



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

JUN 29 2006

10 CFR 50.4

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:


In the Matter of) Docket No. 50-390
Tennessee Valley Authority)

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) INSERVICE INSPECTION (ISI) PROGRAM REQUEST FOR RELIEF 1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19 - REQUEST FOR ADDITIONAL INFORMATION (TAC NOS. MC 9638, MC9639, MC9640, MC9641)

The purpose of this letter is to provide a response to NRC's request for additional information dated April 27, 2006, concerning TVA's request for relief dated January 25, 2006.

The Enclosure provides TVA's response to NRC's questions. There are no regulatory commitments associated with this submittal. If you have any questions concerning this matter, please call me at (423) 365-1824.

Sincerely,


P. L. Pace
Manager, Site Licensing
and Industry Affairs

Enclosure
Cc: See Page 2

A047

U.S. Nuclear Regulatory Commission
Page 2

JUN 29 2006

Enclosure

cc (Enclosure):

NRC Resident Inspector
Watts Bar Nuclear Plant
1260 Nuclear Plant Road
Spring City, Tennessee 37381

Mr. D. V. Pickett, Senior Project Manager
U.S. Nuclear Regulatory Commission
MS 08G9a
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852-2738

U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30303

ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1
REQUEST FOR RELIEF
1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19

This letter provides TVA's response to NRC's request for additional information dated April 27, 2006, concerning TVA's Inservice Inspection Program requests for relief dated January 25, 2006. Below are the responses to NRC's questions:

RELIEF REQUEST 1-ISI-16:

NRC QUESTION 1

Are there any other welds, within the examination category, that can be examined that will provide essentially 100 percent coverage of the examination volume?

TVA RESPONSE

The risk informed segment which includes weld SIF-D092-15 is classified High Safety Significant. The postulated failure mechanisms for the segment include Stress Corrosion Cracking (SCC). All welds in this segment that are subject to SCC must be examined every ten years. Weld SIF-D092-15 is the only weld in this segment that is subject to SCC. Therefore, there are no other welds in this segment to substitute for SIF-D092-15.

NRC QUESTION 2

Please confirm that personnel performing the single-sided examination were Performance Demonstration Initiative-qualified, and provide the appropriate ASME Section XI, Appendix VIII supplement(s) to which they qualified.

TVA RESPONSE

TVA confirms that personnel performing the single-sided examination were Performance Demonstration Initiative (PDI) qualified. Copies of the individual qualified examiner's certifications are provided in Attachment 1. The appropriate ASME Section XI, Appendix VIII Supplement to which the examiners were qualified, are listed on the Certifications.

NRC QUESTION 3

Other than radiographic examination, what other volumetric techniques were considered to increase volumetric coverage, and why were they not pursued?

ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 REQUEST FOR RELIEF 1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19

TVA RESPONSE

Currently, ASME Section XI lists three types of volumetric examination methods (Eddy Current, Radiography, and Ultrasonics). As required by ASME Section XI, and listed in the latest edition of the Electric Power Research Institute (EPRI) PDI qualified procedure, PDI-UT-2, "Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds," Revision C, the required examination volume to be examined is basically the lower one third thickness of the weld for a distance of 1/4-inch from the toe of the weld.

In order to perform an adequate examination of the required volume utilizing the Eddy Current Examination Method, an extensive modification would be required to gain access to the inside diameter of the weld since the component is a Pipe to Tee weld configuration.

Although radiography could be utilized, it is a less sensitive examination in detecting flaws unless the radiographic beam passes thru the weld oriented along the same plane as the flaw, which may require several radiographic shots resulting in additional dosage to personnel.

As indicated above, the Appendix VIII qualified ultrasonic examination technique was developed to provide the best method for detecting flaws in the required examination volume, as required by Supplement 2 of ASME Code Section XI and mandated by 10 CFR 50.55a.

NRC QUESTION 4

What are the general area, contact, and 12" dose rates at weld SIF-D092-15?

TVA RESPONSE

Weld SIF-D092-15 is at the intersection of the 6-inch emergency core cooling system (ECCS) flow path with the 14-inch Residual Heat Removal (RHR) letdown line off of reactor coolant system (RCS) Loop 4 hotleg. The weld of the 6-inch elbow to the 14-inch x 14-inch x 6-inch Tee is just a few feet from the RCS piping.

No specific radiological survey was performed for this weld inspection activity. However, a pre-shielding survey of the hot legs on RCS Loops 1 and 4 was conducted just days before the weld

ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 REQUEST FOR RELIEF 1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19

inspection. The results of the radiological survey were as follows:

General area	25 millirem per hour (mrem/hr)
30 centimeters	35-40 mrem/hr
Contact	80-100 mrem/hr

These survey results are a good approximation of the dose rates at the weld location since the weld is only a few feet off of the RCS loop.

RELIEF REQUEST 1-ISI-17 AND 1-ISI-18:

NRC QUESTION 5

Provide an explanation of Actual Increment and Scan Positions in relation to the limitations of the weld scans.

TVA RESPONSE

The actual increment and scan positions indicate the specific start and stop position readouts indicated by the scanner for the raster scans. Depending upon the specific scanner axes used for incrementing and scanning, the readouts typically represent inches or degrees. These readouts allow the examiner to determine the length of the scan that was accomplished at each increment location, which is used to compute coverage obtained.

NRC QUESTION 6

Compare the limitations on coverage of welds W01-02, W02-03, W2A, W2B, W2C, W2D, W2E, and W2F, with the limitations from any previous scans of the welds, such as preservice inspections, and explain any areas of less coverage than on previous exams. Discuss the results of the comparison.

TVA RESPONSE

The Pre-Service Examination of the WBN reactor vessel was performed during October-November, 1978. The exams were performed to the requirements of Section V and Section XI of the ASME Boiler and Pressure Vessel Code, 1974 Edition through the Summer 1975 Addenda. In accordance with Paragraph I-5213 of Section XI, only the limitations were required to be listed on the examination report. The requirement to calculate the extent of coverage was not required until Regulatory Guide 1.150,

ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 REQUEST FOR RELIEF 1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19

"Ultrasonic Testing of Reactor Vessel Welds during Pre-Service and Inservice Examinations," dated June 1981 was issued. The Pre-Service Examination was performed prior to issuance of this regulatory guide. As a result, the limitation of each component was recorded by the obstruction, and no coverage estimates of the volume were calculated.

As a result, a direct comparison of the extent of coverage cannot be accurately determined. The 2005 Inservice Inspection was performed to Appendix VIII qualified PDI guidelines which utilize qualified personnel and techniques as required by 10 CFR 50.55a and Section XI.

A listing of the reported coverage and limitations for the inservice inspection and limitations for the pre-service inspection is included in Attachment 2.

RELIEF REQUEST 1-ISI-19:

NRC QUESTION 7

Provide details showing ultrasonic beam angles used to find the two code allowable indications in weld-18 and the coverage obtained in the area of the flaws. Also, provide details showing the ultrasonic beam angles for any additional interrogation of these two code allowable indications in weld-18 and any additional coverage obtained in the area of the flaws.

TVA RESPONSE

The nozzle to vessel welds were examined with vendor PDI qualified procedures, and were scanned from the inside surface of the vessel and from the nozzle inside surface. The following information (listed in the vendor's final report) is described below.

- Nozzle to vessel weld from the inside surface of the vessel.

The inner 3.25 inches including the weld metal and adjacent metal for 1/2-inch beyond the weld fusion line was scanned with a module designed to generate 50 and 70 degree shear and longitudinal waves.

The weld metal and adjacent material in the outer volume beyond 3.25 inches was scanned with a module to generate 45 and 55 degree shear wave search units.

ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 REQUEST FOR RELIEF 1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19

- Nozzle to vessel weld from the inside surface of the nozzle bore.

In order to achieve coverage through the examination volume, the nozzle to shell welds were examined from the nozzle bore using longitudinal wave beam angles ranging from 5 degrees to 40 degrees and shear wave beam angles from 35 degrees to 45 degrees.

The indications were located in the outer 85 percent of the vessel and were ultrasonically detected from the inside diameter of the nozzle bore using the phased array technique. The indications were subsequently sized using the vendor's PDI qualified phased array sizing procedure.

A nozzle sketch from the vendor examination report, which shows the beam angles utilized for the outlet nozzle to vessel scan is included in Attachment 3. This sketch identifies the transducer and scan direction performed during the inspection.

NRC QUESTION 8

Compare the two code allowable indications with the results of any previous examinations for weld-18 and discuss the results of the comparison.

TVA RESPONSE

As discussed in Question 7 above, the two code allowable indications were detected from the inside bore surface of the nozzle with a qualified vendor procedure using a Phased Array technique.

During the pre-service examination, there were no flaws detected. The examination was performed utilizing 10, 15, and 45 degree refracted longitudinal waves, and 41.5, 45, and 60 degree shear waves in accordance with ASME Section V and ASME Section XI.

The two code allowable indications were detected and sized using a PDI qualified technique, which was not available at the time of the pre-service inspection.

ENCLOSURE

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1

REQUEST FOR RELIEF

1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19

NRC QUESTION 9

Describe the outlet nozzle integral extension and how it restricts the ultrasonic search unit scan surface, thereby limiting the two-direction transverse coverage.

TVA RESPONSE

The sketch referenced in Question 7, (Attachment 3), shows a basic outline of the integral extension of the outlet nozzle. As seen in the sketch, the outlet nozzle extension extends outward from the inside surface of the nozzle. The height and radius of this design prevents the transducers from mating to the surface, thereby, preventing sound from passing from the transducer to the inside surface of the reactor vessel.

ENCLOSURE
Attachment 1

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1
REQUEST FOR RELIEF
1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19

EXAMINERS CERTIFICATIONS



Sonic Systems International

Sonic Systems

Visual Acuity Examination Record

for

Jason Polisensky 0009666

This vision acuity examination is in compliance with ANSI N45.2.6, NQA-1, ASNT SNT-TC-1A, ANSI/ASNT CP-189, and ASME Section XI 1992 with 1992 addenda and Later editions.

SSI Visual Acuity Examination Procedure No.

SSI-A-020 Rev. 02

Far Distance Acuity:

☐ Natural

☐ Corrected

Far Vision

☒ Right 20/20

☒ Left 20/20

☒ Both 20/20

Snellen Test

Near Distance Acuity:

☐ Natural

☐ Corrected

Near Vision

☒ Right J1-20/25

☒ Left J1-20/25

☒ Both J1-20/25

ASME XI Test Card

Color Contrast Acuity:

☐ Normal

☐ Abnormal

For employment, individuals having a color perception deficiency, shall be considered 'normal', where discrimination of color contrast or the primary colors can be demonstrated to the examiner.

Comments:

Vision acuity examination given by a WGI Level III. Documentation on file.

Eye Test Date

8/24/2004

Eye Test Expiration Date

8/24/2005

Administered By

For [Signature]

Michael Robbins WGI Level III

8/24/2004

Date

Reviewed By

[Signature]

Stephen K. Hubbard Level III

8/24/2004

Date

**Certificate of Qualification**

for

Jason Polisensky 0009666

This individual is certified in accordance with Sonic Systems International Inc.'s Nondestructive Examination Qualification and Certification Program, which is in compliance with the applicable portions of ASNT SNT-TC-1A, CP-189 and ASME Section XI.

SSI NDE Certification Procedure(s) No.

SSI-A-005 Rev. 20 ICN 01 for MT, PT & VT1,2,3; SSI-A-013 Rev. 1 for UT

CERTIFICATIONS

Method	Level	Certification Date	Recertification Date	Expiration Date
Liquid Penetrant	II	1/14/2004	N/A	1/12/2007
Magnetic Particle	II	1/14/2004	N/A	1/12/2007
Ultrasonic	II-PDI	1/13/2004	N/A	1/13/2007
Visual VT-1	II	1/14/2004	N/A	1/12/2007
Visual VT-2	II	1/14/2004	N/A	1/12/2007
Visual VT-3	II	1/14/2004	N/A	1/12/2007

Limitations: None.

Test Techniques: MT: Indirect; PT: Color Contrast and Fluorescent, Solvent Removable and Water Washable; UT: Contact; VT-1: VT-2: VT-3, Direct and Remote.

EYE EXAMS

Not valid without current eye exam attached.

ADDITIONAL CERTIFICATIONS / QUALIFICATIONS

Appendix VIII PDI Qualified for Detection in Ferritic and Austenitic with IGSCC-Expires - Exp Date 10/24/2007

Appendix VIII PDI Qualified for Length Sizing for Ferritic and Austenitic with IGSCC- Expires - 10/24/2007

Reviewed By

Stephen K. Hubbard, Principal Level III2/1/05
Date



Qualification and Certification Summary

Sonic Systems International

Name: Jason Polisensky

Badge: 0009666

CURRENT CERTIFICATION EXAMINATIONS

METHOD	LEVEL	GENERAL/BASIC		SPEC./METHOD		PRACT./SPEC.		COMPOSITE SCORE	EXAMINER
		SCORE	WT	SCORE	WT	SCORE	WT		
AE									
ET									
MT	II	92.5	0.333	100	0.333	100	0.333	97.4	Stephen K. Hubbard
PT	II	95	0.333	90	0.333	100	0.333	94.9	Stephen K. Hubbard
RT									
UT	II-PDI	81.6	0.333	100	0.333	80	0.333	87.1	S.K. Hubbard & EPRI PDI
VT									
VT-1	II	81.7	0.333	93	0.333	100	0.333	91.5	Stephen K. Hubbard
VT-2	II	81.7	0.333	93	0.333	100	0.333	91.5	Stephen K. Hubbard
VT-3	II	81.7	0.333	93	0.333	100	0.333	91.5	Stephen K. Hubbard

EDUCATION

Diploma- Union-Endicott High School - Endicott, NY, 1990

TRAINING

CLS LAB

28	12	Hours - Magnetic Particle, Ocean Corp.
12		Hours - Liquid Penetrant, Ocean Corp.
4		Hours - Liquid Penetrant, SSI
80	24	Hours - Ultrasonic, Ocean Corp.
	41	Hours - PDI, EPRI
15	25	Hours - Smart 2000, GE Nuclear
36		Hours - VT-1,2,3 (ISI), Hellier
4		Hours - VT1,2,3, SSI

EXPERIENCE

Initial Method Certification Date

AE	ET	MT	PT	RT	UT	VT	VT-1	VT-2	VT-3
		2/1/1992	2/1/1992		2/1/1992		9/23/1998	9/23/1998	9/23/1998

The above individual meets or exceeds the certification requirements as specified in Sonic System International, Inc.'s Qualification Program.

Stephen K. Hubbard 2/1/05
Stephen K. Hubbard, Principal, Level III Date



Individual Experience Summary Record

Sonic Systems International

Documented records are maintained on file and meet at least the minimum Sonic Systems International requirements for each certification discipline. These and additional records (when referenced) provide objective evidence supporting Qualification and Certification.

File Date

Name: Jason Polisensky

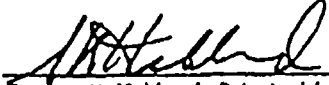
Badge: 0009666

Prior Certification:

Raytheon Level II UT, PT Level I MT
Longview Level II UT, PT
DNV-1997
GE UT Level II
LMT Level II PT, MT, UT

Documented Experience				AE	ET	MT	PT	RT	UT	VT	VT-1	VT-2	VT-3
Date	Company	Level				II	II		II-PDI		II	II	II
02/92 to 12/97	GE	II		0	0	0	0	0	4231	0	0	0	0
01/98 to 03/98	Longview	II		0	0	0	100	0	300	0	0	0	0
03/98 to 04/00	Raytheon	TRN		0	0	0	0	0	0	0	837	372	372
03/98 to 04/00	Raytheon	II		0	0	620	695	0	892	0	0	0	0
09/00 to 10/00	LMT	II		0	0	113	100	0	79	0	0	0	0
10/01 to 04/04	SSI	II		0	0	424	333	0	944	110	168	165	169
Total Experience				0	0	1157	1228	0	6446	110	1005	537	541

The supporting documented records have been reviewed and are true and correct to the best of my knowledge.


Stephen K. Hubbard, Principal Level III

2/1/05
Date



Sonic Systems International, Inc.
The Nuclear Refueling and Inspection Specialists

1880 Dairy Ashford
Suite 207
Houston, Texas 77077
(281) 531-7611

**ASME XI Appendix VIII
Hands-on-Practice (8 Hours)
Documentation**

Candidate Name: Jason Polisensky

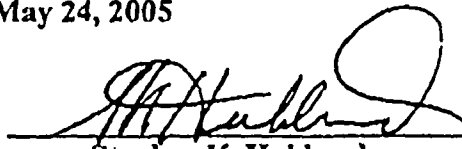
Date: October 24, 2004

SS#/ID#: 0009666

Mr. Polisensky successfully completed qualification for Detection and Length Sizing for Ferritic and Austenitic, PDI-UT-1 and PDI-UT-2 with IGSCC at the EPRI NDE Center on October 24, 2004.

Due Date: May 24, 2005

Verified by:


Stephen K. Hubbard

Level:

III



Washington

ASME Section XI
Appendix VII
Annual Training

Topics Covered:

- A. Review of ASME Section XI, Appendix VII, 1995 Edition
- B. Review of ASME Section XI, Appendix VIII Supplement Identification
- C. Feasibility of Ultrasonic Examination of Dissimilar Metal Welds
 - a. PDI Presentation by Carl Latiolais & Jeff Landrum, EPRI NDE Center April 22, 2002
- D. Status of the PDI Dissimilar Metal Weld Program
 - a. PDI Presentation by Carl Latiolais, EPRI NDE Center, April 12, 2002
- E. Dissimilar Metal Welds - Program Issues
 - a. PDI Presentation by Carl Latiolais, EPRI NDE Center, December 17, 2002
- F. PDI Generic Procedure for the Ultrasonic Examination of Dissimilar Metal Piping Welds; PDI-UT-10, Rev. A 12/20/2002
 - a. This procedure has been qualified at the EPRI NDE Center

Attendees:

Name	SSN	Date
JASON POLISENSKY	[REDACTED]	8/23/04 to 8/25/04

Classroom Time = 10 hours

NDE Instructor

Michael Robbins



Sonic Systems International, Inc.
The Nuclear Refueling and Inspection Specialists

1880 Dairy Ashford
Suite 207
Houston, Texas 77077
(281) 531-7611

**ASME XI Appendix VII
Annual Training (10 Hours)
Documentation**

Candidate Name: Jason Polisensky

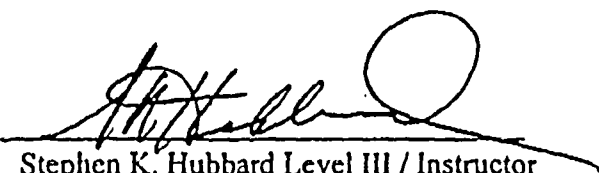
Completion Date: 08/25/2004

ID#: 0009666

Mr. Polisensky received 10 hours of Annual Training from the Washington Group on August 25, 2004. I have reviewed the documentation signed by a Washington Group Level III Instructor. I accept this training as meets the Annual Training requirements outlined in SSI-A-013 Rev. 02.

Retraining due date: 08/25/2005

Approved: _____


Stephen K. Hubbard Level III / Instructor

Performance Demonstration Initiative Program

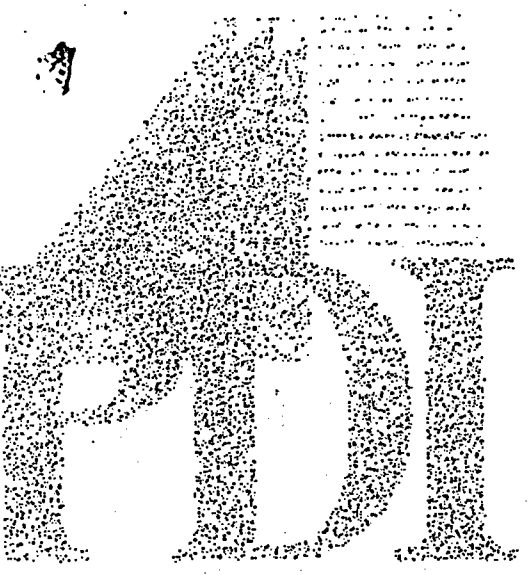
In Accordance with the PDI Implementation of Section XI, Appendix VIII

IGSCC Requalification Signature Sheet

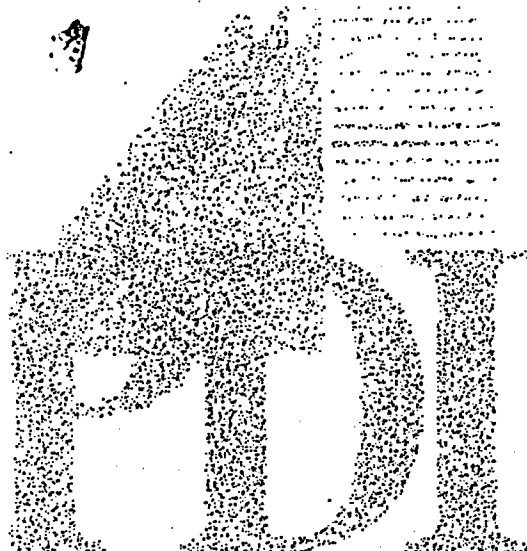
Candidate : Polisensky Jason

Original Procedure : PDI-UT-2 vBa0

(Limitations and Comments listed on original PDQS still apply)


Carl L. Latiolais for Carl Latiolais Date 9/8/2004
Carl L. Latiolais
Performance Demonstration Initiative
Piping and Bolting Supervisor/Level III

F. L. Becker Date 9/8/2004
F. L. Becker
Performance Demonstration Initiative
Administrator



Performance Demonstration Initiative Program

In Accordance with the PDI Implementation of Section XI, Appendix VIII

IGSCC Requalification Summary Sheet

Candidate : Polisensky Jason

Original Procedure : PDI-UT-2 vBa0

(Limitations and Comments listed on original PDQS still apply)

Revision	Addenda	Requal Date	Application	Exam Type	Access
C	0	07/05/2004	Piping Manual	Detection	Single
C	0	07/05/2004	Piping Manual	Detection	Dual

Performance Demonstration Initiative Program

In Accordance with the PDI Implementation of Section XI, Appendix VIII

Specific Detail of Qualifications

Printed: 17-Nov-04

PDQS No: 448

04061103

Candidate: Jason Polisensky

ID#: ~~XXXXXXXXXX~~

Procedure: PDI-UT-2; Revision: C; Addenda: 0

PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds

PDQS Rev: 0

Owner: Performance Demonstration Initiative

Hardware: N/A

Category: Piping

Date of Issue:

17-Nov-04

Analysis SW Type/Rev:

N/A

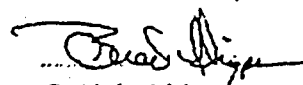
Operator SW Type/Rev:

N/A

Scan Application:

Manual

The above candidate has met the requirements of The Performance Demonstration Initiative's Implementation of The American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, Appendix VIII, as stated in this document.

 For Carl Latolais

Date: 11/17/04

Carl L. Latolais

Performance Demonstration Initiative

Piping and Bolting Supervisor/Level III



Date: 11/17/04

F. L. Becker

Performance Demonstration Initiative

Administrator

This document is not authentic without a raised seal.

Performance Demonstration Initiative Program

In Accordance with the PDI Implementation of Section XI, Appendix VIII

Specific Detail of Qualifications

Candidate: Jason Polisensky

ID#: ~~XXXXXXXXXX~~

Procedure: PDI-UT-2; Revision: C; Addenda: 0

PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds.

PDQS Rev: 0

Owner: Performance Demonstration Initiative

Hardware: N/A

Category: Piping

Date of Issue: 17-Nov-04

Analysis SW Type/Rev: N/A

Operator SW Type/Rev: N/A

Scan Application: Manual

When "Length Sizing" is indicated, the 0.750 RMS acceptance criteria per the PDI Program Description has been achieved.

When "Through Wall Sizing" is indicated, the 0.125 RMS acceptance criteria per the PDI Program Description has been achieved.

Tolerances for field applications as follows:

Diameter:

Lower: .500" can be subtracted from the minimum diameter demonstrated.

Upper: Diameters greater than 24" need not be demonstrated.

Thickness:

Lower: 0.100" can be subtracted from the minimum thickness demonstrated for both austenitic and ferritic

Upper: 1.000" can be added to the maximum thickness demonstrated for ferritic material.

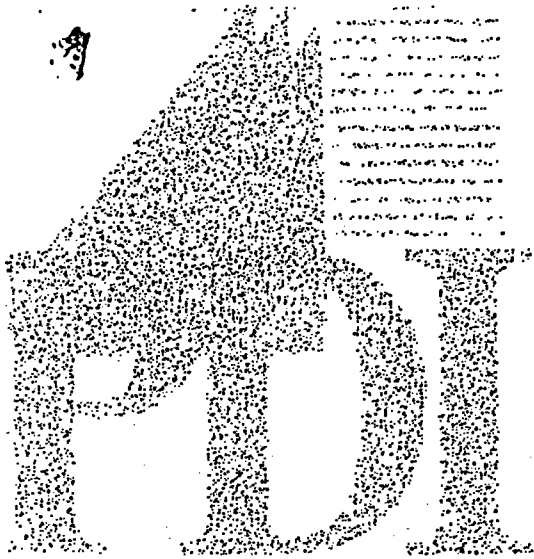
0.500" can be added to the maximum thickness demonstrated for austenitic material.

This candidate has met the practical requirements of Appendix VII: Yes

Comments:

Limitations: 1 This procedure/candidate is not qualified to detect axially orientated flaws located on the far side of the weld where access is limited to one side and the ultrasonic beam is required to propagate through austenitic weld material.

2 The austenitic single side qualifications, documented on this summary, demonstrate application of best available technology, but do not meet the requirements of 10CFR 50.55a(b)(2) (xvi) (B).



Performance Demonstration Initiative Program

In Accordance with the PDI Implementation of Section XI, Appendix VIII

Specific Detail of Qualifications

Printed: 17-Nov-04
PDQS No: 448
04061103

Candidate: Jason Polisensky

ID#: ~~XXXXXXXXXX~~

Procedure: PDI-UT-2; Revision: C; Addenda: 0

PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds

PDQS Rev: 0
Owner: Performance Demonstration Initiative
Hardware: N/A
Category: Piping

Date of Issue: 17-Nov-04
Analysis SW Type/Rev: N/A
Operator SW Type/Rev: N/A
Scan Application: Manual

Ranges Demonstrated:

Date:	25-Oct-04		
MinDiam:	2.000	MinThick:	0.237
MaxDiam:	36.000	MaxThick:	2.900
Material:	Austenitic with IGSCC		
Examination:	Detection		
Access:	Double Sided		
Weld Cond:	Ground Flush		
Weld Cond:	Flat Top		
Weld Cond:	As Welded		
Access:	Single Sided		
Weld Cond:	Ground Flush		
Weld Cond:	Flat Top		
Weld Cond:	As Welded		

Performance Demonstration Initiative Program

In Accordance with the PDI Implementation of Section XI, Appendix VIII

Specific Detail of Qualifications

Printed: 17-Nov-04
PDQS No: 448
04061103

Candidate: Jason Polisensky

ID#: ~~XXXXXXXXXX~~

Procedure: PDI-UT-1; Revision: C; Addenda: 0

PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds

PDQS Rev: 0
Owner: Performance Demonstration Initiative
Hardware: N/A
Category: Piping

Date of Issue: 17-Nov-04
Analysis SW Type/Rev: N/A
Operator SW Type/Rev: N/A
Scan Application: Manual

The above candidate has met the requirements of The Performance Demonstration Initiative's Implementation of The American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, Appendix VIII, as stated in this document.

Carl L. Latiolais for Carl Latiolais

Date: 11/17/04

Carl L. Latiolais
Performance Demonstration Initiative
Piping and Bolting Supervisor/Level III

F. L. Becker

Date: 11-17-04

F. L. Becker
Performance Demonstration Initiative
Administrator

This document is not authentic without a raised seal.

Performance Demonstration Initiative Program

In Accordance with the PDI Implementation of Section XI, Appendix VIII

Specific Detail of Qualifications

Printed: 17-Nov-04
PDQS No: 448
04061103

Candidate: Jason Polisensky

ID#: ~~448-1103~~

Procedure: PDI-UT-1; Revision: C; Addenda: 0

PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds

PDQS Rev: 0

Date of Issue:

17-Nov-04

Owner: Performance Demonstration Initiative

Analysis SW Type/Rev: N/A

Hardware: N/A

Operator SW Type/Rev: N/A

Category: Piping

Scan Application: Manual

When "Length Sizing" is indicated, the 0.750 RMS acceptance criteria per the PDI Program Description has been achieved.

When "Through Wall Sizing" is indicated, the 0.125 RMS acceptance criteria per the PDI Program Description has been achieved.

Tolerances for field applications as follows:

Diameter:

Lower: .500" can be subtracted from the minimum diameter demonstrated.

Upper: Diameters greater than 24" need not be demonstrated.

Thickness:

Lower: 0.100" can be subtracted from the minimum thickness demonstrated for both austenitic and ferritic

Upper: 1.000" can be added to the maximum thickness demonstrated for ferritic material.

0.500" can be added to the maximum thickness demonstrated for austenitic material.

This candidate has met the practical requirements of Appendix VII: No

Comments:

Limitations: 1 This procedure/candidate is only qualified to length size flaws orientated in the circumferential direction.

Performance Demonstration Initiative Program

In Accordance with the PDI Implementation of Section XI, Appendix VIII

Specific Detail of Qualifications

Printed: 17-Nov-04

PDQS No: 448

04061103

Candidate: Jason Polisensky

ID#: ~~XXXXXXXXXX~~

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Category: Piping

Scan Application: Manual

Ranges Demonstrated:

Date:	25-Oct-04		
MinDiam:	4.000	MinThick:	0.337
MaxDiam:	50.000	MaxThick:	3.850
Material:	Ferritic		
Examination:	Detection		
Access:	Double Sided		
Weld Cond:	Ground Flush		
Weld Cond:	Flat Top		
Weld Cond:	As Welded		
Access:	Single Sided		
Weld Cond:	Ground Flush		
Weld Cond:	Flat Top		
Weld Cond:	As Welded		

ENCLOSURE
Attachment 2

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1
REQUEST FOR RELIEF
1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19

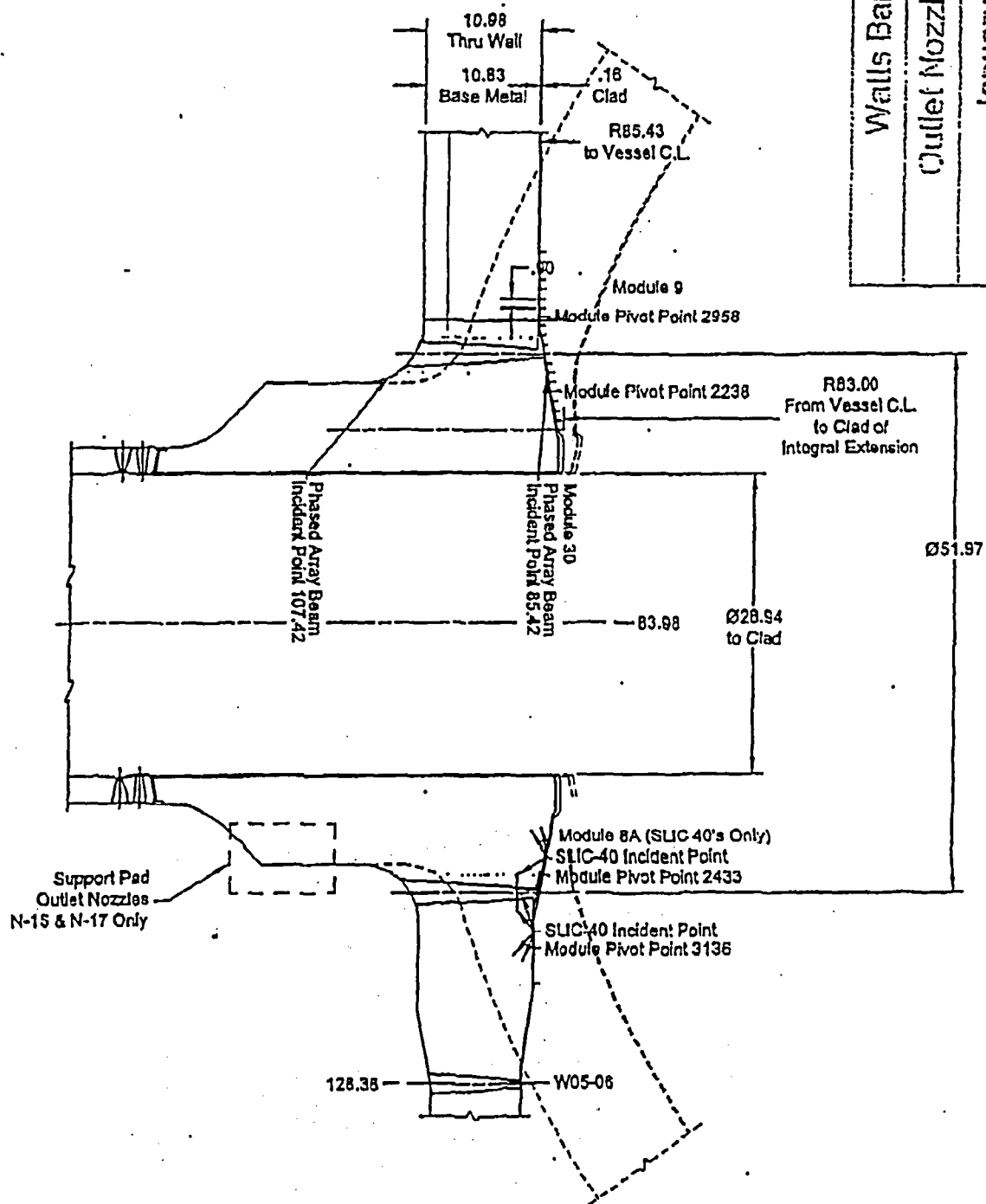
LIST OF LIMITATIONS

WBN
RAI QUESTION #6
PRE-SERVICE VS ISI RPV EXAMINATIONS
COVERAGE OF REQUESTED WELDS

ISI Weld #	% Coverage	Restrictions listed in ISI Report	% Coverage	Restrictions listed in Pre-Service Report
W01-02	60%	Limited to bottom head penetrations	None Performed	No Examinations from the cap side due to instrumentation tube interference
W02-03	72%	Limited due to proximity of core barrel stabilizing lugs	None Performed	Limited Examination due to core support lug interference.
W2A	79%	Limited due to the bottom head penetrations and core barrel stabilizing lugs	None Performed	Limited examination due to core support lug interference.
W2B	84%	Limited due to the bottom head penetrations and core barrel stabilizing lugs	None Performed	Limited examination due to core support lug and instrumentation tube interference.
W2C	85%	Limited due to the bottom head penetrations and core barrel stabilizing lugs	None Performed	Limited examination due to core support lug and instrumentation tube interference.
W2D	85%	Limited due to the bottom head penetrations and core barrel stabilizing lugs	None Performed	Limited Examination due to core support lug interference.
W2E	85%	Limited due to the bottom head penetrations and core barrel stabilizing lugs	None Performed	Limited examination due to core support lug and instrumentation tube interference.
W2F	67%	Limited due to the bottom head penetrations and core barrel stabilizing lugs	None Performed	Limited examination due to core support lug and instrumentation tube interference.

ENCLOSURE
Attachment 3

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1
REQUEST FOR RELIEF
1-ISI-16, 1-ISI-17, 1-ISI-18, AND 1-ISI-19
VENDOR'S NOZZLE SKETCH



Walls Bar Unit 1

Outlet Nozzle-to-Shell

January 2005

SPNOZOUT

Note: Check for limitations due to the proximity of shell wall taper and integral extension.