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RBG-46916

May 29, 2009

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

SUBJECT: Requests for Relief from ASME Section XI Volumetric and Visual
Examination Requirements – Second 10-Year Interval
River Bend Station
Docket No. 50-458
License No. NPF-47

Dear Sir or Madam:

Pursuant to 10 CFR 50.55a(g)(6)(i), Entergy Operations, Inc. (Entergy) requests relief from the requirements of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel (B&PV) Code, Section XI pertaining to volumetric and visual examinations at River Bend Station, Unit 1 (RBS). In several locations, the required coverage cannot be obtained due to interference or geometry. The individual relief requests by examination category are provided in the attachments. These reliefs are for the second 10-year interval.

This submittal contains no new commitment. If you have any questions or require additional information, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "David N. Lorfing".

DNL/bmb

Attachments:

1. Request for Relief RBS-ISI-007
2. Request for Relief RBS-ISI-008
3. Request for Relief RBS-ISI-009
4. Request for Relief RBS-ISI-010
5. Request for Relief RBS-ISI-011

ADLT
RBR

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Attachment 1

RBG-46916

Request for Relief

RBS-ISI-007

REQUEST FOR RELIEF
RBS-ISI-007

Components/Numbers: See Table 1

Code Classes: ASME Code Class 1

References: ASME Section XI 1992 Edition, Table IWB-2500-1
ASME Section XI 1995 Edition with 1996 Addenda (for ultrasonic examinations performed after November 22, 2002)

Examination Category: B-A

Description: Pressure Retaining Welds in Reactor Vessel – Inspection Program B

Item Number(s): B1.40

Unit / Inspection Interval Applicability: River Bend Station (RBS), Second (2nd) 10-year interval

I. Code Requirement(s)

ASME Section XI, Table IWB-2500-1, Examination Category B-A, Pressure Retaining Welds in Reactor Vessel – Inspection Program B:

- 1) Item B1.40 requires a volumetric and surface examination of Reactor Vessel Head to Flange Welds.

During the 2nd ISI 10-year interval at RBS, 10CFR50.55a(g)(6)(ii)(C) mandated an implementation schedule for all licensees to begin use of Appendix VIII of the 1995 Edition, with 1996 Addenda of ASME Section XI. The examination listed in this relief request was performed prior to this implementation schedule, and was performed in accordance with Appendix I of the 1980/81 Edition and Addenda of Section XI. Entergy credited Code coverage for examinations using the techniques and examination angles required at that time. After the implementation of Appendix VIII, examinations were performed using the techniques and examination angles qualified through Performance Demonstration Initiative (PDI) for consideration of Code coverage, in accordance with qualified PDI procedures.

II. Relief Requested

Due to the geometric configuration and location, certain code examination volumes, as depicted in ASME Section XI, cannot be examined to the extent of obtaining full code coverage. Pursuant to 10CFR50.55a(g)(6)(i), Entergy Operations, Inc. (Entergy) requests permission to perform ultrasonic examination within the limitations described in Table 1 of this relief request.

Table 1, Limited B-A Examinations				
Item Number	Item ID	Item Description	% Coverage	Reason for Limitation
B1.40	B13-D001-AG	RPV Head to Flange Weld	50%	Scanning is limited to single side access due to configuration. Scanned from head side only. 0°L, 45°S and 60°S used for scanning.

Basis for Relief

During ultrasonic examination of the Pressure Retaining Reactor Vessel Weld listed in Table 1 of this relief request, 100% coverage of the required examination volume could not be obtained.

B13-D001-AG is not covered by Appendix VIII per I-2110(a) therefore was not subjected to the requirements of Appendix VIII. The procedure used for this examination was written to the requirements of Article 4 of Section V. Entergy has used the best available techniques to examine the subject weld, therefore demonstrating an acceptable level of integrity. To improve upon this examination coverage would require modification and/or replacement of the component.

Radiography is not practical on this type of weld configuration, which prevents placement of the film and exposure source.

III Proposed Alternative Examinations

No alternative testing is proposed at this time. Entergy has examined this weld to the extent practical and will continue to perform pressure testing on the subject welds as required by the Code.

Conclusion

10CFR50.55a(g)(6)(i) states:

The Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Entergy believes that it is impractical to obtain greater examination coverage on this weld. The examinations performed on the subject weld in addition to the examination of similar welds contained in the program would detect generic degradation, if it existed, therefore demonstrating an acceptable level of integrity. These limitations existed during the first Inspection Interval and relief was granted in Relief Request RR0012E, Rev. 2. Therefore, we request the proposed alternative be authorized pursuant to 10CFR50.55a(g)(6)(i).

Attachment 2

RBG-46916

Request for Relief

RBS-ISI-008

REQUEST FOR RELIEF
RBS-ISI-008

Components/Numbers: See Table 1

Code Classes: ASME Code Class 1

References: ASME Section XI 1992 Edition, Table IWB-2500-1

ASME Section XI 1980 Edition with 1981 Addenda (for ultrasonic examinations performed prior to November 22, 2002)

ASME Section XI 1995 Edition with 1996 Addenda (for ultrasonic examinations performed after November 22, 2002)

Examination Category: B-D

Description: Full Penetration Welded Nozzles in Vessels – Inspection Program B

Item Number(s): B3.90

Unit / Inspection Interval Applicability: River Bend Station (RBS), Second (2nd) 10-year interval

I. Code Requirement(s)

ASME Section XI, Table IWB-2500-1, Examination Category B-D, Full Penetration Welded Nozzles in Vessels – Inspection Program B:

- 2) Item B3.90 requires a volumetric examination of Reactor Vessel Nozzle-to-Vessel Welds.

During the 2nd ISI 10-year interval at RBS, 10CFR50.55a(g)(6)(ii)(C) mandated an implementation schedule for all licensees to begin use of Appendix VIII of the 1995 Edition, with 1996 Addenda of ASME Section XI. As a result, some examinations listed in this relief request were performed prior to this implementation schedule, and were performed in accordance with Appendix I of the 1980/81 Edition and Addenda of Section XI. The methodology used to determine Code coverage for each of the components listed in this relief request, therefore, depends on which set of requirements were in effect during the examination. Where earlier Code rules were in effect, Entergy credited Code coverage for examinations using the techniques and examination angles required at that time. After the implementation of Appendix VIII, examinations were performed using the techniques and examination angles qualified through PDI for consideration of Code coverage, in accordance with qualified PDI procedures. In addition to utilizing these qualified techniques and procedures Entergy employed EPRI to perform computer modeling on each of the nozzle configurations to ensure maximum coverage. These differences are reflected in the coverage percentages listed in Table 1, along with a

notation of "Pre-PDI examination" or "PDI examination" for each applicable component, as an indicator of which rules were applied.

II. Relief Requested

Due to the geometric configuration of the nozzle-to-vessel welds listed below, certain code examination volumes, as depicted in ASME Section XI, cannot be examined to the extent of obtaining full code coverage. Pursuant to 10CFR50.55a(g)(6)(i), Entergy Operations, Inc. (Entergy) requests permission to perform ultrasonic examination within the limitations described in Table 1 of this relief request.

Item Number	Item ID	Item Description	% Coverage	Reason for Limitation
B3.90	N03A-1	24" Main Steam, RPV Nozzle to Shell	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.
B3.90	N03B-1	24" Main Steam, RPV Nozzle to Shell	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.
B3.90	N03C-1	24" Main Steam, RPV Nozzle to Shell	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.
B3.90	N03D-1	24" Main Steam, RPV Nozzle to Shell	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.
B3.90	N16-1	12" RCS Inlet Nozzle to Vessel	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.
B3.90	N04A-1	12" Feedwater Nozzle to Vessel	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.
B3.90	N04B-1	12" Feedwater Nozzle to Vessel	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.
B3.90	N04C-1	12" Feedwater Nozzle to Vessel	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.

Table 1, Limited B-D Examinations

Item Number	Item ID	Item Description	% Coverage	Reason for Limitation
B3.90	N04D-1	12" Feedwater Nozzle to Vessel	50.0%	Due to nozzle taper, weld could only be examined from vessel side. 0°, 45°s and 60°s (axial and circ directions) were used for scanning, where accessible. Examinations performed prior to App. VIII implementation.
B3.90	N02A-1	10" RCS Inlet Nozzle to Vessel	85.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.
B3.90	N02B-1	10" RCS Inlet Nozzle to Vessel	85.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.
B3.90	N02C-1	10" RCS Inlet Nozzle to Vessel	79.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.
B3.90	N02D-1	10" RCS Inlet Nozzle to Vessel	79.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.
B3.90	N02E-1	10" RCS Inlet Nozzle to Vessel	85.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.

Table 1, Limited B-D Examinations				
Item Number	Item ID	Item Description	% Coverage	Reason for Limitation
B3.90	N02F-1	10" RCS Inlet Nozzle to Vessel	85.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.
B3.90	N02G-1	10" RCS Inlet Nozzle to Vessel	85.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.
B3.90	N02H-1	10" RCS Inlet Nozzle to Vessel	79.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.
B3.90	N02J-1	10" RCS Inlet Nozzle to Vessel	79.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.
B3.90	N02K-1	10" RCS Inlet Nozzle to Vessel	85.0%	Scanning limited due to close proximity of nozzle transition. 60°RL used (axial and circ directions) per procedure. In addition 35°s (+90°/-90° Skew) from Blend and 50°s ± (47° to 77° Skew) from vessel used for examination of inner 15% per EPRI Modeling. Examinations performed after App. VIII implementation.

Basis for Relief

During ultrasonic examination of the Reactor Vessel nozzle-to-vessel welds listed in Table 1 of this relief request, 100% coverage of the required examination volume could not be obtained.

Components 1 through 9 as listed in Table 1 – These components were not subjected to the requirements of Appendix VIII as they were examined prior to the November 22, 2002 implementation date specified for Supplement 7. The weld configuration and the close proximity of the nozzle transition resulted in geometric scan limitations which cannot be overcome by adding additional examination angles. As a result, the use of 45°s, 60°s,

and 0°L beam angles in the axial direction, and 45°s and 60°s beam angles in the circ direction, were not capable of achieving the Code required examination volume.

Components 10 through 19 as listed in Table 1 – These components were subjected to the requirements of Appendix VIII. The procedure used for these examinations has been demonstrated for the detection of flaws at EPRI in accordance with the requirements of Appendix VIII. In accordance with this procedure 60° refracted longitudinal wave examinations were performed in both the axial (radial) and circumferential scan directions. Additional examinations were performed in accordance with another qualified procedure and EPRI modeling was performed for each of these nozzle configurations. This scanning was performed from both the vessel shell and nozzle blend, where accessible. As a result, the use of 60°L beam angle in the axial and circ directions, and the additional beam angles required by the EPRI modeling, were not capable of achieving the Code required examination volume.

Radiography is not practical on these types of nozzle-to-vessel weld configurations, which prevent placement of the film and exposure source. The examinations performed on the subject items in addition to the examination of other vessel welds contained in the ISI program would detect generic degradation, if it existed, therefore demonstrating an acceptable level of integrity.

III. Proposed Alternative Examinations

No alternative testing is proposed at this time. Entergy has examined these welds to the extent practical and will continue to perform pressure testing on the subject welds as required by the Code.

Conclusion

10CFR50.55a(g)(6)(i) states:

The Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Entergy believes that it is impractical to obtain greater examination coverage on these welds. The examinations performed on the subject welds in addition to the examination of similar welds contained in the program would detect generic degradation, if it existed, therefore demonstrating an acceptable level of integrity. These limitations existed during the first Inspection Interval and relief was granted in RR0012B, Rev. 2. Therefore, we request the proposed alternative be authorized pursuant to 10CFR50.55a(g)(6)(i).

Attachment 3

RBG-46916

Request for Relief

RBS-ISI-009

REQUEST FOR RELIEF
RBS-ISI-009

Components/Numbers: See Table 1

Code Classes: ASME Code Class 1

References: ASME Section XI 1992 Edition, Table IWB-2500-1
 ASME Section XI 1980 Edition with the Summer of 1981 Addenda for Ultrasonic Examinations

Examination Category: B-G-1

Description: Pressure Retaining Bolting, Greater Than 2 in. In Diameter

Item Number(s): B6.40

Unit / Inspection Interval Applicability: River Bend Station (RBS), Second (2nd) 10-year interval

I. Code Requirement(s)

ASME Section XI, Table IWB-2500-1, Examination Category B-G-1, Pressure Retaining Bolting, Greater Than 2 inches in Diameter.

1. Item B6.40 requires a volumetric examination of the threads in flange stud hole and one inch of base material around the hole for a depth equal to the diameter of the stud. The examinations are to be performed once per interval.

II. Relief Requested

Due to the geometric configuration of the threaded area in the upper Reactor Vessel flange, the code examination volume, as depicted in ASME Section XI, cannot be examined to the extent of obtaining full code coverage. Pursuant to 10CFR50.55a(g)(6)(i), Entergy Operations, Inc. (Entergy) requests permission to perform ultrasonic examination within the limitations described in Table 1 of this relief request.

Table 1, Limited B-G-1 Examinations				
Item Number	Item ID	Item Description	% Coverage	Reason for Limitation
B6.40	FLG LIG A1-A8 through FLG LIG H1-H8	Reactor Vessel Threads-in- Flange	86.6	Scanning obstructed between 333° and 27° due to the raised seal face configuration. Scanning performed with 0°L, where accessible. See Figure 1.

Basis for Relief

During ultrasonic examination of the threaded area in the upper Reactor Vessel flange, 100% coverage of the required examination volume could not be obtained.

Examination of threaded flange requires scanning a 1" area around the RPV stud hole. The scan was limited to approximately 85% around the circumference of each stud hole due to the RPV head seal surface.

Radiography is not practical due to the component configuration, which prevents effective placement of the film and exposure source. The examination of 86.6% of the required volume of the subject items would detect generic degradation, if it existed, therefore demonstrating an acceptable level of integrity.

III. Proposed Alternative Examinations

No alternative testing is proposed at this time. Entergy has examined the subject items to the extent practical and will continue to perform pressure testing on the subject areas as required by the Code.

Conclusion

10CFR50.55a(g)(6)(i) states:

The Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

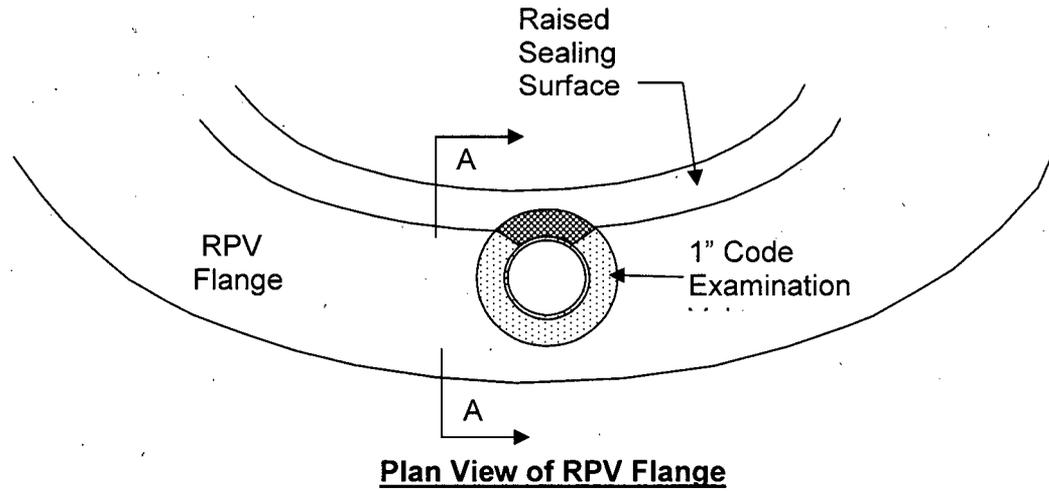
The RPV, including the flange assembly, is subject to a pressure test in accordance with ASME Section XI, Table IWB-2500-1.

The entire code volume around the stud hole is examined except for the area associated with the sealing surface. This area is examined for a distance of 1/2" from the stud hole where the sealing surface is encountered. With the RPV Head in place and fastened with the studs to the RPV shell flange, the seal surface and underlying material is subjected to compressional loads.

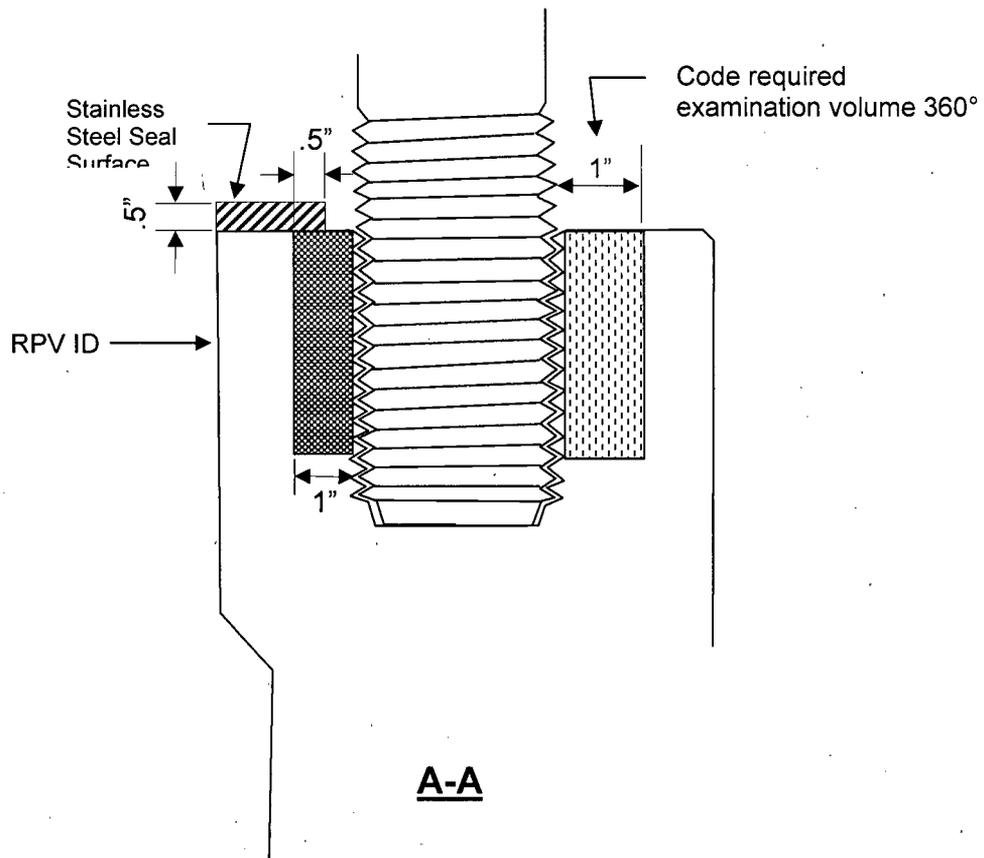
The amount of obtained volumetric coverage that includes the bounded area is adequate to ensure structural integrity of the stud hole regions of the RPV flange.

Entergy believes that it is impractical to obtain greater examination coverage on these areas. To obtain additional coverage would necessitate modification and/or replacement of the component. The examinations performed on the subject areas would detect generic degradation, if it existed, therefore demonstrating an acceptable level of integrity. Therefore, we request the proposed alternative be authorized pursuant to 10CFR50.55a(g)(6)(i).

Figure 1



-  Unable to scan the full 1" of Code required volume
-  Area scanned



Attachment 4

RBG-46916

Request for Relief

RBS-ISI-010

REQUEST FOR RELIEF
RBS-ISI-010

Components/Numbers: See Table 1

Code Classes: ASME Code Class 1

References: ASME Section XI 1992 Edition, Table IWB-2500-1
ASME Section XI 1980 Edition with 1981 Addenda (for ultrasonic examinations performed prior to May 22, 2000)
ASME Section XI 1995 Edition with 1996 Addenda (for ultrasonic examinations performed after May 22, 2000)

Examination Category: B-J

Description: Pressure Retaining Welds in Piping

Item Number(s): B9.11, B9.31

Unit / Inspection Interval Applicability: River Bend Station (RBS), Second (2nd) 10-year interval

I. Code Requirement(s)

ASME Section XI, Table IWB-2500-1, Examination Category B-J, Pressure Retaining Welds in Piping.

1. Item B9.11 requires 100% volumetric examination of the Class 1 NPS 4 or Larger Circumferential Pipe Welds.
2. Item B9.31 requires 100% volumetric examination of the Class 1 NPS 4 or Larger Branch Pipe Connection Welds.

During the 2nd ISI 10-year interval at RBS, 10CFR50.55a(g)(6)(ii)(C) mandated an implementation schedule for all licensees to begin use of Appendix VIII of the 1995 Edition, with 1996 Addenda of ASME Section XI. As a result, some examinations listed in this relief request were performed prior to this implementation schedule, and were performed in accordance with Appendix III of the 1980/81 Edition and Addenda of Section XI. The methodology used to determine Code coverage for each of the components listed in this relief request, therefore, depends on which set of requirements were in effect during the examination. Where earlier Code rules were in effect, Entergy credited Code coverage for examinations using ½ Vee path examination techniques in austenitic materials and allowed propagation of sound through austenitic weld metal to account for additional coverage. After the implementation of Appendix VIII, only ½ Vee path examinations have been allowed to be used in austenitic materials, and angle beams are no longer credited to extend beyond the centerline of austenitic welds for consideration of Code coverage, in accordance with qualified PDI procedures. These differences are reflected in the coverage percentages listed in Table 1, along with a

notation of "Pre-PDI examination" or "PDI examination" for each applicable component, as an indicator of which rules were applied. Additional discussion, as to the examination coverage determination process when using Appendix VIII techniques on single-sided austenitic welds, is provided in Section III of this relief request.

II. Relief Requested

Pursuant to 10CFR50.55a(g)(6)(i), Entergy Operations, Inc. (Entergy) requests relief from achieving greater than 90% coverage, as allowed by Code Case N-460, when performing volumetric examinations on the following welds:

Item Number	Item ID	Item Description	% Coverage	Reason for Limitation
B9.11	RCS-900B-FWB06	RCS pump to 20" Pipe, SS	80.7%	Single Side due to configuration (pump-pipe). Scanned across weld build up. 45°RL primarily used for scanning, 45°s, and 60°RL supplemented for procedure and best effort, where accessible. Examination performed prior to PDI implementation.
B9.11	RCS-900C-FWB15	Sweep-O-Let to 10" Pipe, SS	85.0%	Single side examination due to configuration (pipe to sweep-o-let). Scanned from pipe side only. 45°s and 60°RL used for scanning, where accessible. Examination performed prior to PDI implementation.
B9.11	RCS-900C-FWB16	Sweep-O-Let to 10" Pipe, SS	85.0%	Single side examination due to configuration (pipe to sweep-o-let). Scanned from pipe side only. 45°s and 60°RL used for scanning, where accessible. Examination performed prior to PDI implementation.
B9.31	RCS-900CX-SW014BC	16" Pipe to Sweep-O-Let, SS	86.0%	Single side examination due to configuration (pipe to sweep-o-let). Scanned from pipe side only. 45°s and 60°RL used for scanning, where accessible. Examination performed prior to PDI implementation.
B9.31	RCS-900CX-SW014CB	16" Pipe to Sweep-O-Let, SS	86.0%	Single side examination due to configuration (pipe to sweep-o-let). Scanned from pipe side only. 45°s and 60°RL used for scanning, where accessible. Examination performed prior to PDI implementation.
B9.11	WCS-001A1-XI-FW005	4" Pipe to valve weld	70.9%	Single side examination due to pipe to valve configuration. 70° used for scanning where possible per procedure. Examination performed prior to PDI implementation.
B9.11	WCS-001A3-XI-FW011	4" Pipe to reducer weld	79.0%	Dual sided examination was limited on reducer side to approximately ¼" axial scan movement due to weld crown (front) and reducer configuration (rear). 45°s and 70°s were used for scanning per procedure. Examination performed prior to PDI implementation.

Table 1, Limited B-J Examinations

Item Number	Item ID	Item Description	% Coverage	Reason for Limitation
B9.11	WCS-005A-XI-SW002	6" Pipe to tee	80.5%	13" of the 21.4" circumference was scanned from both sides of the weld, the remaining 8.4" was limited to single side access on pipe side due to the crotch area of the tee. 45°s and 60°s were used for scanning per procedure and supplemented with a 60°L in the limited area for best effort on far side. Examination performed after PDI implementation.
B9.11	WCS-005A-XI-SW003	6" Tee to branch	77.3%	11.7" of the 21.4" circumference was scanned from both sides of the weld; the remaining 9.7" was limited to single side access on pipe side (branch) due to the crotch area of the tee. 45°s and 60°s were used for scanning per procedure and supplemented with a 60°L in the limited area for best effort on far side. Examination performed after PDI implementation.
B9.11	WCS-001A3-XI-SW002	6" Pipe to tee	80.5%	13" of the 21.4" circumference was scanned from both sides of the weld, the remaining 8.4" was limited to single side access on pipe side due to the crotch area of the tee. 45°s and 60°s were used for scanning per procedure and supplemented with a 60°L in the limited area for best effort on far side. Examination performed after PDI implementation.

Basis for Relief

During ultrasonic examination of the piping welds listed in Table 1 of this relief request, 100% coverage of the required examination volume could not be obtained.

Class 1 piping and components are often designed with welded joints such as nozzle-to-pipe, pipe-to-valve and pipe-to-pump which can physically obstruct a large portion of the required examination volume. For many of the welds listed in Table 1 (above), the examinations were performed prior to the 10CFR50.55a mandatory implementation date for Appendix VIII of Section XI. The code coverage provided for these welds reflect what was allowed by qualified procedures and techniques at the time of examination. For those examinations performed after the Appendix VIII implementation date the Code coverage was calculated in accordance with the PDI generic procedures and techniques.

Appendix VIII qualified (PDI) procedures have demonstrated that sound beams may potentially be attenuated and distorted when required to pass through austenitic weld metal. Still, the PDI qualified methods employ the best available technology for maximizing examination coverage of these types of welds. For all the components listed in this relief request, examination was extended to the far side of the weld to the extent permitted by geometry, but this portion of the examination is not included in the reported coverage for welds examined under PDI and Appendix VIII rules. However, for examinations that were performed prior to the Appendix VIII implementation date, the examination coverage was not limited to the centerline of the austenitic weld.

Entergy has used the best available techniques to examine the subject piping welds. To improve upon these examination coverage percentages, modification and/or replacement of the component would be required. Consistent with the ASME Section XI sampling approach, examination of the subject welds, when combined with examinations that have been performed on other welds within the same Examination Category, is adequate to detect generic degradation, if it existed, therefore demonstrating an acceptable level of integrity.

III. Proposed Alternative Examinations

No alternative testing is proposed at this time. Entergy has examined the subject welds to the extent practical and will continue to perform pressure testing on the subject welds as required by the Code.

Entergy will use pressure test and VT-2 visual examination to compliment the limited examination coverage after each refueling outage.

Conclusion

10CFR50.55a(g)(6)(i) states:

The Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Entergy believes that it is impractical to obtain greater examination coverage on these areas. To obtain additional coverage would necessitate modification and/or replacement of the component. The examinations performed on the subject areas, in addition to the

examination of similar welds contained in the program would detect generic degradation, if it existed, therefore demonstrating an acceptable level of integrity. Several of these welds were granted relief during the first inspection interval under RR0008, rev.2. Therefore, we request the proposed alternative be authorized pursuant to 10CFR50.55a(g)(6)(i).

Attachment 5

RBG-46916

Request for Relief

RBS-ISI-011

**REQUEST FOR RELIEF
 RBS-ISI-011**

Components/Numbers: See Table 1

Code Classes: ASME Code Class 1

References: ASME Section XI 1992 Edition, Table IWB-2500-1
 N-509

Examination Category: B-K

Description: Integral Attachments for Class 1 Vessels, Piping, Pumps, and Valves

Item Number(s): B10.10

Unit / Inspection Interval Applicability: River Bend Station (RBS), Unit 1 / Second (2nd) 10-year interval

I. Code Requirement(s)

ASME Section XI, Table IWB-2500-1, Examination Category B-K, Integral Attachments for Class 1 Vessels, Piping, Pumps, and Valves,

1. Item B10.10 requires a surface examination of Pressure Vessel Integrally Welded Attachments.

Figure IWB-2500-13 shows the surface examination volume to be areas A-B and C-D.

II. Relief Requested

Pursuant to 10CFR50.55a(g)(6)(i), Entergy Operations, Inc. (Entergy) requests permission to perform surface examination within the limitations described in Table 1 of this relief request.

Table 1, Limited B-K Examinations				
Item Number	Item ID	Item Description	% Coverage	Reason for Limitation
B10.10	CG	RPV Support Skirt Attachment Weld	50%	Access available only from outside of the RPV Skirt. Only the A-B area was examined

Basis for Relief

During surface examination of both the RPV Skirt weld and pipe support integral attachment weld, 100% coverage of the required examination area could not be obtained.

The configuration of Reactor Vessel Support Skirt Weld B13-D001-CG is such that access is only available from the outside surface of the support, leaving half of the examination volume inaccessible. Refer to Figure IWB-2500-13 for examination volume. The later Edition of the ASME Code recognizes this and only requires the examination from the accessible surface.

In order to perform any type of additional Code examination, modification and/or replacement of the component would be required.

III. Proposed Alternative Examinations

No alternative testing is proposed at this time. Entergy has examined the subject item to the extent practical.

Conclusion.

10CFR50.55a(g)(6)(i) states:

The Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Entergy believes that it is impractical to obtain greater examination coverage on this item. To obtain additional coverage would necessitate modification and/or replacement of the component. The examinations performed on the subject item, in addition to the examination of similar items contained in the program would detect generic degradation, if it existed, therefore demonstrating an acceptable level of integrity. Relief was granted for this examination during the first Interval in RR0012F, rev. 1. Therefore, we request the proposed alternative be authorized pursuant to 10CFR50.55a(g)(6)(i).