 Program and any changes of scope or alternate provisions, as applicable, from that originally submitted.

A copy of each Relief Request is contained in Appendix A of the ISI Program Document Specification NE-42, Revision 1.

Category A: (New Relief Requests)

<u>Relief Request No.</u>	<u>Exam Category/Subject</u>	<u>Item No.</u>
RR-02	B-L-2 Pump Casings	B.12.20
RR-09	F-A Plate and shell type supports	F1.10
		F1.20
		F1.30
		F1.40
	F-B Linear Type Supports	F2.10
		F2.20
		F2.30
	F-C Component standard supports	F2.40
		F3.10
		F3.20
		F3.30
		F3.40
		F3.50

<u>Relief Request No.</u>	<u>Exam Category/Subject</u>	<u>Item No.</u>	
RR-13	C-H All pressure retaining components	C7.10	
		C7.20	
		C7.30	
		C7.40	
		C7.50	
		C7.60	
		C7.70	
		C7.80	
		D-A Systems in support of reactor shutdown function	D1.10
		D-B Systems in support of Emergency Core Cooling, Containment Heat removal, Atmospheric Cleanup, and Reactor Residual Heat Removal.	D2.10
D-C Systems in support of Residual Heat Removal from Spent Fuel Storage Pool.	D3.10		
RR-14	Relief for Augmented Examination Programs	N/A	

Category B: (Original Relief Requests)

<u>Relief Request No.</u>	<u>Exam Category/Subject</u>	<u>Item No.</u>
RR-03	B-M-2 Valve Bodies	B12.50
Description:	Submitted and approved as Relief Request 2.13.1 in Spec. 8031-P-500	
RR-05	C-C Integral attachments for vessels, piping, and valves.	C3.10 C3.20 C3.30
Description:	Incorporates Relief Requests 3.4.3, 3.7.1, and 3.10.2 submitted and approved in Spec. 8031-P-500.	
RR-06	C-A Pressure Retaining welds in pressure vessels	C1.10
Description:	Submitted and approved as Relief Request 3.4.1 in Spec. 8031-P-500.	
RR-07	C-G Pressure Retaining welds in pumps and valves.	C6.10
Description:	Submitted and approved as Relief Request 2.10.1 in Spec. 8031-P-500.	

<u>Relief Request No.</u>	<u>Exam Category/Subject</u>	<u>Item No.</u>
RR-08	B-D Full penetration welds of nozzles in vessels. (Inspection Program B)	B3.90
Description:	Submitted and approved as Relief Request 2.4.4 in Spec. 8031-P-500.	
RR-10	B-F Pressure retaining dissimilar metal welds	B5.130
Description:	Submitted and approved as Relief Request 2.7.3 in Spec. 8031-P-500.	

Category C: (Revised Original Relief Requests)

<u>Relief Request No.</u>	<u>Exam Category/Subject</u>	<u>Item No.</u>
RR-01	B-A Pressure retaining welds in reactor vessel.	B1.11 B1.12 B1.21 B1.22
Description:	Submitted and approved as Relief Request 2.4.1 and 2.4.2 in Spec. 8031-P-500. Scope of new Relief Request has been expanded to include the RPV head welds, Code Item No. B1.21 and B1.22	
RR-04	F-C Component standard supports	F3.50
Description:	Submitted and approved as Relief Request 6.4.1 in Spec. 8031-P-500. Alternate provisions section of the new Relief Request has been expanded to include a new snubber examination and test program to be implemented upon USNRC approval of Augmented Inspection Program AUG-13 and a Tech Spec. revision.	

New
Relief Requests

RELIEF REQUEST NO. RR-02

I. IDENTIFICATION OF COMPONENTS

Reactor Recirculation Pumps, RAP-201 and RBP-201, Examination Category B-L-2, Item Number B12.20. These Class 1 pumps function during normal reactor operation to provide forced recirculation of reactor coolant through the reactor core.

II. CODE REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

ASME Section XI 1977 Edition, Examination Category B-L-2 requires a VT-3 visual examination of the internal surfaces of at least one (1) of the two (2) Reactor Recirculation pump casings during the first inservice inspection interval.

Relief is requested from performance of the Code required visual examination of the pump casing internal surfaces due to impracticality of Code requirements.

III. BASIS FOR RELIEF

In the absence of any other required maintenance on either of the Reactor Recirculation pumps, the hardships associated with pump disassembly, solely for the purpose of visual inspection of the internal surfaces, far exceed any safety benefits resulting from such an inspection.

The disassembly of a reactor recirculation pump at LGS 1 constitutes a maintenance task of major proportions measured both in terms of manhours and associated personnel exposure.

Plant experience with the pump casing material in this application is favorable. The additional assurance of structural integrity afforded by visual examination is far outweighed by the cost and potential hazards presented to facilitate the inspection. In consideration of this situation, the 1989 Edition of Section XI requires a VT-3 examination only if the pump is disassembled for maintenance, repair or volumetric examination.

RELIEF REQUEST NO. BR-02 (CONTD.)

IV. ALTERNATE PROVISIONS

VT-3 visual examinations will be performed on the accessible internal surfaces of one (1) reactor recirculation pump should the required inspection area of either pump become accessible as a result of disassembly of the pump for other purposes.

Also, Code required visual examinations of the pump pressure boundary during system pressure testing provide added assurance of structural integrity.

RELIEF REQUEST NO. RR-09

I. IDENTIFICATION OF COMPONENTS

Class 1, 2, and 3 component supports in piping, Examination Categories F-A, F-B, and F-C, Item Numbers F1.10-F1.40, F2.10-F2.40, and F3.10-F3.50.

Component supports other than piping supports are outside of the scope of this relief request.

II. CODE REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

ASME Section XI 1986 Edition, Paragraph IWF-2510 requires that component supports selected for examination be the supports of those components that are required to be examined under IWB, IWC, and IWD during the first inspection interval. These component supports shall be examined in accordance with Table IWF-2500-1.

ASME Section XI 1986 Edition, Paragraph IWF-2430 details the steps to be taken should additional examinations be required as a result of component support examinations requiring corrective actions per IWF-3000.

Relief is requested from utilization of the IWF-2510 rules for component support selection, and from the IWF-2430 rules for additional examination.

The Code does not provide specific guidance for component support selection and therefore, user interpretation of the rules, as written, may not meet the intent of the Code. In addition, the rules for additional examinations are general and can not effectively compliment the selection basis, nor target specific failure modes.

III. BASIS FOR RELIEF

While IWF-2510 implies that component supports be selected for examination, specific criteria for this selection has not been provided. Interpretation of these requirements is inconsistent and may vary by Code Category of the supported component. One approach

RELIEF REQUEST NO. RR-09 (CONT'D.)

utilized, is to apply the selection criteria of the component where the support is located (e.g. C-F-1/C-F-2 selection rules used to select Class 2 piping supports). This approach may provide for adequate sampling of the support population; however, selection by this approach yields different selection basis for different categories of components, and is cumbersome to apply and track. Other approaches may be used, however, these selections may or may not meet the intent of the Code.

Also, the current provisions in the Code for additional examinations are random and may or may not target a potential failure mode to a specific support population. Enhancement of the component support selection basis should also include a complementary plan for selection of additional examinations.

The ASME Code has recognized the need for a more definitive selection basis for component supports and as such, has issued Code Case N-491. The sampling plan discussed herein parallels this code case.

IV. ALTERNATE PROVISIONS

The sampling plan described in Attachment 1 will be utilized for selection of component supports for examination in lieu of paragraphs IWF-2510 and IWF-2430.

RELIEF REQUEST NO. RR-09 (CONTD.)

Attachment 1

Class 1, 2, and 3 Piping Supports
Sampling Plan

SCOPE

The requirements of this sampling plan are applicable to nonexempt Class 1, 2, and 3 component supports in piping. Component supports other than piping supports, such as equipment supports, are outside of the scope of this sampling plan.

GENERAL

The sampling plan is based on selection of a specified percentage of the nonexempt population of component supports: the exact percentage determined by the Class of the component support.

Within the population, each individual component support is categorized by a support type which identifies its function (e.g. anchor).

The required number of component support selections shall be distributed within each class by system and type, proportional to the number of supports of each type within each system.

RELIEF REQUEST NO. RR-09 (CONTD.)

Attachment 1 (cont'd.)

SPECIFIC

The specific details of the sampling plan to be applied to LGS 1 components supports is as follows:

- 1) The extent of examination is determined by the Class of the component support:

Class 1	25% of the nonexempt population
Class 2	15% of the nonexempt population
Class 3	10% of the nonexempt population

- 2) Component supports are assigned to one of the following functional types:

ANCHOR
MECHANICAL SNUBBER
RIGID
VARIABLE

- 3) In applying the sampling plan, the required percentage of component supports are selected by type in each system. That is, 25% of all Class 1 anchors in system XYZ are selected, 25% of all Class 1 component supports containing snubbers are selected, and so on. Likewise, 15% of all Class 2 anchors are selected, etc. In addition, no less than one component support of each type will be selected (provided supports of that type exist in the system).
- 4) The required number of component supports will be examined over the inservice inspection interval and will be distributed throughout the interval in accordance with Inspection Program B, as follows:

	Minimum examinations completed, %	Maximum examinations credited, %
First Period	16	34
Second period	50	67
Third period	100	100

RELIEF REQUEST NO. RR-09 (CONTD.)

Attachment 1 (cont'd.)

- 5) Should additional examinations be required, per IWF-2430, the following rules shall apply:
- a) When the results of a selected component support examination require corrective measures in accordance with IWF-3000, examinations shall be extended to include examination of the supports immediately adjacent to the nonconforming support, and additional supports of the same type within the system, equal in number to those scheduled for examination during the current inspection period.
 - b) If the examinations of (a) require corrective actions, then the remaining component supports of the affected type, within the affected system, shall be examined.
 - c) If the examinations of (b) require corrective actions, the examinations shall be extended to include all nonexempt supports potentially subject to the same failure mode(s) which required correction in (a) and (b). These examinations shall be extended to other system component supports should the failure mode(s) be non-system related.
 - (d) Examinations shall be extended to include exempt supports should the examinations of (c) require corrective actions. Exempt supports shall be selected for additional examinations if the exempt supports are potentially subject to the same failure mode(s) as detected above.

RELIEF REQUEST NO. RR-12

I. SCOPE

This relief request is applicable to those ASME Code Case(s) adopted for use in this ISI Program which have not been specifically endorsed for use by the USNRC in Regulatory Guide 1.147 (reference 1.1.18).

II. DISCUSSION

Code Cases are periodically published by the ASME for the purpose of either clarifying the intent of Code rules or for providing rules and regulations for circumstances which are not currently covered by existing Code rules but need to be addressed in a timely manner. Use of these non-mandatory Code Cases for inservice inspection is subject to USNRC acceptance of the Code Case(s); Regulatory Guide 1.147 lists those Code Cases that have been reviewed by the NRC and are generally acceptable for implementation in an ISI Program. Other Code Cases may be used provided specific authorization is requested pursuant to 10CFR50.55a.

The purpose of this relief request is to request authorization of the adoption of specific Code Cases for implementation in the LGS 1 ISI Program.

III. CODE CASE(S) REQUIRING AUTHORIZATION

The following Code Case(s) require specific authorization for use in the LGS 1 ISI Program:

A. N-479-1 Boiling Water Reactor (BWR) Main Steam Hydrostatic Test

The Class 2 portion of the Main Steam system is incapable of being isolated from the Class 1 portion for purposes of performing a hydrostatic test. Use of this Code Case allows testing to the alternative rules of IWF 5222 (Class 1), which is most practical in this situation.

RELIEF REQUEST NO. RR-12 (CONTD.)

B. N-495 Hydrostatic Testing of Relief Valves

Under potential hydrostatic testing conditions of Class 2 or 3 components, gagging of relief valves, subject to the hydrostatic test pressure, may not be practical or possible. Use of this Code Case will allow removal of such valves to be conducted under a consistent set of rules while still accomplishing all code intended pressure tests.

IV. ALTERNATE PROVISIONS

The alternative rules of the Code Case(s) in III above shall be implemented in the LGS 1 ISI Program for the first inservice inspection interval.

V. BASIS FOR RELIEF

The Code Case(s) discussed in III above represent technically acceptable alternative rules to ASME Section XI Code rules. The fact that the Code Case(s) have not been endorsed in the Regulatory Guide in no way detracts from their technical adequacy since the major reason for their omission is the timing of their publication with respect to the most recent revision of the Regulatory Guide. That is, the subject Code Case(s) are relatively recent and it is expected that these Code Case(s) will be accepted in a subsequent revision of the Regulatory guide.

Adoption of these alternative rules provides an acceptable level of quality and safety and does not compromise the adequacy of the LGS 1 ISI Program in meeting the intent of ASME Section XI.

RELIEF REQUEST NO. RR-13

I. IDENTIFICATION OF COMPONENTS

Class 2 (exempt and non-exempt) pressure retaining components within the pressure retaining boundary of pressure vessels, piping, pumps, and valves, Examination Category C-II, Item Numbers C7.10 through C7.80 inclusive.

Class 3 (exempt and non-exempt) pressure retaining components within the pressure retaining boundary, Examination Categories D-A, D-B, and D-C, Item Number D1.10, D2.10, and D3.10, respectively.

The specific Class 2 and 3 components covered by this relief request are detailed in Table(s) RR-13-1.1 through RR-13-1.9.

II. CODE REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

ASME Section XI 1986 Edition, Examination Category C-II requires the pressure retaining components within each system boundary be subject to the system pressure tests of IWC-5000 and visually (VT-2) examined.

ASME Section XI 1986 Edition, Examination Categories D-A, D-B, and D-C require the pressure retaining components within each system boundary be subject to the system pressure tests of IWD-5000 and visually (VT-2) examined.

The required system pressure tests shall be performed during the first inservice inspection interval in accordance with Table IWC-2500-1 or Table IWD-2500-1, as applicable.

Relief is requested from meeting the subject pressure test requirements for the specific components listed in Table RR-13-1.1 through RR-13-1.9 due to hardship imposed by plant design and/or redundant testing. Individual test requirements requiring relief are as detailed in the Tables.

RELIEF REQUEST NO. RR-13 (CONTD.)

III. BASIS FOR RELIEF

Pressure testing in accordance with some or all of the requirements of IWC-5000 or IWD-5000, as applicable, for the affected components is impractical due to plant/system design and/or redundant test requirements as detailed in Table(s) RR-13-1.1 through RR-13-1.9.

In all cases, plant modification to facilitate the required testing represents undue hardship and/or alternate testing provides adequate assurance of pressure boundary integrity.

IV. ALTERNATE PROVISIONS

Any alternate test provisions, where practical, are as proposed in Table(s) RR-13-1.1 through RR-13-1.9.

RELIEF REQUEST NO. RR-13 (CONTD.)

Table RR-13-1.1

I. Identification of Components

Class 2 Service Air piping, HBB-166 between and including valves 15-1139 and 15-1140.
(Ref. P & ID: ISI-M-15, Sht 15)

II. Code Requirement From Which Relief Is Requested

IWC-5221, System pressure test during system functional/in-service tests and,
IWC-5222, System hydrostatic test

III. Basis For Relief

10CFR50 Appendix J Local Leak Rate Testing (LLRT) meets the intent of the ASME requirement.

During normal plant operation, Service Air Header pressure is approximately 100-110 psig. HBB-166 is isolated from the Service Air header by normally closed valves 15-1138 and 15-1139 outside containment and 15-1140 and 15-1212 inside containment.

Although Local Leak Rate tests use a lower pressure (44 psig) than normal Service Air pressure, they offer the following advantages over system pressure tests:

- 1) LLRTs are performed more frequently than periodic system functional tests and the ten year hydrostatic test.
- 2) LLRTs have the ability to quantify leakage which is not feasible with VT-2 inspections on air systems.
- 3) LLRTs conservatively test some unclassified piping and includes through valve leakage which would not be identified in a VT-2 inspection.

RELIEF REQUEST NO. RR-13 (CONTD.)

IWC-5210(b) allows for air tests which permit location and detection of through-wall leakages. In the event the LLRT fails to meet its acceptance criteria, further testing would be performed to determine the location of the leaks, appropriate corrective maintenance would be performed, and an appropriate retest would be performed.

IV. ALTERNATE PROVISIONS

10CFR50 Appendix J Local Leak Rate Testing (LLRT) will be utilized to meet the ASME Section XI IWC-5000 pressure testing requirements.

RELIEF REQUEST NO. RR-13 (CONT'D.)

Table RR-13-1.2

I. Identification of Components

Class 3 Nuclear Boiler Vessel instrumentation tubing to drywell pressure instrumentation outboard of HV-42-147A, B, C, and D. (Ref P & ID: ISI-M-42, Sht 1)

II. Code Requirement From Which Relief Is Requested

IWD-5221, System Inservice Test and
IWD-5223, System Hydrostatic Test

III. Basis For Relief

Normal Drywell pressure is less than 1 psig. The pressurizing fluid is nitrogen gas. A VI-2 inspection looking for a nitrogen gas leak with less than 1 psig driving pressure would be inconclusive.

LGS Technical Specifications require channel checks every 12 hours to verify drywell pressure instrumentation operability. This is performed by verifying proper pressure readings. A significant tubing leak will cause an improper reading, and will be corrected and retested. Piping and components are pressurized during the Integrated Leak Rate Test (ILRT) and inspected for leakage.

IV. ALTERNATE PROVISIONS

LGS Technical Specification operability checks and ILRT inspections provide assurance of component integrity and will be utilized to satisfy ASME Section XI requirements.

RELIEF REQUEST NO. RR-13 (CONTD.)

Table RR-13-1.3

I. Identification of Components

Class 2 RCIC Turbine Exhaust Vacuum Breaker lines HBB-101 and HBB-145 (3/4", 3") between and including valves HV-49-11'084, HV-49-11'080, HV-49-11'060 and 49-11'001. (Ref. P & ID: ISI-M-49, Sht 1)

Class 2 RCIC Vacuum Pump Exhaust to Suppression Pool, HBB-150 (3/4", 2") between 49-11'028 and HV-49-11'002, 49-1038 and 49-11'055.

II. Code Requirement From Which Relief Is Requested

IWC-5221, System pressure test during system functional/in-service tests and,
IWC-5222, System hydrostatic test

III. Basis For Relief

10CFR50 Appendix J Local Leak Rate Testing (LLRT) meets the intent of the ASME requirement.

During LLRTs, the subject piping is pressurized to 44 psig, a substantially higher pressure than that developed during a periodic system functional test. As such, the LLRT offers the following advantages over system pressure tests:

- 1) LLRTs are performed more frequently than periodic system functional tests and the ten year hydrostatic test.
- 2) LLRTs have the ability to quantify leakage which is not feasible with VT-2 inspections on this essentially gas-filled piping.
- 3) LLRTs conservatively include through valve leakage which would not be identified in a VT-2 inspection.

RELIEF REQUEST NO. RR-13 (CONTD.)

IWC-5210(b) allows for air tests which permit location and detection of through-wall leakages. In the event the LLRT fails to meet its acceptance criteria, further testing would be performed to determine the location of the leaks, appropriate corrective maintenance, and an appropriate retest would be performed.

IV. ALTERNATE PROVISIONS

10CFR50 Appendix J Local Leak Rate Testing (LLRT) will be utilized to meet the ASME Section XI IWC-5000 pressure testing requirements.

RELIEF REQUEST NO. RR-13 (CONTD.)

Table RR-13-1.4

I. Identification of Components

Class 2 HPCI Turbine Exhaust Vacuum Breaker lines HBB-108 and HBB-144 (3/4", 4") between and including valves HV-55-11095, HV-55-11093, PV-55-11072, and 55-11021. (Ref P & ID: ISI-M-55, Sht 1)

II. Code Requirement From Which Relief Is Requested

IWC-5221, System pressure test during system function/in-service tests and,
IWC-5222, System hydrosta... test.

III. Basis For Relief

10CFR50 Appendix J Local Leak Rate Testing (LLRT) meets the intent of the ASME requirement.

During LLRTs, the subject piping is pressurized to 44 psig, a substantially higher pressure than that developed during a system functional test. As such, the LLRT offers the following advantages over system pressure tests:

- 1) LLRTs are performed more frequently than periodic system functional tests or the ten year hydrostatic test.
- 2) LLRTs have the ability to quantify leakage which is not feasible with VT-2 inspection on this essentially gas-filled piping.
- 3) LLRTs conservatively include through valve leakage which would not be identified in a VT-2 inspection.

IWC-521... s for air tests which permit location and detection of through-wall leakages. In the event the LLRT fails to meet its acceptance criteria, further testing would

RELIEF REQUEST NO. RR-13 (CONT'D.)

be performed to determine the location of the leaks, appropriate corrective maintenance, and an appropriate retest would be performed.

IV. ALTERNATE PROVISIONS

10CFR50 Appendix J Local Leak Rate Testing (LLRT) will be utilized to meet the ASME Section XI IWC-5000 pressure testing requirements.

RELIEF REQUEST NO. RR-13 (CONTD.)

Table RR-13-1.5

I. Identification of Components

Class 3 Containment Atmospheric Control tubing to suppression pool pressure instrumentation outboard of SV-57-101. (Ref P & ID: ISI-M-57, Sht 1, ISI-M-52, Sht 1)

II. Code Requirement From Which Relief Is Requested

IWD-5221, System Inservice Test and
IWD-5223, System Hydrostatic Test.

III. Basis For Relief

Normal suppression pool pressure is less than 1 psig. The pressurizing fluid is nitrogen gas. A VT-2 inspection looking for a nitrogen gas leak with less than 1 psig driving pressure would be inconclusive.

LGS Technical Specifications require monitoring suppression pool pressure every 12 hours to verify suppression pool pressure instrumentation operability. This is performed by verifying a proper pressure reading. A significant tubing leak will give an improper reading, and will be corrected and retested. Also, the instrument and line will be pressurized during H.R.T. and inspection for leakage.

IV. ALTERNATE PROVISIONS

LGS Technical Specification suppression pool instrumentation operability checks and H.R.T. inspections provide assurance of component integrity and will be utilized to satisfy ASME Section XI requirements.

RELIEF REQUEST NO. RR-13 (CONTD.)

Table RR-13-1.6

I. Identification of Components

Check 2 Post-LOCA Recombiner piping HBB-128 and HBB-127 between and including "A" Recombin. and valves HV-57-161 and HV-57-162, and HBB-126 and HBB-124 between and including "B" recomb. and valves HV-57-163 and HV-57-164. (Ref P & IC: ISI-M-57, Sht 1 & 2)

II. Code Requirement From Which Relief Is Requested

IWC-5221, System pressure test during system functional/in-service tests and,
IWC-5222, System hydrostatic test

III. Basis For Relief

System Contaminated Pipe Inspection (CPI) meets the intent of the ASME requirement.

During normal plant operation, this piping is isolated and not pressurized. During CPI testing associated with the Leak Reduction Program (LSAR 6.2.8), this piping is pressurized to 44 psig. CPIs for this system are performed similar to 10CFR50 Appendix J Local Leak Rate Testing and, as such, offer the following advantages over system pressure tests:

- 1) CPIs are performed more frequently than periodic system functional tests and the ten year hydrostatic tests.
- 2) CPIs have the ability to quantify leakage which is not feasible with a VT-2 inspection on this air filled piping.
- 3) CPIs conservatively include through valve leakage which would not be identified in a VT-2 inspection.

RELIEF REQUEST NO. RR-13 (CONTD.)

IWC-5120(b) allows for air tests which permit location and detection of through-wall leakages. In the event the CPI fails to meet its acceptance criteria, further testing would be performed to determine the location of the leaks, appropriate corrective maintenance, and an appropriate retest would be performed.

IV. ALTERNATE PROVISIONS

System Contaminated Pipe Inspection (CPI) will be utilized to meet the ASME Section XI IWC-5000 pressure testing requirements.

RELIEF REQUEST NO. RR-13 (CONTD.)

Table RR-13-1.7

I. Identification of Components

Class 2 Containment Atmospheric Control piping as illustrated in figures RR-13-1.7a, b.

II. Code Requirement From Which Relief Is Requested

IWC-5221, System pressure test during system functional/in-service tests and,
IWC-5222, System hydrostatic test.

III. Basis For Relief

10CFR50 Appendix J Local Leak Rate Testing (LLRT) meets the intent of the ASME requirement.

The LLRT offers the following advantages over system pressure tests:

- 1) LLRTs are performed more frequently than periodic system functional tests.
- 2) LLRTs have the ability to quantify leakage which is not feasible with VT-2 inspection on this essentially gas-filled piping.
- 3) LLRTs conservatively include through valve leakage which would not be identified in a VT-2 inspection.

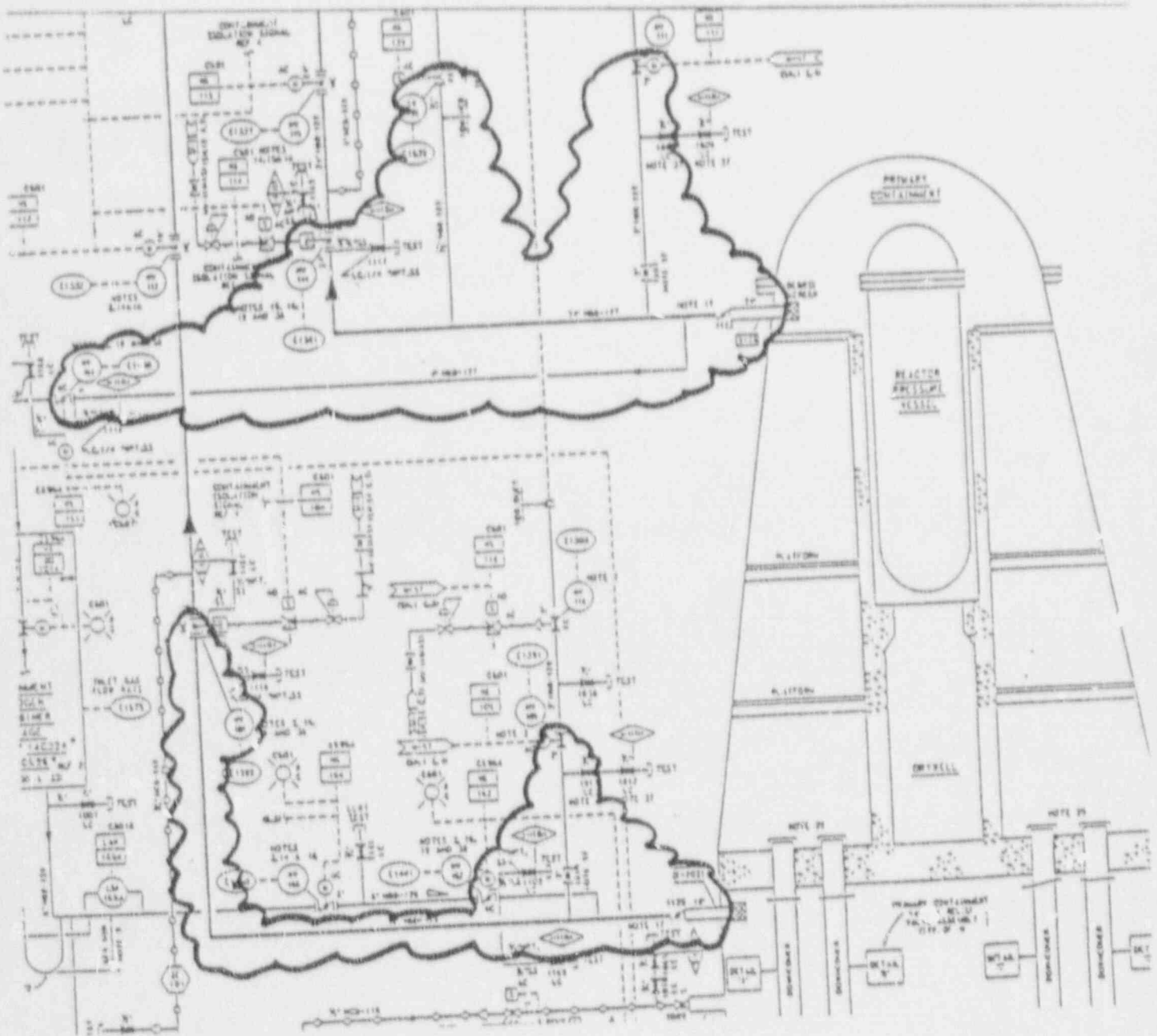
IWC-5210(b) allows for air tests which permit location and detection of through-wall leakages. In the event the LLRT fails to meet its acceptance criteria, further testing would be performed to determine the location of the leaks, appropriate corrective maintenance and an appropriate retest would be performed.

IV. ALTERNATE PROVISIONS

10CFR50 Appendix J Local Leak Rate Testing (LLRT) will be utilized to meet the ASME Section XI IWC-5000 pressure testing requirements.

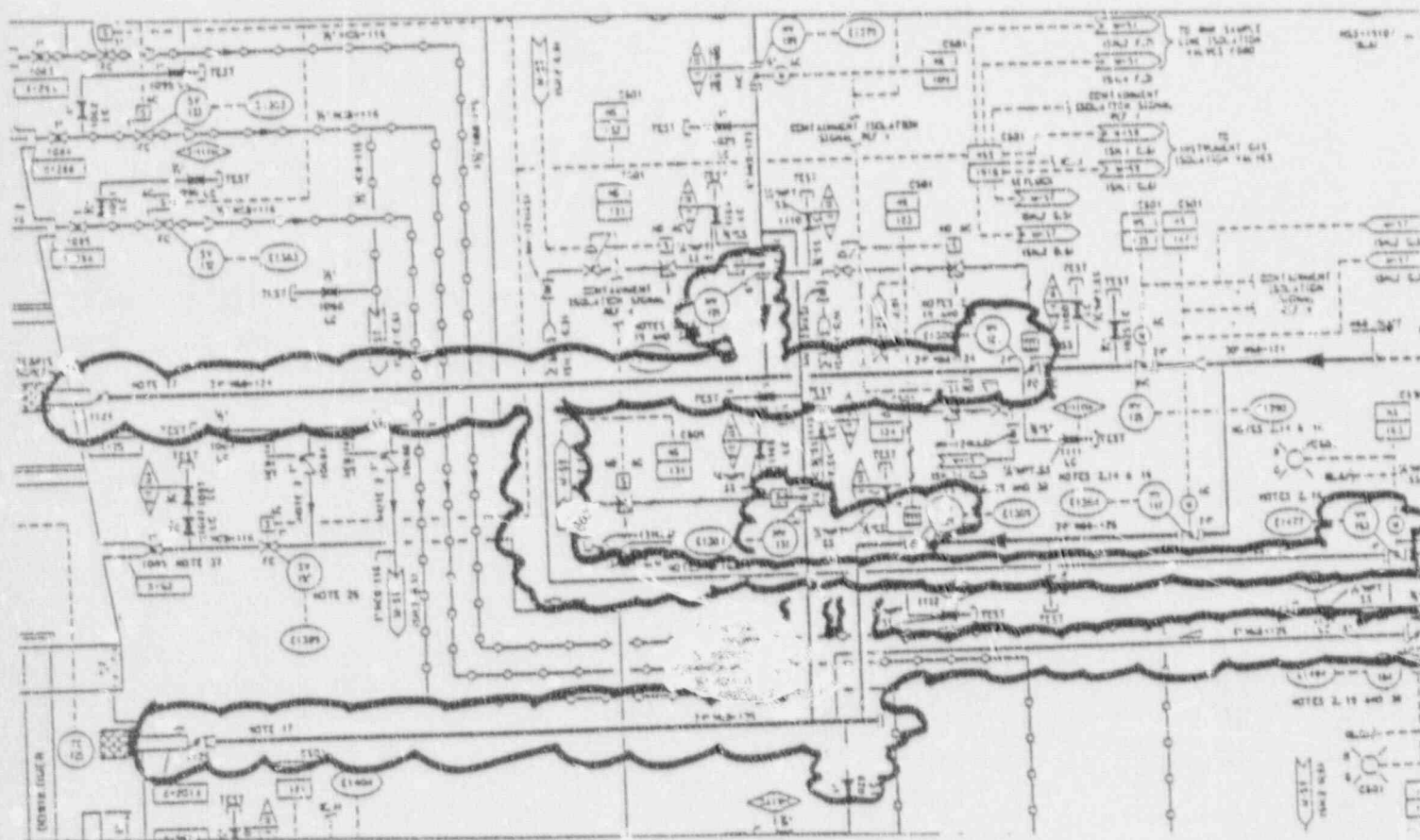
RELIEF REQUEST NO. RR-13 (CONTD.)

Figure RR-13-1.7a
(Ref P & ID: ISI-M-57, Sht 2)



KELIEF REQUEST NO. RR-13 (CONTD.)

Figure RR-13-1.7b
(Ref P & ID: ISI-M-57, Sht 1)



RELIEF REQUEST NO. RR-13 (CONTD.)

Table RR-13-1.8

1. Identification of Components

Class 2 Primary Containment Electrical Penetration tubing and test valves associated with 24 primary containment electrical penetrations as follows:

TEST VALVE NOS.	PENETRATION NO.
60-125-1A,B	JX100A
60-125-2A,B	JX100B
60-125-3A,B	JX100C
60-125-4A,B	JX100D
60-125-5A,B	JX101A
60-125-6A,B	JX101B
60-125-7A,B	JX101C
60-125-8A,B	JX101D
60-125-9A,B	JX103A
60-125-10A,B	JX103B
60-125-11A,B	JX104A
60-125-12A,B	JX104B (UNIT 1)
60-125-13A,B	JX104C
60-125-14A,B	JX104D (UNIT 1)
60-125-15A,B	JX105A
60-125-16A,B	JX105B
60-125-17A,B	JX105C
60-125-18A,B	JX105D
60-125-19A,B	JX105E
60-125-20A,B	JX106A
60-125-21A,B	JX106B
60-125-22A,B	JX106C
60-125-23A,B	JX222
60-125-24A,B	JX230A

RELIEF REQUEST NO. RR-13 (CONTD.)

II. Code Requirement From Which Relief Is Requested

IWC-5221, System pressure test during system functional/in-service tests and,
IWC-5222, System hydrostatic test.

III. Basis For Relief

10CFR 50 Appendix J Local Leak Rate Testing (LLRT) meets the intent of the ASME requirement.

This tubing is normally charged to 0-15 psig with nitrogen gas. Besides pressurizing to a substantially higher pressure (44 psig), the LLRT offers the following advantages over system pressure tests:

- 1) LLRTs are performed more frequently than periodic system functional tests and the ten year hydrostatic test.
- 2) LLRTs have the ability to quantify leakage which is not feasible with VT-2 inspection on this essentially gas filled tubing.
- 3) LLRTs conservatively include through valve leakage which would not be identified in a VT-2 inspection.

IWC-5012(b) allows for use of nitrogen gas as the pressurizing medium. In the event the LLRT fails to meet its acceptance criteria, further testing would be performed to determine the location of the leaks, appropriate corrective maintenance and an appropriate retest would be performed.

IV. ALTERNATE PROVISIONS

10CFR 50 Appendix J Local Leak Rate Testing (LLRT) will be utilized to meet the ASME Section XI IWC-5000 pressure testing requirements.

RELIEF REQUEST NO. RR-13 (CONTD.)

Table RR-13-1.9

I. Identification of Components

Class 2, Primary Containment Leak Testing lines HCB-122 between and including valves 60-1050, 60-1057, and 60-1058; HCB-122 between and including valves 60-1051, 60-1070, and 60-1071; and HCB-122 between and including valves 60-1052, 60-1073, and 60-1074. (Ref P & ID: ISI-M-60, Sht 1)

II. Code Requirement From Which Relief Is Requested

IWC-5221, System pressure test during system functional/in-service tests and,
IWC-5222, System hydrostatic test.

III. Basis For Relief

10CFR 50 Appendix J Local Leak Rate Testing (LLRT) meets the intent of the ASME requirement.

During normal plant operation, this piping is not pressurized and is isolated by locked valves. During the LLRT the piping is pressurized to 44 psig. This piping is also pressurized during LLRTs. LLRTs offer the following advantages over system pressure tests:

- 1) LLRTs are performed more frequently than periodic system functional tests.
- 2) LLRTs have the ability to quantify leakage which is not feasible with a VT-2 inspection on this air filled piping.
- 3) LLRTs conservatively include through valve leakage which would not be identified in a VT-2 inspection.

RELIEF REQUEST NO. RR-13 (CONTD.)

IWC-5210(b) allows for air tests which permit location and detection of through-wall leakages. In the event the LLRT fails to meet its acceptance criteria, further testing would be performed to determine the location of the leaks, appropriate corrective maintenance, and an appropriate retest would be performed.

IV. ALTERNATE PROVISIONS

10CFR50 Appendix J Local Leak Rate Testing (LLRT) will be utilized to meet the ASME Section XI IWC-5000 pressure testing requirements.

RELIEF REQUEST NO. RR-14

I. IDENTIFICATION OF COMPONENTS

The LGS-1 ISI program includes component examination requirements in addition to the ISI requirements of ASME Section XI. These augmented examination requirements originate from a variety of sources - regulatory, industry, etc. - however, like ISI examinations, situations may exist which preclude complete examination in accordance with augmented program requirements. (See Appendix B). As such, relief from these requirements is requested herein.

Specific components affected by this relief request are detailed in Table RR-14-1.

II. REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

Specific augmented requirements from which relief is requested is identified in Table RR-14-1. Program details are found in Appendix B.

III. BASIS FOR RELIEF

The specific basis for relief is as detailed in Table RR-14-1.

IV. ALTERNATE PROVISIONS

Any alternate examination/testing, where practical, is detailed in Table RR-14-1.

RELIEF REQUEST NO. RR-14 (CONTD.)

Table RR-14 I
Augmented Examination
Components Requiring Relief

<u>Examination Area ID Number</u>	<u>Augmented Examination Program No.</u>	<u>Type of Examination</u>	<u>Basis of Relief</u>	<u>Examination % Complete</u>
RC-131 (RCIC, flued head to valve)	AUG-5	Volumetric (UT)	Component configuration precludes complete examination, complete surface exam performed for ISI	85%

Revised
Relief Requests

RELIEF REQUEST NO. RR-01

I. IDENTIFICATION OF COMPONENTS

Class 1 pressure retaining circumferential and longitudinal shell welds in the reactor pressure vessel, Examination Category B-A, Item Numbers B1.11 and B1.12 respectively.

Class 1 pressure retaining circumferential and meridional welds in the reactor pressure vessel bottom head, Examination Category B-A, Item Numbers B1.21 and B1.22 respectively.

II. CODE REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

ASME Section XI 1986 Edition, Examination Category B-A requires a volumetric examination of essentially 100% of the weld length of all circumferential and longitudinal shell welds and all circumferential and meridional bottom head welds during the first inservice inspection interval. Examinations shall be performed in accordance with Figures IWB-2500-1, 2, and 3 (as applicable) and the nondestructive examination requirements of ASME Section V.

Relief is requested from complete examination of the Examination Category B-A welds listed in Table RR-01-1. Complete Code examination of these welds is not practical due to limitations imposed by reactor pressure vessel design.

III. BASIS FOR RELIEF

Complete examination of the subject welds is not practical due to scanning limitations and access restrictions from various RPV appurtenances (such as adjacent RPV nozzles and attachments, the biological shield wall, and control rod drive housings).

The circumferential and longitudinal shell welds are examined using automated ultrasonic examination techniques to the maximum extent practical. Supplemental manual examinations may yield increases in examination coverage; however, these increases come at a cost of increased personnel radiation exposure. Therefore, due to ALARA considerations,

RELIEF REQUEST NO. RR-01 (CONTD.)

supplemental manual ultrasonic examinations are not being considered to augment examination coverage.

Manual ultrasonic examination of the bottom head welds are performed to the maximum extent practical.

Any significant improvement in automated or manual examination coverage cannot be achieved without major plant redesign.

IV. ALTERNATE PROVISIONS

No alternate provisions are practical for the subject weld examinations. All of the welds are subject to the VT-2 examination requirements of Examination Category B-P.

In addition, examination of the remaining Examination Category B-A accessible welds, which are similar in design/service, provide adequate assurance of RPV pressure boundary integrity.

RELIEF REQUEST NO. RR-01 (CONTD.)

TABLE RR-01-1
 EXAMINATION CATEGORY B-A
INCOMPLETE EXAMINATIONS

<u>Component Identification</u>	<u>Description</u>	<u>Limiting Condition</u>	<u>Examination % Complete¹</u>
AA	Shell circumferential	N1A, B; N8A, B	89.4%
AC	Shell circumferential	N17A, B, C, D	89.2%
AE	Shell circumferential	N12A, B, C, D; vessel nameplate	88.3%
BA	Shell longitudinal	N2K	85.65%
BB	Shell longitudinal	N2C	85.65%
BC	Shell longitudinal	N1B, N2F nozzles	85.2%
BF	Shell longitudinal	N17B	76.0%
BG	Shell longitudinal	N11A	79.7%
BK	Shell longitudinal	Biological shield bracket	49.0%
BM	Shell longitudinal	Biological shield bracket	47.9%
BN	Shell longitudinal	Refueling bellows skirt	74.5%
BP	Shell longitudinal	Refueling bellows skirt	75.1%

RELIEF REQUEST NO. RR-01 (CONTD.)

TABLE RR-01-1 (CONTD.)

<u>Component Identification</u>	<u>Description</u>	<u>Limiting Condition</u>	<u>Examination %Complete¹</u>
DA	Bottom head meridional	Skirt attachment weld	84.3%
DB	Bottom head meridional	Skirt attachment weld	84.3%
DC	Bottom head meridional	Skirt attachment weld	84.3%
DD	Bottom head meridional	Skirt attachment weld	84.3%
DE	Bottom head meridional	Skirt attachment weld	84.3%
DF	Bottom head meridional	Skirt attachment weld	84.3%

¹ Percentages listed quantify approximate extent of compliance with Code requirements, and do not represent totally unexamined volume.

RELIEF REQUEST NO. RR-04

I. IDENTIFICATION OF COMPONENTS

ASME Class 1, 2, and 3 snubber assemblies, Code Examination Category F-C, Item Number F3.50.

This relief request is applicable to the snubber assembly only; that is, the snubber body and attachments out to and including the load pins and their retainers.

II. CODE REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

ASME Section XI, 1986 Edition Examination Category F-C requires a VT-3 visual examination of mechanical type snubbers.

In addition, Article IWF-5000 details inservice testing requirements for snubbers less than 50 kips. (Requirement for snubbers 50 kips or greater are in the course of preparation.)

Relief is requested from the examination requirements of Articles IWF-1000, IWF-2000, (excluding IWF-2520), and Table IWF-2500-1 and the inservice testing requirements of Article IWF-5000 due to the redundancy of these examination/test requirements to LGS-1 Technical Specification requirements.

III. BASIS FOR RELIEF

Implementation of both the aforementioned Code requirements and requirements contained in the LGS-1 Technical Specifications, results in redundancy and poses an unnecessary hardship, without a compensating increase in plant safety. Both programs are designed to demonstrate continued operational readiness and structural integrity by visual examination and functional testing of snubber assemblies. However, while the test requirements in the Code are incomplete (depending on the size of the snubber), the program described in Technical Specification 3/4.7.4. is comprehensive and meets the intent of ASME Section XI examination and testing.

RELIEF REQUEST NO. RR-04

IV. ALTERNATE PROVISIONS

The examination and testing of snubber assemblies shall be performed in accordance with Technical Specification 3/4.7.4 in lieu of the aforementioned Code examination and testing requirements. Following the issuance of a license amendment revising the LGS-1 Technical Specifications to incorporate the examination and testing requirements of Augmented Inspection Program-13 in place of the existing Technical Specification requirements, the examination and testing of snubber assemblies shall be performed in accordance with the revised Technical Specification 3/4.7.4 in lieu of the aforementioned Code requirements. Note that the general requirements of Subsection IWA, such as examination methods, personnel qualifications, etc., still apply. Additionally, all repairs and replacements, and their associated records and reports will be in accordance with ASME Section XI.

The remainder of the component support, outboard of the snubber assembly shall be examined in accordance with ASME Section XI, Subsection IWF requirements.

ENCLOSURE 1

Limerick Generating Station
Unit 1 and Common
First Ten Year Interval
Inservice Inspection (ISI) Program
Volume 1