

January 28, 2008

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555Limerick Generating Station, Units 1 and 2
Facility Operating License Nos. NPF-39 and NPF-85
NRC Docket Nos. 50-352 and 50-353Subject: Submittal of Relief Requests Associated with the Second Inservice
Inspection (ISI) Interval

In accordance with 10 CFR 50.55a, "Codes and standards," paragraph (a)(g)(5), Exelon Generation Company, LLC (EGC), is requesting relief from the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components." These reliefs apply to the second 10-year interval inservice inspection program, which concluded on January 31, 2007. The second 10-year inservice inspection interval complied with the ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition, no Addenda.

We request your review and approval by January 31, 2009.

No commitments are contained in this letter.

Should you have any questions concerning this letter, please contact Tom Loomis at (610) 765-5510.

Sincerely,

gbc


Pamela B. Cowan
Director – Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachment: Relief Requests (RRs) 33, 34, 35 and 36

cc: S. J. Collins, Regional Administrator, Region I, USNRC
C. Bickett, USNRC Resident Inspector, LGS
P. Bamford, Project Manager [LGS] USNRC

A047

LRR

ATTACHMENT

Relief Requests (RRs) 33, 34, 35 and 36

**Request for Relief (RR-33) for Pressure Testing of the RPV Head Flange Seal Leak
Detection System In Accordance with 10CFR50.55a(g)(5)(iii)
(Page 1 of 4)**

1.0 ASME CODE COMPONENTS AFFECTED:

Code Class: 1
Reference: Table IWB-2500-1
IWB-5200
Code Case N-498-1
Examination Category: B-P
Item Number: B15.11
Description: Relief for Pressure Testing the RPV Head Flange Seal
Leak Detection System
Component Number: Class 1 RPV Head Flange Seal Leak Detection System
Drawing Number: Unit 1: ISI-M-41 Sht. 1, DBA-113-J001, DCA-321-
J002, DCA-321-J003, and FJ-DCA-321-J001

2.0 APPLICABLE CODE EDITION AND ADDENDA:

The Second Interval Inservice Inspection program was based on the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, 1989 Edition, no Addenda.

3.0 APPLICABLE CODE REQUIREMENT:

The following Code requirements are paraphrased from the 1989 Edition of ASME Section XI and include the application of Code Case N-498-1.

Table IWB-2500-1, Examination Category B-P, Item Number B15.11, requires all pressure retaining components be subject to a system hydrostatic test (visual (VT-2) examination) in accordance with IWB-5222. Code Case N-498-1 allows for a system leakage test (IWB-5221) to be used in lieu of the end of interval system hydrostatic test for Class 1 components. The pressure retaining boundary for the test conducted at or near the end of each inspection interval shall be extended to all Class 1 pressure retaining components per IWB-2500-1 Examination Category B-P note 2. This extended boundary system leakage test is to be conducted once per interval.

4.0 IMPRACTICALITY OF COMPLIANCE:

Pursuant to 10CFR50.55a(g)(5)(iii), relief is requested on the basis that conformance with these code requirements is impractical as conformance would require extensive structural modifications to the RPV Head Flange Seal Leak Detection System.

**Request for Relief (RR-33) for Pressure Testing of the RPV Head Flange Seal Leak
Detection System In Accordance with 10CFR50.55a(g)(5)(iii)**

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The Reactor Vessel Head Flange Leak Detection Line is separated from the reactor pressure boundary by one passive membrane, a silver-plated O-ring located on the vessel flange. A second O-ring is located on the opposite side of the tap in the vessel flange (See Figure RR-33.1). This line is required during plant operation and will indicate failure of the inner flange seal O-ring. Failure of the O-ring would result in a High Pressure Alarm in the Main Control Room.

The configuration of this system precludes manual testing while the vessel head is removed. As figure RR-33.1 portrays, the configuration of the vessel tap, combined with the small size of the tap and the high test pressure requirement (approximately 1045 psig), prevents the tap from being temporarily plugged. Also, when the vessel head is installed, an adequate pressure test cannot be performed due to the fact that the inner O-ring is designed to withstand pressure in one direction only. Due to the groove that the O-ring sits in and the pin/wire clip assembly (See Figure RR-33.1), pressurization in the opposite direction into the recessed cavity and retainer clips would likely damage the O-ring and thus result in further damage to the O-ring.

5.0 BURDEN CAUSED BY COMPLIANCE

Pressure testing of this line during the Class 1 System Leakage Test is precluded because the line will only be pressurized in the event of a failure of the inner O-ring. Purposely failing the inner O-ring to perform the Code Required test would require purchasing a new set of O-rings, additional time and radiation exposure to detension the reactor vessel head, install the new O-rings, and then reset and retension the reactor vessel head. This is considered to impose an undue hardship and burden on Limerick Generating Station. Based on the above, Limerick Generating Station requests relief from the ASME Section XI requirements for end of interval pressure testing of the Reactor Vessel Head Flange Seal Leak Detection System. Compliance with the applicable Code requirements can only be accomplished by redesigning and refabricating the subject line. Based on this, the Code requirements are deemed impractical under 10CFR50.55a(g)(5)(iii).

6.0 PROPOSED ALTERNATIVE AND BASIS FOR USE

The entire Class 1 portion of the RPV Head Flange Seal Leak Detection System piping was inspected via a walkdown during the end of interval System Leakage Test in March 2006. However, it was not known at the time that the line was not filled with water, and therefore, the required pressure was not achieved in this line due to the plant design as described in "Impracticality Of Compliance" and "Burden Caused by Compliance" sections above. This inspection did not reveal any gross structural abnormalities or deficiencies.

Future inspection and pressure testing of this line will be performed in accordance with the Third Interval Relief Request I3R-08, which was submitted on March 6, 2007, and is currently awaiting approval.

**Request for Relief (RR-33) for Pressure Testing of the RPV Head Flange Seal Leak
Detection System In Accordance with 10CFR50.55a(g)(5)(iii)
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7.0 DURATION OF PROPOSED ALTERNATIVE

End of Interval Relief is requested for the Second Ten-Year Inspection Interval for Limerick Generating Station Unit 1, which ended on January 31, 2007.

8.0 PRECEDENTS:

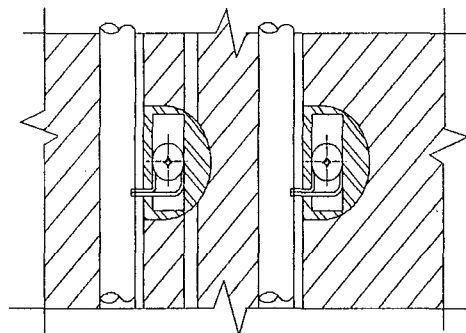
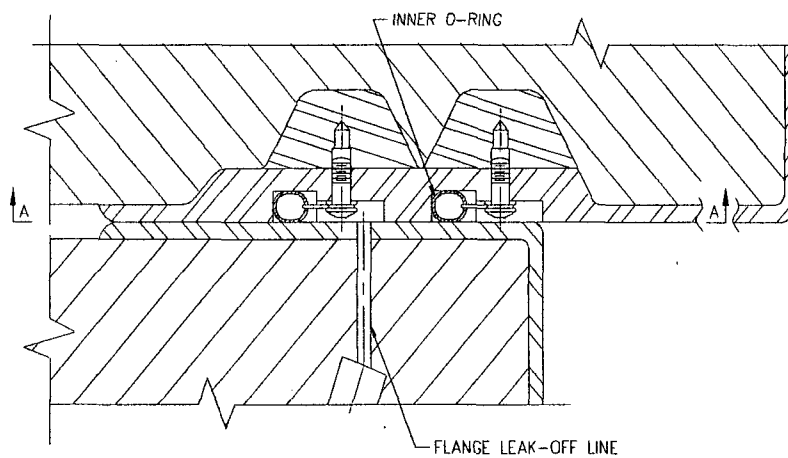
Similar relief requests have been approved for:

- 1) LaSalle County Station second inspection interval Relief Request PR-04 was approved in NRC Safety Evaluation Report dated July 3, 1996. This relief request also concerned the Head Flange Seal Leak Detection System.
- 2) Susquehanna Steam Electric Station third inspection interval Relief Request 3RR-07 was approved in NRC Safety Evaluation Report dated September 24, 2004. This relief request also concerned the Head Flange Leak Detection line.

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FIGURE RR-33.1

O-RING CONFIGURATION



SECTION A-A

Request for Relief (RR-34) for Limited Code Coverage on Nozzle-to-Vessel, Nozzle Inside Radius, and Reactor Vessel Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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1.0 ASME CODE COMPONENTS AFFECTED:

Code Class: 1
Reference: Table IWB-2500-1
Examination Category: B-A
B-D
Item Number: B1.12 and B1.40
B3.90 and B3.100
Description: Relief for the 100% Volumetric Examination of the Class 1 Nozzle-To-Vessel, Nozzle Inside Radius, and Reactor Vessel Welds.
Component Number: Full Penetration Welds on the Nozzle-To-Vessel, Nozzle Inside Radius, and Reactor Vessel Welds identified in the tables below.
Drawing Number: Unit 1: XI-BA-6, XI-BA-7, XI-BF-1-1, XI-BF-2-1, XI-BF-3-1, XI-BF-4-1, XI-BF-5-1, XI-BF-6-1, XI-BF-7-1, XI-BF-8-1, XI-BF-9-1, and XI-BF-17-1

Unit 2: XI-BA-8, XI-BA-9, XI-BF-1-2, XI-BF-2-2, XI-BF-3-2, XI-BF-4-2, XI-BF-5-2, XI-BF-6-2, XI-BF-7-2, XI-BF-8-2, XI-BF-9-2, and XI-BF-17-2

2.0 APPLICABLE CODE EDITION AND ADDENDA:

The Second Interval Inservice Inspection program was based on the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, 1989 Edition, no Addenda.

3.0 APPLICABLE CODE REQUIREMENT:

ASME Section XI, 1989 Edition, Examination Category B-D, Items B3.90 and B3.100 and Examination Category B-A, Items B1.12 and B1.40 require a 100% volumetric examination of all the nozzle-to-vessel, nozzle inside radius, and reactor vessel welds.

4.0 IMPRACTICALITY OF COMPLIANCE:

Pursuant to 10CFR50.55a(g)(5)(iii), relief is requested from the Code required 100% volumetric examination of the nozzle-to-vessel, nozzle inside radius and reactor vessel welds that are listed below, on the basis that conformance with these Code requirements is impractical due to component configuration and access restrictions.

Request for Relief (RR-34) for Limited Code Coverage on Nozzle-to-Vessel, Nozzle Inside Radius, and Reactor Vessel Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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Table RR-34-01 and Table RR-34-02 identify limited examinations for those welds that were performed during the second interval for Unit 1.

Table RR-34-01 Unit 1 Nozzle-To-Vessel Weld Examination Coverage

Welds	Name	Coverage	Item	Notes
N1A	Recirc Suction- A Loop	75.6%	B3.90	Nozzle configuration
N1B	Recirc Suction- B Loop	60%	B3.90	Nozzle configuration
N2A	Recirc Outlet	61.9%	B3.90	Nozzle configuration
N2B	Recirc Outlet	59.3%	B3.90	Nozzle configuration
N2C	Recirc Outlet	51.9%	B3.90	N8A nozzle and nozzle configuration
N2D	Recirc Outlet	61.9%	B3.90	Nozzle configuration
N2E	Recirc Outlet	59.3%	B3.90	Nozzle configuration
N2F	Recirc Outlet	61.9%	B3.90	Nozzle configuration
N2J	Recirc Outlet	77%	B3.90	Interference with N8B
N2K	Recirc Outlet	80.4%	B3.90	Nozzle configuration
N3A	Main Steam- A Loop	58.2%	B3.90	Nozzle configuration
N3B	Main Steam- B Loop	58.2%	B3.90	Nozzle configuration
N3C	Main Steam- C Loop	58.4%	B3.90	Interference with I beam, drain line, and nozzle configuration
N3D	Main Steam- D Loop	58.4%	B3.90	Nozzle configuration
N4A	FW Injection- A Loop	68.8%	B3.90	Nozzle configuration
N4B	FW Injection- A Loop	64.6%	B3.90	Nozzle configuration
N4C	FW Injection- A Loop	64.6%	B3.90	Nozzle configuration
N4D	FW Injection- B Loop	55.9%	B3.90	Interference with N11B and nozzle configuration
N4E	FW Injection- B Loop	79.1%	B3.90	Nozzle configuration
N4F	FW Injection- B Loop	77.1%	B3.90	Nozzle configuration
N5A	Core Spray- B Loop	61.9%	B3.90	Nozzle configuration
N5B	Core Spray- A Loop	61.9%	B3.90	Nozzle configuration
N6A	Head Spray	58%	B3.90	Nozzle configuration
N6B	Spare Head Spray	58%	B3.90	Nozzle configuration
N7	Vent	79.4%	B3.90	Nozzle configuration
N8A	JP Instrument	60.1%	B3.90	Nozzle configuration
N8B	JP Instrument	60.1%	B3.90	Nozzle configuration
N9	CRD Return	60.1%	B3.90	Nozzle configuration
N17A	LPCI Injection- B Loop	61.9%	B3.90	Nozzle configuration
N17B	LPCI Injection- D Loop	61.9%	B3.90	Nozzle configuration
N17D	LPCI Injection- C Loop	61.9%	B3.90	Nozzle configuration

Request for Relief (RR-34) for Limited Code Coverage on Nozzle-to-Vessel, Nozzle Inside Radius, and Reactor Vessel Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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Table RR-34-02 Unit 1 Reactor Vessel Weld Examination Coverage

Welds	Name	Coverage	Item	Notes
BF	Vessel Vertical Weld	85.9%	B1.12	N17B nozzle restricted examination
BM	Vessel Vertical Weld	83.1%	B1.12	Insulation interference
AG	Top Head Weld	85%	B1.40	Flange configuration

The Unit 2 inspection interval was reduced to three outages to align the start of the Unit 2 interval with the Unit 1 interval. The remainder of the second interval inspections for Unit 2 will be completed during the first period of the third interval, per Relief Request I3R-01, Request for Relief for Alternative Requirements for the Synchronization of Ten-Year ISI Intervals Between Units 1 and 2 for Class 1, 2, 3, MC, and CC Components, which was approved in accordance with 10CFR50.55a(a)(3)(i). Table RR-34-03 and Table RR-34-04 identify limited examinations for those welds that were performed during the abbreviated second interval for Unit 2.

Table RR-34-03 Unit 2 Nozzle-To-Vessel and Nozzle Inside Radius Weld Examination Coverage

Welds	Name	Coverage	Item	Notes
N1B	Recirc Suction- B Loop	71%	B3.90	Nozzle configuration
N2B	Recirc Outlet	77%	B3.90	Nozzle configuration
N2C	Recirc Outlet	77%	B3.90	Nozzle configuration
N2E	Recirc Outlet	77%	B3.90	Nozzle configuration
N2F	Recirc Outlet	77%	B3.90	Nozzle configuration
N2G	Recirc Outlet	77%	B3.90	Nozzle configuration
N3A	Main Steam- A Loop	77%	B3.90	Nozzle configuration
N3B	Main Steam- B Loop	77%	B3.90	Nozzle configuration
N4C	FW Injection- A Loop	77%	B3.90	Nozzle configuration
N4D	FW Injection- B Loop	66%	B3.90	Nozzle configuration
N4D-IR	FW Injection- B Loop Inner Radius	88%	B3.100	Vessel thermocouple and N11 nozzle
N5A	Core Spray- B Loop	71.75%	B3.90	Nozzle configuration
N6A	Head Spray	71.75%	B3.90	Nozzle configuration
N6B	Spare Head Spray	71.9%	B3.90	Nozzle configuration
N7	Vent	81.25%	B3.90	Nozzle configuration
N9	CRD Return	77.1%	B3.90	Nozzle configuration
N17A	LPCI Injection- B Loop	81.2%	B3.90	Nozzle configuration
N17C	LPCI Injection- A Loop	77%	B3.90	Nozzle configuration

Table RR-34-04 Unit 2 Reactor Vessel Weld Examination Coverage

Welds	Name	Coverage	Item	Notes
AG	Top Head Weld	88%	B1.40	Head to flange configuration

Request for Relief (RR-34) for Limited Code Coverage on Nozzle-to-Vessel, Nozzle Inside Radius, and Reactor Vessel Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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5.0 BURDEN CAUSED BY COMPLIANCE

The Limerick Generating Station, Units 1 and 2 reactor pressure vessels each have thirty-four (34) nozzles, the welds of which require volumetric examination per code examination category B-D. Due to the nozzle-forging configuration, portions of the code required examination volume could not be completely examined. The curvature of the radius of the nozzle forging is such that ultrasonic scanning of the weld is interrupted due to loss of contact of the ultrasonic search unit. This limitation affects both transverse and parallel scanning of the Code required examination volume. RR-34 Diagram 3, Typical Automated Scan Inspection Area of Limerick Nozzle to Vessel Welds, shows the inspection areas for both the parallel and transverse scans.

The Limerick Generating Station, Unit 1 reactor pressure vessel has 30 vessel welds and the Unit 2 reactor pressure vessel has 31 vessel welds that require volumetric examination per code examination category B-A. In support of ALARA, many of the nozzle-to-vessel, nozzle inside radius, and reactor vessel welds are examined by a remote automated scanner. These techniques, however, limit the examination coverage mainly because of the scanner design. RR-34 Diagrams 1 and 2 identify the scan limitations for the Unit 1 and Unit 2 RPV.

In addition to component configuration, certain weld examinations are further limited by reactor pressure vessel design obstructions (such as RPV appurtenances) and mirror insulation. Examination coverage percentages are identified in Tables RR-34-01, RR-34-02, RR-34-03, and RR-34-04, and inspections were performed to the maximum extent practical for the given configuration. The inspection results for the nozzle-to-vessel, nozzle inside radius, and reactor vessel weld examinations did not identify any reportable indications.

Limerick Generating Station requests relief from 100% volumetric examination of the nozzle-to-vessel, nozzle inside radius, and reactor vessel welds due to access limitations imposed by reactor pressure vessel design and/or component configuration.

6.0 PROPOSED ALTERNATIVE AND BASIS FOR USE

No alternate provisions are practical for the subject welds. Examinations were performed to the maximum extent practical.

7.0 DURATION OF PROPOSED ALTERNATIVE

End of Interval Relief is requested for the Second Ten-Year Inspection Interval for Limerick Generating Station Units 1 and 2, which ended on January 31, 2007.

Request for Relief (RR-34) for Limited Code Coverage on Nozzle-to-Vessel, Nozzle Inside Radius, and Reactor Vessel Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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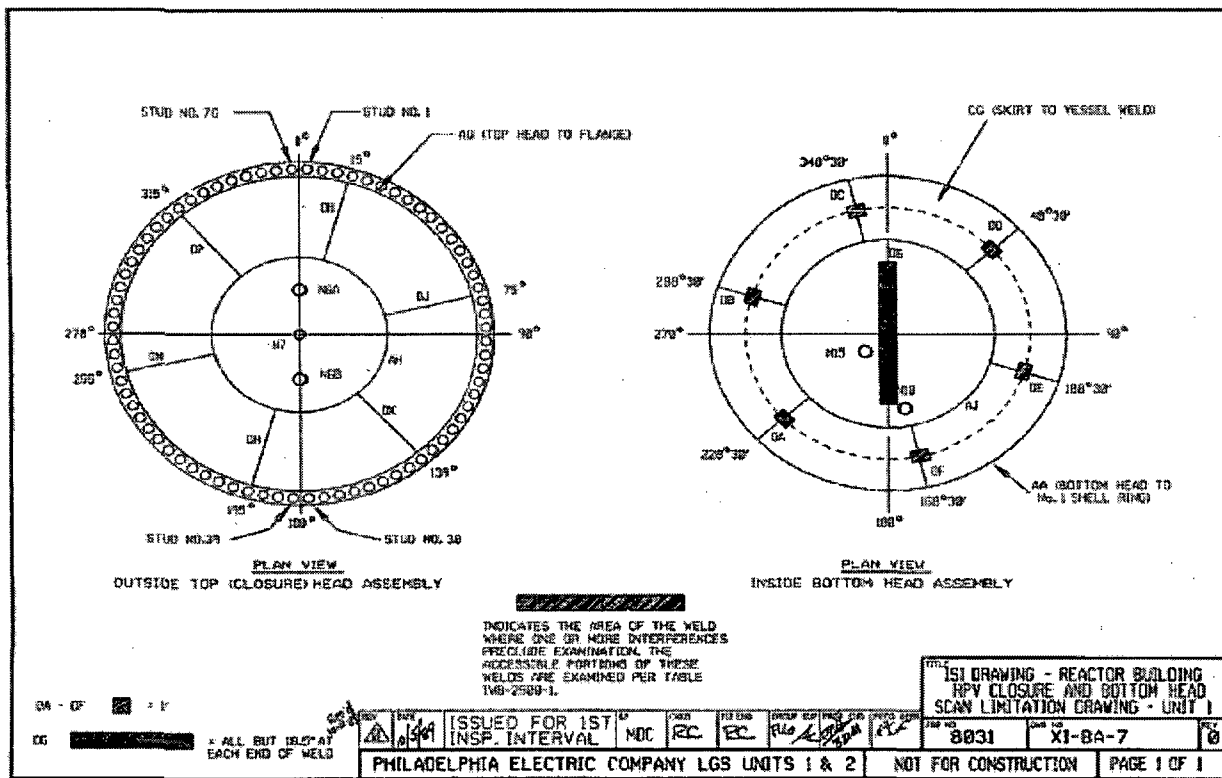
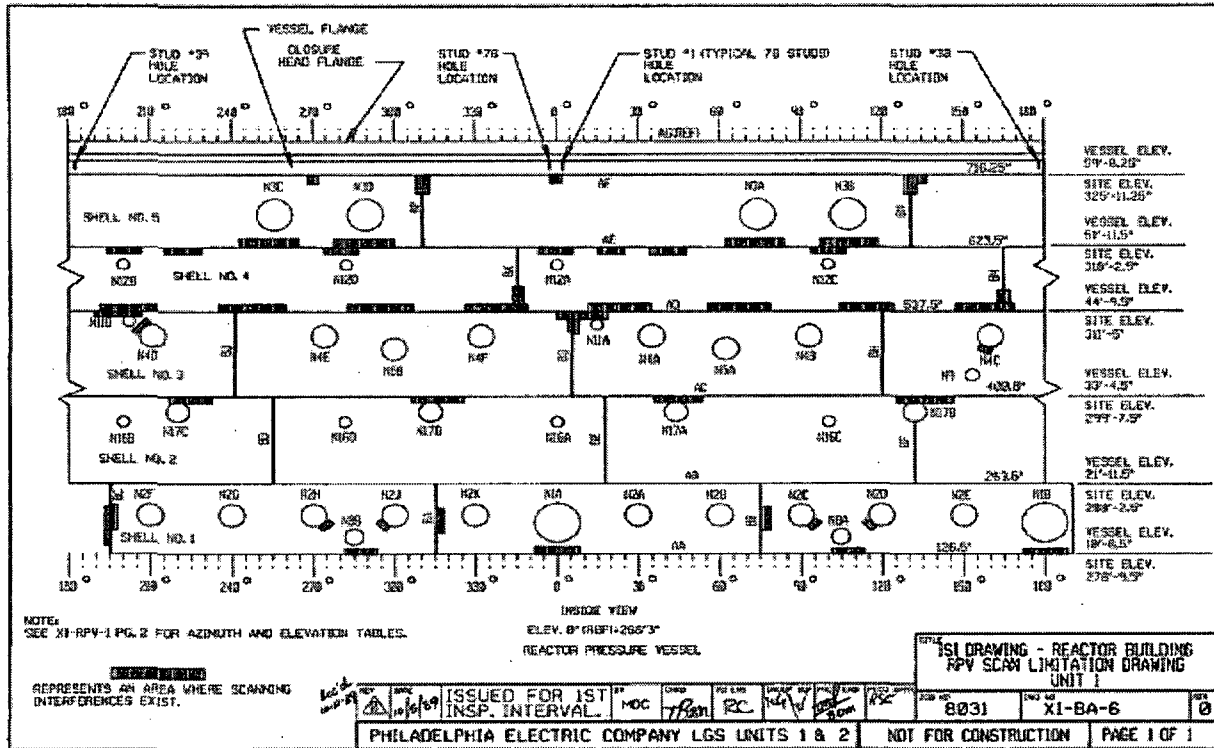
8.0 PRECEDENTS:

Similar relief requests have been approved for:

- 1) Oyster Creek Nuclear Generating Station (OCNGS) in an NRC Safety Evaluation Report dated February 2, 2005. In the OCGNS relief requests (OC-33 and OC-34), examination coverage for Exam Category B-A and B-D, respectively, were limited as well.
- 2) Browns Ferry Nuclear Plant, Unit 3 second inspection interval Relief Request 3-ISI-7, Revision 1 was approved in an NRC Safety Evaluation Report dated August 3, 2006. The Browns Ferry Nuclear Plant, Unit 3 Relief Request 3-ISI-7, Revision 1 concerns limited examination coverage for Examination Category B-D, Item Nos. B3.90 and 3.100 welds.
- 3) Vermont Yankee Nuclear Power Station third inspection interval Relief Request B-5 was approved in an NRC Safety Evaluation Report dated September 19, 2005. The Vermont Yankee Nuclear Power Station Relief Request B-5 concerns limited examination coverages for Examination Category B-D, Item No. B3.90, as well as other limited exams.

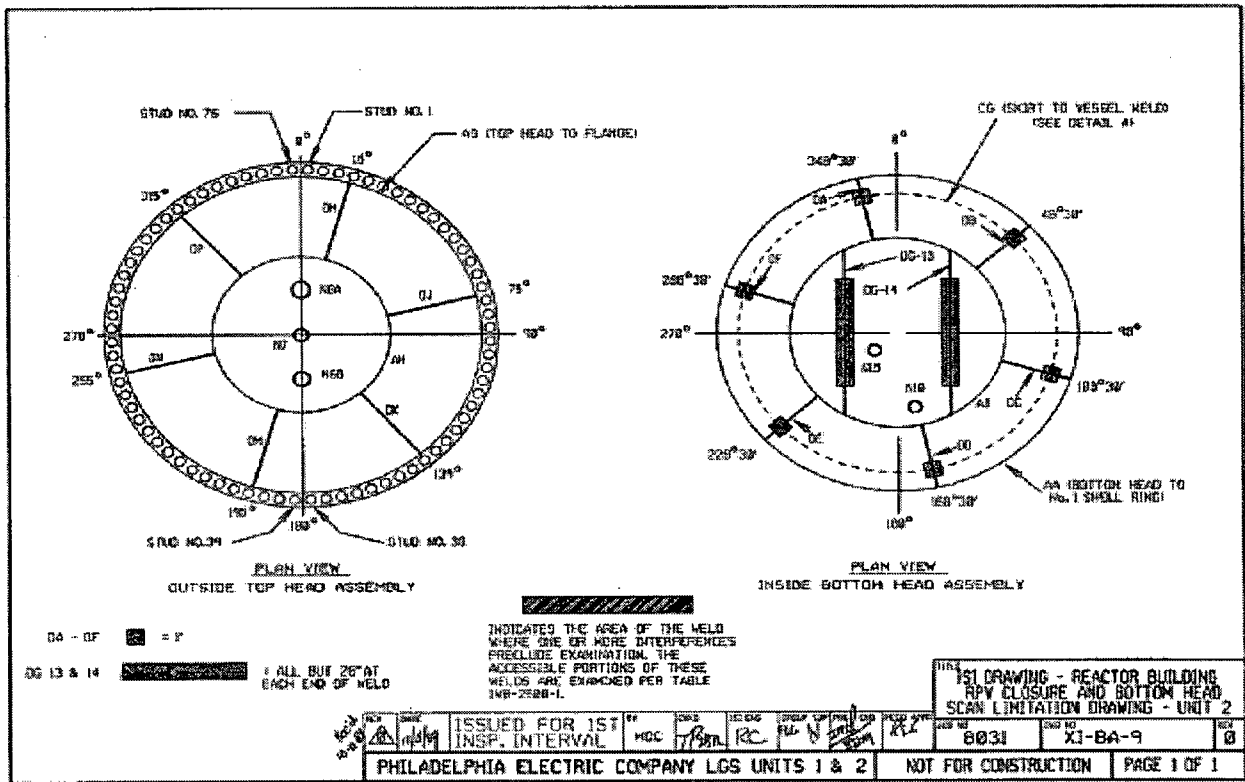
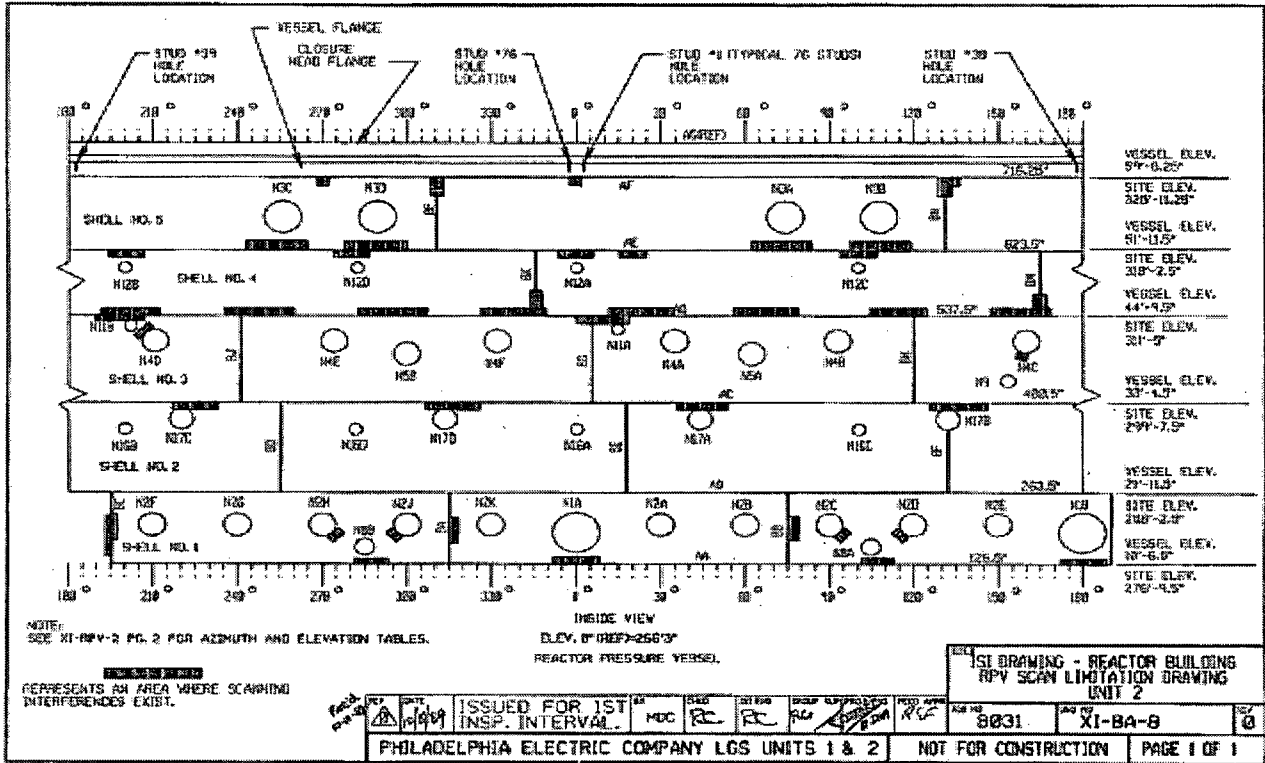
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RR-34 Diagram 1: Unit 1 RPV Scan Limitations



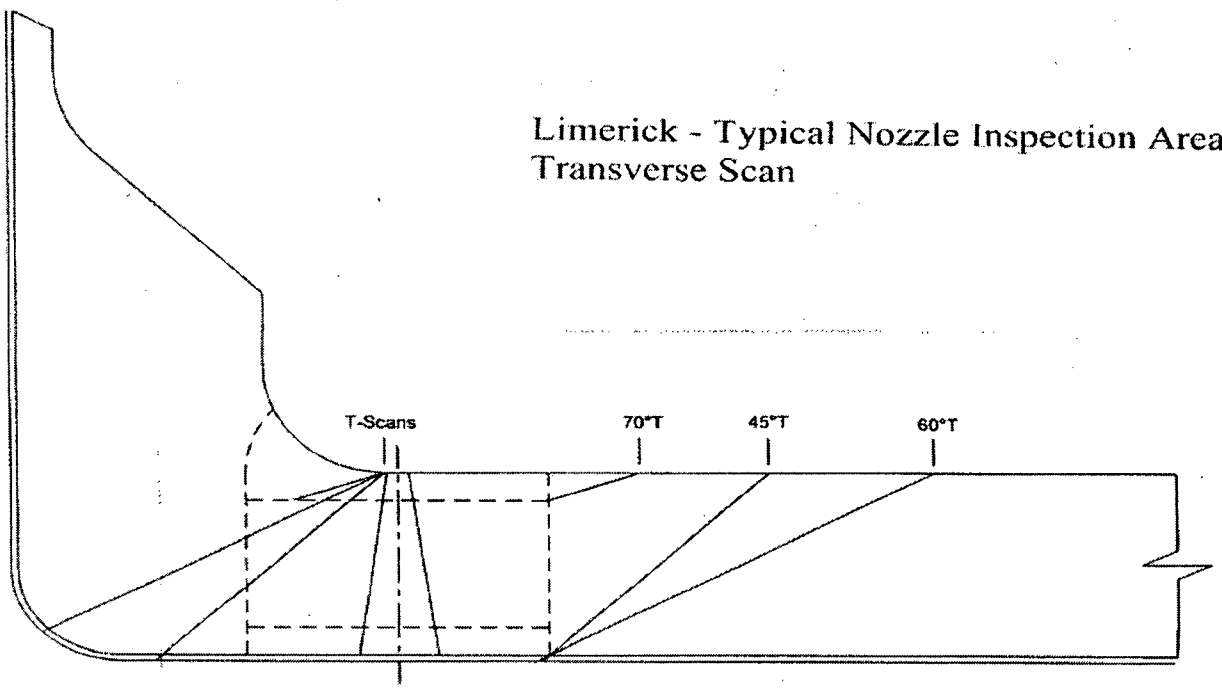
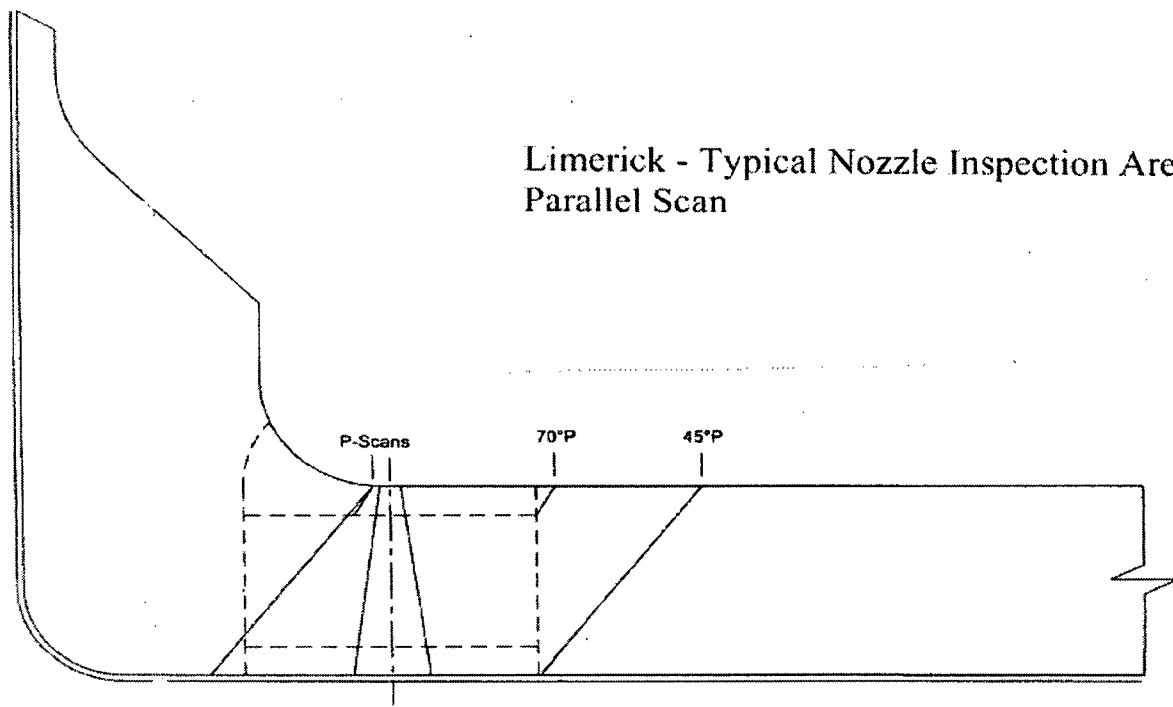
Request for Relief (RR-34) for Limited Code Coverage on Nozzle-to-Vessel, Nozzle Inside Radius, and Reactor Vessel Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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RR-34 Diagram 2: Unit 2 RPV Scan Limitations



Request for Relief (RR-34) for Limited Code Coverage on Nozzle-to-Vessel, Nozzle Inside Radius, and Reactor Vessel Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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RR-34 Diagram 3 Typical Automated Scan Inspection Area of Limerick Nozzle to Vessel Welds



**Request for Relief (RR-35) for Limited Code Coverage on
Piping Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
(Page 1 of 5)**

1.0 ASME CODE COMPONENTS AFFECTED:

Code Class: 1 and 2
Reference: Table IWB-2500-1
Table IWC-2500-1
Risk Informed ISI Program
Examination Category: B-J, C-F-1, C-F-2, and R-A
Item Number: B9.11, C5.11, C5.51, R1.11, R1.18, and R1.20
Description: Limited Code Coverage on Piping Weld Examinations
Component Number: Various
Drawing Number: Various

2.0 APPLICABLE CODE EDITION AND ADDENDA:

The Second Interval Inservice Inspection program was based on the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, 1989 Edition, no Addenda.

3.0 APPLICABLE CODE REQUIREMENT:

ASME Section XI, 1989 Edition, required 100% volumetric examination of Class 1 and 2 piping welds as defined by Table IWB-2500-1, Table IWC-2500-1, and the Limerick Risk Informed Inservice Inspection Program.

10CFR50.55a(b)(2)(xv)(A) requires the following examination coverage when applying Supplement 2 of Appendix VIII:

1. Piping must be examined in two axial directions, and when examination in the circumferential direction is required, the circumferential examination must be performed in two directions, provided access is available. Dissimilar metal welds must be examined axially and circumferentially.
2. Where examination from both sides is not possible, full coverage credit may be claimed from a single side for ferritic welds. Where examination from both sides is not possible on austenitic welds or dissimilar metal welds, full coverage credit from a single side may be claimed only after completing a successful single-sided Appendix VIII demonstration using flaws on the opposite side of the weld. Dissimilar metal weld qualifications must be demonstrated from the austenitic side of the weld and may be used to perform examinations from either side of the weld.

4.0 IMPRACTICALITY OF COMPLIANCE:

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief is requested from the new examination coverage requirements for austenitic piping welds with single side access as required in

**Request for Relief (RR-35) for Limited Code Coverage on
Piping Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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10CFR50.55a(b)(2)(xv)(A)(2), on the basis that conformance with these Code requirements is impractical due to the fact that procedures were not available at the time of the examination of the welds below to perform a single-sided Appendix VIII demonstration using flaws on the opposite side of the weld.

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief is also requested from the 100% volumetric examination requirements of Class 1 and 2 piping welds as defined by Table IWB-2500-1, Table IWC-2500-1, and the Limerick Risk Informed Inservice Inspection Program, on the basis that conformance with these Code requirements is impractical due to component configuration and access restrictions.

Table RR-35-01 Unit 1 Limited Code Coverage on Piping Weld Examinations

Welds	Name	Class	Coverage	Item	Notes
CSB 015	12" Flued Head X-16B to Valve HV-52-108	1	50%	R1.20	Austenitic material – Single sided exam due to valve to pipe flued head configuration.
DCA-101-1 SW2402	6" Pub Piece to Valve HV-44-1F001	1	50%	R1.20	Austenitic material - Baseline examination 100% PT and 50% UT single sided examination due to valve to pipe configuration
DCA-101-1 SW2403	6" Valve HV-44-1F001 to 6" Pub Piece	1	50%	R1.20	Austenitic material - Baseline examination 100% PT and 50% UT single sided examination due to valve to pipe configuration
DCA-101-1 SW2406	6" Pup Piece to Valve HV-44-1F004	1	50%	R1.20	Austenitic material - Baseline examination 100% PT and 50% UT single sided examination due to valve to pipe configuration.
DCA-104-2 SW501	12" Pipe to Valve HV-51-1F050A	1	50%	R1.11	Austenitic material – Baseline exam - Single sided exam due to valve to pipe configuration.
DCA-104-4 SW1702 C1	12" Valve HV-51-1F050A to Pipe	1	50%	R1.11	Austenitic material – Baseline exam - Single sided exam due to valve to pipe configuration.
GBB-105-2 FW 5	16" Valve HV-51-1F016B to Pipe	2	69.5%	R1.20	Carbon Steel - Baseline examination limited due to the valve configuration.
RH 004	20" Pipe to Valve 51-1F077	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
RH 007	20" Pipe to Valve HV-51-1F009	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
RH 008	20" Valve HV-51-1F009 to Pipe	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
RH 015	20" Flued Head X-12 to Valve HV-51-1F008	1	50%	R1.20	Austenitic material – Single sided exam due to valve to pipe flued head configuration.
RHA 002	12" Elbow to Valve 51-1F065A	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
RHA 003	12" Pipe to Valve 51-1F065A	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
RHB 002	12" Elbow to Valve 51-1F065B	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
RHB 003	12" Valve 51-1F065B to Pipe	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
RRB 004	28"X28"X20" Tee to 28" Pipe	1	50%	B9.11	Austenitic material – Single sided exam due to pipe to pipe tee configuration.

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Piping Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
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Table RR-35-01 Unit 1 Limited Code Coverage on Piping Weld Examinations

Welds	Name	Class	Coverage	Item	Notes
RRB 013	28" Pump 1BP201 to Pipe	1	50%	B9.11	Austenitic material – Single sided exam due to pump to pipe configuration.
RRB 016	28" Pipe to Valve HV-43-1F031B	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
RW 020	6" Valve HV-44-1F004 to 6" Pipe	2	50%	C5.11	Austenitic material – Single sided exam due to valve to pipe configuration.

Table RR-35-02 Unit 2 Limited Code Coverage on Piping Weld Examinations

Welds	Name	Class	Coverage	Item	Notes
DBB-203-1 FW2	Valve HV-41-2F032A to 24"x24"x16" Reducing Tee	2	81.5%	R1.11 R1.18	Carbon Steel - Limited examination due to angle between the piping and the reducing tee.
DBB-204-1-1A SW7	24" Pipe to 24" x 6" Sweepolet	2	89%	R1.11 R1.18	Carbon Steel - Limited examination due to weld geometry due to the sever angle between the 24-inch pipe and the 6-inch sweepolet.
DCA-201-1 FW10	6" Pipe to Valve HV-44-2F105	1	50%	B9.11	Austenitic material – Single sided exam due to valve to pipe configuration.
DCA-201-1 SW1402	6" Pipe to Valve HV-044-2F001	1	50%	B9.11	Austenitic material – Baseline exam - Single sided exam due to valve to pipe configuration.
DCA-201-1 SW1403	Valve HV-044-2F001 to 6" Pipe	1	50%	B9.11	Austenitic material – Baseline exam - Single sided exam due to valve to pipe configuration.
DCA-201-2 SW702	6" Pipe to HV-044-2F004	1	50%	B9.11	Austenitic material – Baseline exam - Single sided exam due to valve to pipe configuration.
DCA-204-2 FW1101	12" Pipe to Valve HV-051-2F050A	1	50%	B9.11	Austenitic material – Baseline exam - Single sided exam due to valve to pipe configuration.
DCA-204-4 FW701	Valve HV-051-2F050A to 12" Pipe	1	50%	B9.11	Austenitic material – Baseline exam - Single sided exam due to valve to pipe configuration.
DCA-205-1 FW9	Flued Head (X-12) to Valve HV-51-2F008	1	75%	R1.20	Austenitic material - Limited examination due to weld geometry
DCB-202-1 FW1002	6" Pipe to Pipe	2	50%	C5.51	Austenitic material – Baseline exam – Single sided exam due to location of the weld. This weld is located very close to DCB-202-1 FW1003. The welds are so close that the area between the two welds cannot be examined.
DCB-202-1 FW1003	6" Pipe to Pipe	2	50%	C5.51	Austenitic material – Baseline exam – Single sided exam due to location of the weld. This weld is located very close to DCB-202-1 FW1002. The welds are so close that the area between the two welds cannot be examined.
DCB-202-1 SW1001	HV-044-2F004 to 6" Pipe	2	50%	C5.11	Austenitic material – Baseline exam – Single sided exam due to valve to pipe configuration.
DLA-210-1 FW1	Valve HV-52-208 to Flued Head X-16B	1	71%	R1.20	Austenitic material - Limited examination due to weld geometry
GBB-220-1 FW2	12" Pipe to Valve HV-51-2F015A	2	50%	C5.11	Austenitic material – Single sided exam due to valve to pipe configuration.
GBB-220-2 FW2	12" Pipe to Valve HV-51-2F015B	2	50%	C5.11	Austenitic material – Single sided exam due to valve to pipe configuration.

**Request for Relief (RR-35) for Limited Code Coverage on
Piping Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
(Page 4 of 5)**

Table RR-35-02 Unit 2 Limited Code Coverage on Piping Weld Examinations

Welds	Name	Class	Coverage	Item	Notes
HBB-218-1 FW7	Valve HV-51-2F008 to 20" Pipe	2	50%	C5.11	Austenitic material – Single sided exam due to valve to pipe configuration.

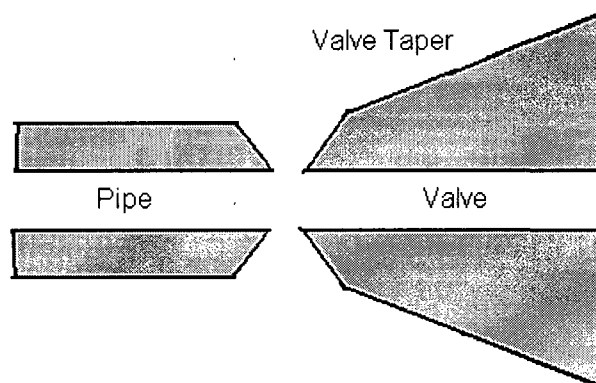
5.0 BURDEN CAUSED BY COMPLIANCE

As discussed in 10CFR50.55a(b)(2)(xv)(A)(1) and 10CFR50.55a(b)(2)(xv)(A)(2), if access is available, the weld shall be ultrasonically scanned in both directions parallel to the weld and both directions perpendicular to the weld, where required. Full credit for examination coverage may be claimed for single side exams on ferritic piping welds. However, for austenitic piping welds, an ultrasonic examination procedure must be qualified with flaws located in the inaccessible side of the weld.

There were no known qualified PDI ultrasonic examination procedures available for single side coverage that demonstrates equivalency to ultrasonic examination two-sided coverage on austenitic piping welds at the time of the examinations for the welds above. At Limerick, qualified PDI ultrasonic examination techniques have been used since 2000. However, qualified PDI procedures were not available at the time of the examination of the welds above to perform a single-sided Appendix VIII demonstration using flaws on the opposite side of the weld as required by 10CFR50.55a(b)(2)(xv)(A)(2).

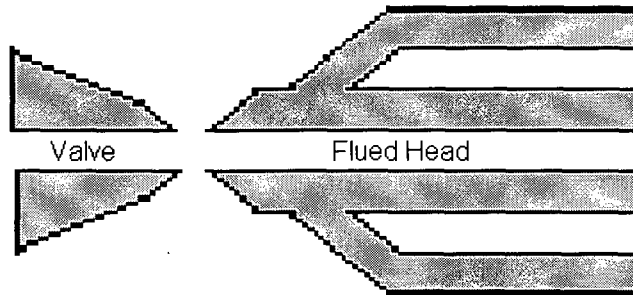
The table above provides the weld, the code required volume achieved, and the basis for not achieving full coverage. Figure 1 shows a typical configuration of a pipe to valve weld. Due to the valve taper, the examination is only acceptable from the piping side for austenitic piping welds. Figure 2 shows a typical configuration of a valve to flued head. Due to the taper of the valve and flued head, only a limited examination can be performed.

Figure 1 Typical Pipe to Valve Weld Configuration



**Request for Relief (RR-35) for Limited Code Coverage on
Piping Weld Examinations In Accordance with 10CFR50.55a(g)(5)(iii)
(Page 5 of 5)**

Figure 2 Typical Flued Head to Valve



The inspection results for the limited weld examinations listed in tables RR-35-01 and RR-35-02 did not identify any reportable indications.

6.0 PROPOSED ALTERNATIVE AND BASIS FOR USE

No alternate provisions are practical for the subject welds. Examinations were performed to the maximum extent practical.

7.0 DURATION OF PROPOSED ALTERNATIVE

End of Interval relief is requested for the Second Ten-Year Inspection Interval for Limerick Generating Station Units 1 and 2, which ended on January 31, 2007.

8.0 PRECEDENTS:

Similar relief requests have been approved for:

1. Oyster Creek Nuclear Generating Station (OCNGS) third inspection interval Relief Request OC-35 was approved in an NRC Safety Evaluation Report dated February 2, 2005. OCGNS Relief Request OC-35 also concerns compliance with Supplement 2 of Appendix VIII.
2. Browns Ferry Nuclear Plant, Unit 3 second inspection interval Relief Request 3-ISI-12 was approved in an NRC Safety Evaluation Report dated August 3, 2006. The Browns Ferry Nuclear Plant, Unit 3 Relief Request 3-ISI-12 also concerns compliance with Appendix VIII for risk-informed welds examinations.

**Request for Relief (RR-36) for Obtaining the Required Percentages
During the Second Interval for Class 1, 2, and 3 Component Inspections
In Accordance with 10CFR50.55a(g)(5)(iii)
(Page 1 of 4)**

1.0 ASME CODE COMPONENTS AFFECTED:

Code Class: 1, 2, and 3
Reference: Table IWB-2412-1
Table IWC-2412-1
Table IWD-2412-1
Code Case N-509
Code Case N-598
Examination Category: B-G-1
B-K (Code Case N-509)
C-A
C-B
C-C (Code Case N-509)
D-A (Code Case N-509)
Item Number: B6.10, B6.20, B6.30, B6.40, B6.50, B6.180, B6.190,
and B6.200
B10.10, B10.20, and B10.30
C1.10 and C1.20
C2.21 and C2.22
C3.10, C3.20, and C3.30
D1.20
Description: Relief for Obtaining the Required Percentages During
the Second Interval
Component Number: Various
Drawing Number: Not Applicable

2.0 APPLICABLE CODE EDITION AND ADDENDA:

The Second Interval Inservice Inspection program was based on the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, 1989 Edition, no Addenda. The required period percentages were based on requirements listed in Code Case N-598, "Alternative Requirements to Required Percentages of Examinations".

3.0 APPLICABLE CODE REQUIREMENT:

Code Case N-598 requires:

Period	Minimum Examinations Completed	Maximum Examinations Completed
1	16%	50%
2	50% ^{Note (1)}	75%
3	100%	100%

**Request for Relief (RR-36) for Obtaining the Required Percentages
During the Second Interval for Class 1, 2, and 3 Component Inspections
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Note (1) - If the first period completion percentage for any examination category exceeds 34%, at least 16% of the required examinations shall be performed in the second period.

4.0 IMPRACTICALITY OF COMPLIANCE:

Relief is requested for obtaining the required examination percentages for:

Category B-G-1 for Unit 1 completed 0% during the first period

Category B-K for Unit 2 completed 13% in the first and 42% in the second period

Category C-A for Unit 1 completed 0% during the first period and Unit 2 completed 0% during the first period and 0% during the second period

Category C-B for Unit 1 completed 0% during the first period and Unit 2 completed 0% during the second period

Category C-C for Unit 1 completed only 13% (for a total of 38%) during the second period

Category D-A for Unit 1 completed 6% during the first period

5.0 BURDEN CAUSED BY COMPLIANCE

Unit 1 Category B-G-1, C-A, C-B, and D-A

During the first period of the second interval for Unit 1, several examinations were missed due to an inadvertent programmatic error in the scheduling of examinations (Corrective Action I0012118 - Inadequate Change From The First to Second ISI Interval). The missed examinations were added to the examinations scheduled in the second period. By the end of the second period, all the examination percentages were within the required limits of Code Case N-598.

Unit 1 Category C-C

The Unit 1 Category C-C welds failed to meet the required percentage for the second period (i.e., 50% was required and only 38% was completed) and failed to obtain the 16% change (actual 13%) for the second period (i.e., Note 1 in Code Case N-598). The scheduling error occurred because the station implementation of Code Case N-509, "Alternative Rules for the Selection and Examination of Class 1, 2, and 3 Integrally Welded Attachments", was incorrect (Corrective Action IR 529815 - ISI Incorrect Interpretation Of Code Case 509).

Code Case N-509 reduced the number of integral attachments that required examinations from 100% to 10%. The code case also deleted the size limitation on the attachment base material design thickness. The station did not factor in all material thicknesses during the implementation of the code case. After review, the total number of required examinations increased. This increase caused the percentages to fall below the required examinations described in Code Case N-598. All required examinations were completed in the third period, prior to the end of the interval.

**Request for Relief (RR-36) for Obtaining the Required Percentages
During the Second Interval for Class 1, 2, and 3 Component Inspections
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(Page 3 of 4)**

Unit 2 Category C-A

This category contains four welds on the RHR heat exchanger. Two of the welds were inspected based on the requirements of Code Case N-435-1, "Alternative Examination Requirements for Vessels With Wall Thickness 2 Inch or Less." The inspection requirements of the code case were incorrectly implemented (Corrective Action IR 601471 - ISI Inspection Volume For Code Case N-435). The station only performed an inspection of the inner 1/3 volume for these two welds, instead of the required full volume. Since credit cannot be taken for these two inspections, the required completion percentage for this category was not obtained. The two welds are scheduled to be inspected during the next Unit 2 refuel outage, 2R10 in the Spring of 2009.

Unit 2 Category C-B

Limerick has two nozzles in Category C-B, Pressure Retaining Nozzle Welds in Vessels. Each nozzle contains two component numbers, one component number for the Nozzle-to-Shell Weld (Item No. C2.21) and one component number for the Nozzle Inside Radius (Item No. C2.22). During the first period, both the nozzle-to-shell weld and the nozzle inside radius were inspected. The two inspections were scheduled together to reduce dose and time in the area. However, no inspections were scheduled during the second period and therefore the 16% change (i.e., Note 1 in Code Case N-598) was not met. An inadvertent programmatic error in the scheduling of these inspections allowed this to occur (Corrective Action IR 665707 - Failure To Meet ISI Period Percentages During 2nd Interval).

Unit 2 Category B-K

The Unit 2 Category B-K welds failed to meet the required percentage for the first period (i.e., 16% was required and only 13% was completed) and for the second period (i.e., 50% was required and only 42% was completed). This scheduling error was found when the station identified that the implementation of Code Case N-509 was incorrect (Corrective Action IR 665707 - Failure To Meet ISI Period Percentages During 2nd Interval).

6.0 PROPOSED ALTERNATIVE AND BASIS FOR USE

The proposed alternative was to perform the Unit 1 required examinations prior to the end of the second interval. Failure to obtain the required percentages in the period cannot be changed; however, compliance was restored for the Unit 1 examination percentages prior to the end of the interval, which was on January 31, 2007.

Relief Request I3R-01, which has already been submitted and was approved by NRC SER dated January 24, 2007, changed the Unit 2 third period of the second interval to become the first period of the third interval. The proposed alternative is to allow the station to restore compliance with the examination percentages prior to the end of the first period of the third interval. For Unit 2 Category C-A, two welds on the RHR Heat

**Request for Relief (RR-36) for Obtaining the Required Percentages
During the Second Interval for Class 1, 2, and 3 Component Inspections
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Exchanger are required to be completed to restore compliance with the examination percentages (Corrective Action IR 649698 – Incorrect Interpretation of ASME Code Case N-435-1). These inspections will be credited to the second interval and will need to be performed again during the third interval on Unit 2.

7.0 DURATION OF PROPOSED ALTERNATIVE

End of Interval relief is requested for the Second Ten-Year Inspection Interval for Limerick Generating Station Units 1 and 2, which ended on January 31, 2007.

8.0 PRECEDENTS:

A similar relief request was approved for Oyster Creek Nuclear Generating Station (OCNGS) in an NRC Safety Evaluation Report dated February 2, 2005. In the OCGNS relief request (OC-32), examination percentages were not completed in accordance with code requirements.

Reese, Debra

From: Faletti, Patricia L.
Sent: Monday, January 28, 2008 10:52 AM
To: Reese, Debra
Subject: Quad Cities NSRB Minutes

Debra -

Attached is the executive summary and subcommittee minutes ready to be combined. Please ensure the document is in the correct format and send back to me for signature prior to distribution.



2007_1128
B_Exec Sum_QDC



2007_1128 QC
NSRB Minutes - dr..

Thanks -

Pat

Reese, Debra

From: Faletti, Patricia L.
Sent: Monday, January 28, 2008 11:39 AM
To: Reese, Debra
Subject: Dresden NSRB Meeting Minutes

Debra -

Attached is the Dresden Executive Summary and Subcommittee Minutes ready to be combined. Please ensure the document is in the correct format and return to me for signature prior to distribution.



2007_1130
RB_Exec Sum_DRE



2007_1130
resden NSRB Minute

Thanks -

Pat