

ATTACHMENT 2

**Quad Cities Nuclear Power Station Fourth Inservice Inspection (ISI) Interval
Limited Coverage Non-Destructive Examination (NDE) Summary Sheets**

2005
INSERVICE EXAMINATION OF
THE REACTOR PRESSURE VESSEL AT
QUAD CITIES GENERATING STATION, UNIT 1

FINAL REPORT
WITH APPENDICES AND FIELD DATA

ISwT Project 04-0379

Prepared for

Exelon Generation Company, LLC
22710 206th Avenue North
Cordova, Illinois 61242-9740

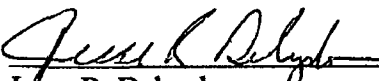
Prepared by

IHI Southwest Technologies, Inc.

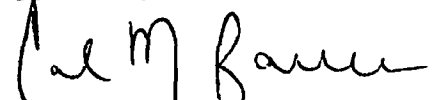
April 2005

APPROVED
11/13/05

Reviewed by:


Jesse R. Delgado
ISwT Level III

Approved by:


Carlos M. Barrera
ISwT Project Manager

Approved by:


Exelon Representative

R. L. May day 05/02/05

101 RECTED TYPoS
11/13/05 BY
R.L. May
10/28/05
11/03/05



TABLE OF CONTENTS

	<u>Page</u>
FINAL REPORT WITH APPENDICES	
LIST OF FIGURES	iv
LIST OF ABBREVIATIONS.....	v
1. INTRODUCTION	1
1.1 Services Covered	1
1.2 Applicable Documents.....	1
1.3 Workslope	2
2. EXAMINATION TECHNIQUES AND EQUIPMENT	3
2.1 Examination Plan, Procedures, and Personnel.....	3
2.2 Equipment.....	3
2.2.1 AIRIS 21	3
2.2.2 EDAS II	5
2.3 NDE Techniques.....	6
3. EXAMINATION RESULTS.....	8
3.1 Examination Results	8
3.2 Examination Limitations.....	8
3.3 Explanation of Field Data Records.....	9
3.4 Examination Summary Table	11
APPENDICES	
A Weld Identification Sketch	
B Operating Procedures	
C Calibration Block Drawings	
D Certificates Of Personnel Qualifications	
E Equipment Certifications	
F Examination Area Coverage Report For Quad Cities Generating Station, Unit 1	



FIELD DATA

Reactor Pressure Vessel - Class 1 Components:

RPV-VSC1-55	Ring 1 Vertical Weld @ 55-degrees
RPV-VSC1-77	Ring 1 Vertical Weld @ 77-degrees
RPV-VSC1-197	Ring 1 Vertical Weld @ 197-degrees
RPV-VSC1-317	Ring 1 Vertical Weld @ 317-degrees
RPV-VSC2-22	Ring 2 Vertical Weld @ 22-degrees
RPV-VSC2-141	Ring 2 Vertical Weld @ 141-degrees
RPV-VSC2-261	Ring 2 Vertical Weld @ 261-degrees
RPV-VSC2-323	Ring 2 Vertical Weld @ 323-degrees
RPV-VSC3-77	Ring 3 Vertical Weld @ 77-degrees
RPV-VSC3-197	Ring 3 Vertical Weld @ 197-degrees
RPV-VSC3-317	Ring 3 Vertical Weld @ 317-degrees
RPV-VSC4-99	Ring 4 Vertical Weld @ 99-degrees
RPV-VSC4-219	Ring 4 Vertical Weld @ 219-degrees
RPV-VSC4-261	Ring 4 Vertical Weld @ 261-degrees
RPV-VSC4-339	Ring 4 Vertical Weld @ 339-degrees
RPV-CW-C4FLG	Shell-to-Flange Circumferential Weld
RPV-BMR-016-295	Beltline Region Repair Weld
RPV-BMR-017-318	Beltline Region Repair Weld
RPV-BMR-018-310	Beltline Region Repair Weld
RPV-BMR-138-270	Beltline Region Repair Weld
RPV-BMR-167-305	Beltline Region Repair Weld



LIST OF FIGURES

<u>Figure No.</u>	<u>Title</u>	<u>Page</u>
1	Quad Cities Generating Station	1
2	AIRIS 21 Scanner and Control Station.....	3
3	Typical AIRIS 21 Removal from an RPV Cavity	4
4	EDAS-II Three-View Image.....	5
5	Typical EDAS Data Acquisition and AIRIS Setup	6
6	PDI Detection Techniques	7
7	Explanation of the Field Data Record	10
8	Explanation of the Summary Table Format	12

**LIST OF ABBREVIATIONS**

AIRIS 21	-	Advanced In-service Reactor Inspection System
ASME	-	The American Society of Mechanical Engineers
AUT	-	Automated Ultrasonic Examination
CNF	-	Customer Notification Form
EDAS™-II	-	Enhanced Data Acquisition System-II
EXELON	-	Exelon Corporation
ID	-	Inside Surface
ISI	-	In-service Examination
ISwT	-	IHI Southwest Technologies, Inc.
NDE	-	Nondestructive Examination
OP	-	Operating Procedure
PDI	-	Performance Demonstration Initiative
QCS1	-	Quad Cities Generating Station, Unit 1
QA	-	Quality Assurance
QAPM	-	Quality Assurance Program Manual
ROV	-	Remotely Operated Vehicle
RPV	-	Reactor Pressure Vessel



2. EXAMINATION TECHNIQUES AND EQUIPMENT

2.1 Examination Plan, Procedures, and Personnel

An Examination Plan was developed to provide all the technical information required to perform the RPV examinations. The Plan provided the scanning parameters, scan sheets, scan path drawings, device configurations, and procedures for the performance of the AUT examinations of the RPV.

The NDE activities were performed using qualified, automated ultrasonic (AUT) procedures. These procedures were approved by Exelon prior to use by ISwT personnel. Copies of these procedures are located in Appendix B.

ISwT examination personnel were certified in accordance with ISwT NPOP 2.0-NDES-001, "Nondestructive Examination Personnel Qualification and Certification," which incorporates the guidelines of the American Society for Nondestructive Testing and ASME Section XI. A copy of each examiner's certifications is provided in Appendix D of this report.

2.2 Equipment

The AUT examinations of the selected RPV welds were performed utilizing ISwT's AIRIS-21 Scanner and EDAS-II data acquisition system. The equipment certifications are located in Appendix E of this report.

2.2.1 AIRIS 21

The AIRIS 21 Scanner is small [(22 in.) wide, (24 in.) tall, and (2 in.) thick] and weighs only (30 lbs.). The small, thin design makes the device ideal for use in tight, narrow conditions such as the annulus between a BWR core shroud and vessel wall. AIRIS 21 uses two small thrust propellers to "swim" to a predetermined location on the vessel wall. Once at the vessel wall, a flexible skirt makes contact with the wall and the thrusters create a partial vacuum between the device and the

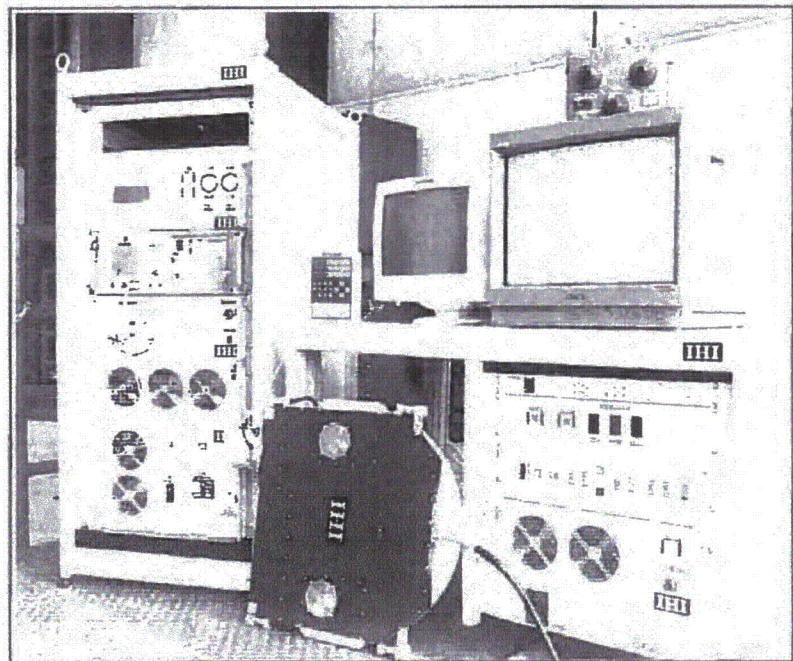


Figure 2. AIRIS 21 and Control Station



vessel wall, allowing the drive wheels to make contact with the vessel surface. Two independent drive wheels (travel motion) and a front skid pad allow free maneuvering around the vessel surface. Independent encoder wheels provide coordinated tracking of device position regardless of motion direction. A linear drive (scanner motion) provides search unit module movement perpendicular to the traveling motion of the device. Both the traveling motion and the scanner motion can be used for UT scanning or incrementing.

Positional location of the AIRIS 21 is accomplished using a combination of measurements integrated and displayed by the control system. An origin reference point is established for each examination zone by locating a specific elevation and azimuth. Elevation can be determined by the use of two high-accuracy water depth sensors, one on the device and one located at a fixed location such as the vessel flange, or it can be determined visually by driving the device to a fixed component inside the vessel whose elevation is known. Azimuth reference location above the shroud is typically accomplished visually by driving the device to a fixed component whose azimuth is known, such as the dryer guide rods at 0 and 180 degrees. Behind the shroud, an optical beam transmitter/receiver system can be used to determine azimuth location based on the known location of internal reactor components, or a physical reference can be obtained from other components such as sparger piping or surveillance specimen holders.

Once the device is on the vessel wall in the referenced position, the encoded drive wheels provide travel distance and a gravity sensor keeps track of device orientation. The control unit integrates this information and provides constant positional information relative to the device location. A graphic display unit also shows the orientation of the device and direction of movement.



Figure 3. Typical AIRIS 21 Removal from an RPV Cavity

The device is controlled through a single umbilical cable bundle, which contains all inputs and outputs to the control system as well as the AUT transducer cables. This device control cable also contains a steel braided cable so that the cable can also function as a device retrieval mechanism in the unlikely event of a power failure or thrust propeller failure. Device operation is monitored visually during the inspections using independent remote video cameras.

2.2.2 EDAS II

The ISwT EDAS-II is used to collect, process, and analyze data during the ISI. EDAS-II is composed of two high-performance subsystems: one is dedicated to data acquisition and the other to data analysis. This allows data acquisition and analysis to occur in parallel. Data are stored and retrieved by these subsystems using high capacity magnetic hard disk arrays. This medium allows for large amounts of data to be recorded in a single operation and "RAID" data safeguarding technology provides assurance that data are not lost prior to archiving. Since the AUT data evaluation is based on visual image as well as A-scan analysis, EDAS-II records full waveforms at close intervals of up to eight scanning channels simultaneously. Amplitude and time analog information is digitized and recorded along with search unit position, thus providing precise correlation with other data records. This results in a high data recording rate and a large volume of recorded data which far exceeds the capabilities of conventional inspection systems. The power of the image analysis system is such that analysts can readily distinguish the predictable pattern of a reflector in an ultrasonic B-scan (side view of a cross-sectional slice of material). Since all A-scan (time versus amplitude plot as shown on an oscilloscope) data are of value regardless of signal amplitude, waveforms are continuously recorded based on position - no amplitude thresholding is employed.

The analysis subsystem consists of a high-performance color graphics workstation, powerful EDAS-II analysis software, and a color hardcopy unit. In performing data analysis, EDAS-II provides an interactive, response-oriented environment for the operator. Images are retrieved and displayed within seconds, providing a useful medium for interactive analysis. The multitasking system and window-based user interface enable selection and simultaneous arrangement of displays to assist the analyst in understanding the data.

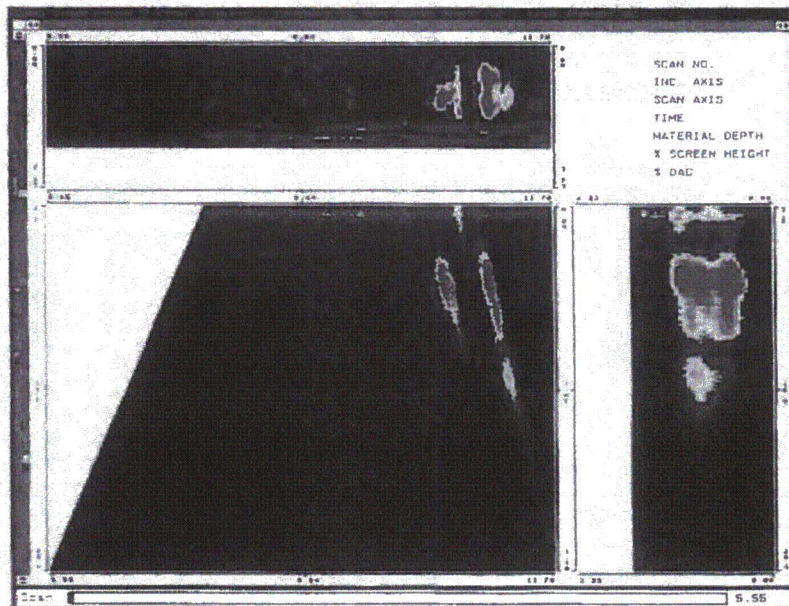


Figure 4. EDAS-II Three-View Image



The ability of EDAS-II to project a three-view summary display generated from the entire set of scan data, as well as to allow the review of individual B-scan data sets with interactive A-scan information, significantly reduced the requirement to "re-look" indications to gather additional data.

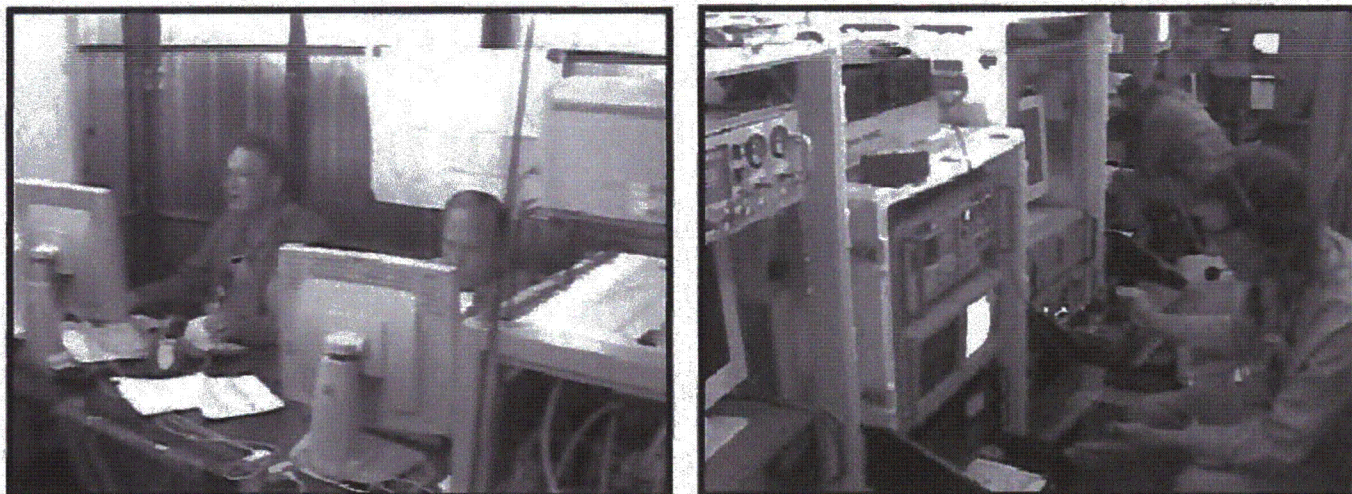


Figure 5. Typical EDAS Data Acquisition and AIRIS Control Station Setup

2.3 NDE Techniques

Reactor Vessel Examinations

The vertical shell welds were ultrasonically examined utilizing ISwT's Performance Demonstration Initiative (PDI) qualified detection procedures. These procedures were previously qualified for both double-sided and single-sided detection and sizing using the unique SLIC40 and Duplex transducer designs.

For flaw detection on the inner 3.25" of the vessel wall (which includes the Supplement 4 volume), the SLIC 40 search unit is used for the detection of both parallel and transverse flaws. When scanning can be accomplished from both sides, two opposing SLIC 40 transducers are used. When scanning can only be accomplished from one side, two SLIC 40s are used side by side.

For flaw detection on the outer portion of the vessel shell, ISwT's "Duplex" transducers were used. These specially designed transducers significantly improve signal-to-noise ratios over standard transducers and were especially valuable during the Supplement 6 qualification for discrimination of buried flaws in the "mid-wall" region of the shell. Two Duplex 55-degree transducers are used in opposing directions when scanning was accomplished from two sides. When scanning can only be accomplished from one side, two Duplex transducers are again used in the same direction; however, one is a 45-degree Duplex. This approach again allows retention of the "two-hit" criterion, but



provides a slightly different angle for more reliable flaw confirmation.

A 0-degree transducer was also carried on the examination module. This transducer was not required during the PDI qualification, and was not used for flaw identification. The transducer is only used to evaluate module contact with the vessel surface and to provide measured shell thickness information if needed for flaw analysis.

System sensitivity calibration was achieved using material noise levels within the actual vessel shell and the flaw discrimination methods used were independent of amplitude.

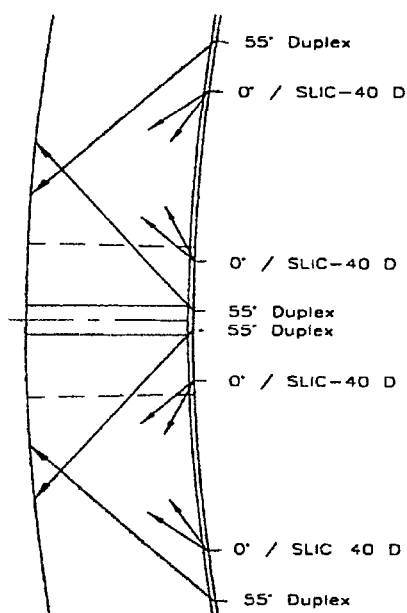


Figure 6. PDI Detection Techniques for RPV Examinations



EXAMINATION RESULTS

3.1 Examination Results

No recordable indications were detected during the examination of the accessible portions of the welds shown in Table 1. The data results were compared to the 1997 ISI data and no relevant differences were encountered. The data records for these examinations are located in the report section entitled "Field Data". The actual RPV ultrasonic data was archived onto 8mm data tapes. These EDAS data tapes are provided as attachments to this report.

Table 1. Examination Results

Weld No.	Weld Configuration Description	Examination Results	Examination Coverage
RPV-VSC1-55	Ring 1 Vertical Weld at 55°	No Recordable Indications	78%
RPV-VSC1-77	Ring 1 Vertical Weld at 77°	No Recordable Indications	85%
RPV-VSC1-197	Ring 1 Vertical Weld at 197°	No Recordable Indications	36%
RPV-VSC1-317	Ring 1 Vertical Weld at 317°	No Recordable Indications	85%
RPV-VSC2-22	Ring 2 Vertical Weld at 22°	No Recordable Indications	66%
RPV-VSC2-141	Ring 2 Vertical Weld at 141°	No Recordable Indications	100%
RPV-VSC2-261	Ring 2 Vertical Weld at 261°	No Recordable Indications	100%
RPV-VSC2-323	Ring 2 Vertical Weld at 323°	No Recordable Indications	100%
RPV-VSC3-77	Ring 3 Vertical Weld at 77°	No Recordable Indications	80%
RPV-VSC3-197	Ring 3 Vertical Weld at 197°	No Recordable Indications	72%
RPV-VSC3-317	Ring 3 Vertical Weld at 317°	No Recordable Indications	80%
RPV-VSC4-99	Ring 4 Vertical Weld at 99°	No Recordable Indications	98%
RPV-VSC4-219	Ring 4 Vertical Weld at 219°	No Recordable Indications	92%
RPV-VSC4-261	Ring 4 Vertical Weld at 261°	No Recordable Indications	100%
RPV-VSC4-339	Ring 4 Vertical Weld at 339°	No Recordable Indications	100%
RPV-CW-C4FLG	Vessel-to-Flange Weld	No Recordable Indications	83%
BMR-016-295	Beltline Region Repair Weld	No Recordable Indications	83%
BMR-017-318	Beltline Region Repair Weld	No Recordable Indications	100%
BMR-018-310	Beltline Region Repair Weld	No Recordable Indications	100%
BMR-138-270	Beltline Region Repair Weld	No Recordable Indications	100%
BMR-167-305	Beltline Region Repair Weld	No Recordable Indications	87%



3.2 Examination Limitations

The scanning accessibility of the full length and/or width of some areas from the inside surface of the RPV was limited due to physical obstructions. A description of the examination limitations is provided below in Table 2. The actual scan areas (scan axis and increment axis) are recorded on the ISwT Examination Records (data records).

Table 2. Examination Limitations

Weld No.	Weld Configuration Description	Examination Limitation
RPV-VSC1-55	Ring 1 Vertical Weld at 55°	Baffle Plate and Jet Pump Diffuser
RPV-VSC1-77	Ring 1 Vertical Weld at 77°	Baffle Plate
RPV-VSC1-197	Ring 1 Vertical Weld at 197°	Core Shroud Repair Tie Rod and Sensing Line Clamp
RPV-VSC1-317	Ring 1 Vertical Weld at 317°	Baffle Plate
RPV-VSC2-22	Ring 2 Vertical Weld at 22°	Core Shroud Repair Tie Rod
RPV-VSC3-77	Ring 3 Vertical Weld at 77°	Core Spray and Feedwater Spargers
RPV-VSC3-197	Ring 3 Vertical Weld at 197°	Core Spray and Feedwater Spargers and the Core Shroud Tie Rod Brackets
RPV-VSC3-317	Ring 3 Vertical Weld at 317°	Core Spray and Feedwater Spargers
RPV-VSC4-99	Ring 4 Vertical Weld at 99°	Rough Clad Area
RPV-VSC4-219	Ring 4 Vertical Weld at 219°	Steam Dryer Support Bracket
RPV-CW-C4FLG	Vessel-to-Flange Weld	RPV Tie Rods and the N3 Nozzle Plugs
~~BMR-16-295~~ BMR-016-295	Beltline Region Repair Weld	Jet Pump Risor Bracket and Core Shroud Repair Tie Rod
BMR-167-305	Beltline Region Repair Weld	Jet Pump Risor Bracket

3.3 Explanation of Field Data Records

In addition to the examinations being automatically recorded as described in the previous section of this report, results of the NDE activities and calibrations performed by ISwT personnel were recorded on standard ISwT forms. The field data records for each weld or area were assembled into a data package preceded by a Summary Sheet. The examination areas and Summary Sheet numbers correspond to those listed in the Summary Table and were completed while on site. Therefore, a general explanation of the individual field data forms is provided to further clarify the information contained on the summary sheet.

- The instruments used in performing the AUT examinations are calibrated prior to use, then verified again at specified intervals during the examinations and upon completion of the examinations. The calibration parameters are recorded on the appropriate calibration record forms. The documented calibration and calibration verification provide assurance that the examinations were performed using properly calibrated instruments.
- The results of the AUT examinations are recorded on ISwT EDAS Examination Record forms. The information documented on these forms describes the parameters associated



IHI Southwest Technologies
NDE Examination Services

Quad Cities Generating Station - Unit 1
April 2005 - QIR18

with the examination. Figure 7 is an explanation of the EDAS Examination Record form.

- As required, the size, location, and nature of reflectors are determined by performance of additional sizing examinations. The analysis is documented on ISwT Indication Resolution Record Sheets, which are then included as a part of that data package.

Figure 7: Explanation of Field Data Record

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site Plant		Weld Identification		Pro Rev Chg ICN		Examination No.			
Project No. 1		Weld Description 1		Device Configuration 2					
Mod Conf		Scan Path Drawing		Exam Date		Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) SNT Level						Start End		Start End	
Data Acquisition									
Scan Controller Parameters		Increment Axis		Scan Axis		Positional Parameters			
Controller		Planned		Planned		Beam Direction			
Scan		Actual		Actual		Transducer Size			
Increment 3		Lower Limit		Lower Limit		Code % Overlap 4			
Mode		Upper Limit		Upper Limit		Number of Scans			
Scan Motion		Increment Interval 3		DCI		Device Position			
Correction		Conversion Counts		Conversion Counts					
		Conversion Units Inch		Conversion Units Inch					
		LD Radius In.							
Module Parameters					Calibration Records		Examination Notes		
Status Angle Direction Scan Offset Stop Offset									
Channel 1									
Channel 2									
Channel 3 5					6		7		
Channel 4							Examination Remarks		
Channel 5									
Channel 6									
Channel 7									
Channel 8									
Data Analysis									
Increment & Scan Positions Actual					Reverifiable Indications			Analyst Remarks	
Scan No (s)					Yes No N/A			Attachment	
Increment Position								Further Evaluation	
Start Stop								Required	
Scan Position								Archive Tape/CD No	
Start Stop								Analyst Tape/CD No	
Channel 1								10	
Channel 2									
Channel 3									
Channel 4									
Channel 5									
Channel 6									
Channel 7									
Channel 8									
Analyst SNT Level Date									

- Plant and Weld ID - Plant site and weld identification information.
- Procedure, Device Drawing, Examination Date and Time - The NDE procedure number along with scanning device drawing numbers, and exam date and time are identified in this area.
- Data Acquisition Examination Parameters - The planned examination parameters that were developed prior to the onsite examination activities from client supplied drawings are listed here along with the parameters that were actually performed. Examination parameters include the increment axis and scan axis upper and lower limits. The increment axis parameters refer to the positioning of the scanning device in order to accomplish the required scanning. The scan axis parameters refer to the area that the device is moved to accomplish the required examination. The actual examination parameters are recorded by the data acquisition operator.
- Data Acquisition Positional Parameters - The search unit beam direction (which is up, down, cw, or ccw), transducer size, and scanning overlap (percent of transducer size) are provided.



The device position is also listed (0, -90, +90, 180).

- 5 Data Acquisition Module Parameters – The UT instrument channel number and the corresponding search unit angles are listed in this area along with the module offset information (both scan and increment offset).
- 6 Data Acquisition Calibration Records - Ultrasonic calibration sheet numbers are identified for each UT channel (UT instrument) used.
- 7 Data Acquisition Examination Notes and Remarks – Examination notes are usually used to remind the acquisition operator of any limitations that might affect the examination and remarks are used to provide additional information regarding actual conditions or any other information related to the examination.
- 8 Data Analysis Increment and Scan Position - The data analyst records the increment and scan positions that are indicated on the recorded examination data.
- 9 Data Analysis Recordable Indications - The data analyst indicates if indications were recorded.
- 10 Data Analyst Remarks - The Analyst will also indicate if further evaluation is required (sizing exams) and where the recorded data has been archived.
- 11 Data Analysis Signature - The data analyst signature and SNT level.

3.4 Examination Summary Table

The following Examination Summary Table provides information on the completed NDE activities performed by ISwT during Q2R17. (Figure 8 is an Explanation of the Summary Table Format.)



SUMMARY NUMBER	EXAMINATION AREA IDENTIFICATION	ASME SEC.XI CATGY ITEM NO	EXAM METHOD	PROCEDURE	N O R E C	O T H E R	REMARKS ALIBRATION BLOCK**
The remarks column is used to describe any pertinent or unique features of the examination such as limitations, results, CNFs, etc. Ultrasonic calibration blocks are also listed in this column.							
The results of the examination are indicated in these columns. The absence of recordable indications is shown by an "X" in the "NOREC" column. The presence of flaw indications is indicated by an "X" in the "OTHER" column, and an explanation of the nature of each flaw indication is contained in the "REMARKS" column.							
This column lists the applicable ISWT nuclear projects operating procedure used for the examination.							
The NDE method used during the examination is listed in this column.							
The ASME SECTION XI ITEM NO. and CATEGORY of the examination area are listed in this column.							
Each examination area is listed in this column.							
This column references the examination summary sheet which serves as a cover sheet for the data package and lists the data record numbers, the examiners, and any pertinent remarks.							

Figure 8. Explanation of the Summary Table Format

QUAD CITIES GENERATING STATION UNIT 1
In-service Inspection Results
Class 1 Scheduled Components – Q1R18

REACTOR PRESSURE VESSEL

Summary Number	Examination Area Identification	ASME Sec. XI Catgy	NDE Method	Procedure	O T		Remarks <u>**Calibration Block**</u>
					N	H	
		Item No.			R	E	
					I	R	

Ring 1 Vertical Welds

000100	RPV-VSC1-55 Ring 1 Vertical Weld @ 55-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	-	-	Automated Exam Nos. ID 1-8. Coverage Obtained – 78% **D70187-2/D70389-1**
000200	RPV-VSC1-77 Ring 1 Vertical Weld @ 77-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	-	-	Automated Exam Nos. ID 9-16. Coverage Obtained – 85% **D70187-2/D70389-1**
000300	RPV-VSC1-197 Ring 1 Vertical Weld @ 197-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	-	-	Automated Exam Nos. ID 17-24. Coverage Obtained – 36% **D70187-2/D70389-1**
000400	RPV-VSC1-317 Ring 1 Vertical Weld @ 317-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	-	-	Automated Exam Nos. ID 25-32. Coverage Obtained – 85% **D70187-2/D70389-1**

Ring 2 Vertical Welds

000500	RPV-VSC2-22 Ring 2 Vertical Weld @ 22-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	-	-	Automated Exam Nos. ID 33-40. Coverage Obtained – 66% **D70187-2/D70389-1**
000600	RPV-VSC2-141 Ring 2 Vertical Weld @ 141-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	-	-	Automated Exam Nos. ID 41-48. Coverage Obtained – 100% **D70187-2/D70389-1**

QUAD CITIES GENERATING STATION UNIT 1
In-service Inspection Results
Class 1 Scheduled Components – Q1R18

REACTOR PRESSURE VESSEL

Summary Number	Examination Area Identification	ASME Sec. XI Catgy	NDE Method	Procedure	O T		Remarks **Calibration Block**
					N R I	H E R	
000700	RPV-VSC2-261 Ring 2 Vertical Weld @ 261-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 49-56. Coverage Obtained – 100% **D70187-2/D70389-1**
000800	RPV-VSC2-323 Ring 2 Vertical Weld @ 323-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 57-64. Coverage Obtained – 100% **D70187-2/D70389-1**

Ring 3 Vertical Welds

000900	RPV-VSC3-77 Ring 3 Vertical Weld @ 77-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 65-72. Coverage Obtained – 80% **D70187-2/D70389-1**
001000	RPV-VSC3-197 Ring 3 Vertical Weld @ 197-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 73-80. Coverage Obtained – 72% **D70187-2/D70389-1**
001100	RPV-VSC3-317 Ring 3 Vertical Weld @ 317-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 81-88. Coverage Obtained – 80% **D70187-2/D70389-1**

Ring 4 Vertical Welds

001200	RPV-VSC4-99 Ring 4 Vertical Weld @ 99-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 89-96. Coverage Obtained – 98% **D70187-2/D70389-1**

QUAD CITIES GENERATING STATION UNIT 1
In-service Inspection Results
Class 1 Scheduled Components – Q1R18

REACTOR PRESSURE VESSEL

Summary Number	Examination Area Identification	ASME Sec. XI Catgy	NDE Method	Procedure	O T		Remarks **Calibration Block**
					N R I	H E R	
001300	RPV-VSC4-219 Ring 4 Vertical Weld @ 219-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 97-104. Coverage Obtained – 92% **D70187-2/D70389-1**
001400	RPV-VSC4-261 Ring 4 Vertical Weld @ 261-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 105-112. Coverage Obtained – 100% **D70187-2/D70389-1**
001500	RPV-VSC4-339 Ring 4 Vertical Weld @ 339-degrees	B-A B1.12	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 113-120. Coverage Obtained – 100% **D70187-2/D70389-1**

Shell to Flange Circumferential Weld

001600	RPV-CW-C4FLG RPV Shell-to-Flange	B-A B1.30	AUTSLIC40 AUTSLIC40T AUT45 AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - - -	- - - - -	Automated Exam Nos. ID 121-122. Coverage Obtained – 83% **D70187-2/D70389-1**

Base Metal Repair Areas

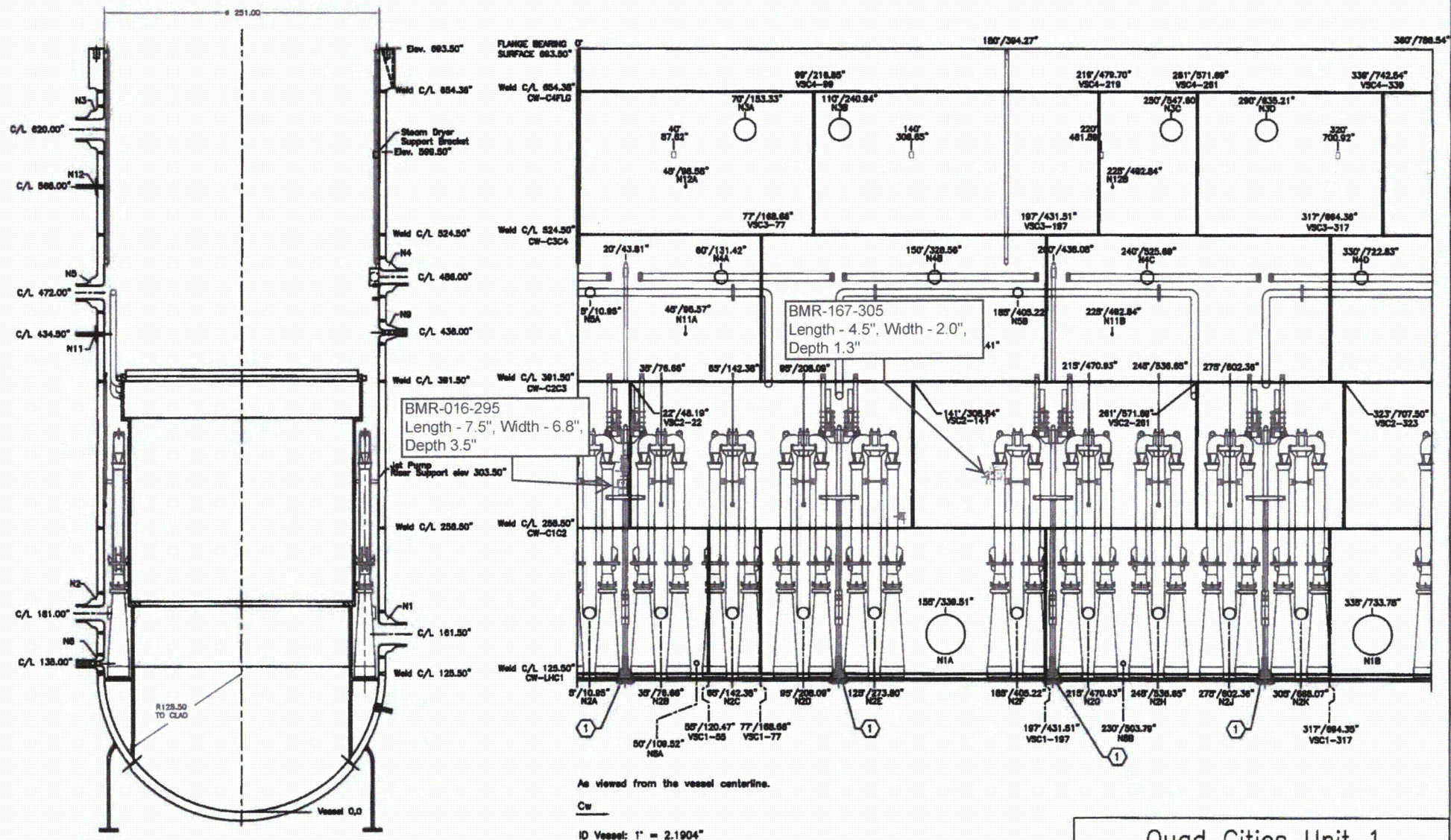
001700	BMR-016-295 Repair Area	B-A B1.51	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 123-125. Coverage Obtained – 83% **D70187-2/D70389-1**
001800	BMR-017-318 Repair Area	B-A B1.51	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	Automated Exam Nos. ID 126-128. Coverage Obtained – 100% **D70187-2/D70389-1**

QUAD CITIES GENERATING STATION UNIT 1
In-service Inspection Results
Class 1 Scheduled Components – Q1R18

REACTOR PRESSURE VESSEL

Summary Number	Examination Area Identification	ASME		NDE Method	Procedure	O T		Remarks <u>**Calibration Block**</u>
		Sec. XI	Catgy			N	H	
		Item No.				R	E	
						I	R	
001900	BMR-018-310 Repair Area	B-A B1.51	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	- - - -	Automated Exam Nos. ID 129-131. Coverage Obtained – 100% **D70187-2/D70389-1**
002000	BMR-138-270 Repair Area	B-A B1.51	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	- - - -	Automated Exam Nos. ID 132-133. Coverage Obtained – 100% **D70187-2/D70389-1**
002100	BMR-167-305 Repair Area	B-A B1.51	AUTSLIC40 AUTSLIC40T AUT55 AUT55T	ISwT-PDI-AUT1 Rev 0, Chg 0 ICN 1,2	- - - -	- - - -	- - - -	Automated Exam Nos. ID 134-135. Coverage Obtained – 87% **D70187-2/D70389-1**

APPENDIX A
WELD IDENTIFICATION SKETCH



Quad Cities Unit 1

ID Vessel Rollout

April 2005

RPV-ID

APPENDIX F

**EXAMINATION AREA COVERAGE REPORT FOR
THE QUAD CITIES GENERATING STATION, UNIT 1**

EXAMINATION AREA COVERAGE REPORT FOR QUAD CITIES GENERATING STATION, UNIT 1

2005 10/05/05

This appendix describes examination coverage achieved during the 2004 in-service inspection of the Quad Cities Generating Station Unit 1, reactor pressure vessel (RPV). The examinations were performed using automated ultrasonic (AUT) scanning equipment and AUT data recording/analysis systems. The scope of the RPV examinations includes 100 percent of the accessible weld and/or component length of the following:

- 1) Vertical shell welds
- 2) Flange-to-shell weld

1. RPV Examination Coverage Requirements Using PDI Techniques

The ISwT techniques and procedures are qualified for both single- and double-sided examinations. The double-sided technique, requiring two examination angles and four search units, is used when access is not restricted. The single-sided examination technique, requiring three examination angles and four search units, is utilized to provide additional coverage when access is restricted. The examination coverage requirements for these techniques are as follows:

1.1 Single-Sided Examination (Reflectors Oriented Parallel and Transverse to the Weld)

- (1) The inner 3.25 inches including the weld metal and adjacent base metal for $\frac{1}{2} t$ either side of the weld fusion line (Volume A) must be completely scanned with both SLIC 40 search units.
- (2) The weld metal and adjacent base material in the outer volume beyond 3.25 inches (Volume B) must be completely scanned with both 45° and 55° Duplex search units.

1.2 Double-Sided Examination (Reflectors Oriented Parallel and Transverse to the Weld)

- (1) The inner 3.25 inches including the weld metal and adjacent base metal for $\frac{1}{2} t$ either side of the weld fusion line (Volume A) must be completely scanned with both SLIC 40 search units.
- (2) The weld metal and adjacent base material in the outer volume beyond 3.25 inches (Volume B) must be completely scanned with both 55° search units.

2. Anticipated Limitation Results

The RPV steam dryer support brackets, the jet pump diffusers, the jet pump support brackets, the jet pump riser braces, and the core shroud repair assemblies limited scanning accessibility to the full length and/or width of some areas from the inside surface. The coverage tables in this appendix describe the percentage of the examination volume that was achieved for each examination area.

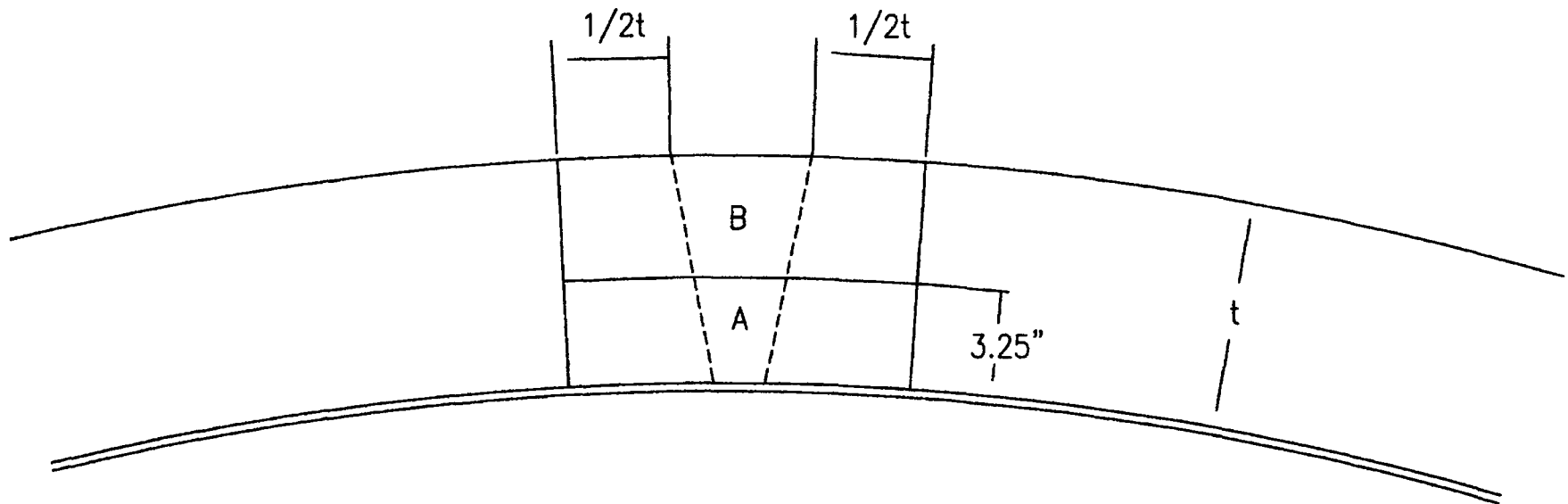
EXAMINATION COVERAGE CALCULATION

The following contains a description of the examination coverage calculation process:

1. Determine the examination scan ("x" and "y") coordinates necessary to obtain 100% of the required weld coverage (reference the examination planned "x" and "y" coordinates).
2. Multiply the delta difference of the planned "x" and "y" coordinates by each other to determine the planned scan area necessary to obtain 100% of the required weld coverage for both transverse and parallel examinations.
3. Multiply the delta difference of the actual "x" and "y" coordinates by each other to determine the actual scan area for both transverse and parallel examinations.
4. Divide the parallel actual scan area by the parallel planned scan area and the transverse actual scan area by the transverse planned scan area to determine the coverage percentage for each type of examination.
5. Compute the average of the parallel and the transverse examination values for the final coverage percentage.

NOTES:

1. The examination limitation and coverage calculations are restricted to examinations performed by ISwT and do not reflect coverage from examinations performed by others during previous inservice inspections.



Vertical Welds

Figure 1

ISwT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 000300

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	RING 1 VERTICAL WELD AT 197-DEGREES
IDENTIFICATION:	VSC1-197

NDE Method	Proc/Rev/Chg/ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N O R T I H	Resolution Record	CNF Number	Remarks
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55	'0800301,0800302	23,24	X -	N / A	N / A	Exam limited due to proximity of the core shroud repair tie rod and the sensing line clamps.
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40	'0800303,0800304	23,24	X -	N / A	N / A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	17,18,19,20, 21,22	X -	N / A	N / A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	17,18,19,20, 21,22	X -	N / A	N / A	

NOTES:

1. Weld VSC1-197 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
2. No recordable indications were detected during this examination.
3. The examination was limited - 36% examination coverage was achieved.
4. Previous data was reviewed and compared upon the completion of the VSC1-197 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by: Carlos M. Barrera
Carlos M. Barrera - Project Engineer

Date: 05-Apr-05

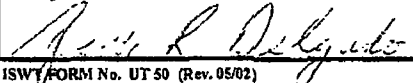
Reviewed by: Exelon Level III

Date: 04-12-2005

Page 1 of 1

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-17	
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 197°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S Vinogradov						4/12/05		Start	End
								0955	1014
								Start	End
								N/A	N/A
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
Controller:	ID Device	Lower Limit		42511	*	Lower Limit		11500	*
Scan:	Y Axis	Upper Limit		43791	*	Upper Limit		14120	*
Increment:	X Axis	Increment Interval		80		DCI		4	
Mode:	Automatic Scan	Conversion Counts		100		Conversion Counts		100	
Scan Motion:	Bi-directional	Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction:	Default	EDAS Radius In.		125.50					
							Positional Parameters		
							Beam Direction: Dn/Up		
							Transducer Size: 1.00		
							Code % of Overlap: 10		
							Number of Scans: 17		
							Device Position: D (0)		
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser,	
Channel 1	On	55	(-)	- 1.40 (in)	- 1.21 (in)	0800301		baffle plate, and the core shroud repair tie rod.	
Channel 2	On	55	(+)	+ 1.40 (in)	- 1.21 (in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.40 (in)	+ 1.21 (in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.40 (in)	+ 1.21 (in)	0800304		Examination Remarks:	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305		No examination due to the proximity of the core shroud repair tie rod	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A		and the sensing line clamps.	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☐ Yes ☒ No	
	Start	Stop	Start	Stop					
*	*	*	*	*	Channel 1 ☐	☐	☒	Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: N/A Analysis Tape/CD No.: N/A	
					Channel 2 ☐	☐	☒		
					Channel 3 ☐	☐	☒		
					Channel 4 ☐	☐	☒		
					Channel 5 ☐	☐	☒		
					Channel 6 ☐	☐	☒		
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date:									
2 APR 05									

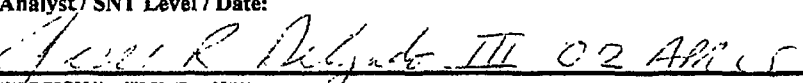
ISWT FORM No. UT 50 (Rev. 05/02)

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT11/0/0/1.2			Examination No.: ID-18		
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 197°			Device Configuration: AIR-21SCAN-0001					
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: S Vinogradov						4/2/05		Start	End	Start	End
								0955	1014	N/A	N/A
Data Acquisition											
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit		42511	*	Lower Limit		14067	*	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit		43791	*	Upper Limit		16687	*	Transducer Size:	1.00
Increment:	X Axis	Increment Interval		80		DCI		4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts		100		Conversion Counts		100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.		125.50							
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:			
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser,			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		baffle plate, and the core shroud repair tie rod.			
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302					
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303					
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:			
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305		* No examination due to proximity of the core shroud repair tie rod.			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A					
Channel 7	Off	N/A	N/A	N/A	N/A	N/A					
Channel 8	Off	N/A	N/A	N/A	N/A	N/A					
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:			
	Start	Stop	Start	Stop				☐ Yes ☒ No			
*	*	*	*	*	Channel 1	☐	☐	☒	Further Evaluation		
					Channel 2	☐	☐	☒	Required:		
					Channel 3	☐	☐	☒	☐ Yes ☒ No		
					Channel 4	☐	☐	☒	Archive Tape/CD No.:		
					Channel 5	☐	☐	☒	N/A		
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:		
					Channel 7	☐	☐	☒	N/A		
					Channel 8	☐	☐	☒			
Analyst / SNT Level / Date:											
 III 2 APR 05											

ISWT FORM No. UT 50 (Rev. 05/02)

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-19	
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 197°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S Vinogradov						4/12/05		Start	End
								0955	1014
								Start	End
								N/A	N/A
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
Controller:	ID Device	Lower Limit	42511		*	Lower Limit	16634		*
Scan:	Y Axis	Upper Limit	43791		*	Upper Limit	19254		*
Increment:	X Axis	Increment Interval	80			DCI	4		
Mode:	Automatic Scan	Conversion Counts	100			Conversion Counts	100		
Scan Motion:	Bi-directional	Conversion Units In.	1.00			Conversion Units In.	1.00		
Correction:	Default	EDAS Radius In.	125.50						
								Positional Parameters	
								Beam Direction:	Dn/Up
								Transducer Size:	1.00
								Code % of Overlap:	10
								Number of Scans:	17
								Device Position:	D (0)
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:	
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser,	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		baffle plate, and the core shroud repair tie rod.	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305		* No examination due to proximity of the core shroud repair tie rod.	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☐ Yes ☒ No	
	Start	Stop	Start	Stop					
*	*	*	*	*	Channel 1	☐	☐	☒	Further Evaluation
					Channel 2	☐	☐	☒	Required:
					Channel 3	☐	☐	☒	☐ Yes ☒ No
					Channel 4	☐	☐	☒	Archive Tape/CD No.:
					Channel 5	☐	☐	☒	N/A
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:
					Channel 7	☐	☐	☒	N/A
					Channel 8	☐	☐	☒	
Analyst / SNT Level / Date:									
02 APR 05									

ISWT FORM No. UT 50 (Rev. 05/02)

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-20			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 197°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S Vinogradov						4/12/05		Start	End	Start	End	
								0955	1014	94	94	
Data Acquisition												
Scan Controller Parameters			Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters	
Controller:	ID Device		Lower Limit		42511		Lower Limit		19201		Beam Direction: Up/Dn	
Scan:	Y Axis		Upper Limit		43791		Upper Limit		21821		Transducer Size: 1.00	
Increment:	X Axis		Increment Interval		80		DCI		4		Code % of Overlap: 10	
Mode:	Automatic Scan		Conversion Counts		100		Conversion Counts		100		Number of Scans: 17	
Scan Motion:	Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: D (0)	
Correction:	Default		EDAS Radius In.		125.50							
Module Parameters:						Calibration Records:		Examination Notes:				
A-07A		Cal 03				QCS1-03		Check for limitations due to the proximity of the jet pump diffuser, baffle plate, and the core shroud repair tie rod.				
Status	Angle	Direction	Scan Offset	Step Offset								
Channel 1	On	55	(-)	- 1.40 (in)	- 1.21 (in)	0800301						
Channel 2	On	55	(+)	+ 1.40 (in)	+ 1.21 (in)	0800302						
Channel 3	On	SLIC-40	(-)	- 1.40 (in)	+ 1.21 (in)	0800303						
Channel 4	On	SLIC-40	(+)	+ 1.40 (in)	+ 1.21 (in)	0800304		Examination Remarks:				
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305		Limited exam due to the proximity of the core shroud repair tie rod.				
Channel 6	Off	N/A	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1				
	Start	Stop	Start	Stop								
1-17	42511	43718	21196	22400	Channel 1 ☐	☒	☐					
					Channel 2 ☐	☒	☐					
					Channel 3 ☐	☒	☐					
					Channel 4 ☐	☒	☐					
					Channel 5 ☐	☐	☒					
					Channel 6 ☐	☐	☒					
					Channel 7 ☐	☐	☒					
					Channel 8 ☐	☐	☒					
Analyst / SNT Level / Date:												
												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 20

Page 1 of 2

Quad Cities Unit 1
VSC1-197
Ring 1 Vert @ 197 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

204.76 - 206.00
423.90 - 431.10
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
0.00 - 7.20
17.68 - 18.92

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME
1 10
423.90 431.10
7.20
31
429.72
209.96
205.48
3.13
5.46
91.5

Comments

: No recordable indications ch 1, ch2
: ch3, ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
0.00 - 7.20
7.84 - 9.08

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
- 5.82
16.76 - 18.00

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
- 5.82
8.76 - 10.00

Exam Number 20

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

- 5.82

12.76 - 14.00

Reviewed By

J. M. R. Delgado

SNT Level

III

Date

2 Apr 05

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-21			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 197°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S Vinogradov						4/2/2005		Start		End		
								1045		1055		
								96		96		
Data Acquisition												
Scan Controller Parameters			Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned	
Controller: ID Device			Lower Limit		42511		42734		Lower Limit		21768	
Scan: Y Axis			Upper Limit		43791		43785		Upper Limit		24388	
Increment: X Axis			Increment Interval		80				DCI		4	
Mode: Automatic Scan			Conversion Counts		100				Conversion Counts		100	
Scan Motion: Bi-directional			Conversion Units In.		1.00				Conversion Units In.		1.00	
Correction: Default			EDAS Radius In.		125.50							
											Positional Parameters	
											Beam Direction: Up/Dn	
											Transducer Size: 1.00	
											Code % of Overlap: 10	
											Number of Scans: 17	
											Device Position: D (0)	
Module Parameters: A-07A Cal 03						Calibration Records:			Examination Notes:			
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03			Check for limitations due to the proximity of the jet pump diffuser,			
Channel 1	On	55	(-)	- 1.40 (in)	- 1.21 (in)	0800301			baffle plate, and the core shroud repair tie rod.			
Channel 2	On	55	(+)	+ 1.40 (in)	- 1.21 (in)	0800302						
Channel 3	On	SLIC-40	(-)	- 1.40 (in)	+ 1.21 (in)	0800303						
Channel 4	On	SLIC-40	(+)	+ 1.40 (in)	+ 1.21 (in)	0800304			Examination Remarks:			
Channel 6	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305						
Channel 6	Off	N/A	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No				
	Start	Stop	Start	Stop								
1-17	42532	43788	22308	24388	Channel 1	☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1			
					Channel 2	☐	☒	☐				
					Channel 3	☐	☒	☐				
					Channel 4	☐	☒	☐				
					Channel 5	☐	☐	☒				
					Channel 6	☐	☐	☒				
					Channel 7	☐	☐	☒				
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date:												
02 APR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 21

Page 1 of 2

Quad Cities Unit 1
VCS1-197
Ring 1 Vert @ 197 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

237.72 - 238.96
426.32 - 433.52
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.22
15.12 - 16.36

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	426.32	433.54
Length	7.22	
% DAC	16	
Inc. Axis Location	432.22	
Surface Location	234.92	
Scan Axis Location	238.92	
Depth In Material	2.80	
Metal Path	4.88	
Time	81.9	

Comments

: No recordable indications ch1, ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.22
24.96 - 26.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

4.89 - 10.09
16.04 - 17.28

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

4.89 - 10.09
24.04 - 25.28

Exam Number 21

Page 2 of 2

Module Coordinates	Channel 5
Inc. Axis	4.89 - 10.09
Scan Axis	20.04 - 21.28

Reviewed By _____ SNT Level _____ Date _____

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-197			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2		Examination No.: ID-22	
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 197°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S Vinogradov						4/2/2005		Start	End
								1105	1120
						Start	End	Surface Temperature °F	
								96	96
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	42511	42498	Lower Limit	24335	24355	Beam Direction:	Up/Dn
Scan:	Y Axis	Upper Limit	43791	43774	Upper Limit	26955	26875	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (180)
Correction:	Default	EDAS Radius In.	125.50						
Module Parameters:					Calibration Records:		Examination Notes:		
A-07A		Cal 03			QCS1-03		Check for limitations due to the proximity of the jet pump diffuser, baffle plate, and the core shroud repair tie rod.		
Status	Angle	Direction	Scan Offset	Step Offset					
Channel 1	On	55	(-)	- 1.40 (in)	- 1.21 (in)	0800301			
Channel 2	On	55	(+)	+ 1.40 (in)	- 1.21 (in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.40 (in)	+ 1.21 (in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.40 (in)	+ 1.21 (in)	0800304	Examination Remarks:		
Channel 6	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-17	42498	43771	24335	26885	Channel 1 ☐	☒	☐	☒ Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	5A & 5B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date: <i>S. Vinogradov 02-APR-05</i>									

Exam Number 22

Page 1 of 2

Quad Cities Unit 1
VSC1-197
Ring 1 Vert @ 197 deg

Cursor Box 1 of 1

Scan Axis	247.87 - 249.11
Inc. Axis	423.90 - 431.10
Depth In Material	2.98 - 3.66

Module Coordinates

Channel 1

Inc. Axis	0.00 - 7.20
Scan Axis	10.16 - 11.40

Feature Analysis

Channel 1

ASME

Inc. Axis Values

Scan No. Limits	1	10
Inc. Axis Limits	423.90	431.10
Length	7.20	

Maximum Point

% DAC	13
Inc. Axis Location	425.21
Surface Location	253.39
Scan Axis Location	248.75
Depth In Material	3.24
Metal Path	5.65
Time	94.7

Comments

: No recordable indications Ch1, ch2
: ch3, ch4.
:
:

Module Coordinates

Channel 2

Inc. Axis	0.00 - 7.20
Scan Axis	-1.12 - 0.12

Module Coordinates

Channel 3

Inc. Axis	- 3.99
Scan Axis	8.96 - 10.20

Module Coordinates

Channel 4

Inc. Axis	- 3.99
Scan Axis	0.08 - 1.32

Exam Number 22

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

- 3.99

4.52 - 5.76

Reviewed By Paul R. DeGroot

SNT Level III

Date 2 APR 85

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-23			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 197°			Device Configuration: AIR-21SCAN-0002						
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						2-Apr-05		Start		End		
Data Acquisition												
Scan Controller Parameters				Increment Axis/Device		Planned		Actual		Scan Axis/Arm		
Controller: ID Device				Lower Limit		12400		*		Lower Limit		
Scan: X Axis				Upper Limit		19330		*		Upper Limit		
Increment: Y Axis				Increment Interval		90				DCI		
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		
Correction: Default				EDAS Radius In.		125.50				Positional Parameters		
										Beam Direction: Ccw/Cw		
										Transducer Size: 1.00		
										Code % of Overlap: 10		
										Number of Scans: 78		
										Device Position: A (0)		
Module Parameters: A-07-1D Cal 33						Calibration Records:			Examination Notes:			
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-33			Check for limitations due to the proximity of the jet pump diffuser,			
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301			baffle plate, and the core shroud repair tie rod.			
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803302						
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303						
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803304			Examination Remarks:			
Channel 5	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803305			* No exam due to core shroud repair tie rod.			
Channel 6	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803306						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:				
	Start	Stop	Start	Stop								
*	*	*	*	*	Channel 1	☐	☐	☒	☐ Yes ☒ No			
					Channel 2	☐	☐	☒	Further Evaluation			
					Channel 3	☐	☐	☒	Required:			
					Channel 4	☐	☐	☒	☐ Yes ☒ No			
					Channel 5	☐	☐	☒	Archive Tape/CD No.:			
					Channel 6	☐	☐	☒	N/A			
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 8	☐	☐	☒	1			
Analyst / SNT Level / Date: <i>Repa Regal II 14 JUL 05</i>												

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2			Examination No.: ID-24			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 197°			Device Configuration: AIR-21SCAN-0002						
Mod.Conf.: A-07-1C			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						2-Apr-05		Start	End	Start	End	
								0337	0405	97	97	
Data Acquisition												
Scan Controller Parameters			Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual	Positional Parameters	
Controller: ID Device			Lower Limit		19240	21099	Lower Limit		42401	42417	Beam Direction: Cw/Ccw	
Scan: X Axis			Upper Limit		26080	26069	Upper Limit		43901	43869	Transducer Size: 1.00	
Increment: Y Axis			Increment Interval		90		DCI		4		Code % of Overlap: 10	
Mode: Automatic Scan			Conversion Counts		100		Conversion Counts		100		Number of Scans: 77	
Scan Motion: Bi-directional			Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: A (180)	
Correction: Default			EDAS Radius In.		125.50							
Module Parameters: A-07-1C Cal 33						Calibration Records:		Examination Notes:				
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-33		Check for limitations due to the proximity of the jet pump diffuser,				
Channel 1	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803301		baffle plate, and the core shroud repair tie rod.				
Channel 2	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803302						
Channel 3	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803303						
Channel 4	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803304		Examination Remarks:				
Channel 5	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803305		Limited exam due to the proximity of the core shroud repair tie rod.				
Channel 6	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803306						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1				
	Start	Stop	Start	Stop	Channel 1	☐	☒					☐
22-77	21097	26079	42417	43885	Channel 2	☐	☒	☐				
					Channel 3	☐	☒	☐				
					Channel 4	☐	☒	☐				
					Channel 5	☐	☐	☒				
					Channel 6	☐	☐	☒				
					Channel 7	☐	☐	☒				
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date: R. Barberino II 02 APR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number ID-24

Page 1 of 2

Quad Cities Unit 1
ID-24
Ring 1 Vert @ 197 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

432.89 - 434.13
191.40 - 199.50
3.37 - 4.55

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
- 7.31
11.08 - 12.32

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
- 7.31
6.68 - 7.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 8.08
10.44 - 11.68

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
- 6.34
7.32 - 8.56

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
- 6.34
13.28 - 14.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 6
0.00 - 8.08
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME
22 31
191.40 199.48
8.08

Exam Number ID-24

Page 2 of 2

% DAC	17
Inc. Axis Location	191.40
Surface Location	433.97
Scan Axis Location	433.97
Depth In Material	4.36
Metal Path	4.36
Time	36.8
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

Dee a R 200

SNT Level

II

Date

02 APR 05

ISwT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 000400

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	RING 1 VERTICAL WELD AT 317-DEGREES
IDENTIFICATION:	VSC1-317

NDE Method	Proc/Rev/Chg/ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N O R T I H	Resolution Record	CNF Number	Remarks
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55	'0800301,0800302	31,32	X -	N / A	N / A	Exam limited due to proximity of the baffle plate.
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40	'0800303,0800304	31,32	X -	N / A	N / A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	25,26,27,28, 29,30	X -	N / A	N / A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	25,26,27,28, 29,30	X -	N / A	N / A	
					X -	N / A	N / A	

- NOTES:
1. Weld VSC1-317 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 85% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the VSC1-317 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by:

Carlos M. Barrera
Carlos M. Barrera - Project Engineer

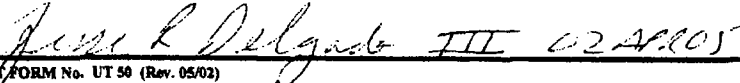
Date: 05-Apr-05

Reviewed by:

Exelon Level III
Exelon Level III

Date: 04-12-2005

Page 1 of 1

 IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSCI-317			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2			Examination No.: ID-25			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 317°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/N/A						4/2/2005		Start		End		
								1609		1620		96
Data Acquisition												
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		
Controller: ID Device				Lower Limit		68795		68826		Lower Limit		
Scan: Y Axis				Upper Limit		70075		70071		Upper Limit		
Increment: X Axis				Increment Interval		80				DCI		
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		
Correction: Default				EDAS Radius In.		125.50				Device Position:		
										D (0)		
Module Parameters:						Cal 03		Calibration Records:		Examination Notes:		
Status		Angle	Direction	Scan Offset	Step Offset			QCS1-03		Check for limitations due to the proximity of the jet pump diffuser		
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)			0800301		and the baffle plate.		
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)			0800302				
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)			0800303				
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)			0800304		Examination Remarks:		
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)			0800305		Limited exam due to proximity of baffle plate.		
Channel 6	Off	N/A	N/A	N/A	N/A			N/A				
Channel 7	Off	N/A	N/A	N/A	N/A			N/A				
Channel 8	Off	N/A	N/A	N/A	N/A			N/A				
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1				
	Start	Stop	Start	Stop								
1-17	68818	70069	13876	15000	Channel 1	☐	☒	☐				
					Channel 2	☐	☒	☐				
					Channel 3	☐	☒	☐				
					Channel 4	☐	☒	☐				
					Channel 5	☐	☐	☒				
					Channel 6	☐	☐	☒				
					Channel 7	☐	☐	☒				
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date:												
												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 25

Page 1 of 2

Quad Cities Unit 1
VSC1-317
Ring 1 Vert @ 317 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

134.64 - 135.88
686.74 - 693.94
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.07
1.56 - 2.80

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length

Channel 1
ASME

	1	10
	686.74	693.81
		7.07

Maximum Point

% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

13
689.97
140.12
135.68
3.11
5.42
90.9

Comments

:
: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.07
-8.28 - -7.04

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 3.23
0.64 - 1.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 3.23
-7.36 - -6.12

Exam Number 25

Page 2 of 2

Module Coordinates

Channel 5

Inc. Axis

- 3.23

Scan Axis

-3.36 - -2.12

Reviewed By

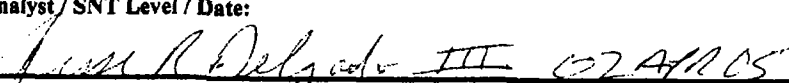
James R. Deyle

SNT Level

III

Date

02 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant : Quad Cities Unit 1				Weld Identification: VSCI-317				Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2				Examination No.: ID-26					
Project No.: 04-0379				Weld Description: Ring 1 Vert @ 317°				Device Configuration: AIR-21SCAN-0001									
Mod.Conf.: A-07B				Scan Path Drawing: SPLONGBUTT				Exam Date		Examination Time		Surface Temperature °F					
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/N/A								4/2/2005		Start		End					
										1635		1642					
										96		96					
Data Acquisition																	
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		68795		68809		Lower Limit		14067		14958		Beam Direction: Dn/Up	
Scan: Y Axis				Upper Limit		70075		70045		Upper Limit		16687		16682		Transducer Size: 1.00	
Increment: X Axis				Increment Interval		80				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 17	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: D (0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters: A-07B Cal 03								Calibration Records:				Examination Notes:					
								QCS1-03				Check for limitations due to the proximity of the jet pump diffuser					
								0800301				and the baffle plate.					
								0800302									
								0800303									
								0800304				Examination Remarks:					
								0800305									
								N/A									
								N/A									
								N/A									
								N/A									
Data Analysis																	
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks									
Scan No.(s)		Increment Position		Scan Position					Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1								
		Start	Stop	Start	Stop	Channel 1	Yes	No	N/A								
1-17		68820	70043	14950	16686	Channel 1	☐	☒	☐								
						Channel 2	☐	☒	☐								
						Channel 3	☐	☒	☐								
						Channel 4	☐	☒	☐								
						Channel 5	☐	☐	☒								
						Channel 6	☐	☐	☒								
						Channel 7	☐	☐	☒								
						Channel 8	☐	☐	☒								
Analyst / SNT Level / Date:																	
																	

ISWT FORM No. UT 50 (Rev. 03/02)

Exam Number 26

Page 1 of 2

Quad Cities Unit 1
VSC1-317
Ring 1 Vert @ 317 deg

Cursor Box 1 of 1

Scan Axis	150.86 - 152.10
Inc. Axis	686.74 - 693.94
Depth In Material	2.45 - 3.13

Module Coordinates

Channel 1

Inc. Axis	0.00 - 6.81
Scan Axis	6.28 - 7.52

Feature Analysis

Channel 1

ASME

Inc. Axis Values

Scan No. Limits	1	10
Inc. Axis Limits	686.74	693.55
Length	6.81	

Maximum Point

% DAC	17
Inc. Axis Location	692.88
Surface Location	156.30
Scan Axis Location	152.10
Depth In Material	2.95
Metal Path	5.15
Time	86.4

Comments

:	No recordable indications ch1 ch2
:	ch3 ch4.
:	
:	

Module Coordinates

Channel 2

Inc. Axis	0.00 - 6.81
Scan Axis	-3.56 - -2.32

Module Coordinates

Channel 3

Inc. Axis	- 3.79
Scan Axis	5.36 - 6.60

Module Coordinates

Channel 4

Inc. Axis	- 3.79
Scan Axis	-2.64 - -1.40

xam Number 26

Channel 5

Module Coordinates
Inc. Axis
Scan Axis

- 3.79
1.36 - 2.60

Reviewed By Jose R. Delgado

Page 49 of 945

SNT Level III Date 02 APR 05

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-317			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-27			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 317°			Device Configuration: AIR-21/SCAN-0001						
Mod. Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A						2-Apr-05		Start		End		
								1647		1654		
								96		96		
Data Acquisition												
Scan Controller Parameters			Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned	
Controller: ID Device			Lower Limit		68795		68789		Lower Limit		16634	
Scan: Y Axis			Upper Limit		70075		70064		Upper Limit		19254	
Increment: X Axis			Increment Interval		80		DCI		4		Positional Parameters	
Mode: Automatic Scan			Conversion Counts		100		Conversion Counts		100		Beam Direction: Dn/Up	
Scan Motion: Bi-directional			Conversion Units In.		1.00		Conversion Units In.		1.00		Transducer Size: 1.00	
Correction: Default			EDAS Radius In.		125.50						Code % of Overlap: 10	
											Number of Scans: 17	
											Device Position: D (0)	
Module Parameters: A-07B Cal 03						Calibration Records:			Examination Notes:			
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03			Check for limitations due to the proximity of the jet pump diffuser			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301			and the baffle plate.			
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302						
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303						
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304			Examination Remarks:			
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305						
Channel 6	Off	N/A	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Channel 1	Yes	No	N/A	Attachment:			
	Start	Stop	Start	Stop					Channel 2	Yes		No
1-17	68791	70079	16634	19254	☐	☒	☐	☐	☒ Yes ☐ No			
					Channel 3	☐	☒	☐	Further Evaluation			
					Channel 4	☐	☒	☐	Required:			
					Channel 5	☐	☐	☒	☐ Yes ☒ No			
					Channel 6	☐	☐	☒	Archive Tape/CD No.:			
					Channel 7	☐	☐	☒	5A & 5B			
					Channel 8	☐	☐	☒	Analysis Tape/CD No.:			
									1			
Analyst / SNT Level / Date: RLOa Rsgg III 02 APR 05												

Exam Number 27

Page 1 of 2

Quad Cities Unit 1
 VSC1-317
 Ring 1 Vert @ 317 deg

 Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

170.82 - 172.06
 689.64 - 696.84
 3.37 - 4.54

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1
 3.05 - 10.17
 10.68 - 11.92

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2
 3.05 - 10.17
 -1.72 - -0.48

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3
 0.00 - 7.15
 9.28 - 10.52

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4
 0.00 - 7.15
 -0.32 - 0.92

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 5
 0.00 - 7.15
 4.48 - 5.72

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length

Channel 5
 ASME
 1 10
 689.64 696.79
 7.15

Maximum Point

% DAC
 Inc. Axis Location
 Surface Location
 Scan Axis Location
 Depth In Material
 Metal Path

2
 691.74
 171.18
 171.18
 3.37
 3.37

Exam Number 27

Page 2 of 2

Time
Comments

28.5

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Roll a Bello

SNT Level

II

Date

02 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-317			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2			Examination No.: ID-28			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 317°			Device Configuration: AIR-21SCAN-0001						
Mod. Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A						2-Apr-05		Start	End	Start	End	
								1659	1706	96	96	
Data Acquisition												
Scan Controller Parameters Controller: ID Device Scan: Y Axis Increment: X Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default			Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters Beam Direction: Dn/Up Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 17 Device Position: D (0)	
Lower Limit		68795	68772	Lower Limit		19201	19201					
Upper Limit		70075	70073	Upper Limit		21821	21817					
Increment Interval		80		DCI		4						
Conversion Counts		100		Conversion Counts		100						
Conversion Units In.		1.00		Conversion Units In.		1.00						
EDAS Radius In.		125.50										
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:				
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.				
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301						
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302						
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303						
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:				
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305						
Channel 6	Off	N/A	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Channel	Yes	No	N/A	Attachment:			
	Start	Stop	Start	Stop								
1-17	68799	70075	19201	21821	Channel 1	☐	☒	☐	☒ Yes ☐ No			
					Channel 2	☐	☒	☐	Further Evaluation			
					Channel 3	☐	☒	☐	Required:			
					Channel 4	☐	☒	☐	☐ Yes ☒ No			
					Channel 5	☐	☐	☒	Archive Tape/CD No.:			
					Channel 6	☐	☐	☒	5A & 5B			
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 8	☐	☐	☒	1			
Analyst / SNT Level / Date: Rosa Rosa II 02 APR 05												

ISWT FORM No. UT 58 (Rev. 05/02)

Exam Number 28

Page 1 of 2

Quad Cities Unit 1
VSC1-317
Ring 1 Vert @ 317 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

196.49 - 197.73
689.64 - 696.84
3.37 - 4.54

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
3.11 - 10.34
10.68 - 11.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
3.11 - 10.34
-1.72 - -0.48

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 6.57
9.28 - 10.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
0.00 - 6.57
-0.32 - 0.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
0.00 - 6.57
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

Channel 5
ASME
1 10
689.64 696.21
6.57
14
690.34
197.13
197.13
3.37
3.37

Exam Number 28

Page 2 of 2

Time	
28.5	
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

DeVaRosa

SNT Level II

Date 02 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																																																																	
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-317			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2			Examination No.: ID-29																																																								
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 317°			Device Configuration: AIR-21SCAN-0001																																																											
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F																																																							
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A						2-Apr-05		Start	End	Start	End																																																						
								1709	1716	96	96																																																						
Data Acquisition																																																																	
Scan Controller Parameters Controller: ID Device Scan: Y Axis Increment: X Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default				Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters Beam Direction: Dn/Up Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 17 Device Position: D (0)																																																					
				Lower Limit		68795	68783	Lower Limit		21768	21772																																																						
				Upper Limit		70075	70066	Upper Limit		24388	24388																																																						
				Increment Interval		80		DCI		4																																																							
				Conversion Counts		100		Conversion Counts		100																																																							
				Conversion Units In.		1.00		Conversion Units In.		1.00																																																							
				EDAS Radius In.		125.50																																																											
Module Parameters: A-07B Cal 03						Calibration Records:			Examination Notes:																																																								
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Status</th> <th>Angle</th> <th>Direction</th> <th>Scan Offset</th> <th>Step Offset</th> </tr> </thead> <tbody> <tr> <td>Channel 1</td> <td>On</td> <td>55</td> <td>(-)</td> <td>- 1.40(in)</td> <td>- 1.21(in)</td> </tr> <tr> <td>Channel 2</td> <td>On</td> <td>55</td> <td>(+)</td> <td>+ 1.40(in)</td> <td>- 1.21(in)</td> </tr> <tr> <td>Channel 3</td> <td>On</td> <td>SLIC-40</td> <td>(-)</td> <td>- 1.97(in)</td> <td>+ 1.69(in)</td> </tr> <tr> <td>Channel 4</td> <td>On</td> <td>SLIC-40</td> <td>(+)</td> <td>+ 1.97(in)</td> <td>+ 1.69(in)</td> </tr> <tr> <td>Channel 5</td> <td>On</td> <td>0T</td> <td>(+)</td> <td>+ 0.00(in)</td> <td>+ 1.69(in)</td> </tr> <tr> <td>Channel 6</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 7</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 8</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>							Status	Angle	Direction	Scan Offset	Step Offset	Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	Channel 6	Off	N/A	N/A	N/A	N/A	Channel 7	Off	N/A	N/A	N/A	N/A	Channel 8	Off	N/A	N/A	N/A	N/A	QCS1-03			Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.		
	Status	Angle	Direction	Scan Offset	Step Offset																																																												
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)																																																												
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)																																																												
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)																																																												
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)																																																												
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)																																																												
Channel 6	Off	N/A	N/A	N/A	N/A																																																												
Channel 7	Off	N/A	N/A	N/A	N/A																																																												
Channel 8	Off	N/A	N/A	N/A	N/A																																																												
						0800301																																																											
						0800302																																																											
						0800303																																																											
						0800304			Examination Remarks:																																																								
						0800305																																																											
						N/A																																																											
						N/A																																																											
						N/A																																																											
						N/A																																																											
Data Analysis																																																																	
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks																																																									
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1																																																									
	Start	Stop	Start	Stop																																																													
1-17	68792	70072	21768	24388	Channel 1 ☐	☒	☐																																																										
					Channel 2 ☐	☒	☐																																																										
					Channel 3 ☐	☒	☐																																																										
					Channel 4 ☐	☒	☐																																																										
					Channel 5 ☐	☐	☒																																																										
					Channel 6 ☐	☐	☒																																																										
					Channel 7 ☐	☐	☒																																																										
					Channel 8 ☐	☐	☒																																																										
Analyst / SNT Level / Date:																																																																	
RKO a RCOO II 02 APR 05																																																																	

Exam Number 29

Page 1 of 2

Quad Cities Unit 1
 VSC1-317
 Ring 1 Vert @ 317 deg

 Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

222.16 - 223.40
 689.64 - 696.84
 3.37 - 4.54

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1

3.00 - 10.27
 10.68 - 11.92

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2

3.00 - 10.27
 -1.72 - -0.48

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3

0.00 - 6.96
 9.28 - 10.52

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4

0.00 - 6.96
 -0.32 - 0.92

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 5

0.00 - 6.96
 4.48 - 5.72

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length
 Maximum Point
 % DAC
 Inc. Axis Location
 Surface Location
 Scan Axis Location
 Depth In Material
 Metal Path

Channel 5
 ASME

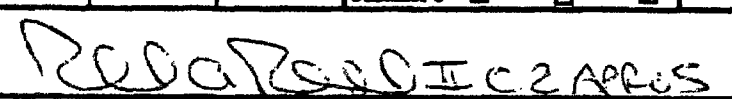
	1	10
689.64		696.60
	6.96	
	6	
	691.22	
	222.16	
	222.16	
	3.67	
	3.67	

Exam Number 29

Page 2 of 2

Time	
31.0	
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By Rebecca Rego SNT Level II Date 02 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant: Quad Cities Unit 1				Weld Identification: VSC1-317				Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2				Examination No: ID-30					
Project No.: 04-0379				Weld Description: Ring 1 Vert @ 317°				Device Configuration: AIR-21SCAN-0001									
Mod. Conf.: A-07B				Scan Path Drawing: SPLONGBUTT				Exam Date		Examination Time		Surface Temperature °F					
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A								2-Apr-05		Start		End		Start		End	
										1720		1727		96		96	
Data Acquisition:																	
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		68795		68777		Lower Limit		24335		24335		Beam Direction: Dn/Up	
Scan: Y Axis				Upper Limit		70075		70053		Upper Limit		26955		26955		Transducer Size: 1.00	
Increment: X Axis				Increment Interval		80				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 17	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: D (0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters: A-07B Cal 03						Calibration Records:						Examination Notes:					
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03				Check for limitations due to the proximity of the jet pump diffuser							
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301				and the baffle plate.							
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302											
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303											
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304				Examination Remarks:							
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305											
Channel 6	Off	N/A	N/A	N/A	N/A	N/A											
Channel 7	Off	N/A	N/A	N/A	N/A	N/A											
Channel 8	Off	N/A	N/A	N/A	N/A	N/A											
Data Analysis																	
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks									
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:									
	Start	Stop	Start	Stop				☒ Yes ☐ No									
1-17	68777	700758	24335	26955	Channel 1	☐	☒	☐	☒ Further Evaluation								
					Channel 2	☐	☒	☐	Required:								
					Channel 3	☐	☒	☐	☐ Yes ☒ No								
					Channel 4	☐	☒	☐	Archive Tape/CD No.:								
					Channel 5	☐	☐	☒	5A & 5B								
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:								
					Channel 7	☐	☐	☒	1								
					Channel 8	☐	☐	☒									
Analyst / SNT Level / Date:																	
																	

ISWT FORM No. UT 58 (Rev. 05/02)

Exam Number 30

Page 1 of 2

Quad Cities Unit 1
 VSC1-317
 Ring 1 Vert @ 317 deg

 Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

247.83 - 249.07
 689.64 - 696.84
 3.37 - 4.54

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1

2.83 - 10.41
 10.68 - 11.92

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2

2.83 - 10.41
 -1.72 - -0.48

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3

0.00 - 6.96
 9.28 - 10.52

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4

0.00 - 6.96
 -0.32 - 0.92

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 5

0.00 - 6.96
 4.48 - 5.72

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length
 Maximum Point
 % DAC
 Inc. Axis Location
 Surface Location
 Scan Axis Location
 Depth In Material
 Metal Path

Channel 5
 ASME

	1	10
689.64		696.60
	6.96	
	2	
	693.02	
	248.11	
	248.11	
	3.41	
	3.41	

Exam Number 30

Page 2 of 2

Time
Comments

28.8

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By Rafaela Rago

Page 61 of 945

SNT Level IV

Date 02 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant: Quad Cities Unit 1			Weld Identification: VSCI-317			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-31		
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 317°			Device Configuration: AIR-21SCAN-0002					
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						1-Apr-05		Start		End	
								2050		2148	
								97		97	
Data Acquisition											
Scan Controller Parameters				Increment Axis/Device		Planned		Actual		Scan Axis/Arm	
Controller: ID Device				Lower Limit		12400				Lower Limit	
Scan: X Axis				Upper Limit		19330				Upper Limit	
Increment: Y Axis				Increment Interval		90				DCI	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.	
Correction: Default				EDAS Radius In.		125.50				1.00	
										Positional Parameters	
										Beam Direction: Ccw/Cw	
										Transducer Size: 1.00	
										Code % of Overlap: 10	
										Number of Scans: 78	
										Device Position: A (0)	
Module Parameters: A-07-1D Cal 33						Calibration Records:		Examination Notes:			
Status	Angle	Direction	Scan Offset	Step Offset		QCS1-33		Check for limitations due to the proximity of the jet pump diffuser			
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301		and the baffle plate.			
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803302					
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303					
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803304		Examination Remarks:			
Channel 5	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803305		Limited exam due to the jet pump configuration.			
Channel 6	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803306					
Channel 7	Off	N/A	N/A	N/A	N/A	N/A					
Channel 8	Off	N/A	N/A	N/A	N/A	N/A					
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:			
	Start	Stop	Start	Stop				☒ Yes ☐ No			
17-78	30237	31507	35050	37678	Channel 1	☐	☒	☐	Further Evaluation		
					Channel 2	☐	☒	☐	Required:		
					Channel 3	☐	☒	☐	☐ Yes ☒ No		
					Channel 4	☐	☒	☐	Archive Tape/CD No.:		
					Channel 5	☐	☐	☒	5A & 5B		
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:		
					Channel 7	☐	☐	☒	1		
					Channel 8	☐	☐	☒			
Analyst / SNT Level / Date: Rosa Rosa II 01 APR 05											

Exam Number 31

Page 1 of 2

Quad Cities Unit 1
 VSC1-317
 Ring 1 Vert @ 317 deg.

 Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

686.93 - 688.17
 125.00 - 133.10
 3.37 - 4.55

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1

0.97 - 8.47
 -2.12 - -0.88

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2

0.97 - 8.47
 2.28 - 3.52

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3

0.00 - 7.68
 -1.48 - -0.24

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4

1.81 - 9.52
 1.64 - 2.88

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 5

1.81 - 9.52
 -4.32 - -3.08

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 6

0.00 - 7.68
 4.48 - 5.72

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length
 Maximum Point

Channel 6
 ASME

17 26
 125.00 132.68
 7.68

Exam Number 31

Page 2 of 2

% DAC	8
Inc. Axis Location	126.81
Surface Location	687.57
Scan Axis Location	687.57
Depth In Material	3.91
Metal Path	3.91
Time	33.0

Comments

: No recordable indications Ch 1, Ch 2

: Ch 3 & Ch 4.

:

:

Reviewed By

Reed R. S. S.

Page 64 of 945

SNT Level

II

Date

01 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-317			Pro/Rev/Chg/ICN: ISWT-FDI-AUT1/0/0/1,2			Examination No.: ID-32			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 317°			Device Configuration: AIR-21SCAN-0002						
Mod.Conf.: A-07-1C			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						1-Apr-05		Start		End		
								2206		2236		97
Data Acquisition												
Scan Controller Parameters Controller: ID Device Scan: X Axis Increment: Y Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default			Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual	Positional Parameters	
			Lower Limit		19240	19239	Lower Limit		68685	68745	Beam Direction: Cw/Ccw	
			Upper Limit		26080	26050	Upper Limit		70185	70161	Transducer Size: 1.00	
			Increment Interval		90		DCI		4	Code % of Overlap: 10		
			Conversion Counts		100		Conversion Counts		100	Number of Scans: 77		
			Conversion Units In.		1.00		Conversion Units In.		1.00	Device Position: A (180)		
EDAS Radius In.		125.50										
Module Parameters: A-07-1C Cal 33						Calibration Records:		Examination Notes:				
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-33		Check for limitations due to the proximity of the jet pump diffuser				
Channel 1	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803301		and the baffle plate.				
Channel 2	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803302						
Channel 3	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803303						
Channel 4	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803304		Examination Remarks:				
Channel 5	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803305						
Channel 6	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803306						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:				
	Start	Stop	Start	Stop				☒ Yes ☐ No				
1-77	19236	26058	68745	70177	Channel 1	☐	☒	☐	Further Evaluation			
					Channel 2	☐	☒	☐	Required:			
					Channel 3	☐	☒	☐	☐ Yes ☒ No			
					Channel 4	☐	☒	☐	Archive Tape/CD No.:			
					Channel 5	☐	☐	☒	5A & 5B			
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 7	☐	☐	☒	1			
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date: <i>Roba Rees II 01 APR 05</i>												

Exam Number 32

Page 1 of 2

Quad Cities Unit 1
 VSC1-317
 Ring 1 Vert @ 317 deg.

Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

686.93 - 688.17
 193.40 - 201.50
 3.37 - 4.55

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1
 0.91 - 9.01
 -2.12 - -0.88

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2
 0.91 - 9.01
 2.28 - 3.52

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3
 0.00 - 8.11
 -1.48 - -0.24

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4
 1.81 - 9.91
 1.64 - 2.88

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 5
 1.81 - 9.91
 -4.32 - -3.08

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 6
 0.00 - 8.11
 4.48 - 5.72

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length
 Maximum Point

Channel 6
 ASME
 1 10
 193.40 201.51
 8.11

xam Number 32

Page 2 of 2

% DAC	18
Inc. Axis Location	195.21
Surface Location	687.73
Scan Axis Location	687.73
Depth In Material	3.72
Metal Path	3.72
Time	31.4
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

R. D. A. R. S.

SNT Level

II

Date

01 APR 85

ISwT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 000100

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	RING 1 VERTICAL WELD AT 55-DEGREES
IDENTIFICATION:	VSC1-55

NDE Method	Proc/Rev/Chg/ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N O R T I H	Resolution Record	CNF Number	Remarks
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55	0800301,0800302	7,8	X -	N/A	N/A	Exam limited due to proximity of the baffle plate and the diffuser.
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40	0800303,0800304	7,8	X -	N/A	N/A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	1,2A,2B,2C,3A	X -	N/A	N/A	
				3B,3C,3D,4A,4B,	X -	N/A	N/A	
				4C,4D,4E,5A,5B,	X -	N/A	N/A	
				5C,5D,5E,6A,6B,	X -	N/A	N/A	
				6B,6C,6D	X -	N/A	N/A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	1,2A,2B,2C,3A	X -	N/A	N/A	
				3B,3C,3D,4A,4B,	X -	N/A	N/A	
				4C,4D,4E,5A,5B,	X -	N/A	N/A	
				5C,5D,5E,6A,6B,	X -	N/A	N/A	
				6B,6C,6D	X -	N/A	N/A	

- NOTES:
1. Weld VSC1-55 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 78% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the VSC1-55 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by: Carlos M. Barrera
Carlos M. Barrera - Project Engineer

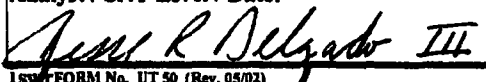
Date: 07-Apr-05

Reviewed by: Exelon Level III

Date: 04-12-2005

Page 1 of 1

Summary Sheet No.: 000100

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: IC-1			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001					
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time			
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						4/3/2005		Start		End	
								0513		0519	
								Surface Temperature °F			
								96		56	
Data Acquisition											
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device	
Controller: ID Device				Lower Limit		11407		*		Lower Limit	
Scan: Y Axis				Upper Limit		12687		*		Upper Limit	
Increment: X Axis				Increment Interval		80				DCI	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.	
Correction: Default				EDAS Radius In.		125.50				1.00	
										Positional Parameters	
										Beam Direction: Dn/Up	
										Transducer Size: 1.00	
										Code % of Overlap: 10	
										Number of Scans: 17	
										Device Position: D (0)	
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:			
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301					
Channel 2	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800302					
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303					
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:			
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305		* No examination due to the proximity of the baffle plate.			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A					
Channel 7	Off	N/A	N/A	N/A	N/A	N/A					
Channel 8	Off	N/A	N/A	N/A	N/A	N/A					
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☐ Yes ☒ No			
	Start	Stop	Start	Stop							
*	*	*	*	*	Channel 1	☐	☐	☒	Further Evaluation Required:		
					Channel 2	☐	☐	☒	☐ Yes ☒ No		
					Channel 3	☐	☐	☒	Archive Tape/CD No.:		
					Channel 4	☐	☐	☒	N/A		
					Channel 5	☐	☐	☒	Analysis Tape/CD No.:		
					Channel 6	☐	☐	☒	N/A		
					Channel 7	☐	☐	☒			
					Channel 8	☐	☐	☒			
Analyst / SNT Level / Date:											
 James R. Delgado III 03 APR 05											

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																																																																
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-2A																																																							
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001																																																										
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F																																																						
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						4/4/2005		Start		End																																																						
								0238		0310																																																						
								Start		End																																																						
								95		95																																																						
Data Acquisition																																																																
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters																																																						
Controller: ID Device		Lower Limit		11407	11435	Lower Limit		14067	*15200	Beam Direction: Dn/Up																																																						
Scan: Y Axis		Upper Limit		12687	12676	Upper Limit		16687	*15800	Transducer Size: 1.00																																																						
Increment: X Axis		Increment Interval		80		DCI		4		Code % of Overlap: 10																																																						
Mode: Automatic Scan		Conversion Counts		100		Conversion Counts		100		Number of Scans: 17																																																						
Scan Motion: Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: D (0)																																																						
Correction: Default		EDAS Radius In.		125.50																																																												
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:																																																								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Status</th> <th>Angle</th> <th>Direction</th> <th>Scan Offset</th> <th>Step Offset</th> </tr> <tr> <td>Channel 1</td> <td>On</td> <td>55</td> <td>(-)</td> <td>- 1.40(in)</td> <td>- 1.21(in)</td> </tr> <tr> <td>Channel 2</td> <td>On</td> <td>55</td> <td>(+)</td> <td>+ 1.40(in)</td> <td>- 1.21(in)</td> </tr> <tr> <td>Channel 3</td> <td>On</td> <td>SLIC-40</td> <td>(-)</td> <td>- 1.97(in)</td> <td>+ 1.69(in)</td> </tr> <tr> <td>Channel 4</td> <td>On</td> <td>SLIC-40</td> <td>(+)</td> <td>+ 1.97(in)</td> <td>+ 1.69(in)</td> </tr> <tr> <td>Channel 5</td> <td>On</td> <td>0T</td> <td>(+)</td> <td>+ 0.00(in)</td> <td>+ 1.69(in)</td> </tr> <tr> <td>Channel 6</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 7</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 8</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </table>						Status	Angle	Direction	Scan Offset	Step Offset	Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	Channel 6	Off	N/A	N/A	N/A	N/A	Channel 7	Off	N/A	N/A	N/A	N/A	Channel 8	Off	N/A	N/A	N/A	N/A	QCSI-03		Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.			
Status	Angle	Direction	Scan Offset	Step Offset																																																												
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)																																																											
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)																																																											
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)																																																											
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)																																																											
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)																																																											
Channel 6	Off	N/A	N/A	N/A	N/A																																																											
Channel 7	Off	N/A	N/A	N/A	N/A																																																											
Channel 8	Off	N/A	N/A	N/A	N/A																																																											
						0800301																																																										
						0800302																																																										
						0800303																																																										
						0800304		Examination Remarks:																																																								
						0800305		Partial Examination.																																																								
						N/A		Limited exam due to the proximity of the baffle plate.																																																								
						N/A																																																										
						N/A																																																										
Data Analysis																																																																
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks																																																								
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:																																																								
	Start	Stop	Start	Stop																																																												
1-17	11403	12685	15200	15800	Channel 1	☐	☒	☐	☒ Yes ☐ No	*19198 in scan position on EDAS is 15200 in realtime																																																						
					Channel 2	☐	☒	☐	Further Evaluation	*19792 in scan position on EDAS is 15200 in realtime																																																						
					Channel 3	☐	☒	☐	Required:																																																							
					Channel 4	☐	☒	☐	☐ Yes ☒ No																																																							
					Channel 5	☐	☐	☒	Archive Tape/CD No.:																																																							
					Channel 6	☐	☐	☒	5A & 5B																																																							
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:																																																							
					Channel 8	☐	☐	☒	1																																																							
Analyst / SNT Level / Date: RECORDED II 04 APR 05																																																																

Exam Number ID-2A

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1	
Scan Axis	194.35 - 195.59
Inc. Axis	115.76 - 122.96
Depth In Material	3.37 - 4.54

	Channel 1
Module Coordinates	
Inc. Axis	3.19 - 10.47
Scan Axis	8.56 - 9.80

	Channel 2
Module Coordinates	
Inc. Axis	3.19 - 10.47
Scan Axis	-3.84 - -2.60

	Channel 3
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	7.16 - 8.40

	Channel 4
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	-2.44 - -1.20

	Channel 5
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	2.36 - 3.60

	Channel 5
Feature Analysis	ASME
Inc. Axis Values	
Scan No. Limits	1 10
Inc. Axis Limits	115.76 122.96
Length	7.20
Maximum Point	
% DAC	18
Inc. Axis Location	118.95
Surface Location	194.59
Scan Axis Location	194.59
Depth In Material	3.98
Metal Path	3.98

Exam Number ID-2A

Page 2 of 2

Time
Comments

33.6

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By RLG/2000 SNT Level III Date 04/22/05



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant : Quad Cities Unit 1	Weld Identification: VSC1-55	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-2B
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 55°	Device Configuration: AIR-21SCAN-0001	
Mod. Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A		4-Apr-05	Surface Temperature °F
		Start	End
		0320	0336
		96	96

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	11407	11416	Lower Limit	14067	*15800	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	12687	12691	Upper Limit	16687	*16400	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
A-07B Cal 03						QCS1-03	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Status	Angle	Direction	Scan Offset	Step Offset			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	Analyst Remarks
	Start	Stop	Start	Stop					
1-17	11416	12691	15800	16400	Channel 1 ☐	☒	☐	☒ Yes ☐ No	*19199 in scan position on EDAS is 15800 in real time.
					Channel 2 ☐	☒	☐	Further Evaluation	*19799 in scan position on EDAS is 16400 in real time.
					Channel 3 ☐	☒	☐	Required:	
					Channel 4 ☐	☒	☐	☐ Yes ☒ No	
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 6 ☐	☐	☒	5A & 5B	
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒	1	

Analyst / SNT Level / Date:

RECAPS II 04 APR 05

Exam Number ID-2B

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

194.35 - 195.59
115.76 - 122.96
3.37 - 4.54

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

3.20 - 10.40
8.56 - 9.80

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

3.20 - 10.40
-3.84 - -2.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 7.20
7.16 - 8.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

0.00 - 7.20
-2.44 - -1.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

0.00 - 7.20
2.36 - 3.60

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

Channel 5
ASME

1	10
115.76	122.96
7.20	
3	
117.35	
195.59	
195.59	
3.37	
3.37	

Exam Number ID-2B

Page 2 of 2

Time
Comments

28.5

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Debra Rago

SNT Level

II

Date

01 APR 05



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC1-55	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-2C
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 55°	Device Configuration: AIR-21SCAN-0001	
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date: 4-Apr-05	Examination Time: Start: 0345, End: 0356
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A		Surface Temperature °F: Start: 96, End: 96	

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	11407	11431	Lower Limit	14067	*16400	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	12687	12684	Upper Limit	16687	*16600	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters: A-07B Cal 03						Calibration Records:	Examination Notes:
Status	Angle	Direction	Scan Offset	Step Offset			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800301	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800302	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800303	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800304	Examination Remarks:
Channel 6	Off	N/A	N/A	N/A	N/A	0800305	Partial Examination.
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	Further Evaluation Required: ☐ Yes ☒ No
	Start	Stop	Start	Stop					
1-17	11407	12687	16400	16600	Channel 1 ☐	☒	☐	*19199 in scan position on EDAS is 16400 in real time.	*19399 in scan position on EDAS is 16600 in real time.
					Channel 2 ☐	☒	☐		
					Channel 3 ☐	☒	☐		
					Channel 4 ☐	☒	☐		
					Channel 5 ☐	☐	☒		
					Channel 6 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 7 ☐	☐	☒	5A & 5B	
					Channel 8 ☐	☐	☒	Analysis Tape/CD No.:	
								1	

Analyst / SNT Level / Date:

Reza Raddi 04 APR 05

Exam Number ID-2C

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

192.35 - 193.59
115.76 - 122.96
3.37 - 4.54

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

3.20 - 10.40
6.56 - 7.80

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

3.20 - 10.40
-5.84 - -4.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 7.20
5.16 - 6.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

0.00 - 7.20
-4.44 - -3.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

0.00 - 7.20
0.36 - 1.60

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

Channel 5
ASME

1	10
115.76	122.96
7.01	
3	
118.16	
193.59	
193.59	
3.75	
3.75	

Exam Number ID-2C

Page 2 of 2

Time
Comments

31.7

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By ROD R. R. R. SNT Level II Date 04 APR 05



Site/Plant : Quad Cities Unit 1	Weld Identification: VSC1-55	Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2		Examination No.: ID-3A		
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 55°	Device Configuration: AIR-21SCAN-0001				
Mod. Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A		4-Apr-05	Start	End	Start	End
			0410	0430	96	96

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	11407	11439	Lower Limit	16634	16600	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	12687	12707	Upper Limit	19254	17200	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
Status	A-07B Angle	Cal 03 Direction	Scan Offset	Step Offset			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03 0800301	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	Examination Remarks: Partial Examination.
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	*19199 in scan position on EDAS is 16600 in real time. *19799 in scan position on EDAS is 17200 in real time.
	Start	Stop	Start	Stop					
1-17	11407	12687	16600	17200	Channel 1 ☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No	
					Channel 2 ☐	☒	☐		
					Channel 3 ☐	☒	☐		
					Channel 4 ☐	☒	☐		
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 6 ☐	☐	☒	5A & 5B	
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒	1	

Analyst / SNT Level / Date:

Recall Recall II 04 APR 05

Exam Number ID-3A

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

194.35 - 195.59
115.76 - 122.96
3.37 - 4.54

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

3.20 - 10.40
8.56 - 9.80

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

3.20 - 10.40
-3.84 - -2.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 7.20
7.16 - 8.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

0.00 - 7.20
-2.44 - -1.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

0.00 - 7.20
2.36 - 3.60

Feature Analysis
Inc. Axis Values

Channel 5
ASME

Scan No. Limits
Inc. Axis Limits
Length

1	10
115.76	122.96
	7.20

Maximum Point

% DAC

10

Inc. Axis Location

120.56

Surface Location

195.11

Scan Axis Location

195.11

Depth In Material

3.86

Metal Path

3.86

Exam Number ID-3A

Page 2 of 2

Time
Comments

32.6

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Rosa Russo

SNT Level

II

Date

04/11/05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant : Quad Cities Unit 1				Weld Identification: VSC1-55				Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2				Examination No.: ID-3B					
Project No.: 04-0379				Weld Description: Ring 1 Vert @ 55°				Device Configuration: AIR-21SCAN-0001									
Mod.Conf.: A-07B				Scan Path Drawing: SPLONGBUTT				Exam Date		Examination Time		Surface Temperature °F					
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A								4-Apr-05		Start		End		Start		End	
										0433		0450		96		96	
Data Acquisition																	
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		11407		11417		Lower Limit		16634		17200		Beam Direction: Dn/Up	
Scan: Y Axis				Upper Limit		12687		12682		Upper Limit		19254		17800		Transducer Size: 1.00	
Increment: X Axis				Increment Interval		80				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 17	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: D (0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters: A-07B Cal 03								Calibration Records:				Examination Notes:					
		Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03				Check for limitations due to the proximity of the jet pump diffuser						
Channel 1		On	55	(-)	- 1.40(in)	- 1.21(in)	0800301				and the baffle plate.						
Channel 2		On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302										
Channel 3		On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303										
Channel 4		On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304				Examination Remarks:						
Channel 5		On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305				Partial Examination.						
Channel 6		Off	N/A	N/A	N/A	N/A	N/A										
Channel 7		Off	N/A	N/A	N/A	N/A	N/A										
Channel 8		Off	N/A	N/A	N/A	N/A	N/A										
Data Analysis																	
Increment & Scan Positions Actual						Recordable Indications						Analyst Remarks					
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:		*19199 in scan position on EDAS is 17200 in real time.							
	Start	Stop	Start	Stop								Yes	No	N/A	*19799 in scan position on EDAS is 17800 in real time.		
1-17	11407	12687	17200	17800	Channel 1	☐	☒	☐	☒ Yes ☐ No								
					Channel 2	☐	☒	☐	Further Evaluation								
					Channel 3	☐	☒	☐	Required:								
					Channel 4	☐	☒	☐	☐ Yes ☒ No								
					Channel 5	☐	☐	☒	Archive Tape/CD No.:								
					Channel 6	☐	☐	☒	5A & 5B								
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:								
					Channel 8	☐	☐	☒	1								
Analyst / SNT Level / Date:												 04 APR 05					

cam Number ID-3B

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

194.35 - 195.59
115.76 - 122.96
3.37 - 4.54

Channel 1

Module Coordinates
Inc. Axis
Scan Axis

3.20 - 10.40
8.56 - 9.80

Channel 2

Module Coordinates
Inc. Axis
Scan Axis

3.20 - 10.40
-3.84 - -2.60

Channel 3

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 7.20
7.16 - 8.40

Channel 4

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 7.20
-2.44 - -1.20

Channel 5

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 7.20
2.36 - 3.60

Channel 5
ASME

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

	1	10
	115.76	122.96
	7.09	
	65	
	119.76	
	195.15	
	195.15	
	3.94	
	3.94	

Exam Number ID-3B

Page 2 of 2

Time
Comments

33.3

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By ROD ARSLO SNT Level II Date 04 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant : Quad Cities Unit 1				Weld Identification: VSC1-55				Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2				Examination No.: ID-3C					
Project No.: 04-0379				Weld Description: Ring 1 Vert @ 55°				Device Configuration: AIR-21SCAN-0001									
Mod.Conf.: A-07B				Scan Path Drawing: SPLONGBUTT				Exam Date		Examination Time		Surface Temperature °F					
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A								4/4/2005		Start		End		Start		End	
										0517		0529		96		96	
Data Acquisition																	
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		11407		11458		Lower Limit		16634		17900		Beam Direction: Dn/Up	
Scan: Y Axis				Upper Limit		12687		12701		Upper Limit		19254		18600		Transducer Size: 1.00	
Increment: X Axis				Increment Interval		80				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 17	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: D (0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters: A-07B Cal 03								Calibration Records:				Examination Notes:					
		Status		Angle		Direction		Scan Offset		Step Offset		QCS1-03		Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.			
Channel 1		On		55		(-)		- 1.40(in)		- 1.21(in)		0800301					
Channel 2		On		55		(+)		+ 1.40(in)		- 1.21(in)		0800302					
Channel 3		On		SLIC-40		(-)		- 1.97(in)		+ 1.69(in)		0800303					
Channel 4		On		SLIC-40		(+)		+ 1.97(in)		+ 1.69(in)		0800304		Examination Remarks:			
Channel 5		On		0T		(+)		+ 0.00(in)		+ 1.69(in)		0800305					
Channel 6		Off		N/A		N/A		N/A		N/A		N/A					
Channel 7		Off		N/A		N/A		N/A		N/A		N/A					
Channel 8		Off		N/A		N/A		N/A		N/A		N/A					
Data Analysis																	
Increment & Scan Positions Actual					Recordable Indications						Analyst Remarks						
Scan No.(s)	Increment Position		Scan Position		Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8	Attachment: ☒ Yes ☐ No	Further Evaluation Required: ☐ Yes ☒ No		Archive Tape/CD No.: 5A & 5B	Analysis Tape/CD No.: 1
	Start	Stop	Start	Stop													
1-17	11407	12687	17800	18400	☐	☒	☐	☐	☐	☐	☐	☒					* 19199 in scan position on EDAS is 17800 in realtime
					☐	☒	☐	☐	☐	☐	☐	☒					* 19199 in scan position on EDAS is 18400 in realtime
Analyst / SNT Level / Date: Rosa Rosa II 04 APR 05																	

xam Number ID-3C

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1	
Scan Axis	194.35 - 195.59
Inc. Axis	115.76 - 122.96
Depth In Material	3.37 - 4.54

	Channel 1
Module Coordinates	
Inc. Axis	3.20 - 10.40
Scan Axis	8.56 - 9.80

	Channel 2
Module Coordinates	
Inc. Axis	3.20 - 10.40
Scan Axis	-3.84 - -2.60

	Channel 3
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	7.16 - 8.40

	Channel 4
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	-2.44 - -1.20

	Channel 5
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	2.36 - 3.60

	Channel 5
Feature Analysis	ASME
Inc. Axis Values	
Scan No. Limits	1 10
Inc. Axis Limits	115.76 122.96
Length	7.10
Maximum Point	
% DAC	38
Inc. Axis Location	121.36
Surface Location	194.43
Scan Axis Location	194.43
Depth In Material	3.90
Metal Path	3.90

Exam Number ID-3C

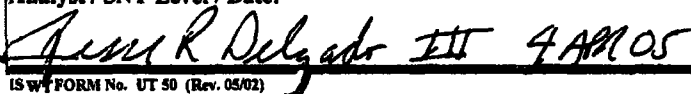
Page 2 of 2

Time
Comments

33.0

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-3D		
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001					
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						4/4/2005		Start	End	Start	End
								0533	0549	96	96
Data Acquisition											
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters	
Controller: ID Device		Lower Limit		11407	11458	Lower Limit		16634	18600	Beam Direction: Dn/Up	
Scan: Y Axis		Upper Limit		12687	12701	Upper Limit		19254	19200	Transducer Size: 1.00	
Increment: X Axis		Increment Interval		80		DCI		4		Code % of Overlap: 10	
Mode: Automatic Scan		Conversion Counts		100		Conversion Counts		100		Number of Scans: 17	
Scan Motion: Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: D (0)	
Correction: Default		EDAS Radius In.		125.50							
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:			
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301					
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302					
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303					
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:			
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305					
Channel 6	Off	N/A	N/A	N/A	N/A	N/A					
Channel 7	Off	N/A	N/A	N/A	N/A	N/A					
Channel 8	Off	N/A	N/A	N/A	N/A	N/A					
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:		* 19199 in scan position on EDAS is 18600 in realtime * 19799 in scan position on EDAS is 19200 in realtime	
	Start	Stop	Start	Stop				☒ Yes ☐ No			
1-17	11407	12687	*18600	*19200	Channel 1	☐	☒	☐	Further Evaluation		
					Channel 2	☐	☒	☐	Required:		
					Channel 3	☐	☒	☐	☐ Yes ☒ No		
					Channel 4	☐	☒	☐	Archive Tape/CD No.:		
					Channel 5	☐	☐	☒	5A & 5B		
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:		
					Channel 7	☐	☐	☒	1		
					Channel 8	☐	☐	☒			
Analyst / SNT Level / Date:											
											

ISW FORM No. UT 50 (Rev. 05/02)

Exam Number ID-3D

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

186.67 - 187.91
112.86 - 120.06
3.46 - 4.14

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
0.00 - 6.93
1.00 - 2.24

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME
1 10
112.86 119.79
6.93
14
115.01
193.07
187.19
4.11
7.17
120.3

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
0.00 - 6.93
-11.64 - -10.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
- 3.72
-0.48 - 0.76

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
- 3.72
-10.16 - -8.92

Exam Number ID-3D

Page 2 of 2

Module Coordinates

Channel 5

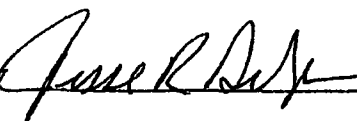
Inc. Axis

- 3.72

Scan Axis

-5.32 - -4.08

Reviewed By



SNT Level

III

Date

4 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																																																																					
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1 001.2		Examination No.: ID-4A																																																													
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001																																																															
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time																																																													
Data Acquisition Operator (s) / SNT Level: Carlos Barberino/ N/A						4/4/2005		Start	End																																																												
								0550	0603																																																												
								Start	End																																																												
								96	96																																																												
Data Acquisition																																																																					
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual																																																												
Controller:	ID Device	Lower Limit		11407	11436	Lower Limit		19201	19200																																																												
Scan:	Y Axis	Upper Limit		12687	12696	Upper Limit		21821	19800																																																												
Increment:	X Axis	Increment Interval	80			DCI	4																																																														
Mode:	Automatic Scan	Conversion Counts	100			Conversion Counts	100																																																														
Scan Motion:	Bi-directional	Conversion Units In.	1.00			Conversion Units In.	1.00																																																														
Correction:	Default	EDAS Radius In.	125.50																																																																		
								Positional Parameters																																																													
								Beam Direction:	Up/Dn																																																												
								Transducer Size:	1.00																																																												
								Code % of Overlap:	10																																																												
								Number of Scans:	17																																																												
								Device Position:	D(0)																																																												
Module Parameters:						Calibration Records:		Examination Notes:																																																													
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>A-07B</th> <th>Cal 03</th> <th></th> <th></th> <th></th> </tr> <tr> <th>Status</th> <th>Angle</th> <th>Direction</th> <th>Scan Offset</th> <th>Step Offset</th> <th></th> </tr> </thead> <tbody> <tr> <td>Channel 1</td> <td>On</td> <td>55</td> <td>(-)</td> <td>- 1.40(in)</td> <td>- 1.21(in)</td> </tr> <tr> <td>Channel 2</td> <td>On</td> <td>55</td> <td>(+)</td> <td>+ 1.40(m)</td> <td>- 1.21(in)</td> </tr> <tr> <td>Channel 3</td> <td>On</td> <td>SLIC-40</td> <td>(-)</td> <td>- 1.97(in)</td> <td>+ 1.69(in)</td> </tr> <tr> <td>Channel 4</td> <td>On</td> <td>SLIC-40</td> <td>(+)</td> <td>+ 1.97(in)</td> <td>- 1.69(in)</td> </tr> <tr> <td>Channel 5</td> <td>On</td> <td>0T</td> <td>(+)</td> <td>+ 0.00(in)</td> <td>+ 1.69(in)</td> </tr> <tr> <td>Channel 6</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 7</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 8</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>							A-07B	Cal 03				Status	Angle	Direction	Scan Offset	Step Offset		Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	Channel 2	On	55	(+)	+ 1.40(m)	- 1.21(in)	Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	Channel 4	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	Channel 6	Off	N/A	N/A	N/A	N/A	Channel 7	Off	N/A	N/A	N/A	N/A	Channel 8	Off	N/A	N/A	N/A	N/A	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.	
	A-07B	Cal 03																																																																			
Status	Angle	Direction	Scan Offset	Step Offset																																																																	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)																																																																
Channel 2	On	55	(+)	+ 1.40(m)	- 1.21(in)																																																																
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)																																																																
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)																																																																
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)																																																																
Channel 6	Off	N/A	N/A	N/A	N/A																																																																
Channel 7	Off	N/A	N/A	N/A	N/A																																																																
Channel 8	Off	N/A	N/A	N/A	N/A																																																																
						0800301																																																															
						0800302																																																															
						0800303																																																															
						0800304		Examination Remarks:																																																													
						0800305																																																															
						N/A																																																															
						N/A																																																															
						N/A																																																															
Data Analysis																																																																					
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks																																																													
Scan No (s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	*19199 in scan position on EDAS is equal to 19200 in realtime.																																																												
	Start	Stop	Start	Stop	Channel 1	☐	☒		☐	*19799 in scan position on EDAS is equal to 19800 in realtime.																																																											
1-17	11407	12687	*19200	*19800	Channel 2	☐	☒	☐																																																													
					Channel 3	☐	☒	☐																																																													
					Channel 4	☐	☒	☐																																																													
					Channel 5	☐	☐	☒																																																													
					Channel 6	☐	☐	☒																																																													
					Channel 7	☐	☐	☒																																																													
					Channel 8	☐	☐	☒																																																													
Analyst / SNT Level / Date:  4 APR 05																																																																					

xam Number ID-4A

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1	
Scan Axis	187.47 - 188.71
Inc. Axis	112.86 - 120.06
Depth In Material	2.98 - 3.66

	Channel 1
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	1.12 - 2.36

	Channel 1	
	ASME	
Feature Analysis		
Inc. Axis Values		
Scan No. Limits	1	10
Inc. Axis Limits	112.86	120.06
Length	7.20	
Maximum Point		
% DAC	14	
Inc. Axis Location	112.86	
Surface Location	192.83	
Scan Axis Location	188.11	
Depth In Material	3.30	
Metal Path	5.76	
Time	96.6	

Comments	
:	No recordable indications ch1 ch2
:	ch3 ch4.
:	
:	

	Channel 2
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	-10.16 - -8.92

	Channel 3
Module Coordinates	
Inc. Axis	-3.20 - 4.00
Scan Axis	-0.08 - 1.16

	Channel 4
Module Coordinates	
Inc. Axis	-3.20 - 4.00
Scan Axis	-8.96 - -7.72

am Number ID-4A

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

-3.20 - 4.00

-4.52 - -3.28

Reviewed By

James R. Pelgand

SNT Level

III

Date

24/APR/05



Site/Plant : Quad Cities Unit 1	Weld Identification: VSC1-55	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-4B	
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 55°	Device Configuration: AIR-21SCAN-0001		
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time	
Data Acquisition Operator (s) / SNT Level: Carlos Barberine/ N/A		4/4/2005	Start	End
			0613	0621
			Start	End
			96	96

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	11407	11436	Lower Limit	19201	19800	Beam Direction:	Up/Dn
Scan:	Y Axis	Upper Limit	12687	12696	Upper Limit	21821	20400	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D(0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
Status	A-07B Angle	Cal 03 Direction	Scan Offset	Step Offset	QCS1-03		
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	Examination Remarks:
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	*19199 in scan position on EDAS is equal to 19800 in realtime. *19799 in scan position on EDAS is equal to 20400 in realtime.
	Start	Stop	Start	Stop	Channel 1				
1-17	11410	12702	*19800	*20400	Channel 1	☒	☐	Further Evaluation Required: ☐ Yes ☒ No	
					Channel 2	☒	☐	Archive Tape/CD No.: 5A & 5B	
					Channel 3	☒	☐	Analysis Tape/CD No.: 1	
					Channel 4	☒	☐		
					Channel 5	☐	☐		
					Channel 6	☐	☐		
					Channel 7	☐	☐		
					Channel 8	☐	☐		

Analyst / SNT Level / Date:

Jesus R Delgado III 4/AM/05
ISPS FORM No. UT 50 (Rev. 05/02)

am Number ID-4B

Page 1 of 2

Quad Cities Unit 1
 VSC1-55
 Ring 1 Vert @ 55 deg

Cursor Box 1 of 1

Scan Axis	187.19 - 188.43
Inc. Axis	112.86 - 120.06
Depth In Material	2.45 - 3.13

Channel 1

Module Coordinates

Inc. Axis	0.00 - 7.20
Scan Axis	0.12 - 1.36

Channel 1

ASME

Feature Analysis

Inc. Axis Values

Scan No.	Limits	1	10
Inc. Axis Limits		112.86	120.06
Length		7.20	

Maximum Point

% DAC	11
Inc. Axis Location	114.46
Surface Location	191.71
Scan Axis Location	187.43
Depth In Material	3.00
Metal Path	5.23
Time	87.7

Comments

:
:
:
:

No recordable indications ch1 ch2
 ch3 ch4.

Channel 2

Module Coordinates

Inc. Axis	0.00 - 7.20
Scan Axis	-9.72 - -8.48

Channel 3

Module Coordinates

Inc. Axis	- 4.06
Scan Axis	-0.80 - 0.44

Channel 4

Module Coordinates

Inc. Axis	- 4.06
Scan Axis	-8.80 - -7.56

xam Number ID-4B

Page 2 of 2

Module Coordinates

Channel 5

Inc. Axis

- 4.06

Scan Axis

-4.80 - -3.56

Reviewed By

James R. Delgado

SNT Level

III

Date

4/14/05

LSI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant: Quad Cities Unit 1				Weld Identification: VSC1-55				Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2				Examination No.: ID-4C					
Project No.: 04-0379				Weld Description: Ring 1 Vert @ 55°				Device Configuration: AIR-21SCAN-0001									
Mod.Conf.: A-07B				Scan Path Drawing: SPLONGBUTT				Exam Date		Examination Time		Surface Temperature °F					
Data Acquisition Operator (s) / SNT Level: Carlos Barberino/ N/A								4/4/2005		Start		End					
										0630		0638		96 96			
Data Acquisition																	
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		11407		11436		Lower Limit		19201		20400		Beam Direction: Up/Dn	
Scan: Y Axis				Upper Limit		12687		12696		Upper Limit		21821		21000		Transducer Size: 1.00	
Increment: X Axis				Increment Interval		80				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 17	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: D(0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters: A-07B Cal 03								Calibration Records:		Examination Notes:							
Status		Angle	Direction	Scan Offset	Step Offset			QCS1-03		Check for limitations due to the proximity of the jet pump diffuser							
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)			0800301		and the baffle plate.							
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)			0800302									
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)			0800303									
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)			0800304		Examination Remarks:							
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)			0800305									
Channel 6	Off	N/A	N/A	N/A	N/A			N/A									
Channel 7	Off	N/A	N/A	N/A	N/A			N/A									
Channel 8	Off	N/A	N/A	N/A	N/A			N/A									
Data Analysis																	
Increment & Scan Positions Actual						Recordable Indications						Analyst Remarks					
Scan No.(s)	Increment Position		Scan Position								Attachment: ☒ Yes ☐ No		*19199 in scan position on EDAS is equal to 20400 in realtime. *19799 in scan position on EDAS is equal to 21000 in realtime.				
	Start	Stop	Start	Stop	Channel 1	☐	☒	☐	Channel 2	☐				☒	☐		
1-17	11452	12683	*20400	*21000	Channel 3	☐	☒	☐	Channel 4	☐	☒	☐	Further Evaluation Required:				
					Channel 5	☐	☐	☒	Channel 6	☐	☐	☒	☐ Yes ☒ No				
					Channel 7	☐	☐	☒	Channel 8	☐	☐	☒	Archive Tape/CD No.:				
													5A & 5B				
													Analysis Tape/CD No.:				
													1				
Analyst/ SNT Level / Date:																	
4 APR 05																	

ISWT FORM No. UT 50 (Rev. 05/02)

xam Number ID-4C

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

187.87 - 189.11
112.86 - 120.06
2.67 - 3.35

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
0.00 - 7.19
1.08 - 2.32

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME
1 10
112.86 120.05
7.19
11
113.58
193.87
189.07
3.35
5.84
97.9

Comments
:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
0.00 - 7.19
-9.32 - -8.08

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
- 4.00
0.08 - 1.32

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
- 4.00
-8.32 - -7.08

Exam Number ID-4C

Page 2 of 2

Module Coordinates	Channel 5
Inc. Axis	- 4.00
Scan Axis	-4.12 - -2.88

Reviewed By

James R. Delgado

SNT Level

III

Date

4/22/05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-4D			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001					
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time			
Data Acquisition Operator (s) / SNT Level: Carlos Barberino/ N/A						4/4/2005		Start		End	
								0643		0650	
								Surface Temperature °F			
								Start		End	
								96		96	
Data Acquisition											
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device	
Controller: ID Device				Lower Limit		11407		11436		Lower Limit	
Scan: Y Axis				Upper Limit		12687		12696		Upper Limit	
Increment: X Axis				Increment Interval		80		DCI		4	
Mode: Automatic Scan				Conversion Counts		100		Conversion Counts		100	
Scan Motion: Bi-directional				Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction: Default				EDAS Radius In.		125.50					
Positional Parameters											
Beam Direction:										Up/Dn	
Transducer Size:										1.00	
Code % of Overlap:										10	
Number of Scans:										17	
Device Position:										D(0)	
Module Parameters:						Cal 03		Calibration Records:		Examination Notes:	
Status		Angle		Direction		Scan Offset		Step Offset		QCS1-03	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)					Check for limitations due to the proximity of the jet pump diffuser	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)					and the baffle plate.	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)						
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)					Examination Remarks:	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)						
Channel 6	Off	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A						
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:		* 19199 in scan position on EDAS is equal to 21000 in realtime.	
	Start	Stop	Start	Stop				☒ Yes	☐ No	* 19799 in scan position on EDAS is equal to 21600 in realtime.	
1-17	11458	12696	21000	21600	Channel 1	☐	☒	☐	Further Evaluation		
					Channel 2	☐	☒	☐	Required:		
					Channel 3	☐	☒	☐	☐ Yes ☒ No		
					Channel 4	☐	☒	☐	Archive Tape/CD No.:		
					Channel 5	☐	☐	☒	5A & 5B		
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:		
					Channel 7	☐	☐	☒	1		
					Channel 8	☐	☐	☒			
Analyst / SNT Level / Date: 											

ISWT FORM No. UT 50 (Rev. 05/03)

xam Number ID-4D

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

187.63 - 188.87
112.86 - 120.06
3.04 - 3.72

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 6.96
1.40 - 2.64

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

1 10
112.86 119.82
6.96

Comments

:
:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 6.96
-10.12 - -8.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 4.00
0.16 - 1.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 4.00
-8.88 - -7.64

Exam Number ID-4D

Page 2 of 2

Module Coordinates

Channel 5

Inc. Axis

- 4.00

Scan Axis

-4.36 - -3.12

Reviewed By

James R. Delgado

SNT Level

III

Date

24 Apr 05



IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC1-55	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-4E
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 55°	Device Configuration: AIR-21SCAN-0001	
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date: 4/4/2005	Surface Temperature °F
Data Acquisition Operator (s) / SNT Level: Carlos Barberino/ N/A			Start: 96
		Examination Time: 0643 - 0650	End: 96

Data Acquisition

Scan Controller Parameters	Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters
Controller: ID Device	Lower Limit	11407	11436	Lower Limit	19201	21600	Beam Direction: Up/Dn
Scan: Y Axis	Upper Limit	12687	12696	Upper Limit	21821	21800	Transducer Size: 1.00
Increment: X Axis	Increment Interval	80		DCI	4		Code % of Overlap: 10
Mode: Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans: 17
Scan Motion: Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position: D(0)
Correction: Default	EDAS Radius In.	125.50					

Module Parameters:	A-07B	Cal 03				Calibration Records:	Examination Notes:
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	Examination Remarks:
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	19199 in scan position on EDAS is equal to 21600 in realtime. 19399 in scan position on EDAS is equal to 21800 in realtime.
	Start	Stop	Start	Stop					
1-17	11453	12626	*21600	*21800	Channel 1 ☐	☒	☐	Further Evaluation Required:	
					Channel 2 ☐	☒	☐	☐ Yes ☒ No	
					Channel 3 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 4 ☐	☒	☐	5A & 5B	
					Channel 5 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 6 ☐	☐	☒	1	
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		

Analyst / SNT Level / Date:

James R. Oelgard III 4 Apr 05

ISWT FORM No. UT 50 (Rev. 05/02)

am Number ID-4E

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

182.83 - 183.71
113.66 - 120.86
5.65 - 6.02

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.56 - 7.83
0.32 - 1.20

Feature Analysis
Comments

Channel 1
Summary

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.56 - 7.83
-18.64 - -17.76

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 4.66
-2.48 - -1.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 4.66
-15.84 - -14.96

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

- 4.66
-9.16 - -8.28

am Number ID-4E

Page 2 of 2

Reviewed By  SNT Level III Date 14 JULY 05

HI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD													
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-5A					
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001							
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time					
Data Acquisition Operator (s) / SNT Level: Carlos Barberino/ N/A						4/4/2005		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Start</th> <th>End</th> </tr> <tr> <td>0643</td> <td>0650</td> </tr> </table>		Start	End	0643	0650
Start	End												
0643	0650												
								<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Start</th> <th>End</th> </tr> <tr> <td>96</td> <td>96</td> </tr> </table>		Start	End	96	96
Start	End												
96	96												
Data Acquisition													
Scan Controller Parameters		Increment Axis/Arm		Planned		Actual		Scan Axis/Device					
Controller: ID Device		Lower Limit		11407		11436		Planned					
Scan: Y Axis		Upper Limit		12687		12696		Actual					
Increment: X Axis		Increment Interval		80		DCI		4					
Mode: Automatic Scan		Conversion Counts		100		Conversion Counts		100					
Scan Motion: Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00					
Correction: Default		EDAS Radius In.		125.50									
Module Parameters:						Calibration Records:		Examination Notes:					
Status		Angle		Direction		Scan Offset		Step Offset					
Channel 1		On		55		(-)		- 1.40(in) - 1.21(in)					
Channel 2		On		55		(+)		+ 1.40(in) - 1.21(in)					
Channel 3		On		SLIC-40		(-)		- 1.97(in) + 1.69(in)					
Channel 4		On		SLIC-40		(+)		+ 1.97(in) + 1.69(in)					
Channel 5		On		0T		(+)		+ 0.00(in) + 1.69(in)					
Channel 6		Off		N/A		N/A		N/A					
Channel 7		Off		N/A		N/A		N/A					
Channel 8		Off		N/A		N/A		N/A					
Data Analysis													
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks					
Scan No.(s)		Increment Position		Scan Position		Yes No N/A			Attachment:				
Start Stop		Start Stop		Channel 1 ☐ ☒ ☐			☒ Yes ☐ No						
1-17		11431 12708		*21700 *22300		Channel 2 ☐ ☒ ☐			* 19199 in scan position on EDAS is equal to 21700 in realtime.				
							Channel 3 ☐ ☒ ☐			* 19799 in scan position on EDAS is equal to 22300 in realtime.			
							Channel 4 ☐ ☒ ☐			Further Evaluation			
							Channel 5 ☐ ☐ ☒			Required:			
							Channel 6 ☐ ☐ ☒			☐ Yes ☒ No			
							Channel 7 ☐ ☐ ☒			Archive Tape/CD No.:			
							Channel 8 ☐ ☐ ☒			5A & 5B			
										Analysis Tape/CD No.:			
										1			
Analyst / SNT Level / Date:													
4 APR 05													

ISWT FORM No. UT 50 (Rev. 03/02)

Exam Number ID-5A

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

187.43 - 188.67
112.86 - 120.06
3.50 - 4.18

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.20
1.84 - 3.08

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time
Comments
:
:
:
:

Channel 1
ASME

	1	10
Inc. Axis Limits	112.86	120.06
Length	7.20	
% DAC	13	
Inc. Axis Location	116.07	
Surface Location	194.31	
Scan Axis Location	188.39	
Depth In Material	4.14	
Metal Path	7.21	
Time	121.0	

No recordable indications ch1 ch2
ch3 ch4

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.20
-10.96 - -9.72

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 4.00
0.32 - 1.56

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 4.00
-9.44 - -8.20

Exam Number ID-5A

Page 2 of 2

Module Coordinates	Channel 5
Inc. Axis	- 4.00
Scan Axis	-4.56 - -3.32

Reviewed By

James L. Delgado

SNT Level

III

Date

04/12/15

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-5B	
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: Carlos Barberino/ N/A						4/4/2005		Start	End
								0802	0825
								Start	End
								96	96
Data Acquisition									
Scan Controller Parameters			Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters
Controller:	ID Device		Lower Limit	11407	11436	Lower Limit	19201	22300	Beam Direction: Up/Dn
Scan:	Y Axis		Upper Limit	12687	12696	Upper Limit	21821	22900	Transducer Size: 1.00
Increment:	X Axis		Increment Interval	80		DCI	4		Code % of Overlap: 10
Mode:	Automatic Scan		Conversion Counts	100		Conversion Counts	100		Number of Scans: 17
Scan Motion:	Bi-directional		Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position: D(0)
Correction:	Default		EDAS Radius In.	125.50					
Module Parameters:						Calibration Records:		Examination Notes:	
Status		A-07B	Cal 03			QCS1-03		Check for limitations due to the proximity of the jet pump diffuser	
	Angle		Direction	Scan Offset	Step Offset			and the baffle plate.	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301			
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	Further Evaluation Required: ☐ Yes ☒ No
	Start	Stop	Start	Stop					
1-17	11428	12661	*22300	*22900	Channel 1 ☐	☒	☐		* 19199 in scan position on EDAS is equal to 22300 in realtime.
					Channel 2 ☐	☒	☐		* 19799 in scan position on EDAS is equal to 22900 in realtime.
					Channel 3 ☐	☒	☐		
					Channel 4 ☐	☒	☐		
					Channel 5 ☐	☐	☒		
					Channel 6 ☐	☐	☒		
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date:									
									

ISWT FORM No. UT 50 (Rev. 05/92)

Exam Number 5B

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 1 Vert @ 55 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

187.19 - 188.43
112.86 - 120.06
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.18
0.12 - 1.36

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	112.86	120.04
Length	7.18	
% DAC	18	
Inc. Axis Location	115.24	
Surface Location	191.19	
Scan Axis Location	187.19	
Depth In Material	2.80	
Metal Path	4.88	
Time	81.9	

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.18
-9.72 - -8.48

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 3.98
-0.80 - 0.44

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 3.98
-8.80 - -7.56

Exam Number 5B

Page 2 of 2

Module Coordinates		Channel 5
Inc. Axis		- 3.98
Scan Axis		-4.80 - -3.56

Reviewed By James R. Delgado SNT Level III Date 4 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD										
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-5C		
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001				
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		
Data Acquisition Operator (s) / SNT Level: Carlos Barberino/ N/A						4/4/2005		Start	End	
								0832	0846	
						Start		End		
								96	96	
Data Acquisition										
Scan Controller Parameters			Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
			Lower Limit	11407	11436	Lower Limit	19201	22900		Beam Direction:
Controller: ID Device			Upper Limit	12687	12696	Upper Limit	21821	23500	Transducer Size:	1.00
Scan: Y Axis			Increment Interval	80		DCI	4		Code % of Overlap:	10
Increment: X Axis			Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Mode: Automatic Scan			Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D(0)
Scan Motion: Bi-directional			EDAS Radius In.	125.50						
Correction: Default										
Module Parameters:						Calibration Records:		Examination Notes:		
Status		A-07B	Cal 03				QCS1-03		Check for limitations due to the proximity of the jet pump diffuser and the baffle plate. Examination Remarks:	
Angle		Direction	Scan Offset	Step Offset						
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301				
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302				
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303				
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304				
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305				
Channel 6	Off	N/A	N/A	N/A	N/A	N/A				
Channel 7	Off	N/A	N/A	N/A	N/A	N/A				
Channel 8	Off	N/A	N/A	N/A	N/A	N/A				
Data Analysis										
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks		
Scan No.(s)	Increment Position		Scan Position		Channel	Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop						
1-17	11428	12661	*22900	*23500	Channel 1	☐	☒	☐	* 19199 in scan position on EDAS is equal to 22900 in realtime.	
					Channel 2	☐	☒	☐	* 19799 in scan position on EDAS is equal to 23500 in realtime.	
					Channel 3	☐	☒	☐		
					Channel 4	☐	☒	☐		
					Channel 5	☐	☐	☒	Required: ☐ Yes ☒ No	
					Channel 6	☐	☐	☒	Archive Tape/CD No.:	
					Channel 7	☐	☐	☒	5A & 5B	
					Channel 8	☐	☐	☒	Analysis Tape/CD No.:	
									1	
Analyst / SNT Level / Date:										
										

ISWT FORM No. UT 50 (Rev. 05/02)

xam Number 5C

Page 1 of 2

Quad Cities Unit 1
VCS1-55
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

197.87 - 199.11
115.28 - 122.48
2.43 - 3.11

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.20
1.00 - 2.24

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	115.28	122.48
Length	7.20	

Comments

:
:
:
:

No recordable indications ch1 ch2
ch 3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.20
10.76 - 12.00

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

3.20 - 10.40
1.88 - 3.12

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

3.20 - 10.40
9.88 - 11.12

Exam Number 5C

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

3.20 - 10.40

5.88 - 7.12

Reviewed By

Jose R Delgado

SNT Level

III

Date

2 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/001/1,2		Examination No.: ID-5D	
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGEUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: Carlos Barberino/ N/A						4/4/2005		Start	End
								0853	0905
								96	96
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
		Lower Limit		11407	11436	Lower Limit		19201	23500
Scan: ID Device		Upper Limit		12687	12696	Upper Limit		21821	24100
Increment: Y Axis		Increment Interval		80		DCI		4	
Mode: X Axis		Conversion Counts		100		Conversion Counts		100	
Scan Motion: Automatic Scan		Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction: Bi-directional		EDAS Radius In.		125.50					
Correction: Default									
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		and the baffle plate.	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	* 19199 in scan position on EDAS is equal to 23500 in realtime.
	Start	Stop	Start	Stop	Channel 1	☐	☒		☐
1-17	11410	12649	*23500	*24100	Channel 2	☐	☒	☐	
					Channel 3	☐	☒	☐	
					Channel 4	☐	☒	☐	
					Channel 5	☐	☐	☒	
					Channel 6	☐	☐	☒	
					Channel 7	☐	☐	☒	
					Channel 8	☐	☐	☒	
Analyst / SNT Level / Date:									
									

ISWT FORM No. UT 50 (Rev. 05/03)

m Number 5D

Page 1 of 2

Quad Cities Unit 1
VCS1-55
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

197.87 - 199.11
115.28 - 122.48
2.45 - 3.13

Module Coordinates

Channel 1

Inc. Axis
Scan Axis

0.00 - 7.20
0.96 - 2.20

Feature Analysis

Channel 1
ASME

Inc. Axis Values

Scan No. Limits

	1	10
Inc. Axis Limits	115.28	122.48

Length

7.20

Maximum Point

% DAC

20

Inc. Axis Location

116.05

Surface Location

194.55

Scan Axis Location

198.63

Depth In Material

2.84

Metal Path

4.96

Time

83.2

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates

Channel 2

Inc. Axis

0.00 - 7.20

Scan Axis

10.80 - 12.04

Module Coordinates

Channel 3

Inc. Axis

3.20 - 10.40

Scan Axis

1.88 - 3.12

Module Coordinates

Channel 4

Inc. Axis

3.20 - 10.40

Scan Axis

9.88 - 11.12

cam Number 5D

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

3.20 - 10.40

5.88 - 7.12

viewed By

QRM

SNT Level

III

Date

14 JULY 05

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2			Examination No.: IT-5E			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001						
Mod. Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A						4-Apr-05		Start		End		
								0916		0940		
Data Acquisition												
Scan Controller Parameters		Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		
Controller: ID Device		Lower Limit		11407		11372		Lower Limit		24100		
Scan: Y Axis		Upper Limit		12687		12652		Upper Limit		24700		
Increment: X Axis		Increment Interval		80				DCI		4		
Mode: Manual Scan		Conversion Counts		100				Conversion Counts		100		
Scan Motion: Bi-directional		Conversion Units In.		1.00				Conversion Units In.		1.00		
Correction: Default		EDAS Radius In.		125.50								
										Positional Parameters		
										Beam Direction: Dn/Up		
										Transducer Size: 1.00		
										Code % of Overlap: 10		
										Number of Scans: 17		
										Device Position: D(0)		
Module Parameters:						Calibration Records:		Examination Notes:				
Status		Angle		Direction		Scan Offset		Step Offset		QCS1-03		
Channel 1		On		55		(-)		- 1.40(in)		- 1.21(in)		
Channel 2		On		55		(+)		+ 1.40(in)		- 1.21(in)		
Channel 3		On		SLIC-40		(-)		- 1.97(in)		+ 1.69(in)		
Channel 4		On		SLIC-40		(+)		+ 1.97(in)		+ 1.69(in)		
Channel 5		On		0T		(+)		+ 0.00(in)		+ 1.69(in)		
Channel 6		Off		N/A		N/A		N/A		N/A		
Channel 7		Off		N/A		N/A		N/A		N/A		
Channel 8		Off		N/A		N/A		N/A		N/A		
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1				
	Start	Stop	Start	Stop								
1-17	11415	12668	24100	24700	Channel 1	☐	☒	☐	*19199 in scan position on EDAS is equal to 24100 in realtime.			
					Channel 2	☐	☒	☐	*19799 in scan position on EDAS is equal to 24700 in realtime.			
					Channel 3	☐	☒	☐				
					Channel 4	☐	☒	☐				
					Channel 5	☐	☐	☒				
					Channel 6	☐	☐	☒				
					Channel 7	☐	☐	☒				
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date:												
Reed Reed II 04 APR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

xam Number 5E

Page 1 of 2

Quad Cities Unit 1
VCS1-55
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

197.87 - 199.11
115.28 - 122.48
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.21
0.96 - 2.20

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	115.28	122.49
Length	7.21	
% DAC	14	
Inc. Axis Location	115.28	
Surface Location	194.83	
Scan Axis Location	199.03	
Depth In Material	2.93	
Metal Path	5.11	
Time	85.8	

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.21
10.80 - 12.04

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

3.23 - 9.68
1.88 - 3.12

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

3.23 - 9.68
9.88 - 11.12

Exam Number 5E

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

3.23 - 9.68

5.88 - 7.12

Reviewed By

REARCOO

SNT Level

II

Date

04 APR 05

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-6A			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						4-Apr-05		Start	End	Start	End	
								1000	1010	90	90	
Data Acquisition												
Scan Controller Parameters			Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters	
Controller:	ID Device		Lower Limit		11407	11371	Lower Limit		24700	24700	Beam Direction: Dn/Up	
Scan:	Y Axis		Upper Limit		12687	12657	Upper Limit		25300	25300	Transducer Size: 1.00	
Increment:	X Axis		Increment Interval		80		DCI		4		Code % of Overlap: 10	
Mode:	Manual Scan		Conversion Counts		100		Conversion Counts		100		Number of Scans: 17	
Scan Motion:	Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: D(0)	
Correction:	Default		EDAS Radius In.		125.50							
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:				
	Status	Angle	Direction	Scan Offset	Step Offset			Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.				
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03						
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800301						
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800302						
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800303						
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800304		Examination Remarks:				
Channel 6	Off	N/A	N/A	N/A	N/A	0800305		Partial Exam				
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No		*19199 in scan position on EDAS is equal to 24700 in realtime. *19799 in scan position on EDAS is equal to 25300 in realtime.		
	Start	Stop	Start	Stop								
1-17	11403	12684	24700	25300	Channel 1	☐	☒	☐	Further Evaluation			
					Channel 2	☐	☒	☐	Required:			
					Channel 3	☐	☒	☐	☐ Yes ☒ No			
					Channel 4	☐	☒	☐	Archive Tape/CD No.:			
					Channel 5	☐	☐	☒	5A & 5B			
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 7	☐	☐	☒	1			
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date: R. Pa. Ros II 4 APR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 6A

Page 1 of 2

Quad Cities Unit 1
VCS1-55
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1	
Scan Axis	194.35 - 195.59
Inc. Axis	112.38 - 119.58
Depth In Material	4.51 - 5.68

	Channel 1
Module Coordinates	
Inc. Axis	- 4.00
Scan Axis	-5.48 - -4.24

	Channel 2
Module Coordinates	
Inc. Axis	- 4.00
Scan Axis	10.20 - 11.44

	Channel 3
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	-3.40 - -2.16

	Channel 4
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	8.12 - 9.36

	Channel 5
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	2.36 - 3.60

	Channel 5
Feature Analysis	ASME
Inc. Axis Values	
Scan No. Limits	1 10
Inc. Axis Limits	112.38 119.58
Length	7.20
Maximum Point	
% DAC	2
Inc. Axis Location	117.18
Surface Location	195.39
Scan Axis Location	195.39
Depth In Material	4.51
Metal Path	4.51

Exam Number 6A

Page 2 of 2

Time	
38.1	
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By Rebecca SNT Level II Date 04 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-6B			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						4-Apr-05		Start	End	Start	End	
								1018	1026	91	91	
Data Acquisition												
Scan Controller Parameters Controller: ID Device Scan: Y Axis Increment: X Axis Mode: Manual Scan Scan Motion: Bi-directional Correction: Default			Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters Beam Direction: Dn/Up Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 17 Device Position: D(0)	
			Lower Limit		11407	11392	Lower Limit		25300	25300		
			Upper Limit		12687	12667	Upper Limit		25900	25900		
			Increment Interval		80		DCI		4			
			Conversion Counts		100		Conversion Counts		100			
			Conversion Units In.		1.00		Conversion Units In.		1.00			
			EDAS Radius In.		125.50							
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:				
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.				
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301						
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302						
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303						
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:				
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305		Partial Exam				
Channel 6	Off	N/A	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:		*19199 in scan position on EDAS is equal to 25300 in realtime.		
	Start	Stop	Start	Stop				☒ Yes ☐ No	*19799 in scan position on EDAS is equal to 25900 in realtime.			
1-17	11402	12687	25300	25900	Channel 1	☐	☒	☐	Further Evaluation			
					Channel 2	☐	☒	☐	Required:			
					Channel 3	☐	☒	☐	☐ Yes ☒ No			
					Channel 4	☐	☒	☐	Archive Tape/CD No.:			
					Channel 5	☐	☐	☒	5A & 5B			
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 7	☐	☐	☒	1			
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date:												
Reca Recd TC 04 APR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 6B

Page 1 of 2

Quad Cities Unit 1
VCS1-55
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

194.35 - 195.59
112.38 - 119.58
3.37 - 4.54

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
- 4.00
-3.84 - -2.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
- 4.00
8.56 - 9.80

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 7.20
-2.44 - -1.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
0.00 - 7.20
7.16 - 8.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
0.00 - 7.20
2.36 - 3.60

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

Channel 5
ASME
1 10
112.38 119.58
7.20
11
114.79
195.15
195.15
3.52
3.52

Exam Number 6B

Page 2 of 2

Time	
29.8	
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By Rela Rose SNT Level II Date 04 APR 05

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1.2			Examination No.: ID-6C			
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001						
Mod. Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						4-Apr-05		Start	End	Start	End	
								1036	1047	91	91	
Data Acquisition												
Scan Controller Parameters			Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters	
Controller: ID Device			Lower Limit		11407	11402	Lower Limit		25900	25900	Beam Direction: Dn/Up	
Scan: Y Axis			Upper Limit		12687	12659	Upper Limit		26500	26500	Transducer Size: 1.00	
Increment: X Axis			Increment Interval		80		DCI		4		Code % of Overlap: 10	
Mode: Manual Scan			Conversion Counts		100		Conversion Counts		100		Number of Scans: 17	
Scan Motion: Bi-directional			Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: D(0)	
Correction: Default			EDAS Radius In.		125.50							
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:				
Status		Angle	Direction	Scan Offset	Step Offset			Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.				
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03						
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800301						
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800302						
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800303						
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800304		Examination Remarks:				
Channel 6	Off	N/A	N/A	N/A	N/A	0800305		Partial Exam				
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	*19199 in scan position on EDAS is equal to 25900 in realtime. *19799 in scan position on EDAS is equal to 26500 in realtime.			
	Start	Stop	Start	Stop								
1-17	11402	12687	25900	26500	Channel 1 ☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1				
				Channel 2 ☐	☒	☐						
				Channel 3 ☐	☒	☐						
				Channel 4 ☐	☒	☐						
				Channel 5 ☐	☐	☒						
				Channel 6 ☐	☐	☒						
				Channel 7 ☐	☐	☒						
				Channel 8 ☐	☐	☒						
Analyst / SNT Level / Date:												
R200a Page II 04 APR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

xam Number 6C

Page 1 of 2

Quad Cities Unit 1
VCS1-55
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

194.35 - 195.59
112.38 - 119.58
3.37 - 4.54

Channel 1

Module Coordinates
Inc. Axis
Scan Axis

- 4.10
-3.84 - -2.60

Channel 2

Module Coordinates
Inc. Axis
Scan Axis

- 4.10
8.56 - 9.80

Channel 3

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 7.22
-2.44 - -1.20

Channel 4

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 7.22
7.16 - 8.40

Channel 5

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 7.22
2.36 - 3.60

Channel 5

ASME

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

1	10
112.38	119.60
7.22	
15	
116.48	
194.35	
194.35	
4.28	
4.28	

Exam Number 6C

Page 2 of 2

Time
Comments

36.2

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Rebecca

SNT Level

II

Date

04 APR 05

LHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD										
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC1-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-6D		
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0001				
Mod. Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						4-Apr-05		Surface Temperature °F		
						Start		End		
						1055		1104		
						91		91		
Data Acquisition										
Scan Controller Parameters			Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
			Lower Limit		11407	11423	Lower Limit		26500	26500
Controller: ID Device			Upper Limit		12687	12682	Upper Limit		27000	27000
Scan: Y Axis			Increment Interval		80		DCI		4	
Increment: X Axis			Conversion Counts		100		Conversion Counts		100	
Mode: Manual Scan			Conversion Units In.		1.00		Conversion Units In.		1.00	
Scan Motion: Bi-directional			EDAS Radius In.		125.50					
Correction: Default										
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:		
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump diffuser		
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		and the baffle plate.		
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302				
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303				
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:		
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305		Partial Exam		
Channel 6	Off	N/A	N/A	N/A	N/A	N/A				
Channel 7	Off	N/A	N/A	N/A	N/A	N/A				
Channel 8	Off	N/A	N/A	N/A	N/A	N/A				
Data Analysis										
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks		
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	*19199 in scan position on EDAS is equal to 26500 in realtime. *19799 in scan position on EDAS is equal to 27000 in realtime.	
	Start	Stop	Start	Stop						
1-17	11407	12685	26500	27000	Channel 1 ☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1		
					Channel 2 ☐	☒	☐			
					Channel 3 ☐	☒	☐			
					Channel 4 ☐	☒	☐			
					Channel 5 ☐	☐	☒			
					Channel 6 ☐	☐	☒			
					Channel 7 ☐	☐	☒			
					Channel 8 ☐	☐	☒			
Analyst / SNT Level / Date:										
Reza Pado II 04 APR 05										

ISWT FORM No. UT 50 (Rev. 03/02)

cam Number 6D

Page 1 of 2

Quad Cities Unit 1
VCS1-55
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1

Scan Axis	193.87 - 195.11
Inc. Axis	112.38 - 119.58
Depth In Material	3.37 - 4.54

Channel 1

Module Coordinates

Inc. Axis	- 4.00
Scan Axis	-4.32 - -3.08

Channel 2

Module Coordinates

Inc. Axis	- 4.00
Scan Axis	8.08 - 9.32

Channel 3

Module Coordinates

Inc. Axis	0.00 - 7.20
Scan Axis	-2.92 - -1.68

Channel 4

Module Coordinates

Inc. Axis	0.00 - 7.20
Scan Axis	6.68 - 7.92

Channel 5

Module Coordinates

Inc. Axis	0.00 - 7.20
Scan Axis	1.88 - 3.12

Channel 5

ASME

Feature Analysis

Inc. Axis Values

Scan No. Limits	1	10
Inc. Axis Limits	112.38	119.58
Length	7.20	

Maximum Point

% DAC	7
Inc. Axis Location	116.38
Surface Location	194.83
Scan Axis Location	194.83
Depth In Material	3.52
Metal Path	3.52

cam Number 6D

Page 2 of 2

Time
Comments

29.8

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Rafaela Regal

SNT Level

II

Date

04 APR 05

 IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSCI-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-7	
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0002			
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						4-Apr-05		Start	End
								2136	2241
								92	92
Data Acquisition									
Scan Controller Parameters		Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual
		Controller: ID Device		Lower Limit	12400	15100	Lower Limit		11297
Scan: X Axis		Upper Limit		19330	19330	Upper Limit		12797	12797
Increment: Y Axis		Increment Interval		90		DCI		4	
Mode: Automatic Scan		Conversion Counts		100		Conversion Counts		100	
Scan Motion: Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction: Default		EDAS Radius In.		125.50					
								Positional Parameters	
								Beam Direction:	Ccw/Cw
								Transducer Size:	1.00
								Code % of Overlap:	10
								Number of Scans:	78
								Device Position:	A (0)
Module Parameters: A-07-1D Cal 33						Calibration Records:		Examination Notes:	
Status	Angle	Direction	Scan Offset	Step Offset			QCS1-33	Check for limitations due to the proximity of the jet pump diffuser	
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301		and the baffle plate.	
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803302			
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303			
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A		Limited exam due to the proximity of the jet pump diffuser and the	
Channel 6	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803306		baffle plate.	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	EDAS scan row numbers and increment numbers reflect realtime AIRI position.
	Start	Stop	Start	Stop					
31-78	15100	19330	11297	12793	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	5A & 5B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date: Revised II 04 APR 05									

xam Number ID-7

Page 1 of 2

Quad Cities Unit 1
VSC1-55
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

113.05 - 114.29
125.00 - 133.10
3.37 - 4.55

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

1.00 - -0.84
-2.12 - -0.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

1.00 - -0.84
2.28 - 3.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 8.16
-1.48 - -0.24

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

1.87 - -0.82
1.64 - 2.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

1.87 - -0.82
-4.32 - -3.08

Module Coordinates
Inc. Axis
Scan Axis

Channel 6

0.00 - 8.16
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME

	31	40
125.00		133.16
	8.16	

Exam Number ID-7

Page 2 of 2

% DAC	6
Inc. Axis Location	128.61
Surface Location	113.97
Scan Axis Location	113.97
Depth In Material	3.49
Metal Path	3.49
Time	29.4
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By Rebecca SNT Level II Date 04 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSCI-55			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-8				
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 55°			Device Configuration: AIR-21SCAN-0002						
Mod.Conf.: A-07-1C			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time				
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						4-Apr-05		Start	End			
								2050	2353	Start	End	
								92	92			
Data Acquisition												
Scan Controller Parameters Controller: ID Device Scan: X Axis Increment: Y Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default			Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual	Positional Parameters Beam Direction: Cw/Ccw Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 77 Device Position: A (180)	
			Lower Limit		19240	19240	Lower Limit		11297	11297		
			Upper Limit		26080	26080	Upper Limit		12797	12797		
			Increment Interval		90		DCI		4			
			Conversion Counts		100		Conversion Counts		100			
			Conversion Units In.		1.00		Conversion Units In.		1.00			
EDAS Radius In.		125.50										
Module Parameters:						Calibration Records:		Examination Notes:				
A-07-1C		Cal 33				QCS1-33		Check for limitations due to the proximity of the jet pump diffuser				
Status	Angle	Direction	Scan Offset	Step Offset			0803301	and the baffle plate.				
Channel 1	On	55	(+)	- 7.00(in)	+ 0.00(in)			0803302				
Channel 2	On	55	(-)	+ 7.00(in)	+ 0.00(in)			0803303				
Channel 3	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)			0803304	Examination Remarks:			
Channel 4	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)							
Channel 5	Off	N/A	N/A	N/A	N/A			N/A				
Channel 6	On	0T	(+)	+ 4.40(in)	- 1.00(in)			0803306				
Channel 7	Off	N/A	N/A	N/A	N/A			N/A				
Channel 8	Off	N/A	N/A	N/A	N/A			N/A				
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	EDAS scan row numbers and increment numbers reflect realtime AIRI position.			
	Start	Stop	Start	Stop								
1-77	19240	26080	11297	12793	Channel 1	☐	☒	☐	☒ Yes ☐ No			
					Channel 2	☐	☒	☐	Further Evaluation			
					Channel 3	☐	☒	☐	Required:			
					Channel 4	☐	☒	☐	☐ Yes ☒ No			
					Channel 5	☐	☐	☒	Archive Tape/CD No.:			
					Channel 6	☐	☐	☒	5A & 5B			
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 8	☐	☐	☒	1			
Analyst / SNT Level / Date: Rola Rola II 05 APR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

kam Number ID-8

Page 1 of 2

Quad Cities Unit 1
ID-8
Ring 3 Vert @ 55 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

121.85 - 123.09
191.40 - 199.50
3.37 - 4.55

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

- 7.19
11.08 - 12.32

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

- 7.19
6.68 - 7.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 87.95
10.44 - 11.68

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 6.29
7.32 - 8.56

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

- 6.29
13.28 - 14.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 6

0.00 - 87.95
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME

	1	10
191.40		279.35
	87.95	

Exam Number ID-8

Page 2 of 2

% DAC	16
Inc. Axis Location	195.89
Surface Location	121.93
Scan Axis Location	121.93
Depth In Material	3.49
Metal Path	3.49
Time	29.4
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

RLO a RLO

SNT Level

II

Date

5 APR 05

ISwT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 000200

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	RING 1 VERTICAL WELD AT 77-DEGREES
IDENTIFICATION:	VSC1-77

NDE Method	Proc/Rev/Chg/ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N O R T I H	Resolution Record	CNF Number	Remarks
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55	'0800301,0800302	15,16	X -	N / A	N / A	Exam limited due to proximity of the baffle plate.
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40	'0800303,0800304	15,16	X -	N / A	N / A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	9,10,11,12, 13,14	X -	N / A	N / A	
					X -	N / A	N / A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	9,10,11,12, 13,14	X -	N / A	N / A	

- NOTES:
1. Weld VSC1-77 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 85% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the VSC1-77 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by: Carlos M. Barrera
Carlos M. Barrera - Project Engineer

Date: 06-Apr-05

Reviewed by: Exelon Level III
Exelon Level III

Date: 04-12-2005

Page 1 of 1



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC1-77	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-9
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 77°	Device Configuration: AIR-21SCAN-0001	
Mod. Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date: 4/3/2005	Examination Time: Start 1313, End 1334
Data Acquisition Operator (s) / SNT Level: S Vinogradov/C. Federick			Surface Temperature °F: Start 75, End 75

Data Acquisition

Scan Controller Parameters	Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters
Controller: ID Device	Lower Limit	16226	*	Lower Limit	11500	*	Beam Direction: Dn/Up
Scan: Y Axis	Upper Limit	17506	*	Upper Limit	14120	*	Transducer Size: 1.00
Increment: X Axis	Increment Interval	80		DCI	4		Code % of Overlap: 10
Mode: Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans: 17
Scan Motion: Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position: D (0)
Correction: Default	EDAS Radius In.	125.50					

Module Parameters:	A-07B	Cal 03				Calibration Records:	Examination Notes:
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	Examination Remarks:
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305	* No exam due to proximity of baffle plates.
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☒ No	
	Start	Stop	Start	Stop					
.	.	.	.	.	Channel 1	☐	☐	☒	Further Evaluation Required:
					Channel 2	☐	☐	☒	☐ Yes ☒ No
					Channel 3	☐	☐	☒	Archive Tape/CD No.:
					Channel 4	☐	☐	☒	N/A
					Channel 5	☐	☐	☒	Analysis Tape/CD No.:
					Channel 6	☐	☐	☒	N/A
					Channel 7	☐	☐	☒	
					Channel 8	☐	☐	☒	

Analyst / SNT Level / Date:

James R. Delgado III 03 APR 05

FORM No. UT 50 (Rev. 05/02)



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC1-77	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-10
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 77°	Device Configuration: AIR-21SCAN-0001	
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date: 4/3/2005	Examination Time: Start 1313, End 1334
Data Acquisition Operator (s) / SNT Level: S Vinogradov/C. Federick			Surface Temperature °F: Start 75, End 75

Data Acquisition

Scan Controller Parameters	Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters
Controller: ID Device	Lower Limit	16226	16267	Lower Limit	14067	14069	Beam Direction: Dn/Up
Scan: Y Axis	Upper Limit	17506	17512	Upper Limit	16687	16687	Transducer Size: 1.00
Increment: X Axis	Increment Interval	80		DCI	4		Code % of Overlap: 10
Mode: Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans: 17
Scan Motion: Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position: D (0)
Correction: Default	EDAS Radius In.	125.50					

Module Parameters:	A-07B	Cal 03	Calibration Records:	Examination Notes:			
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Scan No.(s)	Increment & Scan Positions Actual				Recordable Indications			Analyst Remarks	
	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop				☒ Yes ☐ No	
1-17	16267	17516	14064	16687	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	5A & 5B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		

Analyst / SNT Level / Date:

Jesus R. Delgado III 03 APR 05

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 10

Page 1 of 2

Quad Cities Unit 1
VSC1-77
Ring 1 Vert @ 77 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

149.14 - 150.38
161.05 - 168.25
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.20
13.40 - 14.64

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	161.05	168.25
Length	7.20	
% DAC	13	
Inc. Axis Location	161.05	
Surface Location	154.06	
Scan Axis Location	149.66	
Depth In Material	3.09	
Metal Path	5.38	
Time	90.2	

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.20
3.56 - 4.80

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 4.00
12.48 - 13.72

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 4.00
4.48 - 5.72

Exam Number 10

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

- 4.00
8.48 - 9.72

Reviewed By

James R. Delgado

SNT Level

III

Date

3 APR 05



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC1-77	Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1.2	Examination No.: ID-11
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 77°	Device Configuration: AIR-21SCAN-0001	
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date: 4/13/05	Examination Time:
Data Acquisition Operator (s) / SNT Level: S Vinogradov/C. Federick		Start: 1341	End: 1457
		Start: 9	End: 5

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	16226	16227	Lower Limit	16634	16634	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	17506	17495	Upper Limit	19254	192554	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Manual Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters: A-07B Cal 03						Calibration Records:	Examination Notes:
	Status	Angle	Direction	Scan Offset	Step Offset		
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800301	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800302	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800303	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800304	
Channel 6	Off	N/A	N/A	N/A	N/A	0800305	Examination Remarks:
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual				Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No
	Start	Stop	Start	Stop				
1-17	16212	17489	16634	19254	Channel 1 ☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1
					Channel 2 ☐	☒	☐	
					Channel 3 ☐	☒	☐	
					Channel 4 ☐	☒	☐	
					Channel 5 ☐	☐	☒	
					Channel 6 ☐	☐	☒	
					Channel 7 ☐	☐	☒	
					Channel 8 ☐	☐	☒	

Analyst / SNT Level / Date:

C. Vinogradov III 03 APR 05

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 11

Page 1 of 2

Quad Cities Unit 1
VCS1-77
Ring 1 Vert @ 77 deg

Cursor Box 1 of 1

Scan Axis	168.42 - 169.66
Inc. Axis	161.05 - 168.25
Depth In Material	2.45 - 3.13

	Channel 1
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	7.00 - 8.24

	Channel 1
Feature Analysis	ASME
Inc. Axis Values	
Scan No. Limits	1 10
Inc. Axis Limits	161.05 168.25
Length	7.20
Maximum Point	
% DAC	16
Inc. Axis Location	161.85
Surface Location	173.50
Scan Axis Location	169.06
Depth In Material	3.11
Metal Path	5.42
Time	90.9

Comments	
:	NO recordable Indications ch1 ch2
:	ch3 ch4.
:	
:	

	Channel 2
Module Coordinates	
Inc. Axis	0.00 - 7.20
Scan Axis	-2.84 - -1.60

	Channel 3
Module Coordinates	
Inc. Axis	- 4.00
Scan Axis	6.08 - 7.32

	Channel 4
Module Coordinates	
Inc. Axis	- 4.00
Scan Axis	-1.92 - -0.68

Exam Number 11

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

- 4.00

2.08 - 3.32

Reviewed By *Jim P. Bell* SNT Level *III* Date *03 APR 05*

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 12

Page 1 of 2

Quad Cities Unit 1
VCS1-77
Ring 1 Vert @ 77 deg

Cursor Box 1 of 1

Scan Axis	196.05 - 197.29
Inc. Axis	161.05 - 168.25
Depth In Material	2.45 - 3.13

Module Coordinates

Inc. Axis	0.00 - 7.20
Scan Axis	8.96 - 10.20

Channel 1

Feature Analysis

Inc. Axis Values

Scan No. Limits	1	10
Inc. Axis Limits	161.05	168.25
Length	7.20	

Maximum Point

% DAC	18
Inc. Axis Location	163.45
Surface Location	201.17
Scan Axis Location	196.85
Depth In Material	3.02
Metal Path	5.27
Time	88.3

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Channel 2

Module Coordinates

Inc. Axis	0.00 - 7.20
Scan Axis	-0.88 - 0.36

Channel 3

Module Coordinates

Inc. Axis	- 4.00
Scan Axis	8.04 - 9.28

Channel 4

Module Coordinates

Inc. Axis	- 4.00
Scan Axis	0.04 - 1.28

Exam Number 12

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

- 4.00

4.04 - 5.28

Reviewed By

R00a R000

SNT Level

II

Date

03 APR 05



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSCI-77	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-13	
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 77°	Device Configuration: AIR-21SCAN-0001		
Mod.Conf.: A-07A	Scan Path Drawing: SPLONGBUTT	Exam Date: 4/3/2005	Examination Time: Start: 1545 End: 1605	Surface Temperature °F: Start: 95 End: 95
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A				

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	16226	16195	Lower Limit	21768	21768	Beam Direction:	Up/Dn
Scan:	Y Axis	Upper Limit	17506	17518	Upper Limit	24388	24388	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (180)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
A-07A		Cal 03				QCS1-03	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Status	Angle	Direction	Scan Offset	Step Offset		0800301	
Channel 1	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800302	
Channel 2	On	55	(-)	- 1.40(in)	+ 1.21(in)	0800303	
Channel 3	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	0800304	
Channel 4	On	SLIC-40	(-)	- 1.97(in)	- 1.69(in)	0800305	
Channel 5	On	0T	(+)	+ 0.00(in)	- 1.69(in)	N/A	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	Examination Remarks:

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	Further Evaluation Required: ☐ Yes ☒ No
	Start	Stop	Start	Stop					
1-17	16226	17518	21768	24388	Channel 1 ☐	☒	☐	Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1	
					Channel 2 ☐	☒	☐		
					Channel 3 ☐	☒	☐		
					Channel 4 ☐	☒	☐		
					Channel 5 ☐	☐	☒		
					Channel 6 ☐	☐	☒		
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		

Analyst / SNT Level / Date:

Refa Resol # 03 APR 05

Exam Number 13

Page 1 of 2

Quad Cities Unit 1
VCS1-77
Ring 1 Vert @ 77 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

222.16 - 223.40
163.95 - 171.15
3.94 - 5.11

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
3.20 - 9.88
11.52 - 12.76

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
3.20 - 9.88
-2.56 - -1.32

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 7.10
9.76 - 11.00

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
0.00 - 7.10
-0.80 - 0.44

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
0.00 - 7.10
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length

Channel 5
ASME
1 10
163.95 171.05
7.10

Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

51
167.94
223.08
223.08
4.09
4.09

Exam Number 13

Page 2 of 2

Time
Comments

34.6

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Bill a Rose

SNT Level

II

Date

03 APR 05



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC1-77	Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2	Examination No.: ID-14
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 77°	Device Configuration: AIR-21SCAN-0001	
Mod. Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date: 3-Apr-05	Examination Time: Start 1609, End 1640
Data Acquisition Operator (s) / SNT Level: S Vinogradov / N/A			Surface Temperature °F: Start 95, End 95

Data Acquisition:

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	16226	16226	Lower Limit	24335	24335	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	17506	17539	Upper Limit	26955	26955	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters: A-07B Cal 03						Calibration Records:	Examination Notes:
Status	Angle	Direction	Scan Offset	Step Offset			
Channel 1 On	55	(-)	- 1.40(in)	- 1.21(in)		QCS1-03	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 2 On	55	(+)	+ 1.40(in)	- 1.21(in)		0800301	
Channel 3 On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)		0800302	
Channel 4 On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)		0800303	
Channel 5 On	0T	(+)	+ 0.00(in)	+ 1.69(in)		0800304	Examination Remarks:
Channel 6 Off	N/A	N/A	N/A	N/A		0800305	
Channel 7 Off	N/A	N/A	N/A	N/A		N/A	
Channel 8 Off	N/A	N/A	N/A	N/A		N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-17	16226	17518	24335	26955	Channel 1 ☐	☒	☐	Further Evaluation Required:	
					Channel 2 ☐	☒	☐	☐ Yes ☒ No	
					Channel 3 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 4 ☐	☒	☐	5A & 5B	
					Channel 5 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 6 ☐	☐	☒	1	
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		

Analyst / SNT Level / Date:

Repa/Reel III 03 APR 05

Exam Number 14

Page 1 of 2

Quad Cities Unit 1
VCS1-77
Ring 1 Vert @ 77 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

250.55 - 251.79
163.95 - 171.15
5.00 - 6.17

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

3.19 - 10.40
15.72 - 16.96

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

3.19 - 10.40
-1.32 - -0.08

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 7.20
13.36 - 14.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

0.00 - 7.20
1.04 - 2.28

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

0.00 - 7.20
7.20 - 8.44

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

Channel 5
ASME

1	10
163.95	171.15
7.20	
1	
163.95	
250.55	
250.55	
5.00	
5.00	

Exam Number 14

Page 2 of 2

Time
Comments

42.2

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Reed Rago

SNT Level

II

Date

03 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																																																																																																
Site/Plant: Quad Cities Unit 1			Weld Identification: VSCI-77			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1.2			Examination No.: ID-15																																																																																							
Project No.: 04-0379			Weld Description: Ring 1 Vert @ 77°			Device Configuration: AIR-21SCAN-0002																																																																																										
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F																																																																																						
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						4-Apr-05		Start		End																																																																																						
								1622		1802																																																																																						
Data Acquisition																																																																																																
Scan Controller Parameters Controller: ID Device Scan: X Axis Increment: Y Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default			Increment Axis/Device		Planned		Actual		Scan Axis/Arm		Planned																																																																																					
			Lower Limit		12400		14020		Lower Limit		16116																																																																																					
			Upper Limit		19330		19330		Upper Limit		17616																																																																																					
			Increment Interval		90				DCI		4																																																																																					
			Conversion Counts		100				Conversion Counts		100																																																																																					
			Conversion Units In.		1.00				Conversion Units In.		1.00																																																																																					
			EDAS Radius In.		125.50																																																																																											
Module Parameters: A-07-1D Cal 33 <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Status</th> <th>Angle</th> <th>Direction</th> <th>Scan Offset</th> <th>Step Offset</th> </tr> </thead> <tbody> <tr><td>Channel 1</td><td>On</td><td>55</td><td>(-)</td><td>+ 7.00(in)</td></tr> <tr><td>Channel 2</td><td>On</td><td>55</td><td>(+)</td><td>- 7.00(in)</td></tr> <tr><td>Channel 3</td><td>On</td><td>SLIC-40</td><td>(-)</td><td>+ 4.40(in)</td></tr> <tr><td>Channel 4</td><td>On</td><td>SLIC-40</td><td>(+)</td><td>- 4.40(in)</td></tr> <tr><td>Channel 5</td><td>Off</td><td>N/A</td><td>N/A</td><td>N/A</td></tr> <tr><td>Channel 6</td><td>On</td><td>0T</td><td>(+)</td><td>- 4.40(in)</td></tr> <tr><td>Channel 7</td><td>Off</td><td>N/A</td><td>N/A</td><td>N/A</td></tr> <tr><td>Channel 8</td><td>Off</td><td>N/A</td><td>N/A</td><td>N/A</td></tr> </tbody> </table>						Status	Angle	Direction	Scan Offset	Step Offset	Channel 1	On	55	(-)	+ 7.00(in)	Channel 2	On	55	(+)	- 7.00(in)	Channel 3	On	SLIC-40	(-)	+ 4.40(in)	Channel 4	On	SLIC-40	(+)	- 4.40(in)	Channel 5	Off	N/A	N/A	N/A	Channel 6	On	0T	(+)	- 4.40(in)	Channel 7	Off	N/A	N/A	N/A	Channel 8	Off	N/A	N/A	N/A	Calibration Records: QCS1-33 0803301 0803302 0803303 0803304 N/A 0803306 N/A N/A		Examination Notes: Check for limitations due to the proximity of the jet pump diffuser and the baffle plate. Examination Remarks:																																											
Status	Angle	Direction	Scan Offset	Step Offset																																																																																												
Channel 1	On	55	(-)	+ 7.00(in)																																																																																												
Channel 2	On	55	(+)	- 7.00(in)																																																																																												
Channel 3	On	SLIC-40	(-)	+ 4.40(in)																																																																																												
Channel 4	On	SLIC-40	(+)	- 4.40(in)																																																																																												
Channel 5	Off	N/A	N/A	N/A																																																																																												
Channel 6	On	0T	(+)	- 4.40(in)																																																																																												
Channel 7	Off	N/A	N/A	N/A																																																																																												
Channel 8	Off	N/A	N/A	N/A																																																																																												
Data Analysis																																																																																																
Increment & Scan Positions Actual <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Scan No.(s)</th> <th colspan="2">Increment Position</th> <th colspan="2">Scan Position</th> </tr> <tr> <th>Start</th> <th>Stop</th> <th>Start</th> <th>Stop</th> </tr> </thead> <tbody> <tr><td>19-78</td><td>14020</td><td>19330</td><td>16116</td><td>17612</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>					Scan No.(s)	Increment Position		Scan Position		Start	Stop	Start	Stop	19-78	14020	19330	16116	17612																																				Recordable Indications <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> <th>N/A</th> </tr> </thead> <tbody> <tr><td>Channel 1</td><td>☐</td><td>☒</td><td>☐</td></tr> <tr><td>Channel 2</td><td>☐</td><td>☒</td><td>☐</td></tr> <tr><td>Channel 3</td><td>☐</td><td>☒</td><td>☐</td></tr> <tr><td>Channel 4</td><td>☐</td><td>☒</td><td>☐</td></tr> <tr><td>Channel 5</td><td>☐</td><td>☐</td><td>☒</td></tr> <tr><td>Channel 6</td><td>☐</td><td>☐</td><td>☒</td></tr> <tr><td>Channel 7</td><td>☐</td><td>☐</td><td>☒</td></tr> <tr><td>Channel 8</td><td>☐</td><td>☐</td><td>☒</td></tr> </tbody> </table>				Yes	No	N/A	Channel 1	☐	☒	☐	Channel 2	☐	☒	☐	Channel 3	☐	☒	☐	Channel 4	☐	☒	☐	Channel 5	☐	☐	☒	Channel 6	☐	☐	☒	Channel 7	☐	☐	☒	Channel 8	☐	☐	☒	Analyst Remarks Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: I Scan row numbers and increment numbers reflect AIRIS position.			
Scan No.(s)	Increment Position		Scan Position																																																																																													
	Start	Stop	Start	Stop																																																																																												
19-78	14020	19330	16116	17612																																																																																												
	Yes	No	N/A																																																																																													
Channel 1	☐	☒	☐																																																																																													
Channel 2	☐	☒	☐																																																																																													
Channel 3	☐	☒	☐																																																																																													
Channel 4	☐	☒	☐																																																																																													
Channel 5	☐	☐	☒																																																																																													
Channel 6	☐	☐	☒																																																																																													
Channel 7	☐	☐	☒																																																																																													
Channel 8	☐	☐	☒																																																																																													
Analyst / SNT Level / Date: Repaired II 04 APR 05																																																																																																

Exam Number 15

Page 1 of 2

Quad Cities Unit 1
VSC1-77
Ring 1 Vert @ 77 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

161.24 - 162.48
125.00 - 133.10
3.37 - 4.55

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.97 - 9.05
-2.12 - -0.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.97 - 9.05
2.28 - 3.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 8.09
-1.48 - -0.24

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

1.75 - -0.09
1.64 - 2.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 6

0.00 - 8.09
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

Channel 6
ASME

	19	28
125.00		133.09
	8.09	
	18	
	127.55	
	161.36	
	161.36	
	3.75	
	3.75	

Exam Number 15

Page 2 of 2

Time
Comments

31.7

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

R. A. R. R.

SNT Level

II

Date

04 APR 05



IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC1-77	Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2	Examination No.: ID-16
Project No.: 04-0379	Weld Description: Ring 1 Vert @ 77°	Device Configuration: AIR-21SCAN-0002	
Mod.Conf.: A-07-1D	Scan Path Drawing: SPLONGBUTT	Exam Date: 4-Apr-05	Examination Time: Start 1810, End 1951
Data Acquisition Operator (s) / SNT Level: S. Vlnogradov / N/A C. Frederick / N/A			Surface Temperature °F: Start 92, End 92

Data Acquisition

Scan Controller Parameters		Increment Axis/Device	Planned	Actual	Scan Axis/Arm	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	19240	19240	Lower Limit	16116	16116	Beam Direction:	Ccw/Cw
Scan:	X Axis	Upper Limit	26080	26080	Upper Limit	17616	17616	Transducer Size:	1.00
Increment:	Y Axis	Increment Interval	90		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	77
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	A (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters: A-07-1D Cal 33						Calibration Records:	Examination Notes:
Channel	Status	Angle	Direction	Scan Offset	Step Offset		
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	QCS1-33	Check for limitations due to the proximity of the jet pump diffuser and the baffle plate.
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803301	
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803302	
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803303	
Channel 5	Off	N/A	N/A	N/A	N/A	0803304	Examination Remarks:
Channel 6	On	0T	(+)	- 4.40(in)	+ 1.00(in)	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	0803306	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	Scan row numbers and increment numbers reflect AIRIS position.
	Start	Stop	Start	Stop					
1-77	19240	26080	16116	17616	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	5A & 5B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		

Analyst / SNT Level / Date:

Revised II 04 APR 05

Exam Number 16

Page 1 of 2

Quad Cities Unit 1
VSC1-77
Ring 1 Vert @ 77 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

161.00 - 162.24
193.40 - 201.50
1.67 - 2.84

Channel 1

Module Coordinates
Inc. Axis
Scan Axis

0.90 - 88.11
-4.80 - -3.56

Channel 2

Module Coordinates
Inc. Axis
Scan Axis

0.90 - 88.11
4.48 - 5.72

Channel 3

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 7.22
-3.16 - -1.92

Channel 4

Module Coordinates
Inc. Axis
Scan Axis

1.75 - 88.83
2.84 - 4.08

Channel 6

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 7.22
4.24 - 5.48

Channel 6

ASME

Feature Analysis

Inc. Axis Values

Scan No. Limits

Inc. Axis Limits

Length

Maximum Point

% DAC

Inc. Axis Location

Surface Location

Scan Axis Location

Depth In Material

Metal Path

	1	10
	193.40	200.62
	7.22	
	15	
	198.81	
	162.24	
	162.24	
	2.73	
	2.73	

Exam Number 16

Page 2 of 2

Time
Comments

23.0

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

RoadBello

SNT Level

IC

Date

04 APR 05

ISwT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 000500

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	RING 2 VERTICAL WELD AT 22-DEGREES
IDENTIFICATION:	VSC2-22

NDE Method	Proc/Rev/Chg/ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N O		Resolution Record	CNF Number	Remarks
					R I	T H			
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55	0800301,0800302	39,40	X	-	N/A	N/A	Exam limited due to proximity of the core shroud repair tie rod.
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40	0800303,0800304	39,40	X	-	N/A	N/A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	33,34,35,36, 37,38	X	-	N/A	N/A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	33,34,35,36, 37,38	X	-	N/A	N/A	

- NOTES:
1. Weld VSC2-141 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 66% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the VSC2-66 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by: Carlos M. Barnera
Carlos M. Barnera - Project Engineer

Date: 05-Apr-05

Reviewed by: Exelon Level III

Date: 04-12-2005

Page 1 of 1

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC2-22			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-33	
Project No.: 04-0379			Weld Description: Ring 2 Vert @ 22°			Device Configuration: AIR-21SCAN-0001			
Mod. Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A						2-Apr-05		Start	End
								1820	1847
								Start	End
								96	96
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
Controller:	ID Device	Lower Limit		4179	4206	Lower Limit		24750	24822
Scan:	Y Axis	Upper Limit		5459	5426	Upper Limit		27378	27378
Increment:	X Axis	Increment Interval		80		DCI		4	
Mode:	Automatic Scan	Conversion Counts		100		Conversion Counts		100	
Scan Motion:	Bi-directional	Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction:	Default	EDAS Radius In.		125.50					
							Positional Parameters		
							Beam Direction: Dn/Up		
							Transducer Size: 1.00		
							Code % of Overlap: 10		
							Number of Scans: 17		
							Device Position: D (0)		
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:	
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump bracket,	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core shroud repair tie rod, and the guide rod.	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1	
	Start	Stop	Start	Stop					
1-17	4198	5462	24732	27378	Channel 1 ☐	☒	☐		
					Channel 2 ☐	☒	☐		
					Channel 3 ☐	☒	☐		
					Channel 4 ☐	☒	☐		
					Channel 5 ☐	☐	☒		
					Channel 6 ☐	☐	☒		
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date: Rec'd Rec'd = 02 APR 05									

Exam Number 33

Page 1 of 2

Quad Cities Unit 1
VSC2-22
Ring 2 Vert @ 22 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

278.25 - 279.49
43.48 - 50.68
5.49 - 6.67

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
3.20 - 10.49
13.72 - 14.96

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
3.20 - 10.49
-4.76 - -3.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 7.15
11.04 - 12.28

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
0.00 - 7.15
-2.08 - -0.84

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
0.00 - 7.15
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

Channel 5
ASME
1 10
43.48 50.63
7.15
6
46.68
278.65
278.65
6.17
6.17

Exam Number 33

Page 2 of 2

Time	
52.2	
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By Rolla R. S. 20 SNT Level II Date 02 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC2-22			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-34	
Project No.: 04-0379			Weld Description: Ring 2 Vert @ 22°			Device Configuration: AIR-21SCAN-0001			
Mod. Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A						2-Apr-05		Start	End
								1850	1859
								Start	End
								96	96
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
		Lower Limit		4179	4166	Lower Limit		27325	27329
Controller: ID Device		Upper Limit		5459	5334	Upper Limit		29953	29953
Scan: Y Axis		Increment Interval		80		DCI		4	
Increment: X Axis		Conversion Counts		100		Conversion Counts		100	
Mode: Automatic Scan		Conversion Units In.		1.00		Conversion Units In.		1.00	
Scan Motion: Bi-directional		EDAS Radius In.		125.50					
Correction: Default									
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump bracket,	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core shroud repair tie rod, and the guide rod.	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop				☒ Yes ☐ No	
1-17	4181	5334	27325	29953	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	5A & 5B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date: Reed Reed II 02 APR 05									

Exam Number 34

Page 1 of 2

Quad Cities Unit 1
VSC2-22
Ring 2 Vert @ 22 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

277.73 - 278.97
43.48 - 50.68
3.37 - 4.54

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

3.10 - 9.63
10.68 - 11.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

3.10 - 9.63
-1.72 - -0.48

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 6.65
9.28 - 10.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

0.00 - 6.65
-0.32 - 0.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

0.00 - 6.65
4.48 - 5.72

Feature Analysis
Inc. Axis Values

Channel 5
ASME

Scan No. Limits
Inc. Axis Limits
Length

	1	10
43.48		50.13
	6.65	

Maximum Point

% DAC

9

Inc. Axis Location

50.13

Surface Location

277.73

Scan Axis Location

277.73

Depth In Material

4.05

Metal Path

4.05

Exam Number 34

Page 2 of 2

Time
Comments

34.2

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Debra Rago

Page 168 of 945

SNT Level

II

Date

02/18/15



IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant : Quad Cities Unit 1	Weld Identification: VSC2-22	Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2	Examination No.: ID-35
Project No.: 04-0379	Weld Description: Ring 2 Vert @ 22°	Device Configuration: AIR-21SCAN-0001	
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A		2-Apr-05	Surface Temperature °F
		Start	End
		1902	1908
		Start	End
		96	96

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	4179	4168	Lower Limit	29900	29904	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	5459	5302	Upper Limit	32528	32528	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
A-07B		Cal 03					
Status	Angle	Direction	Scan Offset	Step Offset			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03	Check for limitations due to the proximity of the jet pump bracket,
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800301	core shroud repair tie rod, and the guide rod.
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800302	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800303	
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800304	Examination Remarks:
Channel 6	Off	N/A	N/A	N/A	N/A	0800305	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop					
1-17	4179	5330	29900	32528	Channel 1 ☐	☒	☐	☒ Yes ☐ No	
					Channel 2 ☐	☒	☐	Further Evaluation	
					Channel 3 ☐	☒	☐	Required:	
					Channel 4 ☐	☒	☐	☐ Yes ☒ No	
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 6 ☐	☐	☒	5A & 5B	
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒	1	

Analyst / SNT Level / Date:

R. Vinogradov II 02 APR 05

Exam Number 35

Page 1 of 2

Quad Cities Unit 1
VSC2-22
Ring 2 Vert @ 22 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

303.48 - 304.72
43.48 - 50.68
4.70 - 5.87

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
2.99 - 9.30
12.60 - 13.84

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
2.99 - 9.30
-3.64 - -2.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 6.39
10.36 - 11.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
0.00 - 6.39
-1.40 - -0.16

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
0.00 - 6.39
4.48 - 5.72

Feature Analysis
Inc. Axis Values

Channel 5
ASME

Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

	1	10
Inc. Axis Limits	43.48	49.87
Length	6.39	
% DAC	3	
Inc. Axis Location	49.34	
Surface Location	303.96	
Scan Axis Location	303.96	
Depth In Material	4.70	
Metal Path	4.70	

Exam Number 35

Page 2 of 2

Time	
39.7	
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

R. D. a. D. S. S.

SNT Level

III

Date

02 APR 05

Site/Plant : Quad Cities Unit 1	Weld Identification: VSC2-22	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-36		
Project No.: 04-0379	Weld Description: Ring 2 Vert @ 22°	Device Configuration: AIR-21SCAN-0001				
Mod.Conf.: A-07A	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A		3-Apr-05	Start	End	Start	End
			0458	0504	96	96

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	4179	4166	Lower Limit	32475	32475	Beam Direction:	Up/Dn
Scan:	Y Axis	Upper Limit	5459	5459	Upper Limit	35103	35095	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (180)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
Status	A-07A Angle	Cal 03 Direction	Scan Offset	Step Offset	QCS1-03		
Channel 1	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800301	Check for limitations due to the proximity of the jet pump bracket, core shroud repair tie rod, and the guide rod.
Channel 2	On	55	(-)	- 1.40(in)	+ 1.21(in)	0800302	
Channel 3	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	0800303	
Channel 4	On	SLIC-40	(-)	- 1.97(in)	- 1.69(in)	0800304	Examination Remarks:
Channel 5	On	0T	(+)	+ 0.00(in)	- 1.69(in)	0800305	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-17	4166	5459	32475	35103	Channel 1 ☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No	
					Channel 2 ☐	☒	☐		
					Channel 3 ☐	☒	☐	Archive Tape/CD No.: 5A & 5B	
					Channel 4 ☐	☒	☐		
					Channel 5 ☐	☐	☒	Analysis Tape/CD No.: 1	
					Channel 6 ☐	☐	☒		
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		

Recapitulando II. OZAPROS

Exam Number ID-36

Page 1 of 2

Quad Cities Unit 1
VCS2-22
Ring 2 Vert @ 22 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

329.23 - 330.47
40.10 - 47.30
4.66 - 5.83

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
- 4.00
-3.56 - -2.32

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
- 4.00
12.52 - 13.76

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 7.20
-1.40 - -0.16

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
0.00 - 7.20
10.36 - 11.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
0.00 - 7.20
4.48 - 5.72

Feature Analysis
Inc. Axis Values

Channel 5
ASME

Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

	1	10
Inc. Axis Limits	40.10	47.30
Length	7.20	
% DAC	3	
Inc. Axis Location	46.51	
Surface Location	330.19	
Scan Axis Location	330.19	
Depth In Material	4.89	
Metal Path	4.89	

Exam Number ID-36

Page 2 of 2

Time
Comments

41.3

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

REDA

SNT Level

II

Date

03 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC2-22			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-37	
Project No.: 04-0379			Weld Description: Ring 2 Vert @ 22°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						4/3/2005		Surface Temperature °F	
								Start	End
								0513	0519
								96	96
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
Controller:	ID Device	Lower Limit		4179	4336	Lower Limit		35050	35050
Scan:	Y Axis	Upper Limit		5459	5376	Upper Limit		37678	36958
Increment:	X Axis	Increment Interval		80		DCI		4	
Mode:	Automatic Scan	Conversion Counts		100		Conversion Counts		100	
Scan Motion:	Bi-directional	Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction:	Default	EDAS Radius In.		125.50					
							Positional Parameters		
							Beam Direction: Up/Dn		
							Transducer Size: 1.00		
							Code % of Overlap: 10		
							Number of Scans: 17		
							Device Position: D (180)		
Module Parameters: A-07A Cal 03						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the jet pump bracket,	
Channel 1	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800301		core shroud repair tie rod, and the guide rod.	
Channel 2	On	55	(-)	- 1.40(in)	+ 1.21(in)	0800302			
Channel 3	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	0800303			
Channel 4	On	SLIC-40	(-)	- 1.97(in)	- 1.69(in)	0800304		Examination Remarks:	
Channel 5	On	0T	(+)	+ 0.00(in)	- 1.69(in)	0800305		Examination limited due to the proximity of the core shroud	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A		repair tie rod.	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
3-15	4340	5376	35052	36970	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	5A & 5B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date: Derek Ross II 03 APR 05									

Exam Number ID-37

Page 1 of 2

Quad Cities Unit 1
VCS2-22
Ring 2 Vert @ 22 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

371.46 - 372.70
43.00 - 50.20
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
0.00 - 7.81
16.04 - 17.28

Feature Analysis
Inc. Axis Values
Scan NO. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME
3 12
43.00 50.81
7.81
18
44.68
368.06
372.22
2.91
5.07
85.1

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
0.00 - 7.81
25.88 - 27.12

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
3.37 - -43.29
16.96 - 18.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
3.37 - -43.29
24.96 - 26.20

Exam Number ID-37

Page 2 of 2

Module Coordinates	Channel 5
Inc. Axis	3.37 - -43.29
Scan Axis	20.96 - 22.20

Reviewed By *James R. Delp* SNT Level *III* Date *10/10/05*



Site/Plant : Quad Cities Unit 1	Weld Identification: VSC2-22	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-38	
Project No.: 04-0379	Weld Description: Ring 2 Vert @ 22°	Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07A	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time		Surface Temperature °F
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A		4/3/2005	Start	End	Start
			0513	0519	96
					96

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	4179	*	Lower Limit	37625	*	Beam Direction:	Up/Dn
Scan:	Y Axis	Upper Limit	5459	*	Upper Limit	40253	*	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (180)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:		A-07A	Cal 03			Calibration Records:	Examination Notes:
Status	Angle	Direction	Scan Offset	Step Offset		QCS1-03	Check for limitations due to the proximity of the jet pump bracket,
Channel 1	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800301	core shroud repair tie rod, and the guide rod.
Channel 2	On	55	(-)	- 1.40(in)	+ 1.21(in)	0800302	
Channel 3	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	0800303	
Channel 4	On	SLIC-40	(-)	- 1.97(in)	- 1.69(in)	0800304	Examination Remarks:
Channel 5	On	0T	(+)	+ 0.00(in)	- 1.69(in)	0800305	* No examination due to core shroud tie rod.
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☐ Yes ☒ No	
	Start	Stop	Start	Stop					
*	*	*	*	*	Channel 1	☐	☐	☒	
					Channel 2	☐	☐	☒	Further Evaluation
					Channel 3	☐	☐	☒	Required:
					Channel 4	☐	☐	☒	☐ Yes ☒ No
					Channel 5	☐	☐	☒	Archive Tape/CD No.:
					Channel 6	☐	☐	☒	N/A
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:
					Channel 8	☐	☐	☒	N/A

Analyst / SNT Level / Date:

ISWT FORM No. UT 50 (Rev. 05/02)

IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit I			Weld Identification: VSC2-22			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2			Examination No.: ID-39			
Project No.: 04-0379			Weld Description: Ring 2 Vert @ 22°			Device Configuration: AIR-21SCAN-0002						
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: R.A. Riddles / II C. Barberino / N/A						1-Apr-05		Start	End	Start	End	
								2329	0110	97	97	
Data Acquisition												
Scan Controller Parameters		Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual	Positional Parameters		
Controller:	ID Device	Lower Limit	25700	25703	Lower Limit	4069	4069	Beam Direction: Ccw/Cw				
Scan:	X Axis	Upper Limit	32630	32550	Upper Limit	5569	5569	Transducer Size: 1.00				
Increment:	Y Axis	Increment Interval	90		DCI	4		Code % of Overlap: 10				
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans: 78				
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position: A (0)				
Correction:	Default	EDAS Radius In.	125.50									
Module Parameters: A-07-1D Cal 33						Calibration Records:		Examination Notes:				
	Status	Angle	Direction	Scan Offset	Step Offset	QCSI-33		Check for limitations due to the proximity of the jet pump bracket.				
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301		core shroud repair tie rod, and the guide rod.				
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803302						
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303						
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803304		Examination Remarks:				
Channel 5	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803305		Limited exam due to core shroud repair tie rod.				
Channel 6	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803306		Exam ID-39 run in conjunction with exams ID-125, ID-128 and				
Channel 7	Off	N/A	N/A	N/A	N/A	N/A		ID-131.				
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 5A & 5B Analysis Tape/CD No.: 1				
	Start	Stop	Start	Stop								
1-33	25703	28586	4069	5561	Channel 1	☐	☒	☐				
34-45	28670	29654	4565	5549	Channel 2	☐	☒	☐				
46-78	29748	32632	4101	5549	Channel 3	☐	☒	☐				
					Channel 4	☐	☒	☐				
					Channel 5	☐	☐	☒				
					Channel 6	☐	☐	☒				
					Channel 7	☐	☐	☒				
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date: R.A. Riddles II 02 APR 05												

Exam Number ID-39

Page 1 of 2

Quad Cities Unit 1
VSC2-22
Ring 2 Vert @ 22 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

40.77 - 42.01
258.00 - 266.10
3.37 - 4.55

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
0.92 - 9.03
-2.12 - -0.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
0.92 - 9.03
2.28 - 3.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 8.12
-1.48 - -0.24

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
1.83 - 9.92
1.64 - 2.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
1.83 - 9.92
-4.32 - -3.08

Module Coordinates
Inc. Axis
Scan Axis

Channel 6
0.00 - 8.12
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME
1 10
258.00 266.12
8.12

Exam Number ID-39

Page 2 of 2

% DAC	5
Inc. Axis Location	263.44
Surface Location	41.09
Scan Axis Location	41.09
Depth In Material	3.98
Metal Path	3.98
Time	33.6
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

Rebecca

SNT Level

II

Date

02/18/05

 IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC2-22			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2			Examination No.: ID-40		
Project No.: 04-0379			Weld Description: Ring 2 Vert @ 22°			Device Configuration: AIR-21SCAN-0002					
Mod.Conf.: A-07-1C			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						2-Apr-05		Start		End	
								0017		0041	
								97		97	
Data Acquisition											
Scan Controller Parameters		Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	32540	32522	Lower Limit	4069	4077	Beam Direction: Cw/Ccw			
Scan:	X Axis	Upper Limit	39380	34240	Upper Limit	5569	5565	Transducer Size: 1.00			
Increment:	Y Axis	Increment Interval	90		DCI	4		Code % of Overlap: 10			
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans: 77			
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position: A (180)			
Correction:	Default	EDAS Radius In.	125.50								
Module Parameters: A-07-1C Cal 33						Calibration Records:		Examination Notes:			
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-33		Check for limitations due to the proximity of the jet pump bracket,			
Channel 1	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803301		core shroud repair tie rod, and the guide rod.			
Channel 2	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803302					
Channel 3	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803303					
Channel 4	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803304		Examination Remarks:			
Channel 5	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803305		Limited exam due to core shroud repair tie rod.			
Channel 6	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803306					
Channel 7	Off	N/A	N/A	N/A	N/A	N/A					
Channel 8	Off	N/A	N/A	N/A	N/A	N/A					
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:			
	Start	Stop	Start	Stop				☒ Yes ☐ No			
1-20	32523	34240	4077	5565	Channel 1	☐	☒	☐	Further Evaluation		
					Channel 2	☐	☒	☐	Required:		
					Channel 3	☐	☒	☐	☐ Yes ☒ No		
					Channel 4	☐	☒	☐	Archive Tape/CD No.:		
					Channel 5	☐	☐	☒	5A & 5B		
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:		
					Channel 7	☐	☐	☒	1		
					Channel 8	☐	☐	☒			
Analyst / SNT Level / Date: Rosa Ricci 02 APR 05											

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number ID-40

Page 1 of 2

Quad Cities Unit 1
VSC2-22
Ring 2 Vert @ 22 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

45.97 - 47.21
324.39 - 332.49
1.25 - 2.43

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
- 7.30
10.48 - 11.72

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
- 7.30
0.08 - 1.32

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 8.16
8.64 - 9.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
- 6.37
1.92 - 3.16

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
- 6.37
9.68 - 10.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 6
0.00 - 8.16
0.88 - 2.12

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME
1 10
324.39 332.55
8.16

Exam Number ID-40

Page 2 of 2

% DAC	41
Inc. Axis Location	330.76
Surface Location	47.21
Scan Axis Location	47.21
Depth In Material	2.24
Metal Path	2.24
Time	18.9
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

RACAD

Page 184 of 945

SNT Level

II

Date

02APR05

ISwT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 001000

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	RING 3 VERTICAL WELD AT 197-DEGREES
IDENTIFICATION:	VSC3-197

NDE Method	Proc/Rev/Chg/ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N O		Resolution Record	CNF Number	Remarks
					I	H			
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55	0800301,0800302	77,78,79,80	X	-	N/A	N/A	Exam limited due to proximity of the core spray and feedwater spargers and the core shroud tie rod repair brackets.
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40	0800303,0800304	77,78,79,80	X	-	N/A	N/A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	73a,73b,74a,	X	-	N/A	N/A	
				74b,75a,75b,	X	-	N/A	N/A	
				76	X	-	N/A	N/A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	73a,73b,74a,	X	-	N/A	N/A	
				74b,75a,75b,	X	-	N/A	N/A	
				76	X	-	N/A	N/A	

- NOTES:
1. Weld VSC3-197 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 72% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the VSC3-197 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

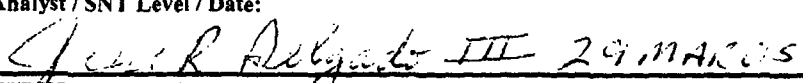
Prepared by: Carlos M. Barrera
Carlos M. Barrera - Project Engineer

Date: 01-Apr-05

Reviewed by: Exelon Level III
Exelon Level III

Date: 04-13-2005

Page 1 of 1

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-73a	
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 197°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A						3/28/2005		Start	End
								1308	1312
								Start	End
								98	98
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	42511	42516	Lower Limit	38050	39131	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	43791	43718	Upper Limit	40378	40378	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						
Module Parameters: A-07B Cal 03					Calibration Records:		Examination Notes:		
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core spray spargers, and the guide rod.	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A		Exam limited due to proximity of core shroud tie rod repair brackets.	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-17	42516	43709	39118	40375	Channel 1 ☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 3A & 3B Analysis Tape/CD No.: 1	
				Channel 2 ☐	☒	☐			
				Channel 3 ☐	☒	☐			
				Channel 4 ☐	☒	☐			
				Channel 5 ☐	☐	☒			
				Channel 6 ☐	☐	☒			
				Channel 7 ☐	☐	☒			
				Channel 8 ☐	☐	☒			
Analyst / SNT Level / Date:									
									

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 73A

Page 1 of 2

Quad Cities Unit 1
VSC3-197
Ring 3 Vert @ 197 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

391.58 - 392.82
423.90 - 431.10
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
0.00 - 6.60
16.00 - 17.24

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME
1 10
423.90 430.50
6.60
24
423.90
396.46
392.82
2.54
4.43
74.2

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
0.00 - 6.60
6.16 - 7.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
- 3.45
15.08 - 16.32

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
- 3.45
7.08 - 8.32

Exam Number 73A

Page 2 of 2

Reviewed By Jose R. Delgado SNT Level III Date 2

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-73b	
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 197°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A						3/28/2005		Start	End
								1318	1323
								Start	End
								98	98
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	42511	42515	Lower Limit	40328	40328	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	43791	43772	Upper Limit	42656	42656	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						
Module Parameters: A-07B Cal 03					Calibration Records:		Examination Notes:		
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core spray spargers, and the guide rod.	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-17	42530	43740	40328	42656	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒		
					Channel 6 ☐	☐	☒		
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date: <i>S. Vinogradov 29 MAR 05 III</i>									

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 73b

Page 1 of 2

Quad Cities Unit 1
VSC3-197
Ring 3 Vert @ 197 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

406.56 - 407.80
423.90 - 431.10
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.20
8.20 - 9.44

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	423.90	431.10
Length	7.20	
% DAC	20	
Inc. Axis Location	429.50	
Surface Location	411.20	
Scan Axis Location	407.64	
Depth In Material	2.50	
Metal Path	4.35	
Time	73.0	

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.20
-1.64 - -0.40

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 4.00
7.28 - 8.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 4.00
-0.72 - 0.52

Exam Number 73b

Page 2 of 2

Reviewed By Jesús R. Delgado Page 191 of 945 SNT Level III Date 29 MAR 05

**Analyst / SNT Level / Date:**

Exam Number 74a

Page 1 of 2

Quad Cities Unit 1
VSC3-317
Ring 3 Vert @ 317 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

431.94 - 433.18
426.32 - 433.52
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.75
0.96 - 2.20

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length

Channel 1
ASME

	1	10
Inc. Axis Limits	426.32	434.07
Length	7.75	

Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

.25
430.90
428.22
432.58
3.04
5.30
89.0

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.75
10.80 - 12.04

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

3.82 - 10.95
1.88 - 3.12

Module Coordinates
Inc. Axis
Scan Axis

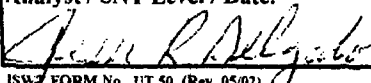
Channel 4

3.82 - 10.95
9.88 - 11.12

Exam Number 74a

Page 2 of 2

Reviewed By Jesse R. Delgado Page 494 of 945 SNT Level III Date 29 MAR 05

 IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-74b	
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 197°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A						3/28/2005		Surface Temperature °F	
						Start		End	
						1405		1410	
						99		99	
Data Acquisition									
Scan Controller Parameters			Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters
Controller:	ID Device		Lower Limit	42511	42512	Lower Limit	44884	44884	Beam Direction:
Scan:	Y Axis		Upper Limit	43791	43818	Upper Limit	47900	46404	Transducer Size:
Increment:	X Axis		Increment Interval	80		DCI	4		Code % of Overlap:
Mode:	Automatic Scan		Conversion Counts	100		Conversion Counts	100		Number of Scans:
Scan Motion:	Bi-directional		Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:
Correction:	Default		EDAS Radius In.	125.50					D (180)
Module Parameters:						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and	
Channel 1	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800301		core spray spargers, and the guide rod.	
Channel 2	On	55	(-)	- 1.40(in)	+ 1.21(in)	0800302			
Channel 3	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	0800303			
Channel 4	On	SLIC-40	(-)	- 1.97(in)	- 1.69(in)	0800304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A		Limited exam due to the proximity of the spargers.	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop					
1-17	42512	43817	44884	46404	Channel 1 ☐	☒	☐	☒ Yes ☐ No	
					Channel 2 ☐	☒	☐	Further Evaluation	
					Channel 3 ☐	☒	☐	Required:	
					Channel 4 ☐	☒	☐	☐ Yes ☒ No	
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 6 ☐	☐	☒	3A & 3B	
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒	1	
Analyst / SNT Level / Date:									
 III 29 MAR 05									

ISW FORM No. UT 50 (Rev. 05/02)

Exam Number 74B

Page 1 of 2

Quad Cities Unit 1
VSCX3-197
Ring 3 Vert @ 197 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

459.40 - 460.64
426.32 - 433.52
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.22
5.64 - 6.88

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	426.32	433.54
Length	7.22	
% DAC	14	
Inc. Axis Location	427.12	
Surface Location	454.92	
Scan Axis Location	459.40	
Depth In Material	3.13	
Metal Path	5.46	
Time	91.5	

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.22
15.48 - 16.72

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

3.20 - 10.40
6.56 - 7.80

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

3.20 - 10.40
14.56 - 15.80

Exam Number 74B

Page 2 of 2

Reviewed By *Genel Delgado* Page 107 of 945 SNT Level *III* Date *29 MAR 05*

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-197			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1.2		Examination No.: ID-75a	
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 197°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A						3/28/2005		Start	End
								1430	1434
						Start	End	Start	End
								99	99
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	42511	42518	Lower Limit	47850	49858	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	43791	43766	Upper Limit	50694	50694	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						
Module Parameters:					Calibration Records:		Examination Notes:		
A-07B		Cal 03			QCS1-03		Check for limitations due to the proximity of the feedwater and		
Status	Angle	Direction	Scan Offset	Step Offset	0800301		core spray spargers, and the guide rod.		
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800302			
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800303			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800304	Examination Remarks:		
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	N/A	Exam limited due to proximity of spargers.		
Channel 5	Off	N/A	N/A	N/A	N/A	N/A			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	Further Evaluation Required: ☐ Yes ☒ No
	Start	Stop	Start	Stop					
1-17	42517	43764	49858	50694	Channel 1 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 2 ☐	☒	☐	3A & 3B	
					Channel 3 ☐	☒	☐	Analysis Tape/CD No.:	
					Channel 4 ☐	☒	☐	1	
					Channel 5 ☐	☐	☒		
					Channel 6 ☐	☐	☒		
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date:									
									

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 75A

Page 1 of 2

Quad Cities Unit 1
VSC3-197
Ring 3 Vert @ 197 deg

Cursor Box 1 of 1

Scan Axis	493.54 - 494.78
Inc. Axis	423.90 - 431.10
Depth In Material	2.45 - 3.13

Module Coordinates

Channel 1

Inc. Axis	0.00 - 7.07
Scan Axis	19.96 - 21.20

Feature Analysis

Channel 1

ASME

Inc. Axis Values

Scan No.	Limits	1	10
Inc. Axis Limits		423.90	430.97
Length		7.07	

Maximum Point

% DAC	20
Inc. Axis Location	424.70
Surface Location	498.70
Scan Axis Location	494.42
Depth In Material	3.00
Metal Path	5.23
Time	87.7

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates

Channel 2

Inc. Axis	0.00 - 7.07
Scan Axis	10.12 - 11.36

Module Coordinates

Channel 3

Inc. Axis	- 3.94
Scan Axis	19.04 - 20.28

Module Coordinates

Channel 4

Inc. Axis	- 3.94
Scan Axis	11.04 - 12.28

Exam Number 75A

Page 2 of 2

Reviewed By John R. Delgado Page 200 of 945 SNT Level III Date 29 MAR 05

Site/Plant : Quad Cities Unit 1	Weld Identification: VSC3-197	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-75b	
Project No.: 04-0379	Weld Description: Ring 3 Vert @ 197°	Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time		Surface Temperature °F
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A		3/28/2005	Start	End	Start
			1439	1444	99
					99

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	42511	42517	Lower Limit	50744	50744	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	43791	43760	Upper Limit	52172	52172	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
	Status	Angle	Direction	Scan Offset	Step Offset		
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03 0800301	Check for limitations due to the proximity of the feedwater and core spray spargers, and the guide rod.
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A	Examination Remarks:
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-17	42512	43758	50744	52172	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	3A & 3B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		

4000 R Delgado III 29 MAR 05
ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 75B

Page 1 of 2

Quad Cities Unit 1
VSC3-197
Ring 3 Vert @ 197 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

506.20 - 507.44
423.90 - 431.10
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
0.00 - 7.05
3.68 - 4.92

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME
1 10
423.90 430.95
7.05
18
430.19
510.00
506.40
2.52
4.39
73.6

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
0.00 - 7.05
-6.16 - -4.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
- 3.91
2.76 - 4.00

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
- 3.91
-5.24 - -4.00

Exam Number 75B

Page 2 of 2

Reviewed By Jose R. Delgado Page 203 of 945 SNT Level III Date 24 MAR 05



Site/Plant : Quad Cities Unit 1	Weld Identification: VSC3-197	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-76	
Project No.: 04-0379	Weld Description: Ring 3 Vert @ 197°	Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time		Surface Temperature °F
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A		3/28/2005	Start	End	Start
			1448	1459	98
					98

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	42511	42508	Lower Limit	52122	52122	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	43791	43794	Upper Limit	53550	53550	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
Status	A-07B Angle	Cal 03 Direction	Scan Offset	Step Offset			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03 0800301	Check for limitations due to the proximity of the feedwater and core spray spargers, and the guide rod.
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A	Examination Remarks:
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-17	42516	43788	52122	53550	Channel 1 ☐	☒	☐	☒ Yes ☐ No	
					Channel 2 ☐	☒	☐	Further Evaluation	
					Channel 3 ☐	☒	☐	Required:	
					Channel 4 ☐	☒	☐	☐ Yes ☒ No	
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 6 ☐	☐	☒	3A & 3B	
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒	1	

Analyst / SNT Level / Date:

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 76

Page 1 of 2

Quad Cities Unit 1
VSC3-197
Ring 3 Vert @ 197 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

518.42 - 519.66
423.90 - 431.10
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 6.97
2.12 - 3.36

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	423.90	430.87
Length	6.97	
% DAC	23	
Inc. Axis Location	425.50	
Surface Location	522.46	
Scan Axis Location	518.94	
Depth In Material	2.45	
Metal Path	4.27	
Time	71.7	

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 6.97
-7.72 - -6.48

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 3.84
1.20 - 2.44

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 3.84
-6.80 - -5.56

Exam Number 76

Page 2 of 2

Reviewed By Jose R Delgado Page 206 of 945 SNT Level III Date 24 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-77	
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 197°			Device Configuration: AIR-21SCAN-0002			
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						26-Mar-05		Start	End
								1420	1434
						Start	End	Start	End
								101	101
Data Acquisition									
Scan Controller Parameters		Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual
Controller:	ID Device	Lower Limit		39000	38979	Lower Limit		42401	42401
Scan:	X Axis	Upper Limit		43500	43499	Upper Limit		43901	43901
Increment:	Y Axis	Increment Interval		90		DCI		4	
Mode:	Automatic Scan	Conversion Counts		100		Conversion Counts		100	
Scan Motion:	Bi-directional	Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction:	Default	EDAS Radius In.		125.50					
								Positional Parameters	
								Beam Direction: Ccw/Cw	
								Transducer Size: 1.00	
								Code % of Overlap: 10	
								Number of Scans: 51	
								Device Position: A (0)	
Module Parameters: A-07-1D Cal 33						Calibration Records:		Examination Notes:	
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-33		Check for limitations due to the proximity of the feedwater and	
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301		core spray spargers, and the guide rod.	
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803302			
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303			
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop					
1-51	38979	43499	42417	43901	Channel 1 ☐	☒	☐	☒ Yes ☐ No	
					Channel 2 ☐	☒	☐	Further Evaluation	
					Channel 3 ☐	☒	☐	Required:	
					Channel 4 ☐	☒	☐	☐ Yes ☒ No	
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 6 ☐	☐	☒	3A & 3B	
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒	1	
Analyst / SNT Level / Date: Rosa Rosa II 26MAR05									

Exam Number 77

Page 1 of 2

Quad Cities Unit 1
VSC2-197
Ring 3 Vert @ 197 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

424.09 - 425.33
391.00 - 399.10
3.37 - 4.55

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

1.00 - 9.00
-2.12 - -0.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

1.00 - 9.00
2.28 - 3.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 8.20
-1.48 - -0.24

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

1.80 - 9.80
1.64 - 2.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

1.80 - 9.80
-4.32 - -3.08

Module Coordinates
Inc. Axis
Scan Axis

Channel 6

0.00 - 8.20
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME

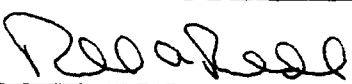
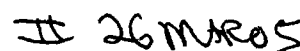
1	10
391.00	399.20
8.20	

Exam Number 77

Page 2 of 2

% DAC	13
Inc. Axis Location	393.80
Surface Location	425.29
Scan Axis Location	425.29
Depth In Material	3.68
Metal Path	3.68
Time	31.0
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By R. D. Reese Page 209 of 945 SNT Level II Date 26 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-197			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1.2			Examination No.: ID-78			
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 197°			Device Configuration: AIR-21SCAN-0002						
Mod. Conf.: A-07-1C			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						26-Mar-05		Start		End		
								1423		1500		
								101		101		
Data Acquisition												
Scan Controller Parameters			Increment Axis/Device		Planned		Actual		Scan Axis/Arm		Planned	
Controller: ID Device									Actual		Positional Parameters	
Scan: X Axis			Lower Limit		43410		43419		Lower Limit		42401	
Increment: Y Axis			Upper Limit		47910		46479		Upper Limit		43901	
Mode: Automatic Scan			Increment Interval		90				DCI		4	
Scan Motion: Bi-directional			Conversion Counts		100				Conversion Counts		100	
Correction: Default			Conversion Units In.		1.00				Conversion Units In.		1.00	
			EDAS Radius In.		125.50						Beam Direction: Cw/Ccw	
											Transducer Size: 1.00	
											Code % of Overlap: 10	
											Number of Scans: 51	
											Device Position: A (180)	
Module Parameters: A-07-1C Cal 33						Calibration Records:			Examination Notes:			
Status		Angle	Direction	Scan Offset	Step Offset							
Channel 1	On	55	(+)	- 7.00(in)	+ 0.00(in)	QCS1-33			Check for limitations due to the proximity of the feedwater and			
Channel 2	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301			core spray spargers, and the guide rod.			
Channel 3	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803302						
Channel 4	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303						
Channel 5	Off	N/A	N/A	N/A	N/A	0803304			Examination Remarks:			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			Limited exam due to the proximity of the feedwater and core			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			spray spargers.			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:				
	Start	Stop	Start	Stop								
1-35	43419	46499	42401	43901	Channel 1	☒	☒	☐	☒ Yes ☐ No			
					Channel 2	☐	☒	☐	Further Evaluation			
					Channel 3	☐	☒	☐	Required:			
					Channel 4	☐	☒	☐	☐ Yes ☒ No			
					Channel 5	☐	☐	☒	Archive Tape/CD No.:			
					Channel 6	☐	☐	☒	3A & 3B			
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 8	☐	☐	☒	1			
Analyst / SNT Level / Date:												
 												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 78

Page 1 of 2

Quad Cities Unit 1
VSC3-197
Ring 3 Vert @ 197 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

430.65 - 431.81
433.10 - 441.20
3.37 - 4.59

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

- 7.20
8.84 - 10.00

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

- 7.20
4.44 - 5.60

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 8.20
8.20 - 9.36

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 6.20
5.08 - 6.24

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

- 6.20
11.04 - 12.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 6

0.00 - 8.20
2.24 - 3.40

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME

1	10
433.10	441.30
8.20	

Exam Number 78

Page 2 of 2

% DAC	5
Inc. Axis Location	436.70
Surface Location	431.57
Scan Axis Location	431.57
Depth In Material	3.72
Metal Path	3.72
Time	31.4
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

REDASS

Page 212 of 945

SNT Level

II

Date

16 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																																																																																	
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-197			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1(0/0/1.2		Examination No.: ID-79																																																																									
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 197°			Device Configuration: AIR-21SCAN-0002																																																																											
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time																																																																									
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						26-Mar-05		Start	End																																																																								
								1602	1610																																																																								
								Start	End																																																																								
								101	101																																																																								
Data Acquisition																																																																																	
Scan Controller Parameters		Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual																																																																								
Controller:	ID Device	Lower Limit	47830	49939	Lower Limit	42401	42405																																																																										
Scan:	X Axis	Upper Limit	52600	52559	Upper Limit	43901	43901																																																																										
Increment:	Y Axis	Increment Interval	90		DCI	4																																																																											
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100																																																																											
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00																																																																											
Correction:	Default	EDAS Radius In.	125.50																																																																														
Module Parameters:						Calibration Records:		Positional Parameters																																																																									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Status</th> <th>Angle</th> <th>Direction</th> <th>Scan Offset</th> <th>Step Offset</th> </tr> </thead> <tbody> <tr> <td>Channel 1</td> <td>On</td> <td>55</td> <td>(-)</td> <td>+ 7.00(in)</td> <td>+ 0.00(in)</td> </tr> <tr> <td>Channel 2</td> <td>On</td> <td>55</td> <td>(+)</td> <td>- 7.00(in)</td> <td>+ 0.00(in)</td> </tr> <tr> <td>Channel 3</td> <td>On</td> <td>SLIC-40</td> <td>(-)</td> <td>+ 4.40(in)</td> <td>+ 1.00(in)</td> </tr> <tr> <td>Channel 4</td> <td>On</td> <td>SLIC-40</td> <td>(+)</td> <td>- 4.40(in)</td> <td>- 1.00(in)</td> </tr> <tr> <td>Channel 5</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 6</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 7</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Channel 8</td> <td>Off</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>							Status	Angle	Direction	Scan Offset	Step Offset	Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	Channel 5	Off	N/A	N/A	N/A	N/A	Channel 6	Off	N/A	N/A	N/A	N/A	Channel 7	Off	N/A	N/A	N/A	N/A	Channel 8	Off	N/A	N/A	N/A	N/A	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Calibration Records:</th> <th>Examination Notes:</th> </tr> </thead> <tbody> <tr> <td>QCS1-33</td> <td>Check for limitations due to the proximity of the feedwater and</td> </tr> <tr> <td>0803301</td> <td>core spray spargers, and the guide rod.</td> </tr> <tr> <td>0803302</td> <td></td> </tr> <tr> <td>0803303</td> <td></td> </tr> <tr> <td>0803304</td> <td>Examination Remarks:</td> </tr> <tr> <td>N/A</td> <td>Limited exam due to the proximity of the feedwater and core</td> </tr> <tr> <td>N/A</td> <td>spray spargers.</td> </tr> <tr> <td>N/A</td> <td></td> </tr> <tr> <td>N/A</td> <td></td> </tr> </tbody> </table>		Calibration Records:	Examination Notes:	QCS1-33	Check for limitations due to the proximity of the feedwater and	0803301	core spray spargers, and the guide rod.	0803302		0803303		0803304	Examination Remarks:	N/A	Limited exam due to the proximity of the feedwater and core	N/A	spray spargers.	N/A		N/A	
	Status	Angle	Direction	Scan Offset	Step Offset																																																																												
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)																																																																												
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)																																																																												
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)																																																																												
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)																																																																												
Channel 5	Off	N/A	N/A	N/A	N/A																																																																												
Channel 6	Off	N/A	N/A	N/A	N/A																																																																												
Channel 7	Off	N/A	N/A	N/A	N/A																																																																												
Channel 8	Off	N/A	N/A	N/A	N/A																																																																												
Calibration Records:	Examination Notes:																																																																																
QCS1-33	Check for limitations due to the proximity of the feedwater and																																																																																
0803301	core spray spargers, and the guide rod.																																																																																
0803302																																																																																	
0803303																																																																																	
0803304	Examination Remarks:																																																																																
N/A	Limited exam due to the proximity of the feedwater and core																																																																																
N/A	spray spargers.																																																																																
N/A																																																																																	
N/A																																																																																	
Data Analysis																																																																																	
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks																																																																									
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	Further Evaluation																																																																								
	Start	Stop	Start	Stop																																																																													
25-54	49939	52559	42405	43901	Channel 1 ☐	☒	☐	☒ Yes ☐ No																																																																									
					Channel 2 ☐	☒	☐	Required:																																																																									
					Channel 3 ☐	☒	☐	☐ Yes ☒ No																																																																									
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:																																																																									
					Channel 5 ☐	☐	☒	3A & 3B																																																																									
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:																																																																									
					Channel 7 ☐	☐	☒	1																																																																									
					Channel 8 ☐	☐	☒																																																																										
Analyst / SNT Level / Date: RDR RDR II 26 MAR 05																																																																																	

Exam Number ID-79

Page 1 of 2

Quad Cities Unit 1
 VSC3-197
 Ring 3 Vert @ 197 deg.

 Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

424.09 - 425.33
 479.30 - 487.40
 3.37 - 4.55

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1
 1.00 - 9.20
 -2.12 - -0.88

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2
 1.00 - 9.20
 2.28 - 3.52

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3
 0.00 - 8.20
 -1.48 - -0.24

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4
 2.00 - 10.00
 1.64 - 2.88

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 5
 2.00 - 10.00
 -4.32 - -3.08

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 6
 0.00 - 8.20
 4.48 - 5.72

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length
 Maximum Point

Channel 6
 ASME
 25 34
 479.30 487.50
 8.20

Exam Number ID-79

Page 2 of 2

% DAC	7
Inc. Axis Location	485.70
Surface Location	425.25
Scan Axis Location	425.25
Depth In Material	4.40
Metal Path	4.40
Time	37.1
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

R. J. Reese

Page 215 of 945

SNT Level II

Date 26 MAR 05



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC3-197	Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1.2	Examination No.: ID-80	
Project No.: 04-0379	Weld Description: Ring 3 Vert @ 197°	Device Configuration: AIR-21SCAN-0002		
Mod. Conf.: A-07-1C	Scan Path Drawing: SPLONGBUTT	Exam Date: 26-Mar-05	Examination Time:	Surface Temperature °F:
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A			Start: 1602	End: 1610
			Start: 101	End: 101

Data Acquisition

Scan Controller Parameters		Increment Axis/Device	Planned	Actual	Scan Axis/Arm	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	47830	*	Lower Limit	42401	*	Beam Direction:	Cw/Ccw
Scan:	X Axis	Upper Limit	52600	*	Upper Limit	43901	*	Transducer Size:	1.00
Increment:	Y Axis	Increment Interval	90		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	54
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	A (180)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
A-07-1C		Cal 33					
Status	Angle	Direction	Scan Offset	Step Offset			
Channel 1	On	55	(+)	- 7.00(in)	+ 0.00(in)	QCS1-33	Check for limitations due to the proximity of the feedwater and core spray spargers, and the guide rod.
Channel 2	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301	
Channel 3	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803302	
Channel 4	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303	
Channel 5	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803304	Examination Remarks:
Channel 6	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803305	* Exam ID-80 covered with Exam ID-79
Channel 7	Off	N/A	N/A	N/A	N/A	0803306	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop					
*	*	*	*	*	Channel 1	☐	☐	☒	☐ Yes ☒ No
					Channel 2	☐	☐	☒	Further Evaluation
					Channel 3	☐	☐	☒	Required:
					Channel 4	☐	☐	☒	☐ Yes ☒ No
					Channel 5	☐	☐	☒	Archive Tape/CD No.:
					Channel 6	☐	☐	☒	N/A
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:
					Channel 8	☐	☐	☒	N/A

Analyst / SNT Level / Date:

RLO a RLO II 26 MAR 05

ISWT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 001100

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	RING 3 VERTICAL WELD AT 317-DEGREES
IDENTIFICATION:	VSC3-317

NDE Method	Proc/Rev/Chg/ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N O		Resolution Record	CNF Number	Remarks
					I	H			
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55	'0800301,0800302	85,86,87,88	X	-	N/A	N/A	Exam limited due to proximity of the core spray and feedwater spargers.
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40	'0800303,0800304	85,86,87,88	X	-	N/A	N/A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	81a,81b,82a, 82b,83a,83b, 84	X	-	N/A	N/A	
					X	-	N/A	N/A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	81a,81b,82a, 82b,83a,83b, 84	X	-	N/A	N/A	
					X	-	N/A	N/A	
					X	-	N/A	N/A	

- NOTES:
1. Weld VSC3-317 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 80% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the VSC1-317 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by:

C. M. Barrera
Carlos M. Barrera - Project Engineer

Date: 14-Apr-05

Reviewed by:

R. L. May
Exelon Level III

Date: 05/02/05

Page 1 of 1

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant : Quad Cities Unit 1				Weld Identification: VSC3-317			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2			Examination No.: ID-81a							
Project No.: 04-0379				Weld Description: Ring 3 Vert @ 317°			Device Configuration: AIR-21SCAN-0001										
Mod. Conf.: A-07B				Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F						
Data Acquisition Operator (s) / SNT Level: S Vinogradov				3/27/2005			Start 1202		End 1217		Start 100		End 100				
Data Acquisition																	
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		68796		68786		Lower Limit		38050		38010		Beam Direction: Dn/Up	
Scan: Y Axis				Upper Limit		70076		70066		Upper Limit		40378		40378		Transducer Size: 1.00	
Increment: X Axis				Increment Interval		80				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 17	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: D (0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters: A-07B Cal 03						Calibration Records:						Examination Notes:					
Status		Angle		Direction		Scan Offset		Step Offset		QCS1-03		Check for limitations due to the proximity of the feedwater and					
Channel 1	On	55	(-)	- 1.40(in)		- 1.21(in)				0800301		core spray spargers.					
Channel 2	On	55	(+)	+ 1.40(in)		- 1.21(in)				0800302							
Channel 3	On	SLIC-40	(-)	- 1.97(in)		+ 1.69(in)				0800303							
Channel 4	On	SLIC-40	(+)	+ 1.97(in)		+ 1.69(in)				0800304		Examination Remarks:					
Channel 5	Off	N/A	N/A	N/A		N/A				N/A							
Channel 6	Off	N/A	N/A	N/A		N/A				N/A							
Channel 7	Off	N/A	N/A	N/A		N/A				N/A							
Channel 8	Off	N/A	N/A	N/A		N/A				N/A							
Data Analysis																	
Increment & Scan Positions Actual					Recordable Indications					Analyst Remarks							
Scan No.(s)		Increment Position		Scan Position		Yes		No		N/A		Attachment: ☒ Yes ☐ No					
		Start	Stop	Start	Stop												
1-17		68786	70066	38010	40378	Channel 1	☐	☒	☐			Further Evaluation					
						Channel 2	☐	☒	☐			Required:					
						Channel 3	☐	☒	☐			☐ Yes ☒ No					
						Channel 4	☐	☒	☐			Archive Tape/CD No.:					
						Channel 5	☐	☐	☒			3A & 3B					
						Channel 6	☐	☐	☒			Analysis Tape/CD No.:					
						Channel 7	☐	☐	☒			1					
						Channel 8	☐	☐	☒								
Analyst / SNT Level / Date:																	
27 MAR 2005																	

ISWT/CRM No. UT 50 (Rev. 05/92)

Exam Number 81A

Page 1 of 2

Quad Cities Unit 1
VSC3-317
Ring 3 Vert @ 317 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

385.14 - 386.38
686.75 - 693.95
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 6.44
9.56 - 10.80

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	686.75	693.19
Length	6.44	
% DAC	16	
Inc. Axis Location	690.96	
Surface Location	389.30	
Scan Axis Location	385.22	
Depth In Material	2.87	
Metal Path	5.00	
Time	83.8	

Comments

:
:
:
:

No recordable Indications ch1 ch 2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 6.44
-0.28 - 0.96

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 3.46
8.64 - 9.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 3.46
0.64 - 1.88

Exam Number 81A

Page 2 of 2

Module Coordinates

Inc. Axis

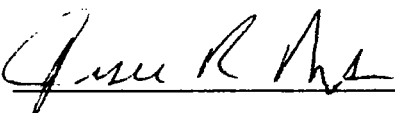
Scan Axis

Channel 5

- 3.46

4.64 - 5.88

Reviewed By

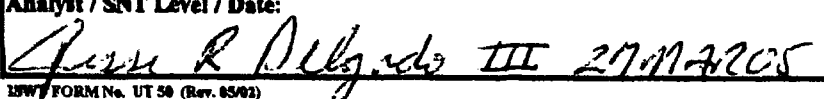


SNT Level

III

Date

27 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-317			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2			Examination No.: ID-81b			
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 317°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S Vinogradov						3/27/2005		Start		End		
								1225		1231		
								100		100		
Data Acquisition												
Scan Controller Parameters			Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned	
Controller: ID Device			Lower Limit		68796		68796		Lower Limit		40328	
Scan: Y Axis			Upper Limit		70076		70065		Upper Limit		42656	
Increment: X Axis			Increment Interval		80		DCI		4		Beam Direction: Dn/Up	
Mode: Automatic Scan			Conversion Counts		100		Conversion Counts		100		Transducer Size: 1.00	
Scan Motion: Bi-directional			Conversion Units In.		1.00		Conversion Units In.		1.00		Code % of Overlap: 10	
Correction: Default			EDAS Radius In.		125.50						Number of Scans: 17	
Module Parameters: A-07B			Cal 03				Calibration Records:		Examination Notes:			
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and				
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core spray spargers.				
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302						
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303						
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:				
Channel 5	Off	N/A	N/A	N/A	N/A	N/A						
Channel 6	Off	N/A	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No		Further Evaluation Required: ☐ Yes ☒ No		
	Start	Stop	Start	Stop								
1-17	68796	70065	40328	42656	Channel 1 ☐	☒	☐	Archive Tape/CD No.: 3A & 3B Analysis Tape/CD No.: 1				
				Channel 2 ☐	☒	☐						
				Channel 3 ☐	☒	☐						
				Channel 4 ☐	☒	☐						
				Channel 5 ☐	☐	☒						
				Channel 6 ☐	☐	☒						
				Channel 7 ☐	☐	☒						
				Channel 8 ☐	☐	☒						
Analyst / SNT Level / Date:												
												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 81B

Page 1 of 2

Quad Cities Unit 1
VSC3-317
Ring 3 Vert @ 317 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

409.40 - 410.64
686.75 - 693.95
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 6.88
11.04 - 12.28

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	686.75	693.63
Length	6.88	
% DAC	16	
Inc. Axis Location	690.52	
Surface Location	414.28	
Scan Axis Location	409.92	
Depth In Material	3.06	
Metal Path	5.34	
Time	89.6	

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 6.88
1.20 - 2.44

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 3.77
10.12 - 11.36

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 3.77
2.12 - 3.36

Exam Number 81B

Page 2 of 2

Reviewed By



SNT Level

II

Date

27 MAR 05

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-317			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-82a			
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 317°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						3/27/2005		Start		End		
								1300		1306		100
Data Acquisition												
Scan Controller Parameters Controller: ID Device Scan: Y Axis Increment: X Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default			Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters Beam Direction: Up/Dn Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 17 Device Position: D (180)	
			Lower Limit		68796	68796	Lower Limit		42606	42610		
			Upper Limit		70076	69780	Upper Limit		44934	44934		
			Increment Interval		80	DCI		4				
			Conversion Counts		100	Conversion Counts		100				
Conversion Units In.		1.00	Conversion Units In.		1.00							
EDAS Radius In.		125.50										
Module Parameters:						Calibration Records:		Examination Notes:				
Status		A-07A	Cal 03				QCS1-03		Check for limitations due to the proximity of the feedwater and			
Angle			Direction		Scan Offset		0800301		core spray spargers.			
Channel 1		On	55	(+)	+ 1.40(in)		0800302					
Channel 2		On	55	(-)	- 1.40(in)		0800303					
Channel 3		On	SLIC-40	(+)	+ 1.97(in)		0800304		Examination Remarks:			
Channel 4		On	SLIC-40	(-)	- 1.97(in)							
Channel 5		Off	N/A	N/A	N/A		N/A					
Channel 6		Off	N/A	N/A	N/A		N/A					
Channel 7		Off	N/A	N/A	N/A		N/A					
Channel 8		Off	N/A	N/A	N/A		N/A					
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 3A & 3B Analysis Tape/CD No.: 1				
	Start	Stop	Start	Stop								
1-17	68796	70074	42610	44934	Channel 1	☐	☒	☐				
					Channel 2	☐	☒	☐				
					Channel 3	☐	☒	☐				
					Channel 4	☐	☒	☐				
					Channel 5	☐	☐	☒				
					Channel 6	☐	☐	☒				
					Channel 7	☐	☐	☒				
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date:												
<i>S. Vinogradov 27 MAR 05</i>												

ISW FORM No. UT 58 (Rev. 05/02)

Exam Number 82A

Page 1 of 2

Quad Cities Unit 1
VSC3-317
Ring 3 Vert @ 317 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

440.54 - 441.78
689.17 - 696.37
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.37
9.56 - 10.80

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	689.17	696.54
Length	7.37	
% DAC	13	
Inc. Axis Location	689.17	
Surface Location	437.10	
Scan Axis Location	440.78	
Depth In Material	2.58	
Metal Path	4.50	
Time	75.5	

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.37
19.40 - 20.64

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

3.20 - 10.69
10.48 - 11.72

Module Coordinates
Inc. Axis
Scan Axis

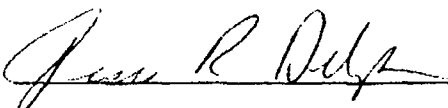
Channel 4

3.20 - 10.69
18.48 - 19.72

Exam Number 82A

Page 2 of 2

Reviewed By

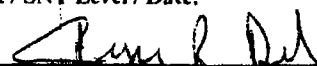


SNT Level

LTL

Date

27-MAR-05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-317			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-82b			
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 317°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						3/27/2005		Start		End		
								1310		1315		100
Data Acquisition												
Scan Controller Parameters			Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters	
Controller: ID Device			Lower Limit		68796	68799	Lower Limit		44884	44884	Beam Direction: Up/Dn	
Scan: Y Axis			Upper Limit		70076	70107	Upper Limit		47900	46400	Transducer Size: 1.00	
Increment: X Axis			Increment Interval		80		DCI		4		Code % of Overlap: 10	
Mode: Automatic Scan			Conversion Counts		100		Conversion Counts		100		Number of Scans: 17	
Scan Motion: Bi-directional			Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: D (180)	
Correction: Default			EDAS Radius In.		125.50							
Module Parameters: A-07A Cal 03						Calibration Records:		Examination Notes:				
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and				
Channel 1	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800301		core spray spargers.				
Channel 2	On	55	(-)	- 1.40(in)	+ 1.21(in)	0800302						
Channel 3	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	0800303						
Channel 4	On	SLIC-40	(-)	- 1.97(in)	- 1.69(in)	0800304		Examination Remarks:				
Channel 5	Off	N/A	N/A	N/A	N/A	N/A		Limited exam due to the proximity of the feedwater and core				
Channel 6	Off	N/A	N/A	N/A	N/A	N/A		spray spargers.				
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:				
	Start	Stop	Start	Stop				☒ Yes ☐ No				
1-17	68799	70076	44884	46400	Channel 1	☐	☒	☐	Further Evaluation			
					Channel 2	☐	☒	☐	Required:			
					Channel 3	☐	☒	☐	☐ Yes ☒ No			
					Channel 4	☐	☒	☐	Archive Tape/CD No.:			
					Channel 5	☐	☐	☒	3A & 3B			
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 7	☐	☐	☒	1			
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date:												
 III 14 JULY 05												

ISWT FORM No. UT-50 (Rev. 05/03)

Exam Number 82b

Page 1 of 2

Quad Cities Unit 1
VSC3-317
Ring 3 Vert @ 317 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

454.72 - 455.96
689.17 - 696.37
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.20
0.96 - 2.20

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	689.17	696.37
Length	7.20	
% DAC	16	
Inc. Axis Location	690.77	
Surface Location	452.32	
Scan Axis Location	455.96	
Depth In Material	2.54	
Metal Path	4.43	
Time	74.2	

Comments

:
:
:
:

No recordable Indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.20
10.80 - 12.04

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

3.20 - 10.40
1.88 - 3.12

Module Coordinates
Inc. Axis
Scan Axis

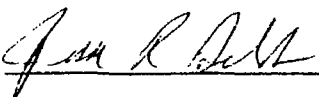
Channel 4

3.20 - 10.40
9.88 - 11.12

Exam Number 82b

Page 2 of 2

Reviewed By



SNT Level

LTL

Date

28 11/10/05



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC3-317	Pro/Rev/Cbg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-83a
Project No.: 04-0379	Weld Description: Ring 3 Vert @ 317°	Device Configuration: AIR-21SCAN-0001	
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date: 27-Mar-05	Examination Time: Start 1104, End 1109
Data Acquisition Operator (s) / SNT Level: S. Vinogradov			Surface Temperature °F: Start 100, End 100

Data Acquisition

Scan Controller Parameters	Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters
Controller: ID Device	Lower Limit	68796	68845	Lower Limit	47850	48574	Beam Direction: Dn/Up
Scan: Y Axis	Upper Limit	70076	70221	Upper Limit	50694	50694	Transducer Size: 1.00
Increment: X Axis	Increment Interval	80		DCI	4		Code % of Overlap: 10
Mode: Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans: 17
Scan Motion: Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position: D (0)
Correction: Default	EDAS Radius In.	125.50					

Module Parameters: A-07B Cal 03						Calibration Records:	Examination Notes:
Status	Angle	Direction	Scan Offset	Step Offset			
Channel 1 On	55	(-)	- 1.40(in)	- 1.21(in)		QCS1-03	Check for limitations due to the proximity of the feedwater and core spray spargers.
Channel 2 On	55	(+)	+ 1.40(in)	- 1.21(in)		0800301	
Channel 3 On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)		0800302	
Channel 4 On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)		0800303	
Channel 5 Off	N/A	N/A	N/A	N/A		0800304	Examination Remarks:
Channel 6 Off	N/A	N/A	N/A	N/A		N/A	Limitaion due to spargers.
Channel 7 Off	N/A	N/A	N/A	N/A		N/A	
Channel 8 Off	N/A	N/A	N/A	N/A		N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	Further Evaluation Required: ☐ Yes ☒ No
	Start	Stop	Start	Stop					
1-17	68845	70221	48574	50694	Channel 1 ☐	☒	☐		
					Channel 2 ☐	☒	☐		
					Channel 3 ☐	☒	☐		
					Channel 4 ☐	☒	☐		
					Channel 5 ☐	☐	☒		
					Channel 6 ☐	☐	☒		
					Channel 7 ☐	☐	☒		
					Channel 8 ☐	☐	☒		

Analyst / SNT Level / Date:

Jesús Delgado III 27 MAR 05

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 83a

Page 1 of 2

Quad Cities Unit 1
VSC3-317
Ring 3 Vert @ 317 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

492.46 - 493.70
686.75 - 693.95
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.15
18.88 - 20.12

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	686.75	693.90
Length	7.15	
% DAC	14	
Inc. Axis Location	690.63	
Surface Location	497.06	
Scan Axis Location	493.54	
Depth In Material	2.47	
Metal Path	4.31	
Time	72.3	

Comments

:
:
:
:

No recordable indication ch1 ch2
ch3 ch4 .

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.15
9.04 - 10.28

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 3.88
17.96 - 19.20

Module Coordinates
Inc. Axis
Scan Axis

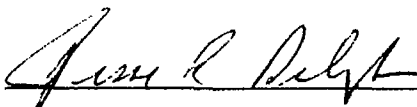
Channel 4

- 3.88
9.96 - 11.20

Exam Number 83a

Page 2 of 2

Reviewed By



Page 232 of 945

SNT Level

III

Date

27 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1				Weld Identification: VSC3-317		Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-83b			
Project No.: 04-0379				Weld Description: Ring 3 Vert @ 317°		Device Configuration: AIR-21SCAN-0001						
Mod. Conf.: A-07B				Scan Path Drawing: SPLONGBUTT		Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						27-Mar-05		Start		End		
								1119		1123		
								100		100		
Data Acquisition:												
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		
Controller: ID Device				Lower Limit		68796		68806		Lower Limit		
Scan: Y Axis				Upper Limit		70076		70077		Upper Limit		
Increment: X Axis				Increment Interval		80				DCI		
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		
Correction: Default				EDAS Radius In.		125.50				Device Position:		
										D (0)		
Module Parameters: A-07B Cal 03						Calibration Records:			Examination Notes:			
						QCS1-03			Check for limitations due to the proximity of the feedwater and			
						0800301			core spray spargers.			
						0800302						
						0800303						
						0800304			Examination Remarks:			
Channel 1 On 55 (-) - 1.40(in) - 1.21(in)						N/A						
Channel 2 On 55 (+) + 1.40(in) - 1.21(in)						N/A						
Channel 3 On SLIC-40 (-) - 1.97(in) + 1.69(in)						N/A						
Channel 4 On SLIC-40 (+) + 1.97(in) + 1.69(in)						N/A						
Channel 5 Off N/A N/A N/A N/A						N/A						
Channel 6 Off N/A N/A N/A N/A						N/A						
Channel 7 Off N/A N/A N/A N/A						N/A						
Channel 8 Off N/A N/A N/A N/A						N/A						
Data Analysis:												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)		Increment Position		Scan Position					Attachment: ☒ Yes ☐ No			
		Start	Stop	Start	Stop	Channel 1	Yes	No	N/A			
1-17		68806	70077	50744	52172	Channel 2	☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No		
						Channel 3	☐	☒	☐			
						Channel 4	☐	☒	☐	Archive Tape/CD No.: 3A & 3B		
						Channel 5	☐	☐	☒			
						Channel 6	☐	☐	☒	Analysis Tape/CD No.: 1		
						Channel 7	☐	☐	☒			
						Channel 8	☐	☐	☒			
Analyst / SNT Level / Date:												
												

ISWT FORM No. UT 58 (Rev. 05/02)

Exam Number ID-83B

Page 1 of 2

Quad Cities Unit 1
VSC3-317
Ring 3 Vert @ 317 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

504.92 - 506.16
686.75 - 693.95
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.20
2.40 - 3.64

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
686.75		693.95
	7.20	
	10	
	693.95	
	510.44	
	506.12	
	3.02	
	5.27	
	88.3	

Comments

: No recordable indications ch1 ch2
: ch2 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.20
-7.44 - -6.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 4.00
1.48 - 2.72

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 4.00
-6.52 - -5.28

Exam Number ID-83B

Page 2 of 2

Module Coordinates

Channel 5

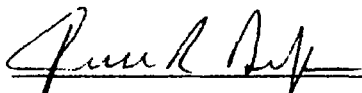
Inc. Axis

- 4.00

Scan Axis

-2.52 - -1.28

Reviewed By



Page 235 of 945

SNT Level LII

Date

27 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-317			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No: ID-84								
Project No: 04-0379			Weld Description: Ring 3 Vert @ 317°			Device Configuration: AIR-21SCAN-0001											
Mod. Conf: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F							
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						3/27/2005		Start 1130		End 1134		Start 100		End 100			
Data Acquisition																	
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		68796		68796		Lower Limit		52122		52122		Beam Direction: Dn/Up	
Scan: Y Axis				Upper Limit		70076		70076		Upper Limit		53550		53550		Transducer Size: 1.00	
Increment: X Axis				Increment Interval		80				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 17	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: D (0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:									
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and									
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core spray spargers.									
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302											
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303											
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:									
Channel 5	Off	N/A	N/A	N/A	N/A	N/A											
Channel 6	Off	N/A	N/A	N/A	N/A	N/A											
Channel 7	Off	N/A	N/A	N/A	N/A	N/A											
Channel 8	Off	N/A	N/A	N/A	N/A	N/A											
Data Analysis																	
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks									
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 3A & 3B Analysis Tape/CD No.: 1									
	Start	Stop	Start	Stop	Channel 1	Channel 2	Channel 3										
1-17	68796	70076	52122	53550	☐	☒	☐										
					☐	☒	☐										
					☐	☒	☐										
					☐	☒	☐										
					☐	☐	☒										
					☐	☐	☒										
					☐	☐	☒										
					☐	☐	☒										
Analyst / SNT Level / Date:																	
<i>Jose R. Delgado III 27 MAR 05</i>																	

Exam Number ID-84

Page 1 of 2

Quad Cities Unit 1
 VSC3-317
 Ring 3 Vert @ 317 deg

Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

519.06 - 520.30
 686.75 - 693.95
 2.45 - 3.13

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1

0.00 - 6.92
 2.76 - 4.00

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length
 Maximum Point
 % DAC
 Inc. Axis Location
 Surface Location
 Scan Axis Location
 Depth In Material
 Metal Path
 Time
 Comments
 :
 :
 :
 :

Channel 1
ASME

	1	10
686.75		693.67
	6.92	
	10	
	693.67	
	524.26	
	520.22	
	2.82	
	4.92	
	82.6	

No recordable indications ch1 ch2
 ch3 ch4.

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2

0.00 - 6.92
 -7.08 - -5.84

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3

- 3.83
 1.84 - 3.08

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4

- 3.83
 16 - -4.92

Exam Number ID-84

Page 2 of 2

Module Coordinates

Channel 5

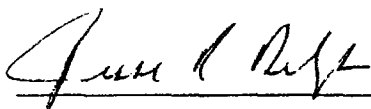
Inc. Axis

- 3.83

Scan Axis

-2.16 - -0.92

Reviewed By



Page 238 of 945

SNT Level

III

Date

27 MAR 05

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-317			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-85			
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 317°			Device Configuration: AIR-21SCAN-0002						
Mod. Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S Vinogradov						3/26/2005		Start		End		
								1250		1309		
Data Acquisition												
Scan Controller Parameters Controller: ID Device Scan: X Axis Increment: Y Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default			Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual	Positional Parameters Beam Direction: Ccw/Cw Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 51 Device Position: A (0)	
			Lower Limit		39000	39079	Lower Limit		68686	68726		
			Upper Limit		43500	43499	Upper Limit		70186	70114		
			Increment Interval		90		DCI		4			
			Conversion Counts		100		Conversion Counts		100			
			Conversion Units In.		1.00		Conversion Units In.		1.00			
			EDAS Radius In.		125.50							
Module Parameters: A-07-1D Cal 33						Calibration Records:		Examination Notes:				
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-33		Check for limitations due to the proximity of the feedwater and				
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301		core spray spargers.				
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803302						
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303						
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803304		Examination Remarks:				
Channel 5	Off	N/A	N/A	N/A	N/A	N/A						
Channel 6	Off	N/A	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 3A & 3B Analysis Tape/CD No.: 1				
	Start	Stop	Start	Stop	Channel 1	☐	☒					☐
1-51	39079	43499	68726	70114	Channel 2	☐	☒	☐				
					Channel 3	☐	☒	☐				
					Channel 4	☐	☒	☐				
					Channel 5	☐	☐	☒				
					Channel 6	☐	☐	☒				
					Channel 7	☐	☐	☒				
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date:												
28 MAR 05												

ISW FORM No. UT 58 (Rev. 05/02)

Exam Number 85

Page 2 of 2

Module Coordinates

Inc. Axis

Scan Axis

Channel 5

1.00 - 9.20

0.88 - 2.12

Module Coordinates

Inc. Axis

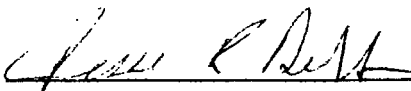
Scan Axis

Channel 6

- 7.40

9.68 - 10.92

Reviewed By



Page 240 of 945

SNT Level

III

Date

28 March

Exam Number 85

Page 1 of 2

Quad Cities Unit 1
 VSC3-317
 Ring 3 Vert @ 317 deg.

Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

692.14 - 693.38
 390.00 - 398.10
 2.45 - 3.13

Module Coordinates

Channel 1

Inc. Axis
 Scan Axis

0.00 - 8.20
 1.80 - 3.04

Feature Analysis

Channel 1

Inc. Axis Values

ASME

Scan No. Limits

Inc. Axis Limits

Length

Maximum Point

% DAC

Inc. Axis Location

Surface Location

Scan Axis Location

Depth In Material

Metal Path

Time

Comments

:

:

:

:

No recordable indications Ch1 ch2
 ch3 ch4.

Module Coordinates

Channel 2

Inc. Axis
 Scan Axis

0.00 - 8.20
 8.76 - 10.00

Module Coordinates

Channel 3

Inc. Axis
 Scan Axis

- 7.40
 2.92 - 4.16

Module Coordinates

Channel 4

Inc. Axis
 Scan Axis

1.00 - 9.20
 7.64 - 8.88



IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD

Site/Plant: Quad Cities Unit 1	Weld Identification: VSC3-317	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-86
Project No.: 04-0379	Weld Description: Ring 3 Vert @ 317°	Device Configuration: AIR-21SCAN-0002	
Mod. Conf.: A-07-1C	Scan Path Drawing: SPLONGBUTT	Exam Date: 3/26/2005	Examination Time: Start 1314, End 1337
Data Acquisition Operator (s) / SNT Level: S Vinogradov			Surface Temperature °F: Start 101, End 101

Data Acquisition

Scan Controller Parameters		Increment Axis/Device	Planned	Actual	Scan Axis/Arm	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	43410	43419	Lower Limit	68686	68710	Beam Direction:	Cw/Ccw
Scan:	X Axis	Upper Limit	47910	46499	Upper Limit	70186	70174	Transducer Size:	1.00
Increment:	Y Axis	Increment Interval	90		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	51
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	A (180)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters: A-07-1C Cal 33						Calibration Records:	Examination Notes:
	Status	Angle	Direction	Scan Offset	Step Offset		
Channel 1	On	55	(+)	- 7.00(in)	+ 0.00(in)	QCS1-33	Check for limitations due to the proximity of the feedwater and
Channel 2	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301	core spray spargers.
Channel 3	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803302	
Channel 4	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303	
Channel 5	Off	N/A	N/A	N/A	N/A	0803304	Examination Remarks:
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	Limited exam due to the proximity of the feedwater and core
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	spray spargers.
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-35	43419	46499	68694	70186	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	3A & 3B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		

Analyst / SNT Level / Date:

Reed Reed II 26 MAR 05

Exam Number 86

Page 1 of 2

Quad Cities Unit 1
VSC3-317
Ring 3 Vert @ 317 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

695.74 - 696.98
433.10 - 441.20
3.37 - 4.55

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
- 7.20
11.08 - 12.32

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
- 7.20
6.68 - 7.92

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 8.20
10.44 - 11.68

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
- 6.40
7.32 - 8.56

Module Coordinates
Inc. Axis
Scan Axis

Channel 5
- 6.40
13.28 - 14.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 6
0.00 - 8.20
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME
1 10
433.10 441.30
8.20

Exam Number 86

Page 2 of 2

% DAC	9
Inc. Axis Location	440.30
Surface Location	696.78
Scan Axis Location	696.78
Depth In Material	3.41
Metal Path	3.41
Time	28.8
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

R. L. Rago

Page 244 of 945

SNT Level

II

Date

26 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant: Quad Cities Unit 1				Weld Identification: VSC3-317				Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2				Examination No.: ID-87					
Project No.: 04-0379				Weld Description: Ring 3 Vert @ 317°				Device Configuration: AIR-21SCAN-0002									
Mod. Conf.: A-07-1D				Scan Path Drawing: SPLONGBUTT				Exam Date		Examination Time		Surface Temperature °F					
Data Acquisition Operator (s) / SNT Level: S. Vinogradov								3/26/2005		Start		End					
										1220		1230					
										106		106					
Data Acquisition																	
Scan Controller Parameters Controller: ID Device Scan: X Axis Increment: Y Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default				Increment Axis/Device		Planned		Actual		Scan Axis/Arm		Planned		Actual		Positional Parameters Beam Direction: Ccw/Cw Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 54 Device Position: A (0)	
				Lower Limit		47830		49519		Lower Limit		68686		68694			
				Upper Limit		52600		52699		Upper Limit		70186		70170			
				Increment Interval		90				DCI		4					
				Conversion Counts		100				Conversion Counts		100					
				Conversion Units In.		1.00				Conversion Units In.		1.00					
				EDAS Radius In.		125.50											
Module Parameters:						A-07-1D		Cal 33		Calibration Records:		Examination Notes:					
		Status	Angle	Direction	Scan Offset	Step Offset			QCS1-33		Check for limitations due to the proximity of the feedwater and						
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)			0803301		core spray spargers.							
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)			0803302									
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)			0803303									
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)			0803304		Examination Remarks:							
Channel 5	Off	N/A	N/A	N/A	N/A			N/A		Limited exam due to the proximity of the feedwater and core							
Channel 6	Off	N/A	N/A	N/A	N/A			N/A		spray spargers.							
Channel 7	Off	N/A	N/A	N/A	N/A			N/A									
Channel 8	Off	N/A	N/A	N/A	N/A			N/A									
Data Analysis																	
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks									
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:									
	Start	Stop	Start	Stop				☒ Yes ☐ No									
20-54	49519	52699	68694	70170	Channel 1	☐	☒	☐	Further Evaluation								
					Channel 2	☐	☒	☐	Required:								
					Channel 3	☐	☒	☐	☐ Yes ☒ No								
					Channel 4	☐	☒	☐	Archive Tape/CD No.:								
					Channel 5	☐	☐	☒	3A & 3B								
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:								
					Channel 7	☐	☐	☒	1								
					Channel 8	☐	☐	☒									
Analyst / SNT Level / Date:																	
 III 26 MAR 05																	

UFT FORM No. UT 58 (Rev. 05/02)

Exam Number 87

Page 1 of 2

Quad Cities Unit 1
 VSC3-317
 Ring 3 Vert @ 317 deg.

Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

696.54 - 697.78
 407.10 - 415.20
 2.45 - 3.13

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1

17.20 - 25.60
 6.20 - 7.44

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length
 Maximum Point
 % DAC
 Inc. Axis Location
 Surface Location
 Scan Axis Location
 Depth In Material
 Metal Path
 Time

Channel 1
 ASME

	39	48
407.20		415.60
	8.40	
	16	
	411.00	
	701.38	
	697.02	
	3.06	
	5.34	
	89.6	

Comments

:
:
:
:

No recordable indications ch1 ch2
 ch3 ch4.

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2

17.20 - 25.60
 13.16 - 14.40

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3

16.20 - 24.60
 7.32 - 8.56

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4

18.00 - 26.40
 12.04 - 13.28

Exam Number 87

Page 2 of 2

Channel 5
Module Coordinates
Inc. Axis 18.00 - 26.40
Scan Axis 5.28 - 6.52

Channel 6
Module Coordinates
Inc. Axis 16.20 - 24.60
Scan Axis 14.08 - 15.32

Reviewed By

James R. Delaty

SNT Level

III

Date

26 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-317			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2			Examination No.: ID-88			
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 317°			Device Configuration: AIR-21SCAN-0002						
Mod. Conf.: A-07-1C			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						3/26/2005		Start		End		
								1220		1230		106
Data Acquisitions												
Scan Controller Parameters Controller: ID Device Scan: X Axis Increment: Y Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default			Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual	Positional Parameters	
			Lower Limit		47830	•	Lower Limit		68686	•	Beam Direction: Cw/Ccw	
			Upper Limit		52600	•	Upper Limit		70186	•	Transducer Size: 1.00	
			Increment Interval		90		DCI		4		Code % of Overlap: 10	
			Conversion Counts		100		Conversion Counts		100		Number of Scans: 54	
Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: A (180)				
EDAS Radius In.		125.50										
Module Parameters: A-07-1C Cal 33						Calibration Records:		Examination Notes:				
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-33		Check for limitations due to the proximity of the feedwater and				
Channel 1	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803301		core spray spargers.				
Channel 2	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803302						
Channel 3	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803303						
Channel 4	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803304		Examination Remarks:				
Channel 5	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803305		• Exam ID-88 covered with Exam ID-87				
Channel 6	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803306						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:				
	Start	Stop	Start	Stop								
•	•	•	•	•	Channel 1	☐	☐	☒	☐ Yes ☒ No			
					Channel 2	☐	☐	☒	Further Evaluation			
					Channel 3	☐	☐	☒	Required:			
					Channel 4	☐	☐	☒	☐ Yes ☒ No			
					Channel 5	☐	☐	☒	Archive Tape/CD No.:			
					Channel 6	☐	☐	☒	N/A			
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:			
					Channel 8	☐	☐	☒	1			
Analyst / SNT Level / Date: Ropa Ropa II 26 MAR 05												

ISWT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 000900

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	RING 3 VERTICAL WELD AT 77-DEGREES
IDENTIFICATION:	VSC3-77

NDE Method	Proc/Rev/Chg/ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N R I	O T H	Resolution Record	CNF Number	Remarks
AUT	ISWT-PDI-AUT1/0/0/1,2	AUT55	'0800301,0800302	69,70,71,72	X	-	N/A	N/A	Exam limited due to proximity of the core spray and feedwater spargers.
AUT	ISWT-PDI-AUT1/0/0/1,2	AUTSLIC40	'0800303,0800304	69,70,71,72	X	-	N/A	N/A	
AUT	ISWT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	65a,65b,66a,	X	-	N/A	N/A	
				66b,67a,67b,	X	-	N/A	N/A	
				68	X	-	N/A	N/A	
AUT	ISWT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	65a,65b,66a,	X	-	N/A	N/A	
				66b,67a,67b,	X	-	N/A	N/A	
				68	X	-	N/A	N/A	

- NOTES:
1. Weld VSC3-77 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 80% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the VSC3-77 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by: Carlos M. Barrera
Carlos M. Barrera - Project Engineer

Date: 01-Apr-05

Reviewed by: Exelon Level III

Date: 04-12-2005

Page 1 of 1

Summary Sheet No.: 000900

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-65a	
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AJR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						28-Mar-05		Start	End
								1132	1140
								Start	End
								98	98
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
Controller: ID Device		Lower Limit		16226	16313	Lower Limit		38050	38014
Scan: Y Axis		Upper Limit		17506	17506	Upper Limit		40378	40378
Increment: X Axis		Increment Interval		80		DCI		4	
Mode: Automatic Scan		Conversion Counts		100		Conversion Counts		100	
Scan Motion: Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction: Default		EDAS Radius In.		125.50					
Positional Parameters									
Beam Direction: Dn/Up									
Transducer Size: 1.00									
Code % of Overlap: 10									
Number of Scans: 17									
Device Position: D (0)									
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core spray spargers.	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop					
1-17	16226	17509	38038	40378	Channel 1	☐	☒	☐	☒ Yes ☐ No
					Channel 2	☐	☒	☐	Further Evaluation
					Channel 3	☐	☒	☐	Required:
					Channel 4	☐	☒	☐	☐ Yes ☒ No
					Channel 5	☐	☐	☒	Archive Tape/CD No.:
					Channel 6	☐	☐	☒	3A & 3B
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:
					Channel 8	☐	☐	☒	1
Analyst / SNT Level / Date:									
RLO a RLO II 14 JULY 05									

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 65a

Page 1 of 2

Quad Cities Unit 1
VSC3-77
Ring 3 Vert @ 77 deg

Cursor Box 1 of 1

Scan Axis	403.43 - 404.67
Inc. Axis	163.95 - 171.15
Depth In Material	0.17 - 0.61

Module Coordinates

Channel 1

Inc. Axis	2.60 - 10.40
Scan Axis	76.56 - 77.80

Module Coordinates

Channel 2

Inc. Axis	2.60 - 10.40
Scan Axis	73.28 - 74.52

Module Coordinates

Channel 3

Inc. Axis	0.00 - 6.44
Scan Axis	77.08 - 78.32

Module Coordinates

Channel 4

Inc. Axis	0.00 - 6.44
Scan Axis	72.80 - 74.04

Feature Analysis

Channel 4

ASME

Inc. Axis Values

Scan No. Limits	1	10
Inc. Axis Limits	163.95	170.39
Length	6.44	

Maximum Point

% DAC	6
Inc. Axis Location	169.58
Surface Location	403.99
Scan Axis Location	404.23
Depth In Material	0.30
Time	5.0

Comments

: No recordable indications Ch 1, Ch 2
:
:
:
:
:

Exam Number 65a

Page 2 of 2

Reviewed By

Rafa Reed

Page 252 of 945

SNT Level

II

Date

29 MAR 05



Site/Plant : Quad Cities Unit 1	Weld Identification: VSC3-77	Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2	Examination No.: ID-65b			
Project No.: 04-0379	Weld Description: Ring 3 Vert @ 77°	Device Configuration: AIR-21SCAN-0001				
Mod.Conf.: A-07B	Scan Path Drawing: SPLONGBUTT	Exam Date	Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A		28-Mar-05	Start	End	Start	End
			1145	1155	98	98

Data Acquisition

Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	16226	16226	Lower Limit	40328	40328	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	17506	17506	Upper Limit	42656	42656	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						

Module Parameters:						Calibration Records:	Examination Notes:
	Status	A-07B Angle	Cal 03 Direction	Scan Offset	Step Offset		
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	QCS1-03 0800301	Check for limitations due to the proximity of the feedwater and core spray spargers.
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302	
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303	
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A	Examination Remarks:
Channel 6	Off	N/A	N/A	N/A	N/A	N/A	
Channel 7	Off	N/A	N/A	N/A	N/A	N/A	
Channel 8	Off	N/A	N/A	N/A	N/A	N/A	

Data Analysis

Increment & Scan Positions Actual				Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No
	Start	Stop	Start	Stop				
1-17	16226	17503	40328	42656	Channel 1 ☐	☒	☐	
					Channel 2 ☐	☒	☐	Further Evaluation
					Channel 3 ☐	☒	☐	Required:
					Channel 4 ☐	☒	☐	☐ Yes ☒ No
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:
					Channel 6 ☐	☐	☒	3A & 3B
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:
					Channel 8 ☐	☐	☒	1

Analyst / SNT Level / Date:

Reda Reda II 30 MAR 05

Exam Number 65B

Page 1 of 2

Quad Cities Unit 1
VSC3-77
Ring 3 Vert @ 77 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

409.73 - 410.97
163.95 - 171.15
0.43 - 0.87

Module Coordinates
Inc. Axis
Scan Axis

Channel 1
2.65 - 10.40
8.44 - 9.68

Module Coordinates
Inc. Axis
Scan Axis

Channel 2
2.65 - 10.40
4.44 - 5.68

Module Coordinates
Inc. Axis
Scan Axis

Channel 3
0.00 - 5.10
8.80 - 10.04

Module Coordinates
Inc. Axis
Scan Axis

Channel 4
0.00 - 5.10
4.12 - 5.36

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Time

Channel 4
ASME
1 10
163.95 169.05
5.10
5
169.36
409.93
410.41
0.55
9.4

Comments

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Exam Number 65B

Page 2 of 2

Reviewed By

PODARSO

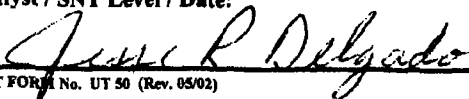
Page 255 of 945

SNT Level

II

Date

30 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-66a			
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AIR-21SCAN-0001						
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A C. Frederick/ N/A						3/28/2005		Start		End		
								1206		1211		
								Start		End		
								99		99		
Data Acquisition												
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters		
		Lower Limit		16226	16233	Lower Limit		42606	42605			
Controller: ID Device		Upper Limit		17506	17511	Upper Limit		44934	44934	Beam Direction: Up/Dn		
Scan: Y Axis		Increment Interval		80		DCI		4		Transducer Size: 1.00		
Increment: X Axis		Conversion Counts		100		Conversion Counts		100		Code % of Overlap: 10		
Mode: Automatic Scan		Conversion Units In.		1.00		Conversion Units In.		1.00		Number of Scans: 17		
Scan Motion: Bi-directional		EDAS Radius In.		125.50						Device Position: D (180)		
Correction: Default												
Module Parameters:						Calibration Records:		Examination Notes:				
Status		A-07A	Cal 03				QCS1-03		Check for limitations due to the proximity of the feedwater and			
Angle		Direction	Scan Offset	Step Offset					core spray spargers.			
Channel 1	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800301						
Channel 2	On	55	(-)	- 1.40(in)	+ 1.21(in)	0800302						
Channel 3	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	0800303						
Channel 4	On	SLIC-40	(-)	- 1.97(in)	- 1.69(in)	0800304		Examination Remarks:				
Channel 5	Off	N/A	N/A	N/A	N/A	N/A						
Channel 6	Off	N/A	N/A	N/A	N/A	N/A						
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 3A & 3B Analysis Tape/CD No.: 1				
	Start	Stop	Start	Stop								
1-17	16237	17514	42606	44930	Channel 1	☐	☒	☐				
					Channel 2	☐	☒	☐				
					Channel 3	☐	☒	☐				
					Channel 4	☐	☒	☐				
					Channel 5	☐	☐	☒				
					Channel 6	☐	☐	☒				
					Channel 7	☐	☐	☒				
					Channel 8	☐	☐	☒				
Analyst / SNT Level / Date:												
 Jose R. Delgado III 29 MAR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 66A

Page 1 of 2

Quad Cities Unit 1
VSCX3-77
Ring 3 Vert @ 77 deg.

Cursor Box 1 of 1

Scan Axis	438.86 - 440.10
Inc. Axis	163.47 - 170.67
Depth In Material	2.45 - 3.13

Module Coordinates

	Channel 1
Inc. Axis	0.00 - 7.20
Scan Axis	7.88 - 9.12

Feature Analysis

Inc. Axis Values

	1	10
Scan No. Limits		
Inc. Axis Limits	163.47	170.67
Length	7.20	

Maximum Point

% DAC	51
Inc. Axis Location	167.43
Surface Location	434.70
Scan Axis Location	439.18
Depth In Material	3.13
Metal Path	5.46
Time	91.5

Comments

:	No recordable indications ch1 ch2
:	ch 3 ch 4.
:	
:	

Channel 2

Module Coordinates

Inc. Axis	0.00 - 7.20
Scan Axis	17.72 - 18.96

Channel 3

Module Coordinates

Inc. Axis	3.20 - 10.40
Scan Axis	8.80 - 10.04

Channel 4

Module Coordinates

Inc. Axis	3.20 - 10.40
Scan Axis	16.80 - 18.04

Exam Number 66A

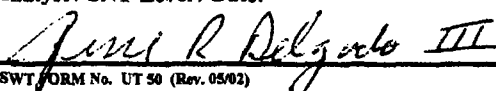
Page 2 of 2

Reviewed By

Juan R. Delgado

Page 258 of 945

SNT Level IIIDate 29 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-66b	
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07A			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A C. Frederick/ N/A						3/28/2005		Start	End
								1217	1226
								99	99
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
		Positional Parameters							
Controller: ID Device		Lower Limit		16226	16228	Lower Limit		44884	44884
Scan: Y Axis		Upper Limit		17506	17500	Upper Limit		47900	46776
Increment: X Axis		Increment Interval		80		DCI		4	
Mode: Automatic Scan		Conversion Counts		100		Conversion Counts		100	
Scan Motion: Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction: Default		EDAS Radius In.		125.50					
Module Parameters: A-07A Cal 03						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and	
Channel 1	On	55	(+)	+ 1.40(in)	+ 1.21(in)	0800301		core spray spargers.	
Channel 2	On	55	(-)	- 1.40(in)	+ 1.21(in)	0800302			
Channel 3	On	SLIC-40	(+)	+ 1.97(in)	- 1.69(in)	0800303			
Channel 4	On	SLIC-40	(-)	- 1.97(in)	- 1.69(in)	0800304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A		Limited examination due to proximity of spargers.	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop					
1-17	162228	17504	44584	46776	Channel 1 ☐	☒	☐	☒ Yes ☐ No	
					Channel 2 ☐	☒	☐	Further Evaluation	
					Channel 3 ☐	☒	☐	Required:	
					Channel 4 ☐	☒	☐	☐ Yes ☒ No	
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 6 ☐	☐	☒	3A & 3B	
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒	1	
Analyst / SNT Level / Date:									
 29 MAR 05									

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 66B

Page 1 of 2

Quad Cities Unit 1
VSCX3-77
Ring 3 Vert @ 77 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

454.72 - 455.96
163.47 - 170.67
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.34
0.96 - 2.20

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	163.47	170.81
Length	7.34	
% DAC	26	
Inc. Axis Location	169.17	
Surface Location	451.44	
Scan Axis Location	455.80	
Depth In Material	3.06	
Metal Path	5.34	
Time	89.6	

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.34
10.80 - 12.04

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

3.21 - 10.63
1.88 - 3.12

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

3.21 - 10.63
9.88 - 11.12

Exam Number 66B

Page 2 of 2

Reviewed By

Gen R Delgado

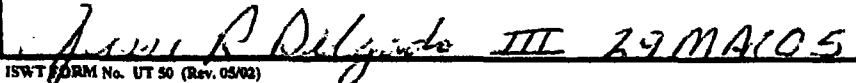
Page 261 of 945

SNT Level

III

Date

29 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-67a	
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A C. Frederick/ N/A						3/28/2005		Surface Temperature °F	
								Start End	
						1027		1038	
								98 98	
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
		Lower Limit		16226	16265	Lower Limit		47850	49538
Controller: ID Device		Upper Limit		17506	17503	Upper Limit		50694	50694
Scan: Y Axis		Increment Interval		80		DCI		4	
Increment: X Axis		Conversion Counts		100		Conversion Counts		100	
Mode: Automatic Scan		Conversion Units In.		1.00		Conversion Units In.		1.00	
Scan Motion: Bi-directional		EDAS Radius In.		125.50					
Correction: Default									
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and	
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core spray spargers.	
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A		Limited exam due to proximity of Spargers.	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:	
	Start	Stop	Start	Stop					
1-17	16315	17505	49530	50634	Channel 1	☐	☒	☐	Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 3A & 3B Analysis Tape/CD No.: 1
				Channel 2	☐	☒	☐		
				Channel 3	☐	☒	☐		
				Channel 4	☐	☒	☐		
				Channel 5	☐	☐	☒		
				Channel 6	☐	☐	☒		
				Channel 7	☐	☐	☒		
				Channel 8	☐	☐	☒		
Analyst / SNT Level / Date:									
									

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 67a

Page 1 of 2

Quad Cities Unit 1
VSC3-77
Ring 3 Vert @ 77 deg

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

487.22 - 488.46
161.05 - 168.25
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 7.20
13.64 - 14.88

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

Channel 1
ASME

	1	10
Inc. Axis Limits	161.05	168.25
Length	7.20	
% DAC	0	
Inc. Axis Location	161.05	
Surface Location	490.74	
Scan Axis Location	487.22	
Depth In Material	2.45	
Metal Path	4.27	
Time	71.7	

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 7.20
3.80 - 5.04

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 4.00
12.72 - 13.96

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

- 4.00
4.72 - 5.96

Exam Number 67a

Page 2 of 2

Reviewed By

Jose R. Delgado

Page 264 of 945

SNT Level

III

Date

29 MAR 08

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-68		
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AIR-21SCAN-0001					
Mod.Conf.: A-07B			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov/ N/A						3/28/2005		Start	End	Start	End
								1051	1057	97	97
Data Acquisition											
Scan Controller Parameters Controller: ID Device Scan: Y Axis Increment: X Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual	Positional Parameters Beam Direction: Dn/Up Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 17 Device Position: D (0)	
		Lower Limit		16226	16234	Lower Limit		52122	52122		
		Upper Limit		17506	17468	Upper Limit		53550	53550		
		Increment Interval		80		DCI		4			
		Conversion Counts		100		Conversion Counts		100			
		Conversion Units In.		1.00		Conversion Units In.		1.00			
		EDAS Radius In.		125.50							
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:			
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03		Check for limitations due to the proximity of the feedwater and			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301		core spray spargers.			
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302					
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303					
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:			
Channel 5	Off	N/A	N/A	N/A	N/A	N/A					
Channel 6	Off	N/A	N/A	N/A	N/A	N/A					
Channel 7	Off	N/A	N/A	N/A	N/A	N/A					
Channel 8	Off	N/A	N/A	N/A	N/A	N/A					
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No			
	Start	Stop	Start	Stop							
1-17	16235	17477	52122	53550	Channel 1	☐	☒	☐	Further Evaluation		
					Channel 2	☐	☒	☐	Required:		
					Channel 3	☐	☒	☐	☐ Yes ☒ No		
					Channel 4	☐	☒	☐	Archive Tape/CD No.:		
					Channel 5	☐	☐	☒	3A & 3B		
					Channel 6	☐	☐	☒	Analysis Tape/CD No.:		
					Channel 7	☐	☐	☒	1		
					Channel 8	☐	☐	☒			
Analyst / SNT Level / Date: <i>James R. Delgado III 29 MAR 05</i>											

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 68

Page 1 of 2

Quad Cities Unit 1
 VSC3-77
 Ring 3 Vert @ 77 deg

Cursor Box 1 of 1
 Scan Axis
 Inc. Axis
 Depth In Material

518.54 - 519.78
 161.05 - 168.25
 2.45 - 3.13

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 1

0.00 - 7.00
 2.24 - 3.48

Feature Analysis
 Inc. Axis Values
 Scan No. Limits
 Inc. Axis Limits
 Length

Channel 1
ASME

	1		10
	161.05		168.05
		7.00	

Maximum Point
 % DAC
 Inc. Axis Location
 Surface Location
 Scan Axis Location
 Depth In Material
 Metal Path
 Time

29
 161.05
 523.86
 519.62
 2.98
 5.19
 87.0

Comments

No recordable indications ch1 ch2
 ch3 ch4.

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 2

0.00 - 7.00
 -7.60 - -6.36

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 3

- 3.90
 1.32 - 2.56

Module Coordinates
 Inc. Axis
 Scan Axis

Channel 4

- 3.90
 -6.68 - -5.44

Exam Number 68

Page 2 of 2

Reviewed By Juan R Delgado SNT Level III Date 29 MAR 05

 HI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-69								
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AIR-21SCAN-0002											
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F							
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						3/30/2005		Start		End							
								1045		1111		94		94			
Data Acquisition																	
Scan Controller Parameters				Increment Axis/Device		Planned		Actual		Scan Axis/Arm		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		39000		38984		Lower Limit		16116		16124		Beam Direction: Ccw/Cw	
Scan: X Axis				Upper Limit		43500		43494		Upper Limit		17616		17616		Transducer Size: 1.00	
Increment: Y Axis				Increment Interval		90				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 51	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: A (0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters:						A-07-1D		Cal 33		Calibration Records:		Examination Notes:					
Status		Angle	Direction	Scan Offset	Step Offset					QCS1-33		Check for limitations due to the proximity of the feedwater and					
Channel 1 On		55	(-)	+ 7.00(in)	+ 0.00(in)					0803301		core spray spargers.					
Channel 2 On		55	(+)	- 7.00(in)	+ 0.00(in)					0803302							
Channel 3 On		SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)					0803303							
Channel 4 On		SLIC-40	(+)	- 4.40(in)	- 1.00(in)					0803304		Examination Remarks:					
Channel 5 Off		N/A	N/A	N/A	N/A					N/A							
Channel 6 Off		N/A	N/A	N/A	N/A					N/A							
Channel 7 Off		N/A	N/A	N/A	N/A					N/A							
Channel 8 Off		N/A	N/A	N/A	N/A					N/A							
Data Analysis																	
Increment & Scan Positions Actual					Recordable Indications					Analyst Remarks							
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment:									
	Start	Stop	Start	Stop													
1-51	38986	43494	16124	17616	Channel 1	☐	☒	☐	☒ Yes ☐ No								
					Channel 2	☐	☒	☐	Further Evaluation								
					Channel 3	☐	☒	☐	Required:								
					Channel 4	☐	☒	☐	☐ Yes ☒ No								
					Channel 5	☐	☐	☒	Archive Tape/CD No.:								
					Channel 6	☐	☐	☒	4A & 4B								
					Channel 7	☐	☐	☒	Analysis Tape/CD No.:								
					Channel 8	☐	☐	☒	1								
Analyst / SNT Level / Date:																	
 30 MAR 05																	

ISWT FORM No. UT 58 (Rev. 05/82)

Exam Number 69

Page 1 of 2

Quad Cities Unit 1
VSC3-197
Ring 3 Vert @ 197 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

167.60 - 168.84
390.00 - 398.10
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 8.16
2.96 - 4.20

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length

Channel 1
ASME

	1	10
	390.00	398.16
		8.16

Maximum Point

% DAC

26

Inc. Axis Location

395.45

Surface Location

172.12

Scan Axis Location

167.84

Depth In Material

3.00

Metal Path

5.23

Time

87.7

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 8.16
9.92 - 11.16

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 7.25
4.08 - 5.32

Module Coordinates
Inc. Axis
Scan Axis

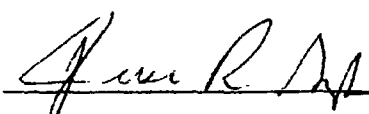
Channel 4

0.98 - 9.06
8.80 - 10.04

Exam Number 69

Page 2 of 2

Reviewed By



SNT Level

LIT

Date

30 MAR 05

 IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-70		
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AIR-21SCAN-0002					
Mod.Conf.: A-07-1C			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						3/30/2005		Start		End	
								1121		1143	
								94		94	
Data Acquisition											
Scan Controller Parameters		Increment Axis/Device		Planned		Actual		Scan Axis/Arm		Planned	
Controller: ID Device		Lower Limit		43410		43411		Lower Limit		16116	
Scan: X Axis		Upper Limit		47910		46422		Upper Limit		17616	
Increment: Y Axis		Increment Interval		90		DCI		4		Positional Parameters	
Mode: Automatic Scan		Conversion Counts		100		Conversion Counts		100		Beam Direction: Cw/Ccw	
Scan Motion: Bi-directional		Conversion Units In.		1.00		Conversion Units In.		1.00		Transducer Size: 1.00	
Correction: Default		EDAS Radius In.		125.50						Code % of Overlap: 10	
Module Parameters:		A-07-1C		Cal 33		Calibration Records:		Examination Notes:			
Status		Angle		Direction		Scan Offset		Step Offset		QCSI-33	
Channel 1 On		55		(+)		- 7.00(in)		+ 0.00(in)		0803301	
Channel 2 On		55		(-)		+ 7.00(in)		+ 0.00(in)		0803302	
Channel 3 On		SLIC-40		(+)		- 4.40(in)		- 1.00(in)		0803303	
Channel 4 On		SLIC-40		(-)		+ 4.40(in)		+ 1.00(in)		0803304	
Channel 5 Off		N/A		N/A		N/A		N/A		Examination Remarks:	
Channel 6 Off		N/A		N/A		N/A		N/A		Exam limited due to spargers.	
Channel 7 Off		N/A		N/A		N/A		N/A			
Channel 8 Off		N/A		N/A		N/A		N/A			
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Increment Position		Scan Position			Yes No N/A			Attachment:			
Start Stop		Start Stop			Channel 1			☒ Yes ☐ No			
1-35		43411 46472			16116 17616			Further Evaluation			
					Channel 2			Required:			
					Channel 3			☐ Yes ☒ No			
					Channel 4			Archive Tape/CD No.:			
					Channel 5			4A & 4B			
					Channel 6			Analysis Tape/CD No.:			
					Channel 7			1			
					Channel 8						
Analyst / SNT Level / Date:											
 30 MAR 05											

ISWT FORM No. UT 50. (Rev. 05/02)

Exam Number 70

Page 1 of 2

Quad Cities Unit 1
VSC3-77
Ring 3 Vert @ 77 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

158.64 - 159.88
434.10 - 442.20
2.45 - 3.13

Channel 1

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 8.10
0.96 - 2.20

Channel 1
ASME

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length

	1	10
434.10		442.20
	8.10	

Maximum Point

% DAC

26

Inc. Axis Location

434.10

Surface Location

154.92

Scan Axis Location

159.28

Depth In Material

3.06

Metal Path

5.34

Time

89.6

Comments

:
:
:
:

No recordable indications ch1 ch2
ch3 ch4.

Channel 2

Module Coordinates
Inc. Axis
Scan Axis

0.00 - 8.10
-6.00 - -4.76

Channel 3

Module Coordinates
Inc. Axis
Scan Axis

0.96 - 9.00
-0.16 - 1.08

Channel 4

Module Coordinates
Inc. Axis
Scan Axis

- 7.20
-4.88 - -3.64

Exam Number 70

Page 2 of 2

Reviewed By *John R. Ruff* SNT Level *III* Date *30 MAR 2015*

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant : Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2		Examination No.: ID-71				
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AIR-21SCAN-0002						
Mod.Conf.: A-07-1D			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time				
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						3/30/2005		Start		End		
								1025		1042		
								Surface Temperature °F				
								Start		End		
								94		94		
Data Acquisition												
Scan Controller Parameters				Increment Axis/Device		Planned		Actual		Scan Axis/Arm		
Controller: ID Device Scan: X Axis Increment: Y Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default				Lower Limit		47830		49539		Lower Limit		
				Upper Limit		52600		52609		Upper Limit		
				Increment Interval		90		DCI		4		
				Conversion Counts		100		Conversion Counts		100		
				Conversion Units In.		1.00		Conversion Units In.		1.00		
				EDAS Radius In.		125.50						
										Beam Direction: Ccw/Cw Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 54 Device Position: A (0)		
Module Parameters:						Calibration Records:		Examination Notes:				
						QCS1-33		Check for limitations due to the proximity of the feedwater and				
						0803301		core spray spargers.				
						0803302						
						0803303						
						0803304		Examination Remarks:				
						N/A		Limited exam due to the proximity of the feedwater and core				
						N/A		spray spargers.				
						N/A						
						N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)		Increment Position		Scan Position		Yes No N/A Channel 1 ☐ ☒ ☐ Channel 2 ☐ ☒ ☐ Channel 3 ☐ ☒ ☐ Channel 4 ☐ ☒ ☐ Channel 5 ☐ ☐ ☒ Channel 6 ☐ ☐ ☒ Channel 7 ☐ ☐ ☒ Channel 8 ☐ ☐ ☒			Attachment: ☒ Yes ☐ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: 4A & 4B Analysis Tape/CD No.: 1			
		Start		Stop								
20-54		49539		52607		16120			17604			
Analyst / SNT Level / Date:  III 30 MAR 05												

ISWT FORM No. UT 50 (Rev. 05/02)

Exam Number 71

Page 1 of 2

Quad Cities Unit 1
VSC3-77
Ring 3 Vert @ 77 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

171.20 - 172.44
478.30 - 486.40
2.45 - 3.13

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.00 - 8.07
6.56 - 7.80

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length

Channel 1
ASME

	20	29
478.30		486.37
	8.07	

Maximum Point

% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path
Time

18
479.15
175.84
171.48
3.06
5.34
89.6

Comments

: No recordable indications ch1 ch2
: ch3 ch4.
:
:

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.00 - 8.07
13.52 - 14.76

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 7.18
7.68 - 8.92

Module Coordinates
Inc. Axis
Scan Axis

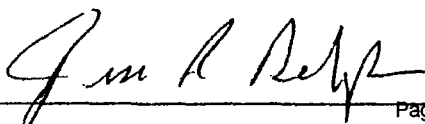
Channel 4

0.85 - 9.01
12.40 - 13.64

Exam Number 71

Page 2 of 2

Reviewed By

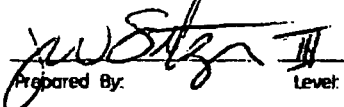
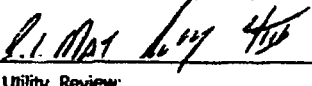
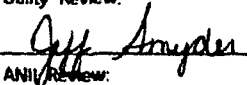


Page 276 of 945

SNT Level IIIDate 30 MAR 05

 IH SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD											
Site/Plant: Quad Cities Unit 1			Weld Identification: VSC3-77			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-72		
Project No.: 04-0379			Weld Description: Ring 3 Vert @ 77°			Device Configuration: AIR-21SCAN-0002					
Mod.Conf.: A-07-1C			Scan Path Drawing: SPLONGBUTT			Exam Date		Examination Time		Surface Temperature °F	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov						3/30/2005		Start		End	
								1025		1042	
								94		94	
Data Acquisition											
Scan Controller Parameters Controller: ID Device Scan: X Axis Increment: Y Axis Mode: Automatic Scan Scan Motion: Bi-directional Correction: Default		Increment Axis/Device		Planned		Actual		Scan Axis/Arm		Planned	
		Lower Limit		47830		*		Lower Limit		16116	
		Upper Limit		52600		*		Upper Limit		17616	
		Increment Interval		90				DCI		4	
		Conversion Counts		100				Conversion Counts		100	
		Conversion Units In.		1.00				Conversion Units In.		1.00	
		EDAS Radius In.		125.50							
										Positional Parameters Beam Direction: Cw/Ccw Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 54 Device Position: A (180)	
Module Parameters:						Calibration Records:		Examination Notes:			
Status		Angle		Direction		Scan Offset		Step Offset			
Channel 1 On		55		(+) (+)		- 7.00(in)		+ 0.00(in)		QCS1-33	
Channel 2 On		55		(-) (-)		+ 7.00(in)		+ 0.00(in)		0803301	
Channel 3 On		SLIC-40		(+) (+)		- 4.40(in)		- 1.00(in)		0803302	
Channel 4 On		SLIC-40		(-) (-)		+ 4.40(in)		+ 1.00(in)		0803303	
Channel 5 On		0T		(+) (+)		- 4.40(in)		+ 1.00(in)		0803304	
Channel 6 On		0T		(+) (+)		+ 4.40(in)		- 1.00(in)		0803305	
Channel 7 Off		N/A		N/A		N/A		N/A		0803306	
Channel 8 Off		N/A		N/A		N/A		N/A		N/A	
Examination Remarks: * Exam coverage obtain with exam 71.											
Data Analysis											
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks			
Scan No.(s)	Increment Position		Scan Position		Channel 1	Yes	No	N/A	Attachment: ☐ Yes ☒ No Further Evaluation Required: ☐ Yes ☒ No Archive Tape/CD No.: N/A Analysis Tape/CD No.: N/A		
	Start	Stop	Start	Stop							
*	*	*	*	*	Channel 2	☐	☐	☒			
					Channel 3	☐	☐	☒			
					Channel 4	☐	☐	☒			
					Channel 5	☐	☐	☒			
					Channel 6	☐	☐	☒			
					Channel 7	☐	☐	☒			
					Channel 8	☐	☐	☒			
Analyst / SNT Level / Date: <i>James R. Delgado III 30 MAR 05</i>											

ISWT FORM No. UT 50 (Rev. 05/02)

 GE ENERGY, NUCLEAR	EXAMINATION SUMMARY SHEET	Report No.: Q1R19-130					
Site: Quad Cities Component ID: RPV-TMHE							
Outage: RFO19 RPV Top Head to Flange Weld							
System: RPV ASME Cat: B-A ASME Item: B1.40 Aug Req: N/A							
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° RL	UT-141	N/A	GE-UT-300 Ver. 9	999788QC	Jack Reisewitz	II	5/12/2007
60° RL	UT-142	N/A	GE-UT-300 Ver. 9	CAL-IHW2-053	Jack Reisewitz	II	5/12/2007
60° Long.	UT-146	N/A	GE-UT-300 Ver. 9	CAL-IHW2-053	Troy Huhe	II	5/13/2007
60° RL	UT-143	N/A	GE-UT-300 Ver. 9	CAL-IHW2-053	David Hancock	II	5/13/2007
60° RL	UT-144	N/A	GE-UT-300 Ver. 9	999788QC	David Hancock	II	5/13/2007
60° Long.	UT-145	N/A	GE-UT-300 Ver. 9	999788QC	Troy Huhe	II	5/13/2007
MT	MT-008	N/A	GE-MT-100 Ver. 7	N/A	James Bullen	II	5/12/2007
Examination Results This exam was performed in accordance with the ASME Section XI 1995 Edition with 1996 Addenda. 72.6% of the volume was examined with no limitations noted. There were no recordable indications.							
Examination results were compared to data report N/A from N/A outage with ☐ No Change These examinations were performed under Work Order: 964266 ☐ Change							
This Summary and the following data sheets have been reviewed and accepted by the following personnel:						RWP: Dose: mrv.	
Prepared By: 		Level: III	Date: 5/15/07	Utility Review: 	Date: 05/15/07	Page <u>1</u> of <u>10</u>	
				ANI Review: 	Date: 5/18/07		

GE ENERGY, NUCLEAR		Ultrasonic Calibration and Examination Record RPV Components																																																	
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>		Data Report Number: <u>QIR19-130</u> Linearity Sheet: <u>L-002</u> Data Sheet Number: <u>UT-142</u> Ver.: <u>Ver 9</u> DRR: <u>N/A</u>																																																	
Calibration Block: <u>CAL-IIW2-053</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>4.0"</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>2234</u></td> <td>Exam Start: <u>0109</u></td> <td></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td>Exam End: <u>0437</u></td> <td></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td><u>Ultracal II</u></td> <td><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>0503</u></td> <td>Couplant:</td> <td>Batch:</td> </tr> <tr> <td><u>251935</u></td> <td><u>90° F</u></td> <td><u>86° F</u></td> </tr> <tr> <td>Thermometer</td> <td>Initial Cal Temp.</td> <td>Final Cal Temp.</td> </tr> </table>		<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness	Initial Cal: <u>2234</u>	Exam Start: <u>0109</u>		Cal Check: <u>N/A</u>	Exam End: <u>0437</u>		Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>06225</u>	Final Cal: <u>0503</u>	Couplant:	Batch:	<u>251935</u>	<u>90° F</u>	<u>86° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Search Unit Data <table style="width:100%;"> <tr> <td><u>Siemens</u></td> <td><u>228C-02001</u></td> <td><u>20.17K.627/Rect.</u></td> </tr> <tr> <td>Manufacturer:</td> <td>Serial Number:</td> <td>Size / Shape:</td> </tr> <tr> <td><u>0.600</u></td> <td><u>60°</u></td> <td><u>60°</u></td> </tr> <tr> <td>Incident Point</td> <td>Nominal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td><u>3.0 MHz</u></td> <td><u>SDC3</u></td> <td><u>RL</u></td> </tr> <tr> <td>Frequency:</td> <td>Model:</td> <td>Mode:</td> </tr> </table>		<u>Siemens</u>	<u>228C-02001</u>	<u>20.17K.627/Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>0.600</u>	<u>60°</u>	<u>60°</u>	Incident Point	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u>	<u>SDC3</u>	<u>RL</u>	Frequency:	Model:	Mode:									
<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness																																																	
Initial Cal: <u>2234</u>	Exam Start: <u>0109</u>																																																		
Cal Check: <u>N/A</u>	Exam End: <u>0437</u>																																																		
Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>06225</u>																																																	
Final Cal: <u>0503</u>	Couplant:	Batch:																																																	
<u>251935</u>	<u>90° F</u>	<u>86° F</u>																																																	
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																	
<u>Siemens</u>	<u>228C-02001</u>	<u>20.17K.627/Rect.</u>																																																	
Manufacturer:	Serial Number:	Size / Shape:																																																	
<u>0.600</u>	<u>60°</u>	<u>60°</u>																																																	
Incident Point	Nominal Angle:	Measured Angle:																																																	
<u>3.0 MHz</u>	<u>SDC3</u>	<u>RL</u>																																																	
Frequency:	Model:	Mode:																																																	
DAC Construction <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>W Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> </thead> <tbody> <tr> <td>SDH</td> <td><u>0.600"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>1.280</u></td> <td><u>0.640</u></td> <td><u>3.2</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td>1X</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td>1X</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td>1X</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td>1X</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table>		Reflector	Hole Depth	Gain @ 1X	Max Amp	W Dim.	Sweep	Screen Div.	SDH	<u>0.600"</u>	1X	<u>80%</u>	<u>1.280</u>	<u>0.640</u>	<u>3.2</u>	N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Cable <table style="width:100%;"> <tr> <td><u>RG-174</u></td> <td><u>12'</u></td> <td><u>0</u></td> </tr> <tr> <td>Cable Type:</td> <td>Length:</td> <td>Connectors:</td> </tr> </table>		<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:
Reflector	Hole Depth	Gain @ 1X	Max Amp	W Dim.	Sweep	Screen Div.																																													
SDH	<u>0.600"</u>	1X	<u>80%</u>	<u>1.280</u>	<u>0.640</u>	<u>3.2</u>																																													
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																	
Cable Type:	Length:	Connectors:																																																	
DAC 1X= <u>59.0 dB</u> Sweep 0-10 <u>2.0" Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve		Instrument Settings <table style="width:100%;"> <tr> <td><u>Panometrics / Epoch 4</u></td> <td><u>031570311</u></td> </tr> <tr> <td>Manufacturer/Model:</td> <td>Serial Number:</td> </tr> <tr> <td><u>9.1 us</u></td> <td><u>0.2536 in./usec.</u></td> </tr> <tr> <td>Delay/Zero:</td> <td>Velocity:</td> </tr> <tr> <td><u>Auto</u></td> <td><u>Fullwave</u></td> </tr> <tr> <td>Rep Rate:</td> <td>Rectification:</td> </tr> <tr> <td><u>400 Ohms</u></td> <td><u>0%</u></td> </tr> <tr> <td>Damping:</td> <td>Reject:</td> </tr> <tr> <td><u>Off</u></td> <td><u>Off</u></td> </tr> <tr> <td>DAC:</td> <td>TVG:</td> </tr> <tr> <td><u>Off</u></td> <td><u>Off</u></td> </tr> <tr> <td>CSC:</td> <td>OGS:</td> </tr> </table>		<u>Panometrics / Epoch 4</u>	<u>031570311</u>	Manufacturer/Model:	Serial Number:	<u>9.1 us</u>	<u>0.2536 in./usec.</u>	Delay/Zero:	Velocity:	<u>Auto</u>	<u>Fullwave</u>	Rep Rate:	Rectification:	<u>400 Ohms</u>	<u>0%</u>	Damping:	Reject:	<u>Off</u>	<u>Off</u>	DAC:	TVG:	<u>Off</u>	<u>Off</u>	CSC:	OGS:																								
<u>Panometrics / Epoch 4</u>	<u>031570311</u>																																																		
Manufacturer/Model:	Serial Number:																																																		
<u>9.1 us</u>	<u>0.2536 in./usec.</u>																																																		
Delay/Zero:	Velocity:																																																		
<u>Auto</u>	<u>Fullwave</u>																																																		
Rep Rate:	Rectification:																																																		
<u>400 Ohms</u>	<u>0%</u>																																																		
Damping:	Reject:																																																		
<u>Off</u>	<u>Off</u>																																																		
DAC:	TVG:																																																		
<u>Off</u>	<u>Off</u>																																																		
CSC:	OGS:																																																		
Exam Data for Weld: <u>RPV-THHF</u> <u>RPV Top Head to Flange Weld</u> Configuration: <table style="width:100%;"> <tr> <td><u>OD Plate</u></td> <td><u>89° F</u></td> </tr> <tr> <td>Exam Surface:</td> <td>Component Temperature</td> </tr> </table>		<u>OD Plate</u>	<u>89° F</u>	Exam Surface:	Component Temperature	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Reflector</th> <th><u>N/A</u></th> <th><u>N/A</u></th> <th><u>N/A</u></th> </tr> </thead> <tbody> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table>		Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																												
<u>OD Plate</u>	<u>89° F</u>																																																		
Exam Surface:	Component Temperature																																																		
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Weld Examination Area:		Acceptable Linearity performed : <u>4/27/2007</u>																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Weld</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> </thead> <tbody> <tr> <td><u>180° to 360°</u></td> <td><u>T&P</u></td> <td><u>73</u></td> <td><u>NR1</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table>		Weld	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>180° to 360°</u>	<u>T&P</u>	<u>73</u>	<u>NR1</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																									
Weld	Exam Access	Scan dB	Recordable Indications	Exam Angle																																															
<u>180° to 360°</u>	<u>T&P</u>	<u>73</u>	<u>NR1</u>	<u>60°</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
Comments: Cal/Exam Date is the date of initial calibration. Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.																																																			
<table style="width:100%;"> <tr> <td style="width:33%;"> <u>JAR</u> <u>Jack Reisewitz</u> Initials: Examiner </td> <td style="width:33%;"> <u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date: </td> <td style="width:33%;"> <u>R.L. Mat</u> <u>4/14/07</u> Utility Reviewed By: Date: </td> </tr> <tr> <td> <u>N/A</u> Initials: Examiner </td> <td> <u>N/A</u> Level: </td> <td> <u>Jeff Snyder</u> <u>5/18/07</u> ANI Reviewed By: Date: </td> </tr> <tr> <td> <u>[Signature]</u> GE Reviewed By: </td> <td> <u>5/15/07</u> Date: </td> <td> Page <u>2</u> of <u>8</u> <u>5/15/07</u> </td> </tr> </table>				<u>JAR</u> <u>Jack Reisewitz</u> Initials: Examiner	<u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date:	<u>R.L. Mat</u> <u>4/14/07</u> Utility Reviewed By: Date:	<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:	<u>Jeff Snyder</u> <u>5/18/07</u> ANI Reviewed By: Date:	<u>[Signature]</u> GE Reviewed By:	<u>5/15/07</u> Date:	Page <u>2</u> of <u>8</u> <u>5/15/07</u>																																							
<u>JAR</u> <u>Jack Reisewitz</u> Initials: Examiner	<u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date:	<u>R.L. Mat</u> <u>4/14/07</u> Utility Reviewed By: Date:																																																	
<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:	<u>Jeff Snyder</u> <u>5/18/07</u> ANI Reviewed By: Date:																																																	
<u>[Signature]</u> GE Reviewed By:	<u>5/15/07</u> Date:	Page <u>2</u> of <u>8</u> <u>5/15/07</u>																																																	

GE ENERGY, NUCLEAR	Ultrasonic Calibration and Examination Record RPV Components																																																																																																																														
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>	Data Report Number: <u>QIR19-130</u> Linearity Sheet: <u>L-002</u> Data Sheet Number: <u>UT-141</u> Ver.: <u>Ver 9</u> DRR: <u>N/A</u>																																																																																																																														
Calibration Block: <u>999788QC</u> <table style="width:100%;"> <tr> <td style="text-align: center;">CS</td> <td style="text-align: center;">FLAT</td> <td style="text-align: center;">5.0"</td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>2235</u></td> <td></td> <td>Exam Start: <u>0109</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>0437</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;">Ultracal II</td> <td style="text-align: center;">06225</td> </tr> <tr> <td>Final Cal: <u>0505</u></td> <td style="text-align: center;">Couplant</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>251935</u></td> <td style="text-align: center;"><u>90° F</u></td> <td style="text-align: center;"><u>85° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID NOTCH</td> <td><u>5.0"</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>8.68</u></td> <td><u>5.00</u></td> <td><u>6.7</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> DAC 1X= <u>66.5</u> Sweep 0-10 <u>7.5"</u> <u>Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve	CS	FLAT	5.0"	Material	Size	Thickness	Initial Cal: <u>2235</u>		Exam Start: <u>0109</u>	Cal Check: <u>N/A</u>		Exam End: <u>0437</u>	Cal Check: <u>N/A</u>	Ultracal II	06225	Final Cal: <u>0505</u>	Couplant	Batch	<u>251935</u>	<u>90° F</u>	<u>85° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID NOTCH	<u>5.0"</u>	<u>1X</u>	<u>80%</u>	<u>8.68</u>	<u>5.00</u>	<u>6.7</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;">Sierra</td> <td style="text-align: center;">22BC-02001</td> <td style="text-align: center;">20.17X.627/Rect.</td> </tr> <tr> <td style="text-align: center;">Manufacturer:</td> <td style="text-align: center;">Serial Number:</td> <td style="text-align: center;">Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.600</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td style="text-align: center;">Incident Point:</td> <td style="text-align: center;">Nominal Angle:</td> <td style="text-align: center;">Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;">SDC3</td> <td style="text-align: center;">RL</td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Model:</td> <td style="text-align: center;">Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;">RG-174</td> <td style="text-align: center;">12'</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">Cable Type:</td> <td style="text-align: center;">Length:</td> <td style="text-align: center;">Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td colspan="2" style="text-align: center;">Panametrics / Epoch 4</td> <td style="text-align: center;"><u>031570311</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer/Model:</td> <td colspan="2" style="text-align: center;">Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>9.1 us</u></td> <td style="text-align: center;"><u>0.2336 in./usec</u></td> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> </tr> <tr> <td style="text-align: center;">Delay/Zero:</td> <td style="text-align: center;">Velocity:</td> <td style="text-align: center;">Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;">Auto</td> <td style="text-align: center;">Fullwave</td> <td style="text-align: center;">15.0 in.</td> </tr> <tr> <td style="text-align: center;">Rep Rate:</td> <td style="text-align: center;">Rectification:</td> <td style="text-align: center;">Range:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> <td style="text-align: center;"><u>3.03 MHz</u></td> </tr> <tr> <td style="text-align: center;">Damping:</td> <td style="text-align: center;">Reject:</td> <td style="text-align: center;">Frequency:</td> </tr> <tr> <td style="text-align: center;"><u>OFF</u></td> <td style="text-align: center;"><u>OFF</u></td> <td style="text-align: center;"><u>OFF</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> <td style="text-align: center;">CSC:</td> </tr> <tr> <td style="text-align: center;"><u>OFF</u></td> <td style="text-align: center;"><u>OFF</u></td> <td style="text-align: center;"><u>OFF</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> <td style="text-align: center;">DGS:</td> </tr> </table>	Sierra	22BC-02001	20.17X.627/Rect.	Manufacturer:	Serial Number:	Size / Shape:	<u>0.600</u>	<u>60°</u>	<u>60°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u>	SDC3	RL	Frequency:	Model:	Mode:	RG-174	12'	0	Cable Type:	Length:	Connectors:	Panametrics / Epoch 4		<u>031570311</u>	Manufacturer/Model:	Serial Number:		<u>9.1 us</u>	<u>0.2336 in./usec</u>	<u>0.8 - 3.0 MHz</u>	Delay/Zero:	Velocity:	Narrowband Filter:	Auto	Fullwave	15.0 in.	Rep Rate:	Rectification:	Range:	<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>	Damping:	Reject:	Frequency:	<u>OFF</u>	<u>OFF</u>	<u>OFF</u>	DAC:	TVG:	CSC:	<u>OFF</u>	<u>OFF</u>	<u>OFF</u>	DAC:	TVG:	DGS:
CS	FLAT	5.0"																																																																																																																													
Material	Size	Thickness																																																																																																																													
Initial Cal: <u>2235</u>		Exam Start: <u>0109</u>																																																																																																																													
Cal Check: <u>N/A</u>		Exam End: <u>0437</u>																																																																																																																													
Cal Check: <u>N/A</u>	Ultracal II	06225																																																																																																																													
Final Cal: <u>0505</u>	Couplant	Batch																																																																																																																													
<u>251935</u>	<u>90° F</u>	<u>85° F</u>																																																																																																																													
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																																																																																													
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																																									
ID NOTCH	<u>5.0"</u>	<u>1X</u>	<u>80%</u>	<u>8.68</u>	<u>5.00</u>	<u>6.7</u>																																																																																																																									
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																									
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																									
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																									
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																									
Sierra	22BC-02001	20.17X.627/Rect.																																																																																																																													
Manufacturer:	Serial Number:	Size / Shape:																																																																																																																													
<u>0.600</u>	<u>60°</u>	<u>60°</u>																																																																																																																													
Incident Point:	Nominal Angle:	Measured Angle:																																																																																																																													
<u>3.0 MHz</u>	SDC3	RL																																																																																																																													
Frequency:	Model:	Mode:																																																																																																																													
RG-174	12'	0																																																																																																																													
Cable Type:	Length:	Connectors:																																																																																																																													
Panametrics / Epoch 4		<u>031570311</u>																																																																																																																													
Manufacturer/Model:	Serial Number:																																																																																																																														
<u>9.1 us</u>	<u>0.2336 in./usec</u>	<u>0.8 - 3.0 MHz</u>																																																																																																																													
Delay/Zero:	Velocity:	Narrowband Filter:																																																																																																																													
Auto	Fullwave	15.0 in.																																																																																																																													
Rep Rate:	Rectification:	Range:																																																																																																																													
<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>																																																																																																																													
Damping:	Reject:	Frequency:																																																																																																																													
<u>OFF</u>	<u>OFF</u>	<u>OFF</u>																																																																																																																													
DAC:	TVG:	CSC:																																																																																																																													
<u>OFF</u>	<u>OFF</u>	<u>OFF</u>																																																																																																																													
DAC:	TVG:	DGS:																																																																																																																													
Exam Data for Weld: <u>RPV-THHF</u> <u>RPV Top Head to Flange Weld</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;">OD Plate</td> <td style="text-align: center;">85° F</td> </tr> <tr> <td style="text-align: center;">Exam Surface:</td> <td style="text-align: center;">Component Temperature</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> <tr> <td><u>180° to 360°</u></td> <td><u>T&P</u></td> <td><u>70.5</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>	OD Plate	85° F	Exam Surface:	Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>180° to 360°</u>	<u>T&P</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> Acceptable Linearity performed : <u>4/27/2007</u>	Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																	
OD Plate	85° F																																																																																																																														
Exam Surface:	Component Temperature																																																																																																																														
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																																																											
<u>180° to 360°</u>	<u>T&P</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>																																																																																																																											
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																											
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																											
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																											
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																												
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																												
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																												
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																												
Comments: Cal/Exam Date is the date of initial calibration. Calibration for full volume examination. Exams performed to maintain a 10 - 20% clad roll.																																																																																																																															
<table style="width:100%;"> <tr> <td style="width:33%;"> <u>JAR</u> Jack Reiszewitz Initials: Examiner <u>N/A</u> Initials: Examiner <u>JWS</u> GE Reviewed By: </td> <td style="width:33%;"> <u>II</u> Level: Cal/Exam Date: <u>N/A</u> Level: <u>II</u> Level: </td> <td style="width:33%;"> <u>5/12/2007</u> Date: <u>5-15-07</u> Date: </td> </tr> </table> <u>P.L. Mac Big 4/15/07</u> Utility Reviewed By: <u>Jeff Snyder</u> ANI/Reviewed By: Date: <u>5/15/07</u> Page 3 of 8 10 5/15/07		<u>JAR</u> Jack Reiszewitz Initials: Examiner <u>N/A</u> Initials: Examiner <u>JWS</u> GE Reviewed By:	<u>II</u> Level: Cal/Exam Date: <u>N/A</u> Level: <u>II</u> Level:	<u>5/12/2007</u> Date: <u>5-15-07</u> Date:																																																																																																																											
<u>JAR</u> Jack Reiszewitz Initials: Examiner <u>N/A</u> Initials: Examiner <u>JWS</u> GE Reviewed By:	<u>II</u> Level: Cal/Exam Date: <u>N/A</u> Level: <u>II</u> Level:	<u>5/12/2007</u> Date: <u>5-15-07</u> Date:																																																																																																																													

GE ENERGY, NUCLEAR	Ultrasonic Calibration and Examination Record RPV Components																																																																																																				
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>	Data Report Number: <u>Q1R19-130</u> Linearity Sheet: <u>1-007</u> Data Sheet Number: <u>UT-145</u> Ver.: <u>Ver 9</u> DRR: <u>N/A</u>																																																																																																				
Calibration Block: <u>99978BQC</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>5.0"</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1211</u></td> <td></td> <td>Exam Start: <u>1300</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1440</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultracal II</u> Couplant</td> <td style="text-align: center;"><u>06225</u> Batch</td> </tr> <tr> <td>Final Cal: <u>1500</u></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"><u>251891</u> Thermometer</td> <td style="text-align: center;"><u>80° F</u> Initial Cal Temp.</td> <td style="text-align: center;"><u>80° F</u> Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID NOTCH</td> <td><u>5.0"</u></td> <td><u>1X</u></td> <td><u>60%</u></td> <td><u>8.6</u></td> <td><u>4.9</u></td> <td><u>6.6</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> DAC 1X= <u>66.0</u> Sweep 0-10 <u>7.5" Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve	<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0"</u> Thickness	Initial Cal: <u>1211</u>		Exam Start: <u>1300</u>	Cal Check: <u>N/A</u>		Exam End: <u>1440</u>	Cal Check: <u>N/A</u>	<u>Ultracal II</u> Couplant	<u>06225</u> Batch	Final Cal: <u>1500</u>			<u>251891</u> Thermometer	<u>80° F</u> Initial Cal Temp.	<u>80° F</u> Final Cal Temp.	Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID NOTCH	<u>5.0"</u>	<u>1X</u>	<u>60%</u>	<u>8.6</u>	<u>4.9</u>	<u>6.6</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Sierra</u> Manufacturer:</td> <td style="text-align: center;"><u>228C-02002</u> Serial Number:</td> <td style="text-align: center;"><u>20.1x.627/Rect.</u> Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.70</u> Incident Point:</td> <td style="text-align: center;"><u>60°</u> Nominal Angle:</td> <td style="text-align: center;"><u>61°</u> Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u> Frequency:</td> <td style="text-align: center;"><u>SDC3</u> Model:</td> <td style="text-align: center;"><u>Long</u> Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u> Cable Type:</td> <td style="text-align: center;"><u>6'</u> Length:</td> <td style="text-align: center;"><u>0</u> Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Panametrics / Epoch 4</u> Manufacturer/Model:</td> <td style="text-align: center;"><u>031574612</u> Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>7.95 us</u> Delay/Zero:</td> <td style="text-align: center;"><u>0.2246 in./usec</u> Velocity:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u> Rep Rate:</td> <td style="text-align: center;"><u>15.47 in.</u> Range:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u> Damping:</td> <td style="text-align: center;"><u>0%</u> Reject:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> DAC:</td> <td style="text-align: center;"><u>Off</u> TVG:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> CSC:</td> <td style="text-align: center;"><u>Off</u> DGS:</td> </tr> </table> Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> Acceptable Linearity performed : <u>4/27/2007</u>	<u>Sierra</u> Manufacturer:	<u>228C-02002</u> Serial Number:	<u>20.1x.627/Rect.</u> Size / Shape:	<u>0.70</u> Incident Point:	<u>60°</u> Nominal Angle:	<u>61°</u> Measured Angle:	<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>Long</u> Mode:	<u>RG-174</u> Cable Type:	<u>6'</u> Length:	<u>0</u> Connectors:	<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>031574612</u> Serial Number:	<u>7.95 us</u> Delay/Zero:	<u>0.2246 in./usec</u> Velocity:	<u>Auto</u> Rep Rate:	<u>15.47 in.</u> Range:	<u>400 Ohms</u> Damping:	<u>0%</u> Reject:	<u>Off</u> DAC:	<u>Off</u> TVG:	<u>Off</u> CSC:	<u>Off</u> DGS:	Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0"</u> Thickness																																																																																																			
Initial Cal: <u>1211</u>		Exam Start: <u>1300</u>																																																																																																			
Cal Check: <u>N/A</u>		Exam End: <u>1440</u>																																																																																																			
Cal Check: <u>N/A</u>	<u>Ultracal II</u> Couplant	<u>06225</u> Batch																																																																																																			
Final Cal: <u>1500</u>																																																																																																					
<u>251891</u> Thermometer	<u>80° F</u> Initial Cal Temp.	<u>80° F</u> Final Cal Temp.																																																																																																			
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																															
ID NOTCH	<u>5.0"</u>	<u>1X</u>	<u>60%</u>	<u>8.6</u>	<u>4.9</u>	<u>6.6</u>																																																																																															
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																															
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																															
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																															
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																															
<u>Sierra</u> Manufacturer:	<u>228C-02002</u> Serial Number:	<u>20.1x.627/Rect.</u> Size / Shape:																																																																																																			
<u>0.70</u> Incident Point:	<u>60°</u> Nominal Angle:	<u>61°</u> Measured Angle:																																																																																																			
<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>Long</u> Mode:																																																																																																			
<u>RG-174</u> Cable Type:	<u>6'</u> Length:	<u>0</u> Connectors:																																																																																																			
<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>031574612</u> Serial Number:																																																																																																				
<u>7.95 us</u> Delay/Zero:	<u>0.2246 in./usec</u> Velocity:																																																																																																				
<u>Auto</u> Rep Rate:	<u>15.47 in.</u> Range:																																																																																																				
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:																																																																																																				
<u>Off</u> DAC:	<u>Off</u> TVG:																																																																																																				
<u>Off</u> CSC:	<u>Off</u> DGS:																																																																																																				
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																		
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																		
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																		
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																		
Exam Data for Weld: <u>RPV-THHF</u> <u>RPV Top Head to Flange Weld</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD Plate</u> Exam Surface:</td> <td style="text-align: center;"><u>80° F</u> Component Temperature</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> <tr> <td><u>90° to 180°</u></td> <td><u>T&P</u></td> <td><u>71.1</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>		<u>OD Plate</u> Exam Surface:	<u>80° F</u> Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>90° to 180°</u>	<u>T&P</u>	<u>71.1</u>	<u>NRI</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																									
<u>OD Plate</u> Exam Surface:	<u>80° F</u> Component Temperature																																																																																																				
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																																	
<u>90° to 180°</u>	<u>T&P</u>	<u>71.1</u>	<u>NRI</u>	<u>60°</u>																																																																																																	
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																	
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																	
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																	
Comments: Cal/Exam Date is the date of initial calibration. Calibration for full volume examination. Exams performed to maintain a 10 - 20% clad roll.																																																																																																					
<table style="width:100%;"> <tr> <td style="width:33%;"> <u>TH</u> <u>Troy Huhe</u> Initials: Examiner <u>N/A</u> Initials: Examiner <u>JWS</u> GE Reviewed By: </td> <td style="width:33%;"> <u>II</u> <u>5/13/2007</u> Level: Cal/Exam Date: <u>N/A</u> Level: <u>TH</u> <u>5:15:07</u> Level: Date: </td> <td style="width:33%;"> <u>R.L. Mai</u> <u>4/17/07</u> Utility Reviewed By: Date: <u>Jeff Snyder</u> <u>5/16/07</u> ANI Reviewed By: Date: </td> </tr> </table>		<u>TH</u> <u>Troy Huhe</u> Initials: Examiner <u>N/A</u> Initials: Examiner <u>JWS</u> GE Reviewed By:	<u>II</u> <u>5/13/2007</u> Level: Cal/Exam Date: <u>N/A</u> Level: <u>TH</u> <u>5:15:07</u> Level: Date:	<u>R.L. Mai</u> <u>4/17/07</u> Utility Reviewed By: Date: <u>Jeff Snyder</u> <u>5/16/07</u> ANI Reviewed By: Date:																																																																																																	
<u>TH</u> <u>Troy Huhe</u> Initials: Examiner <u>N/A</u> Initials: Examiner <u>JWS</u> GE Reviewed By:	<u>II</u> <u>5/13/2007</u> Level: Cal/Exam Date: <u>N/A</u> Level: <u>TH</u> <u>5:15:07</u> Level: Date:	<u>R.L. Mai</u> <u>4/17/07</u> Utility Reviewed By: Date: <u>Jeff Snyder</u> <u>5/16/07</u> ANI Reviewed By: Date:																																																																																																			

GE ENERGY, NUCLEAR	Ultrasonic Calibration and Examination Record RPV Components																																																																																																																											
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>	Data Report Number: <u>Q1R19-130</u> Linearity Sheet: <u>L-002</u> Data Sheet Number: <u>UT-144</u> Ver.: <u>9</u> DRR: <u>N/A</u>																																																																																																																											
Calibration Block <u>999788QC</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>5.0"</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1218</u></td> <td></td> <td>Exam Start: <u>1300</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1440</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultralog II</u></td> <td style="text-align: center;"><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>1505</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>251891</u></td> <td style="text-align: center;"><u>80° F</u></td> <td style="text-align: center;"><u>80° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID Notch</td> <td><u>5.0"</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>8.66</u></td> <td><u>5.00</u></td> <td><u>6.7</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> DAC 1X= <u>66.5</u> Sweep 0-10 <u>7.5"</u> <u>Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve	<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0"</u> Thickness	Initial Cal: <u>1218</u>		Exam Start: <u>1300</u>	Cal Check: <u>N/A</u>		Exam End: <u>1440</u>	Cal Check: <u>N/A</u>	<u>Ultralog II</u>	<u>06225</u>	Final Cal: <u>1505</u>	Couplant:	Batch	<u>251891</u>	<u>80° F</u>	<u>80° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID Notch	<u>5.0"</u>	<u>1X</u>	<u>80%</u>	<u>8.66</u>	<u>5.00</u>	<u>6.7</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Stamps</u></td> <td style="text-align: center;"><u>228C-02001</u></td> <td style="text-align: center;"><u>21.17x62.7/Rect</u></td> </tr> <tr> <td>Manufacturer:</td> <td>Serial Number:</td> <td>Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.600</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td>Incident Point:</td> <td>Normal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;"><u>SDC3</u></td> <td style="text-align: center;"><u>RL</u></td> </tr> <tr> <td>Frequency:</td> <td>Model:</td> <td>Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>12'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Cable Type:</td> <td>Length:</td> <td>Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td colspan="2" style="text-align: center;"><u>Parametrics / Epoch 4</u></td> <td style="text-align: center;"><u>051570311</u></td> </tr> <tr> <td colspan="2">Manufacturer/Model:</td> <td>Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>9.1 μs</u></td> <td style="text-align: center;"><u>0.2336 in./μsec</u></td> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> </tr> <tr> <td>Delay/Zero:</td> <td>Velocity:</td> <td>Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> <td style="text-align: center;"><u>15.0 in</u></td> </tr> <tr> <td>Rep Rate:</td> <td>Rectification:</td> <td>Range:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> <td style="text-align: center;"><u>3.03 MHz</u></td> </tr> <tr> <td>Damping:</td> <td>Reject:</td> <td>Frequency:</td> </tr> <tr> <td style="text-align: center;"><u>OFF</u></td> <td style="text-align: center;"><u>OFF</u></td> <td style="text-align: center;"><u>OFF</u></td> </tr> <tr> <td>DAC:</td> <td>TVG:</td> <td>CSC:</td> </tr> <tr> <td style="text-align: center;"><u>OFF</u></td> <td style="text-align: center;"><u>OFF</u></td> <td style="text-align: center;"><u>OFF</u></td> </tr> <tr> <td></td> <td></td> <td>DGS:</td> </tr> </table>	<u>Stamps</u>	<u>228C-02001</u>	<u>21.17x62.7/Rect</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>0.600</u>	<u>60°</u>	<u>60°</u>	Incident Point:	Normal Angle:	Measured Angle:	<u>3.0 MHz</u>	<u>SDC3</u>	<u>RL</u>	Frequency:	Model:	Mode:	<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:	<u>Parametrics / Epoch 4</u>		<u>051570311</u>	Manufacturer/Model:		Serial Number:	<u>9.1 μs</u>	<u>0.2336 in./μsec</u>	<u>0.8 - 3.0 MHz</u>	Delay/Zero:	Velocity:	Narrowband Filter:	<u>Auto</u>	<u>Fullwave</u>	<u>15.0 in</u>	Rep Rate:	Rectification:	Range:	<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>	Damping:	Reject:	Frequency:	<u>OFF</u>	<u>OFF</u>	<u>OFF</u>	DAC:	TVG:	CSC:	<u>OFF</u>	<u>OFF</u>	<u>OFF</u>			DGS:
<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0"</u> Thickness																																																																																																																										
Initial Cal: <u>1218</u>		Exam Start: <u>1300</u>																																																																																																																										
Cal Check: <u>N/A</u>		Exam End: <u>1440</u>																																																																																																																										
Cal Check: <u>N/A</u>	<u>Ultralog II</u>	<u>06225</u>																																																																																																																										
Final Cal: <u>1505</u>	Couplant:	Batch																																																																																																																										
<u>251891</u>	<u>80° F</u>	<u>80° F</u>																																																																																																																										
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																																																																																										
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																																						
ID Notch	<u>5.0"</u>	<u>1X</u>	<u>80%</u>	<u>8.66</u>	<u>5.00</u>	<u>6.7</u>																																																																																																																						
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																						
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																						
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																						
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																						
<u>Stamps</u>	<u>228C-02001</u>	<u>21.17x62.7/Rect</u>																																																																																																																										
Manufacturer:	Serial Number:	Size / Shape:																																																																																																																										
<u>0.600</u>	<u>60°</u>	<u>60°</u>																																																																																																																										
Incident Point:	Normal Angle:	Measured Angle:																																																																																																																										
<u>3.0 MHz</u>	<u>SDC3</u>	<u>RL</u>																																																																																																																										
Frequency:	Model:	Mode:																																																																																																																										
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																																																																																										
Cable Type:	Length:	Connectors:																																																																																																																										
<u>Parametrics / Epoch 4</u>		<u>051570311</u>																																																																																																																										
Manufacturer/Model:		Serial Number:																																																																																																																										
<u>9.1 μs</u>	<u>0.2336 in./μsec</u>	<u>0.8 - 3.0 MHz</u>																																																																																																																										
Delay/Zero:	Velocity:	Narrowband Filter:																																																																																																																										
<u>Auto</u>	<u>Fullwave</u>	<u>15.0 in</u>																																																																																																																										
Rep Rate:	Rectification:	Range:																																																																																																																										
<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>																																																																																																																										
Damping:	Reject:	Frequency:																																																																																																																										
<u>OFF</u>	<u>OFF</u>	<u>OFF</u>																																																																																																																										
DAC:	TVG:	CSC:																																																																																																																										
<u>OFF</u>	<u>OFF</u>	<u>OFF</u>																																																																																																																										
		DGS:																																																																																																																										
Exam Data for Weld: <u>RPV-THHF</u> <u>RPV Top Head to Flange Weld</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD Plate</u></td> <td style="text-align: center;"><u>80° F</u></td> </tr> <tr> <td>Exam Surface:</td> <td>Component Temperature</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> <tr> <td><u>0° to 90°</u></td> <td><u>T&P</u></td> <td><u>72.5</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>	<u>OD Plate</u>	<u>80° F</u>	Exam Surface:	Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>0° to 90°</u>	<u>T&P</u>	<u>72.5</u>	<u>NRI</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> Acceptable Linearity performed : <u>4/27/2007</u>	Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																														
<u>OD Plate</u>	<u>80° F</u>																																																																																																																											
Exam Surface:	Component Temperature																																																																																																																											
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																																																								
<u>0° to 90°</u>	<u>T&P</u>	<u>72.5</u>	<u>NRI</u>	<u>60°</u>																																																																																																																								
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																								
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																								
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																								
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																									
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																									
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																									
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																									
Comments: Cal/Exam Date is the date of initial calibration. Calibration for full volume examination. Exams performed to maintain a 10 - 20% clad rail.																																																																																																																												
<table style="width:100%;"> <tr> <td style="width:30%;"> David Hancock Initials: Examiner Level: Cal/Exam Date: </td> <td style="width:30%;"> II <u>5/13/2007</u> N/A N/A Initials: Examiner Level: </td> <td style="width:30%;"> Jeff Snyder Utility Reviewed By: Date: </td> <td style="width:10%;"> <u>5/13/07</u> Date: </td> </tr> <tr> <td> J. W. S. Reviewed By: Level: Date: </td> <td> II <u>5.15.07</u> Level: Date: </td> <td colspan="2"> Page <u>6</u> of <u>8</u> just signed </td> </tr> </table>		 David Hancock Initials: Examiner Level: Cal/Exam Date:	II <u>5/13/2007</u> N/A N/A Initials: Examiner Level:	 Jeff Snyder Utility Reviewed By: Date:	<u>5/13/07</u> Date:	 J. W. S. Reviewed By: Level: Date:	II <u>5.15.07</u> Level: Date:	Page <u>6</u> of <u>8</u> just signed																																																																																																																				
 David Hancock Initials: Examiner Level: Cal/Exam Date:	II <u>5/13/2007</u> N/A N/A Initials: Examiner Level:	 Jeff Snyder Utility Reviewed By: Date:	<u>5/13/07</u> Date:																																																																																																																									
 J. W. S. Reviewed By: Level: Date:	II <u>5.15.07</u> Level: Date:	Page <u>6</u> of <u>8</u> just signed																																																																																																																										

GE ENERGY, NUCLEAR	Ultrasonic Calibration and Examination Record RPV Components																																																																																																		
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>	Data Report Number: <u>QIR19-130</u> Linearity Sheet: <u>L-002</u> Data Sheet Number: <u>UT-143</u> Ver.: <u>Ver 9</u> DRR: <u>N/A</u>																																																																																																		
Calibration Block: <u>CAL-IHW2-053</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>4.0"</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1219</u></td> <td>Exam Start: <u>1300</u></td> <td></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td>Exam End: <u>1440</u></td> <td></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td><u>Ultragel II</u></td> <td><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>1507</u></td> <td>Couplant:</td> <td>Batch</td> </tr> <tr> <td><u>251891</u></td> <td><u>80° F</u></td> <td><u>80° F</u></td> </tr> <tr> <td>Thermometer</td> <td>Initial Cal Temp.</td> <td>Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>SDH</td> <td><u>0.600"</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>1.280</u></td> <td><u>0.640</u></td> <td><u>3.2</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> DAC 1X= <u>56.0 dB</u> Sweep 0-10 <u>2.0" Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve	<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness	Initial Cal: <u>1219</u>	Exam Start: <u>1300</u>		Cal Check: <u>N/A</u>	Exam End: <u>1440</u>		Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>06225</u>	Final Cal: <u>1507</u>	Couplant:	Batch	<u>251891</u>	<u>80° F</u>	<u>80° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	SDH	<u>0.600"</u>	<u>1X</u>	<u>80%</u>	<u>1.280</u>	<u>0.640</u>	<u>3.2</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Siemens</u> Manufacturer:</td> <td style="text-align: center;"><u>22BC-02001</u> Serial Number:</td> <td style="text-align: center;"><u>20.19x627/Rect</u> Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.600</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td>Incident Point:</td> <td>Nominal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u> Frequency:</td> <td style="text-align: center;"><u>SDC3</u> Model:</td> <td style="text-align: center;"><u>RL</u> Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u> Cable Type:</td> <td style="text-align: center;"><u>12</u> Length:</td> <td style="text-align: center;"><u>0</u> Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Panometrics / Epoch 4</u> Manufacturer/Model:</td> <td style="text-align: center;"><u>031570311</u> Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>9.3 us</u> Delay/Zero:</td> <td style="text-align: center;"><u>0.2336 in./usec</u> Velocity:</td> </tr> <tr> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u> Narrowband Filter:</td> <td></td> </tr> <tr> <td style="text-align: center;"><u>Auto</u> Rep Rate:</td> <td style="text-align: center;"><u>Fullwave</u> Rectification:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u> Damping:</td> <td style="text-align: center;"><u>0%</u> Reject:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> DAC:</td> <td style="text-align: center;"><u>Off</u> TVG:</td> </tr> <tr> <td style="text-align: center;"><u>4.0 in.</u> Range:</td> <td style="text-align: center;"><u>3.03 MHz</u> Frequency:</td> </tr> <tr> <td style="text-align: center;"><u>Sa / Med</u> Pulser:</td> <td style="text-align: center;"><u>DUAL</u> Mode:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> DAC:</td> <td style="text-align: center;"><u>Off</u> TVG:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> CSC:</td> <td style="text-align: center;"><u>Off</u> DGS:</td> </tr> </table>	<u>Siemens</u> Manufacturer:	<u>22BC-02001</u> Serial Number:	<u>20.19x627/Rect</u> Size / Shape:	<u>0.600</u>	<u>60°</u>	<u>60°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>RL</u> Mode:	<u>RG-174</u> Cable Type:	<u>12</u> Length:	<u>0</u> Connectors:	<u>Panometrics / Epoch 4</u> Manufacturer/Model:	<u>031570311</u> Serial Number:	<u>9.3 us</u> Delay/Zero:	<u>0.2336 in./usec</u> Velocity:	<u>0.8 - 3.0 MHz</u> Narrowband Filter:		<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:	<u>400 Ohms</u> Damping:	<u>0%</u> Reject:	<u>Off</u> DAC:	<u>Off</u> TVG:	<u>4.0 in.</u> Range:	<u>3.03 MHz</u> Frequency:	<u>Sa / Med</u> Pulser:	<u>DUAL</u> Mode:	<u>Off</u> DAC:	<u>Off</u> TVG:	<u>Off</u> CSC:	<u>Off</u> DGS:
<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness																																																																																																	
Initial Cal: <u>1219</u>	Exam Start: <u>1300</u>																																																																																																		
Cal Check: <u>N/A</u>	Exam End: <u>1440</u>																																																																																																		
Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>06225</u>																																																																																																	
Final Cal: <u>1507</u>	Couplant:	Batch																																																																																																	
<u>251891</u>	<u>80° F</u>	<u>80° F</u>																																																																																																	
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																																																																	
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																													
SDH	<u>0.600"</u>	<u>1X</u>	<u>80%</u>	<u>1.280</u>	<u>0.640</u>	<u>3.2</u>																																																																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																													
<u>Siemens</u> Manufacturer:	<u>22BC-02001</u> Serial Number:	<u>20.19x627/Rect</u> Size / Shape:																																																																																																	
<u>0.600</u>	<u>60°</u>	<u>60°</u>																																																																																																	
Incident Point:	Nominal Angle:	Measured Angle:																																																																																																	
<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>RL</u> Mode:																																																																																																	
<u>RG-174</u> Cable Type:	<u>12</u> Length:	<u>0</u> Connectors:																																																																																																	
<u>Panometrics / Epoch 4</u> Manufacturer/Model:	<u>031570311</u> Serial Number:																																																																																																		
<u>9.3 us</u> Delay/Zero:	<u>0.2336 in./usec</u> Velocity:																																																																																																		
<u>0.8 - 3.0 MHz</u> Narrowband Filter:																																																																																																			
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:																																																																																																		
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:																																																																																																		
<u>Off</u> DAC:	<u>Off</u> TVG:																																																																																																		
<u>4.0 in.</u> Range:	<u>3.03 MHz</u> Frequency:																																																																																																		
<u>Sa / Med</u> Pulser:	<u>DUAL</u> Mode:																																																																																																		
<u>Off</u> DAC:	<u>Off</u> TVG:																																																																																																		
<u>Off</u> CSC:	<u>Off</u> DGS:																																																																																																		
Exam Data for Weld: <u>RPV-THEE</u> <u>RPV Top Head to Flange Weld</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD Plate</u> Exam Surface:</td> <td style="text-align: center;"><u>80° F</u> Component Temperature</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> <tr> <td><u>0° to 90°</u></td> <td><u>T&P</u></td> <td><u>70.0</u></td> <td><u>NR1</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>	<u>OD Plate</u> Exam Surface:	<u>80° F</u> Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>0° to 90°</u>	<u>T&P</u>	<u>70.0</u>	<u>NR1</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> Acceptable Linearity performed : <u>4/27/2007</u>	Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																							
<u>OD Plate</u> Exam Surface:	<u>80° F</u> Component Temperature																																																																																																		
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																															
<u>0° to 90°</u>	<u>T&P</u>	<u>70.0</u>	<u>NR1</u>	<u>60°</u>																																																																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																															
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																
Comments: Cal/Exam Date is the date of initial calibration. Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.																																																																																																			
<u>David Hancock</u> II <u>5/13/2007</u> Initials: Examiner Level: Cal/Exam Date: <u>N/A</u> <u>N/A</u> Initials: Examiner Level: <u>James</u> <u>III</u> <u>5.14.07</u> GE Reviewed By: Level: Date:	<u>R.L. May</u> <u>4/20</u> <u>05/14/07</u> Utility Reviewed By: Date: <u>Jeff Snyder</u> <u>5/18/07</u> ANI Reviewed By: Date: 10 Page 7 of 8 JMS 5/14/07																																																																																																		

GE Energy, Nuclear		MAGNETIC PARTICLE EXAMINATION REPORT										
Site: <u>Quad Cities</u>		Unit: <u>1</u>	Project: <u>RFO19</u>									
		Report Number: <u>Q1R19-130</u>	Sheet No.: <u>MT-008</u>									
Weld No.: <u>RPV-THHF</u>		Configuration: <u>RPV Top Head to Flange Weld</u>										
Drawing: <u>M-3121 SHL 1</u>		System: <u>RPV</u>										
Procedure No.: <u>GE-MT-100</u>		Version / Revision: <u>Ver. 7</u>	DRR: <u>N/A</u>									
Material/Thickness:	Surface Condition:	Item:										
<u>Carbon Steel / 4.00"</u>	<u>Ground</u>	<u>Weld - Final</u>										
Magnetizing Apparatus		Black Light										
Mfg: <u>Parker</u>	Yoke Calibration: <u>AC - 10 lb. Lift</u>	Model	Serial Number									
Model: <u>B-300</u>		Blacklight: <u>N/A</u>	<u>N/A</u>									
Serial No.:	Yoke Spacing: <u>4" - 6"</u>	Light Meter: <u>N/A</u>	<u>N/A</u>									
Thermometer: <u>255249</u>	Surface Temperature: <u>90° F</u>											
Technique		Examination Medium										
Magnetization: <u>AC</u>	Magnetic Particles: <u>Dry</u>	Blacklight Intensity: <u>N/A</u>										
Technique: <u>Continuous Yoke</u>	<u>Magnaflux</u> Manufacturer: Particle Type: Batch No	Blacklight Intensity:										
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:20%;">Indication Number:</th> <th style="width:60%;">Description:</th> <th style="width:20%;">Results:</th> </tr> </thead> <tbody> <tr> <td align="center"><u>N/A</u></td> <td align="center"><u>N/A</u></td> <td align="center"><u>NRI</u></td> </tr> <tr> <td colspan="3" style="height: 150px;"></td> </tr> </tbody> </table>				Indication Number:	Description:	Results:	<u>N/A</u>	<u>N/A</u>	<u>NRI</u>			
Indication Number:	Description:	Results:										
<u>N/A</u>	<u>N/A</u>	<u>NRI</u>										
Comments: * Two yokes were utilized during exam: S/N B165, cal due date 09/07/07 and S/N 4846, cal due date 09/06/07.												
<u>KER KURT BAUMANN II 5/12/2007</u> <u>JMB JAMES M. BULLEN II 5/12/2007</u> Initial Examiner Level Date <u>JWS</u> <u>II</u> <u>5/12/07</u> GE Review Level Date		<u>R.L.M. 6/14/07 4/05</u> <u>05/14/07</u> Utility Review Date <u>Jeff Snyder</u> <u>5/18/07</u> ANL Review Date Page <u>8</u> of <u>10</u> <u>JWS 5/18/07</u>										

Quad Cities Unit 1 / 2007



GE Energy - Nuclear

Reactor Pressure Vessel Coverage Calculation Sheet

Quad Cities Unit 1 / 2007
RPV-THHF
Spring / Q1R19

		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
Weld Length = 819.39 Exam Volume = 26.8		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° T-Scan (S4 UC)	A	3.9	3.9	14.6%	819.39	7.3%
60° T-Scan (S6 FV)	A	16.5	16.4	61.2%	819.39	30.6%
60° T-Scan (S6 NS)	A	6.4	4	14.9%	819.39	7.5%
60° P-Scan (S4 UC)	A	3.9	2.2	8.2%	819.39	4.1%
60° P-Scan (S6 FV)	A	16.5	9.3	34.7%	819.39	17.4%
60° P-Scan (S6 NS)	A	6.4	3.1	11.6%	819.39	5.8%
60° T-Scan (S4 UC)						
60° T-Scan (S6 FV)						
60° T-Scan (S6 NS)						
60° P-Scan (S4 UC)						
60° P-Scan (S6 FV)						
60° P-Scan (S6 NS)						
60° T-Scan (S4 UC)						
60° T-Scan (S6 FV)						
60° T-Scan (S6 NS)						
60° P-Scan (S4 UC)						
60° P-Scan (S6 FV)						
60° P-Scan (S6 NS)						

% Total Composite Coverage = 72.6%

Rev. 0 9/23/05

Comments: A - Scanned accessible weld length. Exam restricted due to the flange

Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in inches or degrees.

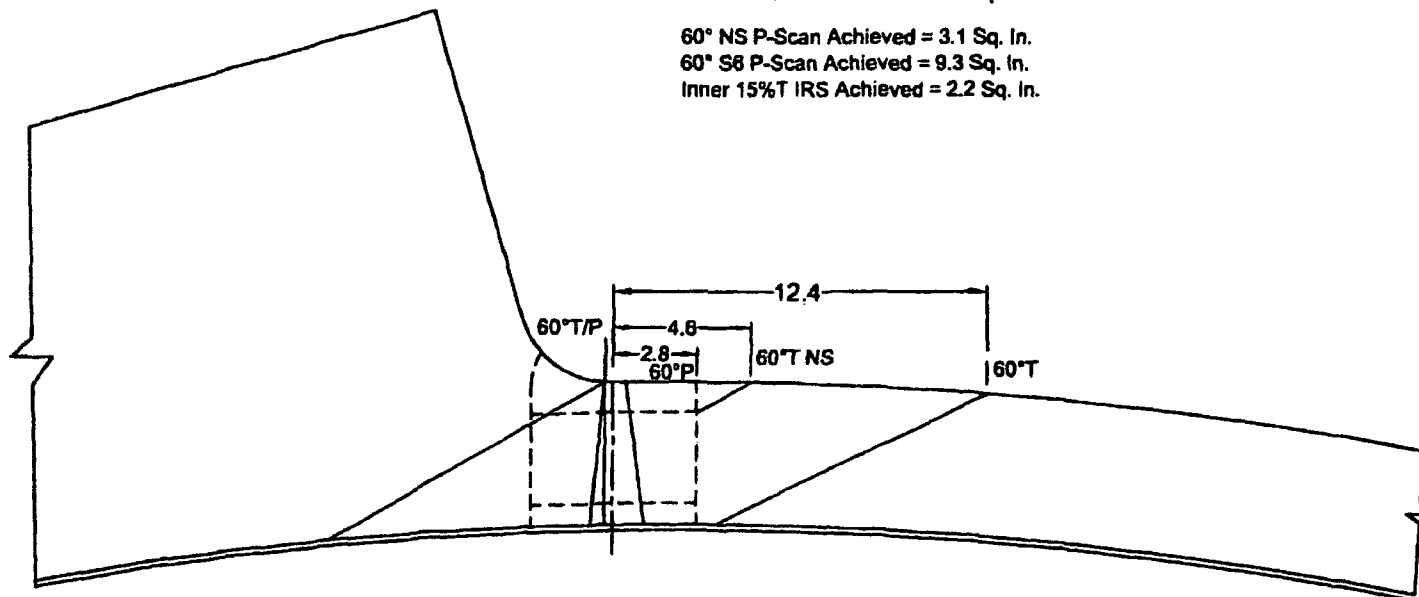
Page 9 of 10

Quad Cities Unit 1 Top Head - Flg.

60° NS Exam Volume = 6.4 Sq. In.
60° S6 Exam Volume = 16.5 Sq. In.
Inner 15%T S6 Exam Volume (60° & IRS) = 3.9 Sq. In.

60° NS T-Scan Achieved = 4.0 Sq. In.
60° S6 T-Scan Achieved = 16.4 Sq. In.
60° S4 T-Scan Achieved = 3.9 Sq. In.

60° NS P-Scan Achieved = 3.1 Sq. In.
60° S6 P-Scan Achieved = 9.3 Sq. In.
Inner 15%T IRS Achieved = 2.2 Sq. In.



ISwT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 001700

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	BELTLINE REGION REPAIR WELD
IDENTIFICATION:	BMR-016-295

<u>NDE Method</u>	<u>Proc/Rev/Chg/ICN</u>	<u>NDE Examination</u>	<u>Calibration Sheet No.</u>	<u>Data Sheet No.</u>	<u>N O R T I H</u>	<u>Resolution Record</u>	<u>CNF Number</u>	<u>Remarks</u>
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55	'0800301,0800302	125	X -	N / A	N / A	Exam limited due to proximity of the jet pump riser brackets and the core shroud repair tie rod.
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40	'0800303,0800304	125	X -	N / A	N / A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUT55T	0803301,0803302	123A,124	X -	N / A	N / A	
AUT	ISwT-PDI-AUT1/0/0/1,2	AUTSLIC40T	0803303,0803304	123A,124	X -	N / A	N / A	

- NOTES:
1. BMR-016-295 was examined from the inside surface using AIRIS-21 and EDAS-II examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 83% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the BMR-016-295 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by: Carlos M. Barrera
Carlos M. Barrera - Project Engineer

Date: 07-Apr-05

Reviewed by: Exelon Level III

Date: 04-13-2005

Page 1 of 1

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: BMR-016-295			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2		Examination No.: ID-123A	
Project No.: 04-0379			Weld Description: Beltline Region Repair			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPBMR016,017,018			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A						3-Apr-05		Start	End
								0404	0408
								Start	End
								96	96
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm	Planned	Actual	Scan Axis/Device	Planned	Actual	Positional Parameters	
Controller:	ID Device	Lower Limit	3559	3562	Lower Limit	28450	28450	Beam Direction:	Dn/Up
Scan:	Y Axis	Upper Limit	4839	4745	Upper Limit	31014	31082	Transducer Size:	1.00
Increment:	X Axis	Increment Interval	80		DCI	4		Code % of Overlap:	10
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100		Number of Scans:	17
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00		Device Position:	D (0)
Correction:	Default	EDAS Radius In.	125.50						
Module Parameters: A-07B Cal 03					Calibration Records:		Examination Notes:		
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-03	Exams 123A and 124 are run in conjunction with each other.		
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301			
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304	Examination Remarks:		
Channel 5	On	0T	(+)	+ 0.00(in)	+ 1.69(in)	0800305			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop	Channel 1 ☐	☒	☐		
1-17	3568	4741	28450	31094	Channel 2 ☐	☒	☐	Further Evaluation	
					Channel 3 ☐	☒	☐	Required:	
					Channel 4 ☐	☒	☐	☐ Yes ☒ No	
					Channel 5 ☐	☐	☒	Archive Tape/CD No.:	
					Channel 6 ☐	☐	☒	5A & 5B	
					Channel 7 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 8 ☐	☐	☒	1	
Analyst / SNT Level / Date: R. D. Rose II 03 APR 05									

Exam Number ID-123A

Page 1 of 2

Quad Cities Unit 1
BMR-016-295
Beltline Region Repair

Cursor Box 1 of 1

Scan Axis	288.98 - 290.22
Inc. Axis	37.48 - 44.68
Depth In Material	4.73 - 5.91

Channel 1

Module Coordinates

Inc. Axis	2.86 - 9.55
Scan Axis	12.64 - 13.88

Channel 2

Module Coordinates

Inc. Axis	2.86 - 9.55
Scan Axis	-3.68 - -2.44

Channel 3

Module Coordinates

Inc. Axis	0.00 - 6.63
Scan Axis	10.40 - 11.64

Channel 4

Module Coordinates

Inc. Axis	0.00 - 6.63
Scan Axis	-1.44 - -0.20

Channel 5

Module Coordinates

Inc. Axis	0.00 - 6.63
Scan Axis	4.48 - 5.72

Channel 5

ASME

Feature Analysis

Inc. Axis Values

Scan No. Limits	1	10
Inc. Axis Limits	37.48	44.11
Length	6.63	

Maximum Point

% DAC

Inc. Axis Location	38.28

Surface Location	288.98

Scan Axis Location	288.98

Depth In Material	5.11

Metal Path	5.11

Exam Number ID-123A

Page 2 of 2

Time
Comments

43.2

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

R. A. Reed

SNT Level

II

Date

03 APR 05

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD																	
Site/Plant : Quad Cities Unit 1				Weld Identification: BMR-016-295				Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2				Examination No.: ID-124					
Project No.: 04-0379				Weld Description: Beltline Region Repair				Device Configuration: AIR-21SCAN-0001									
Mod.Conf.: A-07B				Scan Path Drawing: SPBMR016,017,018				Exam Date		Examination Time		Surface Temperature °F					
Data Acquisition Operator (s) / SNT Level: C. Barberino / N/A								3-Apr-05		Start		End					
										0404		0408		96		96	
Data Acquisition																	
Scan Controller Parameters				Increment Axis/Arm		Planned		Actual		Scan Axis/Device		Planned		Actual		Positional Parameters	
Controller: ID Device				Lower Limit		3559		3562		Lower Limit		28450		28450		Beam Direction: Dn/Up	
Scan: Y Axis				Upper Limit		4839		4745		Upper Limit		31014		31082		Transducer Size: 1.00	
Increment: X Axis				Increment Interval		80				DCI		4				Code % of Overlap: 10	
Mode: Automatic Scan				Conversion Counts		100				Conversion Counts		100				Number of Scans: 17	
Scan Motion: Bi-directional				Conversion Units In.		1.00				Conversion Units In.		1.00				Device Position: D (0)	
Correction: Default				EDAS Radius In.		125.50											
Module Parameters: A-07B Cal 03										Calibration Records:		Examination Notes:					
		Status	Angle	Direction	Scan Offset	Step Offset				QCS1-03		Exams 123A and 124 are run in conjunction with each other.					
Channel 1		On	55	(-)	- 1.40(in)	- 1.21(in)				0800301							
Channel 2		On	55	(+)	+ 1.40(in)	- 1.21(in)				0800302							
Channel 3		On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)				0800303							
Channel 4		On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)				0800304		Examination Remarks:					
Channel 5		On	0T	(+)	+ 0.00(in)	+ 1.69(in)				0800305							
Channel 6		Off	N/A	N/A	N/A	N/A				N/A							
Channel 7		Off	N/A	N/A	N/A	N/A				N/A							
Channel 8		Off	N/A	N/A	N/A	N/A				N/A							
Data Analysis																	
Increment & Scan Positions Actual						Recordable Indications						Analyst Remarks					
Scan No.(s)		Increment Position		Scan Position				Yes		No		N/A		Attachment:			
		Start	Stop	Start	Stop									☒ Yes ☐ No			
1-17		3568	4741	28450	31094	Channel 1 ☐		☒		☐				Further Evaluation			
						Channel 2 ☐		☒		☐				Required:			
						Channel 3 ☐		☒		☐				☐ Yes ☒ No			
						Channel 4 ☐		☒		☐				Archive Tape/CD No.:			
						Channel 5 ☐		☐		☒				5A & 5B			
						Channel 6 ☐		☐		☒				Analysis Tape/CD No.:			
						Channel 7 ☐		☐		☒				1			
						Channel 8 ☐		☐		☒							
Analyst / SNT Level / Date: Rosa Rosa II 03 APR 05																	

Exam Number ID-123A, *DS-124*

Page 1 of 2

Quad Cities Unit 1
BMR-016-295
Beltline Region Repair

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

288.98 - 290.22
37.48 - 44.68
4.73 - 5.91

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

2.86 - 9.55
12.64 - 13.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

2.86 - 9.55
-3.68 - -2.44

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 6.63
10.40 - 11.64

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

0.00 - 6.63
-1.44 - -0.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

0.00 - 6.63
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Metal Path

Channel 5
ASME

1	10
37.48	44.11
6.63	
2	
38.28	
288.98	
288.98	
5.11	
5.11	

Exam Number ID-123A, ID-124

Page 2 of 2

Time
Comments

43.2

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Reviewed By

Rola Rola

SNT Level

II

Date

03 APR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD												
Site/Plant: Quad Cities Unit 1			Weld Identification: BMR-016-295			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1,2			Examination No.: ID-125			
Project No.: 04-0379			Weld Description: Beltline Region Repair			Device Configuration: AIR-21SCAN-0002						
Mod.Conf.: A-07-1D			Scan Path Drawing: SPBMR016.017.018			Exam Date		Examination Time		Surface Temperature °F		
Data Acquisition Operator (s) / SNT Level: R.A. Riddles/ II C. Barberino / N/A						1-Apr-05		Start	End	Start	End	
								2329	0110	97	97	
Data Acquisition												
Scan Controller Parameters			Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual	Positional Parameters	
Controller: ID Device			Lower Limit		29400	25703	Lower Limit		3750	4069	Beam Direction: Ccw/Cw	
Scan: X Axis			Upper Limit		31200	32550	Upper Limit		4950	5569	Transducer Size: 1.00	
Increment: Y Axis			Increment Interval		90		DCI		4		Code % of Overlap: 10	
Mode: Automatic Scan			Conversion Counts		100		Conversion Counts		100		Number of Scans: 21	
Scan Motion: Bi-directional			Conversion Units In.		1.00		Conversion Units In.		1.00		Device Position: A (0)	
Correction: Default			EDAS Radius In.		125.50							
Module Parameters: A-07-1D Cal 33						Calibration Records:		Examination Notes:				
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-33						
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301						
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803302						
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303						
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803304		Examination Remarks:				
Channel 5	On	0T	(+)	+ 4.40(in)	- 1.00(in)	0803305		Exam ID-125 run inconjunction with exam ID-39.				
Channel 6	On	0T	(+)	- 4.40(in)	+ 1.00(in)	0803306		Limited exam due to the proximity of the jet pump riser brackets and the core shroud repair tie rods.				
Channel 7	Off	N/A	N/A	N/A	N/A	N/A						
Channel 8	Off	N/A	N/A	N/A	N/A	N/A						
Data Analysis												
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks				
Scan No.(s)	Increment Position		Scan Position		Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
	Start	Stop	Start	Stop								
34-45	28670	29654	4565	5549	☐	☒	☐	☐	☐	☐	☐	☐
46-78	29748	32632	4101	5549	☐	☒	☐	☐	☐	☐	☐	☐
					☐	☒	☐	☐	☐	☐	☐	☐
					☐	☐	☒	☐	☐	☐	☐	☐
					☐	☐	☐	☒	☐	☐	☐	☐
					☐	☐	☐	☐	☒	☐	☐	☐
					☐	☐	☐	☐	☐	☒	☐	☐
					☐	☐	☐	☐	☐	☐	☒	☐
Analyst / SNT Level / Date:												
R.A. Riddles II 02 APR 05												

Exam Number ID-39, ID-125

Page 1 of 2

Quad Cities Unit 1
VSC2-22
Ring 2 Vert @ 22 deg.

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

40.77 - 42.01
258.00 - 266.10
3.37 - 4.55

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

0.92 - 9.03
-2.12 - -0.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

0.92 - 9.03
2.28 - 3.52

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 8.12
-1.48 - -0.24

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

1.83 - 9.92
1.64 - 2.88

Module Coordinates
Inc. Axis
Scan Axis

Channel 5

1.83 - 9.92
-4.32 - -3.08

Module Coordinates
Inc. Axis
Scan Axis

Channel 6

0.00 - 8.12
4.48 - 5.72

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point

Channel 6
ASME

1	10
258.00	266.12
8.12	

Exam Number ID-39, 00.125

Page 2 of 2

% DAC	5
Inc. Axis Location	263.44
Surface Location	41.09
Scan Axis Location	41.09
Depth In Material	3.98
Metal Path	3.98
Time	33.6
Comments	
:	No recordable indications Ch 1, Ch 2
:	Ch 3 & Ch 4.
:	
:	

Reviewed By

Reed Reed

SNT Level

II

Date

02 MAR 05

ISwT EXAMINATION SUMMARY RECORD

Project No.: 04-0379

QUAD CITIES GENERATING STATION, UNIT 1

Summary Sheet No.: 002100

SITE:	QUAD CITIES GENERATING STATION UNIT 1
SYSTEM:	REACTOR PRESSURE VESSEL
LINE/SUBASSEMBLY:	BELTLINE REGION REPAIR WELD
IDENTIFICATION:	BMR-167-305

NDE Method	Proc/Rev Ctg, ICN	NDE Examination	Calibration Sheet No.	Data Sheet No.	N R I	O T M	Resolution Record	CNF Number	Remarks
AUT	ISwT-PDI-AUT1:0/0/1,2	AUT55	0800301,0800302	135	X	-	N / A	N / A	Exam limited due to proximity of the jet pump riser bracket.
AUT	ISwT-PDI-AUT1:0/0/1,2	AUTSLIC40	0800303,0800304	135	X	-	N / A	N / A	
AUT	ISwT-PDI-AUT1:0/0/1,2	AUT55T	0803301,0803302	134	X	-	N / A	N / A	
AUT	ISwT-PDI-AUT1:0/0/1,2	AUTSLIC40T	0803303,0803304	134	X	-	N / A	N / A	

- NOTES:
1. BMR-167-305 was examined from the inside surface using AIRIS-21 and EDAS-41 examination equipment.
 2. No recordable indications were detected during this examination.
 3. The examination was limited - 87% examination coverage was achieved.
 4. Previous data was reviewed and compared upon the completion of the BMR-167-305 examinations and there are no relevant differences.

****UT CALIBRATION BLOCK(s)****
D-70187-2/D70389-1

Prepared by: Carlos M. Barrera
Carlos M. Barrera - Project Engineer

Date: 02-Nov-05

Reviewed by: Exelon Level III

Date: 11/03/05

Page 1 of 1

Summary Sheet No.: 002100

IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: BMR-167-305			Pro/Rev/Chg/ICN: ISWT-PDI-AUT1/0/0/1,2		Examination No.: ID-134	
Project No.: 04-0379			Weld Description: Beltline Region Repair			Device Configuration: AIR-21SCAN-0001			
Mod.Conf.: A-07B			Scan Path Drawing: SPBMR167			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						28-Mar-05		Start	End
								1837	1858
								Start	End
								98	98
Data Acquisition									
Scan Controller Parameters		Increment Axis/Arm		Planned	Actual	Scan Axis/Device		Planned	Actual
Controller:	ID Device	Lower Limit		37358	37342	Lower Limit		29350	29350
Scan:	Y Axis	Upper Limit		39278	38796	Upper Limit		32330	32330
Increment:	X Axis	Increment Interval		80		DCI		4	
Mode:	Automatic Scan	Conversion Counts		100		Conversion Counts		100	
Scan Motion:	Bi-directional	Conversion Units In.		1.00		Conversion Units In.		1.00	
Correction:	Default	EDAS Radius In.		125.50					
								Positional Parameters	
								Beam Direction:	Dn/Up
								Transducer Size:	1.00
								Code % of Overlap:	10
								Number of Scans:	25
								Device Position:	D (0)
Module Parameters: A-07B Cal 03						Calibration Records:		Examination Notes:	
Status		Angle	Direction	Scan Offset	Step Offset	QCS1-03			
Channel 1	On	55	(-)	- 1.40(in)	- 1.21(in)	0800301			
Channel 2	On	55	(+)	+ 1.40(in)	- 1.21(in)	0800302			
Channel 3	On	SLIC-40	(-)	- 1.97(in)	+ 1.69(in)	0800303			
Channel 4	On	SLIC-40	(+)	+ 1.97(in)	+ 1.69(in)	0800304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A		Limited exam due to the proximity of the jet pump riser bracket.	
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-19	37342	38781	29350	32330	Channel 1 ☐	☒	☐	Further Evaluation	
					Channel 2 ☐	☒	☐	Required:	
					Channel 3 ☐	☒	☐	☐ Yes ☒ No	
					Channel 4 ☐	☒	☐	Archive Tape/CD No.:	
					Channel 5 ☐	☐	☒	3A & 3B	
					Channel 6 ☐	☐	☒	Analysis Tape/CD No.:	
					Channel 7 ☐	☐	☒	1	
					Channel 8 ☐	☐	☒		
Analyst / SNT Level / Date:									
<i>Reed Reed II 29 MAR 05</i>									

Exam Number 134

Page 1 of 2

Quad Cities Unit 1
BMR-167-305
Beltline Region Repair

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

300.35 - 301.59
375.27 - 382.47
0.33 - 0.77

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

3.20 - 10.16
8.72 - 9.96

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

3.20 - 10.16
4.96 - 6.20

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

0.00 - 7.03
9.12 - 10.36

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

0.00 - 7.03
4.60 - 5.84

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Time

Channel 4
ASME

	1	10
Inc. Axis Limits	375.27	382.30
Length	7.03	
% DAC	9	
Inc. Axis Location	379.22	
Surface Location	300.15	
Scan Axis Location	300.55	
Depth In Material	0.45	
Time	7.7	

Comments

:
:
:
:

No recordable indications Ch 1, Ch 2
Ch 3 & Ch 4.

Exam Number 134

Page 2 of 2

Reviewed By R. LaRosa SNT Level II Date 24 MAR 05

 IHI SOUTHWEST TECHNOLOGIES AUTOMATED ULTRASONIC EXAMINATION RECORD									
Site/Plant : Quad Cities Unit 1			Weld Identification: BMR-167-305			Pro/Rev/Chg/ICN: ISwT-PDI-AUT1/0/0/1.2		Examination No.: ID-135	
Project No.: 04-0379			Weld Description: Beltline Region Repair			Device Configuration: AIR-21SCAN-0002			
Mod.Conf.: A-07-1D			Scan Path Drawing: SPBMR167			Exam Date		Examination Time	
Data Acquisition Operator (s) / SNT Level: S. Vinogradov / N/A C. Frederick / N/A						29-Mar-05		Start	End
								1832	1835
								Start	End
								95	95
Data Acquisition									
Scan Controller Parameters		Increment Axis/Device		Planned	Actual	Scan Axis/Arm		Planned	Actual
Controller:	ID Device	Lower Limit	30300	30306	Lower Limit	36868	36880	Positional Parameters Beam Direction: Ccw/Cw Transducer Size: 1.00 Code % of Overlap: 10 Number of Scans: 13 Device Position: A (0)	
Scan:	X Axis	Upper Limit	31380	31396	Upper Limit	38368	38368		
Increment:	Y Axis	Increment Interval	90		DCI	4			
Mode:	Automatic Scan	Conversion Counts	100		Conversion Counts	100			
Scan Motion:	Bi-directional	Conversion Units In.	1.00		Conversion Units In.	1.00			
Correction:	Default	EDAS Radius In.	125.50						
Module Parameters: A-07-1D Cal 33						Calibration Records:		Examination Notes:	
	Status	Angle	Direction	Scan Offset	Step Offset	QCS1-33			
Channel 1	On	55	(-)	+ 7.00(in)	+ 0.00(in)	0803301			
Channel 2	On	55	(+)	- 7.00(in)	+ 0.00(in)	0803302			
Channel 3	On	SLIC-40	(-)	+ 4.40(in)	+ 1.00(in)	0803303			
Channel 4	On	SLIC-40	(+)	- 4.40(in)	- 1.00(in)	0803304		Examination Remarks:	
Channel 5	Off	N/A	N/A	N/A	N/A	N/A			
Channel 6	Off	N/A	N/A	N/A	N/A	N/A			
Channel 7	Off	N/A	N/A	N/A	N/A	N/A			
Channel 8	Off	N/A	N/A	N/A	N/A	N/A			
Data Analysis									
Increment & Scan Positions Actual					Recordable Indications			Analyst Remarks	
Scan No.(s)	Increment Position		Scan Position		Yes	No	N/A	Attachment: ☒ Yes ☐ No	
	Start	Stop	Start	Stop					
1-13	30305	31393	36880	38360	Channel 1	☒	☐	Further Evaluation	
					Channel 2	☒	☐	Required:	
					Channel 3	☒	☐	☐ Yes ☒ No	
					Channel 4	☒	☐	Archive Tape/CD No.:	
					Channel 5	☐	☒	4A & 4B	
					Channel 6	☐	☐	Analysis Tape/CD No.:	
					Channel 7	☐	☒	1	
					Channel 8	☐	☒		
Analyst / SNT Level / Date: R. P. R. II 30 MAR 05									

Exam Number 135

Page 1 of 2

Quad Cities Unit 1
BMR-167-305
Beltline Region Repair

Cursor Box 1 of 1
Scan Axis
Inc. Axis
Depth In Material

368.76 - 370.00
302.00 - 310.10
0.45 - 0.90

Module Coordinates
Inc. Axis
Scan Axis

Channel 1

- 7.19
-6.28 - -5.04

Module Coordinates
Inc. Axis
Scan Axis

Channel 2

- 7.19
6.44 - 7.68

Module Coordinates
Inc. Axis
Scan Axis

Channel 3

- 6.46
-3.92 - -2.68

Module Coordinates
Inc. Axis
Scan Axis

Channel 4

0.00 - 8.21
4.08 - 5.32

Feature Analysis
Inc. Axis Values
Scan No. Limits
Inc. Axis Limits
Length
Maximum Point
% DAC
Inc. Axis Location
Surface Location
Scan Axis Location
Depth In Material
Time

Channel 4
ASME

1 10
302.00 310.21
8.21

18
304.71
369.36
369.84
0.58
9.8

Comments

: No recordable indications Ch 1, Ch 2
: Ch 3 & Ch 4.
:
:

Exam Number 135

Page 2 of 2

Reviewed By Rebecca Page

SNT Level II

Date 3/21/2015

 GE ENERGY, NUCLEAR		EXAMINATION SUMMARY SHEET				Report No.: Q1R19-122	
Site: <u>Quad Cities</u>		Component ID: <u>N6A NO2</u>					
Outage: <u>RFO19</u>		Head to Nozzle (Head Spray)					
System: <u>RPV</u>	ASME Cat: <u>B-D</u>	ASME Item: <u>B3.90</u>	Aug Req: <u>N/A</u>				

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60" Long.	UT-082	N/A	GE-UT-300 Ver. 9	99978BQC	Troy Huhe	II	5/12/2007
60" Long.	UT-083	N/A	GE-UT-300 Ver. 9	CAL-IIW2-053	Troy Huhe	II	5/12/2007

Examination Results

This exam was performed in accordance with the ASME Section XI 1995 Edition with 1996 Addenda.

56.5% of the code required volume was examined, no limitations other than the geometrical configuration of the nozzle to shell weld are noted.

There were no recordable indications.

Examination results were compared to data report <u>N/A</u> from <u>N/A</u> outage with ☐ No Change
These examinations were performed under Work Order: <u>94426604A</u> ☐ Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel:				RWP: 7821
Prepared By: <u>JWS</u>	Level: <u>III</u>	Date: <u>5-14-07</u>	Utility Review: <u>R.L. May Jr.</u>	Date: <u>05/12/07</u>
ANII Review: <u>Jeff Snyder</u>				Date: <u>5/19/07</u>
Page <u>1</u> of <u>4</u>				

GE ENERGY, NUCLEAR		Ultrasonic Calibration and Examination Record RPV Components																																																	
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>		Data Report Number: <u>Q1R19-122</u> Linearity Sheet: <u>L-007</u> Data Sheet Number: <u>UT-082</u> Ver.: <u>9</u> DRR: <u>N/A</u>																																																	
Calibration Block: <u>99978BQC</u> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>5.0</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1129</u></td> <td></td> <td>Exam Start: <u>1430</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1730</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultracal II</u></td> <td style="text-align: center;"><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>1823</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>251891</u></td> <td style="text-align: center;"><u>86° F</u></td> <td style="text-align: center;"><u>86° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table>		<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0</u> Thickness	Initial Cal: <u>1129</u>		Exam Start: <u>1430</u>	Cal Check: <u>N/A</u>		Exam End: <u>1730</u>	Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>06225</u>	Final Cal: <u>1823</u>	Couplant:	Batch	<u>251891</u>	<u>86° F</u>	<u>86° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Search Unit Data <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>Sigma</u></td> <td style="text-align: center;"><u>22BC-02002</u></td> <td style="text-align: center;"><u>20.1"x.627" / Rect</u></td> </tr> <tr> <td>Manufacturer:</td> <td>Serial Number:</td> <td>Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.70</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>61°</u></td> </tr> <tr> <td>Incident Point:</td> <td>Nominal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;"><u>SDC3</u></td> <td style="text-align: center;"><u>Long</u></td> </tr> <tr> <td>Frequency:</td> <td>Model:</td> <td>Mode:</td> </tr> </table>		<u>Sigma</u>	<u>22BC-02002</u>	<u>20.1"x.627" / Rect</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>0.70</u>	<u>60°</u>	<u>61°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>	Frequency:	Model:	Mode:									
<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0</u> Thickness																																																	
Initial Cal: <u>1129</u>		Exam Start: <u>1430</u>																																																	
Cal Check: <u>N/A</u>		Exam End: <u>1730</u>																																																	
Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>06225</u>																																																	
Final Cal: <u>1823</u>	Couplant:	Batch																																																	
<u>251891</u>	<u>86° F</u>	<u>86° F</u>																																																	
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																	
<u>Sigma</u>	<u>22BC-02002</u>	<u>20.1"x.627" / Rect</u>																																																	
Manufacturer:	Serial Number:	Size / Shape:																																																	
<u>0.70</u>	<u>60°</u>	<u>61°</u>																																																	
Incident Point:	Nominal Angle:	Measured Angle:																																																	
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>																																																	
Frequency:	Model:	Mode:																																																	
DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> </thead> <tbody> <tr> <td>ID Notch</td> <td><u>5.0</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>8.6</u></td> <td><u>4.9</u></td> <td><u>6.6</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table> DAC 1X= <u>65.5</u> Sweep 0-10 <u>7.5</u> <u>Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve		Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID Notch	<u>5.0</u>	<u>1X</u>	<u>80%</u>	<u>8.6</u>	<u>4.9</u>	<u>6.6</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Cable <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>6'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Cable Type:</td> <td>Length:</td> <td>Connectors:</td> </tr> </table>		<u>RG-174</u>	<u>6'</u>	<u>0</u>	Cable Type:	Length:	Connectors:
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																													
ID Notch	<u>5.0</u>	<u>1X</u>	<u>80%</u>	<u>8.6</u>	<u>4.9</u>	<u>6.6</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
<u>RG-174</u>	<u>6'</u>	<u>0</u>																																																	
Cable Type:	Length:	Connectors:																																																	
Instrument Settings <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>Parameetrics / Epoch 4</u></td> <td style="text-align: center;"><u>031574612</u></td> </tr> <tr> <td>Manufacturer/Model:</td> <td>Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>7.95 us</u></td> <td style="text-align: center;"><u>0.2246 in./uscc</u></td> </tr> <tr> <td>Delay/Zero:</td> <td>Velocity:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> </tr> <tr> <td>Rep Rate:</td> <td>Rectification:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>Off</u></td> </tr> <tr> <td>Damping:</td> <td>Reject:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>Off</u></td> </tr> <tr> <td>DAC:</td> <td>TVG:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>Off</u></td> </tr> <tr> <td>CSC:</td> <td>DGS:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>Off</u></td> </tr> </table>		<u>Parameetrics / Epoch 4</u>	<u>031574612</u>	Manufacturer/Model:	Serial Number:	<u>7.95 us</u>	<u>0.2246 in./uscc</u>	Delay/Zero:	Velocity:	<u>Auto</u>	<u>Fullwave</u>	Rep Rate:	Rectification:	<u>400 Ohms</u>	<u>Off</u>	Damping:	Reject:	<u>Off</u>	<u>Off</u>	DAC:	TVG:	<u>Off</u>	<u>Off</u>	CSC:	DGS:	<u>Off</u>	<u>Off</u>	Calibration Verification Field Simulator Block S/N: <u>Q89-3RD-028</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Reflector</th> <th>N/A</th> <th>N/A</th> <th>N/A</th> </tr> </thead> <tbody> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table> Acceptable Linearity performed : <u>4/27/2007</u>		Reflector	N/A	N/A	N/A	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>						
<u>Parameetrics / Epoch 4</u>	<u>031574612</u>																																																		
Manufacturer/Model:	Serial Number:																																																		
<u>7.95 us</u>	<u>0.2246 in./uscc</u>																																																		
Delay/Zero:	Velocity:																																																		
<u>Auto</u>	<u>Fullwave</u>																																																		
Rep Rate:	Rectification:																																																		
<u>400 Ohms</u>	<u>Off</u>																																																		
Damping:	Reject:																																																		
<u>Off</u>	<u>Off</u>																																																		
DAC:	TVG:																																																		
<u>Off</u>	<u>Off</u>																																																		
CSC:	DGS:																																																		
<u>Off</u>	<u>Off</u>																																																		
Reflector	N/A	N/A	N/A																																																
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Exam Data for Weld: <u>N6A NOZ</u> <u>Head to Nozzle Dead Spray</u> Configuration: <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>OD</u></td> <td style="text-align: center;"><u>86° F</u></td> </tr> <tr> <td>Exam Surface:</td> <td>Component Temperature</td> </tr> </table>				<u>OD</u>	<u>86° F</u>	Exam Surface:	Component Temperature																																												
<u>OD</u>	<u>86° F</u>																																																		
Exam Surface:	Component Temperature																																																		
<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> </thead> <tbody> <tr> <td><u>0° to 360°</u></td> <td><u>T&P</u></td> <td><u>70.5 dB</u></td> <td><u>NR1</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table>				Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>0° to 360°</u>	<u>T&P</u>	<u>70.5 dB</u>	<u>NR1</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																							
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																															
<u>0° to 360°</u>	<u>T&P</u>	<u>70.5 dB</u>	<u>NR1</u>	<u>60°</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
Comments: Cal/Exam Date is the date of initial calibration. Calibration for full volume examination. Exams performed to maintain a 10 - 20% clad roll.																																																			
<table style="width:100%; border: none;"> <tr> <td style="width: 30%;"> <u>TH</u> <u>Troy Huhe</u> Initials: Examiner </td> <td style="width: 30%;"> <u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date: </td> <td style="width: 30%;"> <u>R.I. May</u> <u>4/24/07</u> Utility Reviewed By: Date: </td> <td style="width: 10%;"></td> </tr> <tr> <td> <u>N/A</u> Initials: Examiner </td> <td> <u>N/A</u> Level: </td> <td> <u>Jeff Snyder</u> <u>5/19/07</u> ANI Reviewed By: Date: </td> <td></td> </tr> <tr> <td> <u>TH</u> GE Reviewed By: </td> <td> <u>TH</u> <u>5.14.07</u> Level: Date: </td> <td></td> <td></td> </tr> </table>				<u>TH</u> <u>Troy Huhe</u> Initials: Examiner	<u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date:	<u>R.I. May</u> <u>4/24/07</u> Utility Reviewed By: Date:		<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:	<u>Jeff Snyder</u> <u>5/19/07</u> ANI Reviewed By: Date:		<u>TH</u> GE Reviewed By:	<u>TH</u> <u>5.14.07</u> Level: Date:																																						
<u>TH</u> <u>Troy Huhe</u> Initials: Examiner	<u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date:	<u>R.I. May</u> <u>4/24/07</u> Utility Reviewed By: Date:																																																	
<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:	<u>Jeff Snyder</u> <u>5/19/07</u> ANI Reviewed By: Date:																																																	
<u>TH</u> GE Reviewed By:	<u>TH</u> <u>5.14.07</u> Level: Date:																																																		

Ultrasonic Calibration and Examination Record

RPV Components

DRR N/A

Page 3 of 4

Quad Cities Unit-1 Q1R19

**Quad Cities Unit-1 Q1R19
N6A Spare Nozzle - Report Number Q1R19-122
Spring 2007**

		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
Weld Length =	360.	Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
Exam Volume =	88.8					
60° NS T-Scan	A	37.3	7.9	8.9%	360.0	4.4%
60° S6 T-Scan	A	42.9	37.6	42.3%	360.0	21.2%
60° S4 T-Scan	A	8.6	8.6	9.7%	360.0	4.8%
60° NS P-Scan	A	37.3	6.9	7.8%	360.0	3.9%
60° S6 P-Scan	A	42.9	30.7	34.6%	360.0	17.3%
IRS S4 P-Scan	A	8.6	8.6	9.7%	360.0	4.8%
60° NS T-Scan						
60° S6 T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° S6 P-Scan						
IRS S4 P-Scan						

% Total Composite Coverage = 56.5%

Comments: A - Examined 360° scan limited due to nozzle configuration only.

Top and bottom side portions added together.

Note - Rounding methods may affect calculated values.

JWS # 5.14.07

Page 4 of 4

Quad Cities Unit-1, Q1R19, 2007

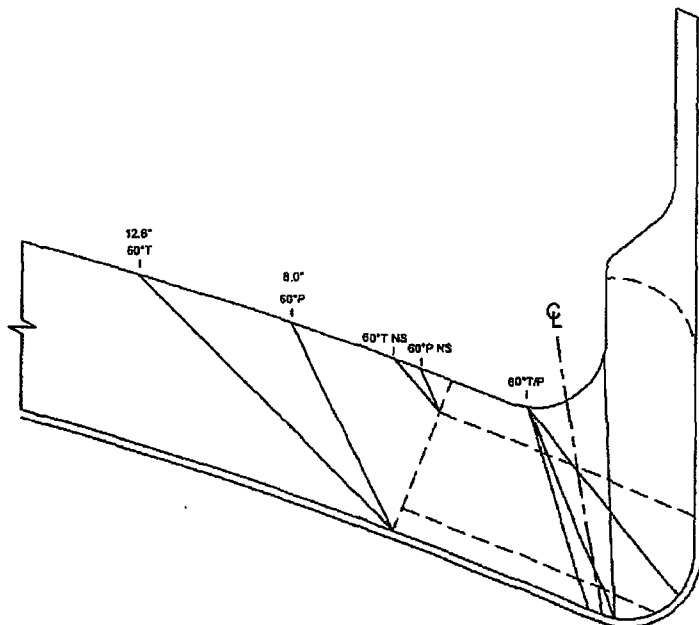
Quad Cities Unit 1 Top Head Spare

Bottom Side Coverage

60° NS Exam Volume = 14.8 Sq. In.
60° FV S6 Exam Volume = 17.6 Sq. In.
45° / 60° FV S4 / 15%T IRS Exam Volume = 3.2 Sq. In.

60° NS T-Scan achieved = 4.5 Sq. In.
60° FV S6 T-Scan achieved = 17.2 Sq. In.
60° FV S4 T-Scan achieved = 3.2 Sq. In.

60° NS P-Scan achieved = 4.0 Sq. In.
60° FV S6 P-Scan achieved = 16.0 Sq. In.
Inner 15%T 45° & 60° IRS-Scan achieved = 3.2 Sq. In. (By modeling.)

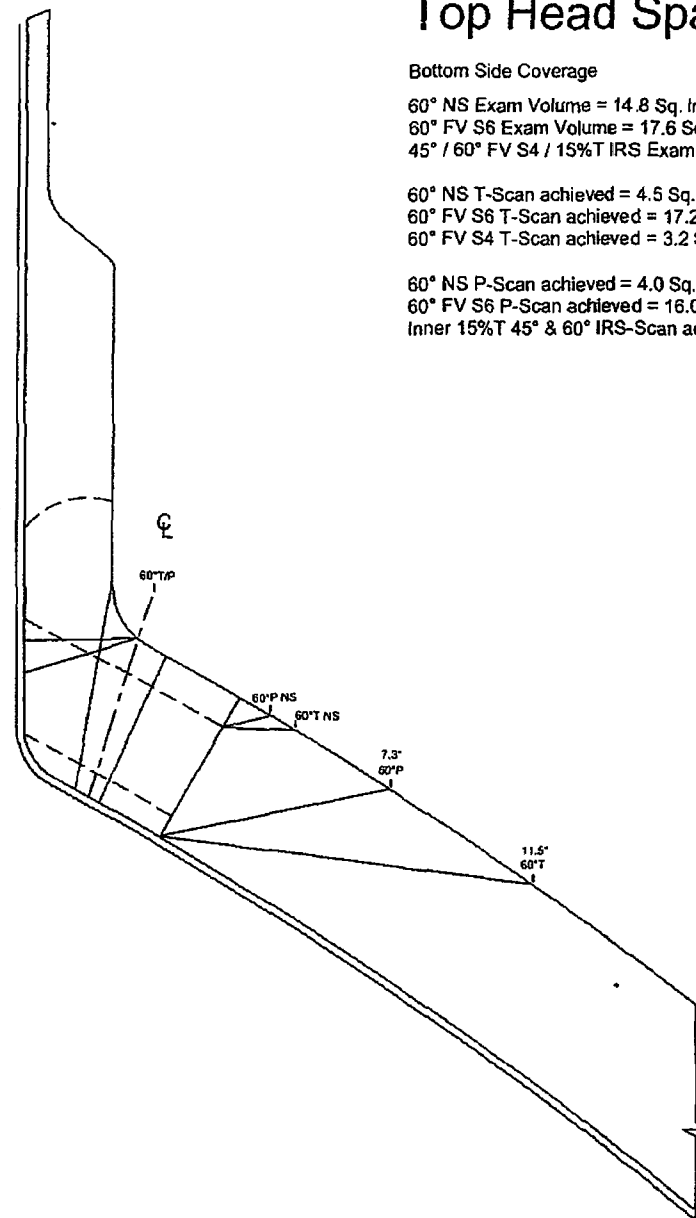


Top Side Coverage

60° NS Exam Volume = 22.5 Sq. In.
60° FV S6 Exam Volume = 25.3 Sq. In.
45° / 60° FV S4 / 15%T IRS Exam Volume = 5.4 Sq. In.

60° NS T-Scan achieved = 3.4 Sq. In.
60° FV S6 T-Scan achieved = 20.4 Sq. In.
60° FV S4 T-Scan achieved = 5.4 Sq. In.

60° NS P-Scan achieved = 2.9 Sq. In.
60° FV S6 P-Scan achieved = 14.7 Sq. In.
Inner 15%T 45° & 60° IRS-Scan achieved = 5.4 Sq. In. (By modeling.)



Page

 GE ENERGY, NUCLEAR		EXAMINATION SUMMARY SHEET				Report No. Q1R19-124	
Site: Quad Cities		Component ID: N68 NOZ					
Outage: RFO19		Head to Nozzle (Spare Nozzle)					
System: RPV		ASME Cat: B-D		ASME Item B3.90		Aug Req N/A	

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° Long.	UT-084	N/A	GE-UT-300 Ver. 9	99978BQC	Troy Huhe	II	5/12/2007
60° Long.	UT-085	N/A	GE-UT-300 Ver. 9	CAL-11W2-053	Troy Huhe	II	5/12/2007

Examination Results

This exam was performed in accordance with the ASME Section XI 1995 Edition with 1996 Addenda.

56.5% of the code required volume was examined, no limitations other than the geometrical configuration of the nozzle to shell weld are noted.

There were no recordable indications.

Examination results were compared to data report N/A from N/A outage with ☐ No Change	
These examinations were performed under Work Order: 9442660AA ☐ Change	

This Summary and the following data sheets have been reviewed and accepted by the following personnel:				RWP: 7821	
Prepared By: <u><i>[Signature]</i></u>	Level: <u>III</u>	Date: <u>5.14.07</u>	Utility Review: <u><i>R. L. May</i></u>	Date: <u>05/17/07</u>	Dose: 3.3 mr.
ANI Review: <u><i>Jeff Snyder</i></u>				Date: <u>5/19/07</u>	Page <u>1</u> of <u>4</u>

GE ENERGY, NUCLEAR		Ultrasonic Calibration and Examination Record RPV Components																																																																																					
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>		Data Report Number: <u>Q1R19-124</u> Data Sheet Number: <u>UT-084</u> Ver.: <u>9</u> DRR: <u>N/A</u>																																																																																					
Calibration Block: <u>99978BQC</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>5.0</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1129</u></td> <td></td> <td>Exam Start: <u>1430</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1730</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultracal II</u></td> <td style="text-align: center;"><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>1823</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>251891</u></td> <td style="text-align: center;"><u>86° F</u></td> <td style="text-align: center;"><u>86° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table>		<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0</u> Thickness	Initial Cal: <u>1129</u>		Exam Start: <u>1430</u>	Cal Check: <u>N/A</u>		Exam End: <u>1730</u>	Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>06225</u>	Final Cal: <u>1823</u>	Couplant:	Batch	<u>251891</u>	<u>86° F</u>	<u>86° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Sigma</u></td> <td style="text-align: center;"><u>22BC-02002</u></td> <td style="text-align: center;"><u>21.1"x.627" / Rect.</u></td> </tr> <tr> <td>Manufacturer:</td> <td>Serial Number:</td> <td>Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.70</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>61°</u></td> </tr> <tr> <td>Incident Point:</td> <td>Nominal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;"><u>SDC3</u></td> <td style="text-align: center;"><u>Long.</u></td> </tr> <tr> <td>Frequency:</td> <td>Model:</td> <td>Mode:</td> </tr> </table>		<u>Sigma</u>	<u>22BC-02002</u>	<u>21.1"x.627" / Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>0.70</u>	<u>60°</u>	<u>61°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long.</u>	Frequency:	Model:	Mode:																																													
<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0</u> Thickness																																																																																					
Initial Cal: <u>1129</u>		Exam Start: <u>1430</u>																																																																																					
Cal Check: <u>N/A</u>		Exam End: <u>1730</u>																																																																																					
Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>06225</u>																																																																																					
Final Cal: <u>1823</u>	Couplant:	Batch																																																																																					
<u>251891</u>	<u>86° F</u>	<u>86° F</u>																																																																																					
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																																																					
<u>Sigma</u>	<u>22BC-02002</u>	<u>21.1"x.627" / Rect.</u>																																																																																					
Manufacturer:	Serial Number:	Size / Shape:																																																																																					
<u>0.70</u>	<u>60°</u>	<u>61°</u>																																																																																					
Incident Point:	Nominal Angle:	Measured Angle:																																																																																					
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long.</u>																																																																																					
Frequency:	Model:	Mode:																																																																																					
DAC Construction <u>June 5/11/07</u> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID Notch</td> <td><u>5.0</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>8.6</u></td> <td><u>4.79</u></td> <td><u>6.6</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> DAC 1X= <u>65.5</u> Sweep 0-10 <u>7.5</u> <u>Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve		Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID Notch	<u>5.0</u>	<u>1X</u>	<u>80%</u>	<u>8.6</u>	<u>4.79</u>	<u>6.6</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>6'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Cable Type:</td> <td>Length:</td> <td>Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td colspan="2" style="text-align: center;"><u>Parameters / Epoch 4</u></td> <td style="text-align: center;"><u>031574612</u></td> </tr> <tr> <td colspan="2">Manufacturer/Model:</td> <td>Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>7.95 us</u></td> <td style="text-align: center;"><u>0.2246 in./usec.</u></td> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> </tr> <tr> <td>Delay/Zero:</td> <td>Velocity:</td> <td>Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> <td style="text-align: center;"><u>15.47 in.</u></td> </tr> <tr> <td>Rep. Rate:</td> <td>Rectification:</td> <td>Range:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>3.03 MHz</u></td> </tr> <tr> <td>Damping:</td> <td>Reject:</td> <td>Frequency:</td> </tr> <tr> <td style="text-align: center;"><u>Off.</u></td> <td style="text-align: center;"><u>Off.</u></td> <td style="text-align: center;"><u>Off.</u></td> </tr> <tr> <td>DAC:</td> <td>TVG:</td> <td>CSC:</td> </tr> <tr> <td style="text-align: center;"><u>Off.</u></td> <td style="text-align: center;"><u>Off.</u></td> <td style="text-align: center;"><u>Off.</u></td> </tr> <tr> <td>DAC:</td> <td>TVG:</td> <td>CSC:</td> </tr> </table>		<u>RG-174</u>	<u>6'</u>	<u>0</u>	Cable Type:	Length:	Connectors:	<u>Parameters / Epoch 4</u>		<u>031574612</u>	Manufacturer/Model:		Serial Number:	<u>7.95 us</u>	<u>0.2246 in./usec.</u>	<u>0.8 - 3.0 MHz</u>	Delay/Zero:	Velocity:	Narrowband Filter:	<u>Auto</u>	<u>Fullwave</u>	<u>15.47 in.</u>	Rep. Rate:	Rectification:	Range:	<u>400 Ohms</u>	<u>Off</u>	<u>3.03 MHz</u>	Damping:	Reject:	Frequency:	<u>Off.</u>	<u>Off.</u>	<u>Off.</u>	DAC:	TVG:	CSC:	<u>Off.</u>	<u>Off.</u>	<u>Off.</u>	DAC:	TVG:	CSC:
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																	
ID Notch	<u>5.0</u>	<u>1X</u>	<u>80%</u>	<u>8.6</u>	<u>4.79</u>	<u>6.6</u>																																																																																	
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																	
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																	
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																	
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																	
<u>RG-174</u>	<u>6'</u>	<u>0</u>																																																																																					
Cable Type:	Length:	Connectors:																																																																																					
<u>Parameters / Epoch 4</u>		<u>031574612</u>																																																																																					
Manufacturer/Model:		Serial Number:																																																																																					
<u>7.95 us</u>	<u>0.2246 in./usec.</u>	<u>0.8 - 3.0 MHz</u>																																																																																					
Delay/Zero:	Velocity:	Narrowband Filter:																																																																																					
<u>Auto</u>	<u>Fullwave</u>	<u>15.47 in.</u>																																																																																					
Rep. Rate:	Rectification:	Range:																																																																																					
<u>400 Ohms</u>	<u>Off</u>	<u>3.03 MHz</u>																																																																																					
Damping:	Reject:	Frequency:																																																																																					
<u>Off.</u>	<u>Off.</u>	<u>Off.</u>																																																																																					
DAC:	TVG:	CSC:																																																																																					
<u>Off.</u>	<u>Off.</u>	<u>Off.</u>																																																																																					
DAC:	TVG:	CSC:																																																																																					
Exam Data for Weld: <u>N6B NOZ</u> <u>Head to Nozzle (Spare Nozzle)</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD</u></td> <td style="text-align: center;"><u>86° F</u></td> </tr> <tr> <td>Exam Surface:</td> <td>Component Temperature</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> <tr> <td><u>0° to 360°</u></td> <td><u>T&P</u></td> <td><u>70.5 dB</u></td> <td><u>NR1</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>		<u>OD</u>	<u>86° F</u>	Exam Surface:	Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>0° to 360°</u>	<u>T&P</u>	<u>70.5 dB</u>	<u>NR1</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> Acceptable Linearity performed : <u>4/27/2007</u>		Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																							
<u>OD</u>	<u>86° F</u>																																																																																						
Exam Surface:	Component Temperature																																																																																						
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																			
<u>0° to 360°</u>	<u>T&P</u>	<u>70.5 dB</u>	<u>NR1</u>	<u>60°</u>																																																																																			
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																			
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																			
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																			
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																				
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																				
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																				
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																				
Comments: Cal/Exam Date is the date of initial calibration. Calibration for full volume examination. Exams performed to maintain a 10 - 20% clad roll.																																																																																							
<table style="width:100%;"> <tr> <td style="width:25%;"> <u>TH</u> <u>Troy Huhe</u> Initials: Examiner </td> <td style="width:25%;"> <u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date: </td> <td style="width:25%;"> <u>R.L. May Jr</u> <u>5/12/07</u> Utility Reviewed By: Date: </td> <td style="width:25%;"> <u>Jeff Smyler</u> <u>5/19/07</u> ANII Reviewed By: Date: </td> </tr> <tr> <td> <u>N/A</u> Initials: Examiner </td> <td> <u>N/A</u> Level: </td> <td colspan="2"></td> </tr> <tr> <td> <u>SWB</u> GE Reviewed By: </td> <td> <u>TH</u> <u>5-14-07</u> Level: Date: </td> <td colspan="2"></td> </tr> </table>				<u>TH</u> <u>Troy Huhe</u> Initials: Examiner	<u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date:	<u>R.L. May Jr</u> <u>5/12/07</u> Utility Reviewed By: Date:	<u>Jeff Smyler</u> <u>5/19/07</u> ANII Reviewed By: Date:	<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:			<u>SWB</u> GE Reviewed By:	<u>TH</u> <u>5-14-07</u> Level: Date:																																																																										
<u>TH</u> <u>Troy Huhe</u> Initials: Examiner	<u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date:	<u>R.L. May Jr</u> <u>5/12/07</u> Utility Reviewed By: Date:	<u>Jeff Smyler</u> <u>5/19/07</u> ANII Reviewed By: Date:																																																																																				
<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:																																																																																						
<u>SWB</u> GE Reviewed By:	<u>TH</u> <u>5-14-07</u> Level: Date:																																																																																						



GE ENERGY, NUCLEAR

Ultrasonic Calibration and Examination Record RPV Components

Site/Unit: Quad Cities / 1

Data Report Number: Q1R19-124

Linearity Sheet: L-007

Outage: RFO19

Data Sheet Number: UT-085

Procedure: GE-UT-300

Ver.: 9

DRR: N/A

Calibration Block: CAL-IIW2-053

<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0</u> Thickness
Initial Cal: <u>1119</u>	Exam Start	
Cal Check: <u>N/A</u>	Exam End:	
Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>06225</u>
Final Cal: <u>1822</u>	Couplant:	Batch
<u>251891</u> Thermometer	<u>86° F</u> Initial Cal Temp.	<u>86° F</u> Final Cal Temp.

DAC Construction

Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim	Sweep	Screen Div.
SDH	<u>0.60"</u>	<u>1X</u>	<u>80%</u>	<u>1.2</u>	<u>0.64</u>	<u>3.2</u>
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

DAC 1X= 54.8

Sweep 0-10 2.0 Depth

Note: N/A dB difference between 3/8 and 5/8 Ve

Search Unit Data

<u>Sigma</u> Manufacturer:	<u>228C-02002</u> Serial Number:	<u>2(1.1"x.62") / Rect.</u> Size / Shape:
<u>0.70</u>	<u>60°</u>	<u>61°</u>
Incident Point:	Nominal Angle:	Measured Angle:
<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>Long.</u> Mode:

Search Unit Cable

<u>RG-174</u> Cable Type:	<u>6'</u> Length:	<u>0</u> Connectors:

Instrument Settings

<u>Panometrics / Epoch 4</u> Manufacturer/Model:	<u>031574612</u> Serial Number:
<u>7.95 µs</u> Delay/Zero:	<u>0.2246 in./µsec.</u> Velocity:
<u>0.8 - 3.0 MHz</u> Narrowband Filter:	
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:
<u>400 Ohms</u> Damping:	<u>4.125 in.</u> Range:
<u>Off</u> DAC:	<u>Off</u> TVG:
<u>Off</u> Reject:	<u>Off</u> Frequency:
<u>Off</u> Mode:	<u>Off</u> DGS:

Exam Data for Weld: N6B NOZ

Head to Nozzle (Spare Nozzle)

Configuration:

<u>OD</u> Exam Surface:	<u>86° F</u> Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
<u>0° to 360°</u>	<u>T&P</u>	<u>68.8 dB</u>	<u>NRI</u>	<u>60°</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Acceptable Linearity performed : 4/27/2007

Comments: Cal/Exam Date is the date of initial calibration.
Calibration for near surface examination.
Exams performed a minimum of 14 dB above reference.

TH Troy Huhe

Initials: Examiner

II 5/12/2007

Level: Cal/Exam Date:

N/A

Initials: Examiner

N/A

Level:

GE Reviewed By: [Signature]

TH

Level:

5.14.07

Date:

R.L. Matley 5/17/07

Utility Reviewed By:

Date:

Jeff Amyder

ANU Reviewed By:

5/19/07

Date:

Page 3 of 4

Quad Cities Unit-1 Q1R19

Quad Cities Unit-1 Q1R19
N6B Spare Nozzle - Report Number Q1R19-124
Spring 2007

		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
Weld Length = 360. Exam Volume = 88.8		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° NS T-Scan	A	37.3	7.9	8.9%	360.0	4.4%
60° S6 T-Scan	A	42.9	37.6	42.3%	360.0	21.2%
60° S4 T-Scan	A	8.6	8.6	9.7%	360.0	4.8%
60° NS P-Scan	A	37.3	6.9	7.8%	360.0	3.9%
60° S6 P-Scan	A	42.9	30.7	34.6%	360.0	17.3%
IRS S4 P-Scan	A	8.6	8.6	9.7%	360.0	4.8%
60° NS T-Scan						
60° S6 T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° S6 P-Scan						
IRS S4 P-Scan						

% Total Composite Coverage = 56.5%

Comments: A - Examined 360° scan limited due to nozzle configuration only.

Top and bottom side portions added together.

Note - Rounding methods may affect calculated values.

JS TH 5.14.07

Page 4 of 4

Quad Cities Unit-1, Q1R19, 2007

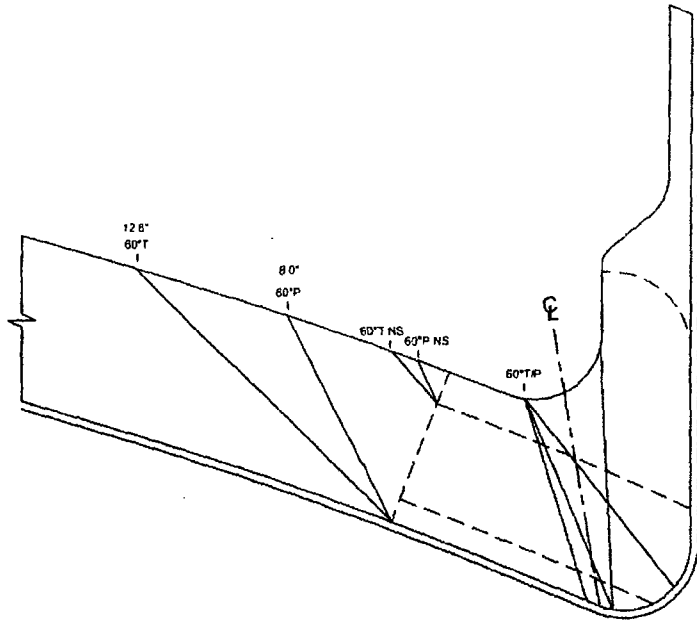
Quad Cities Unit 1 Top Head Spare

Bottom Side Coverage

60° NS Exam Volume = 14.8 Sq. In.
60° FV S6 Exam Volume = 17.6 Sq. In.
45° / 60° FV S4 / 15%T IRS Exam Volume = 3.2 Sq. In.

60° NS T-Scan achieved = 4.5 Sq. In.
60° FV S6 T-Scan achieved = 17.2 Sq. In.
60° FV S4 T-Scan achieved = 3.2 Sq. In.

60° NS P-Scan achieved = 4.0 Sq. In.
60° FV S6 P-Scan achieved = 16.0 Sq. In.
Inner 15%T 45° & 60° IRS-Scan achieved = 3.2 Sq. In. (By modeling.)

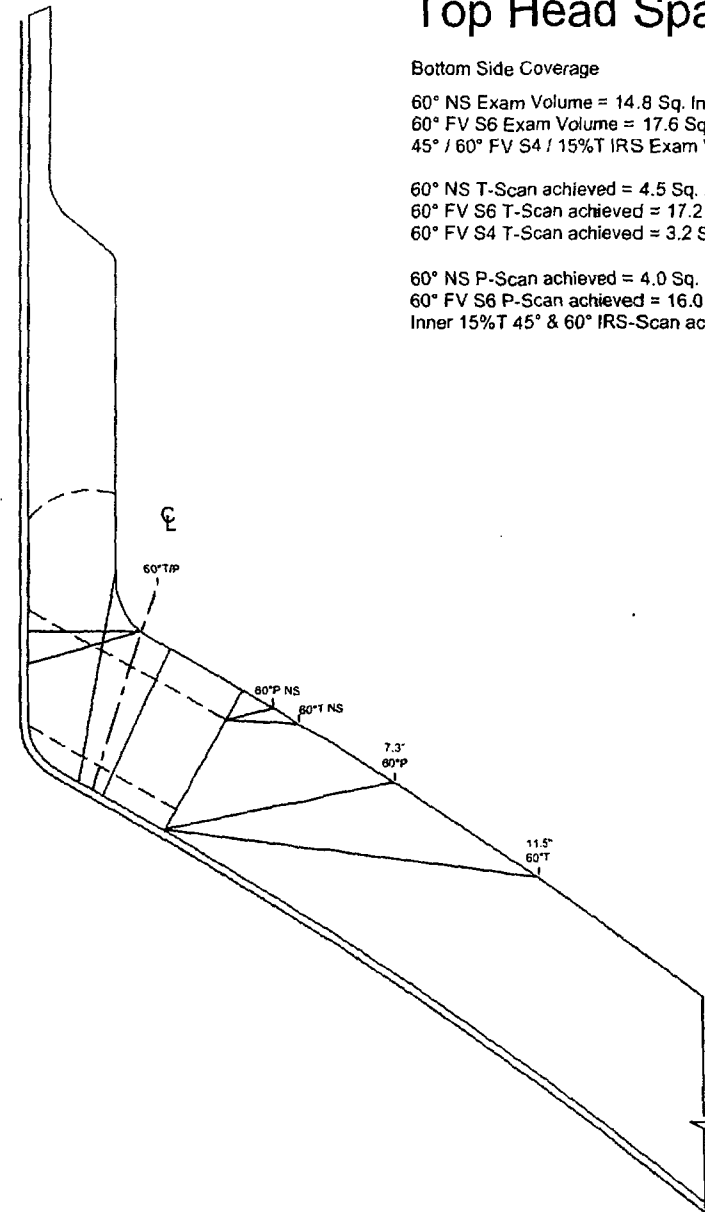


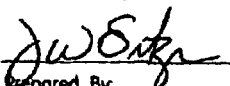
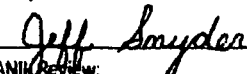
Top Side Coverage

60° NS Exam Volume = 22.5 Sq. In.
60° FV S6 Exam Volume = 25.3 Sq. In.
45° / 60° FV S4 / 15%T IRS Exam Volume = 5.4 Sq. In.

60° NS T-Scan achieved = 3.4 Sq. In.
60° FV S6 T-Scan achieved = 20.4 Sq. In.
60° FV S4 T-Scan achieved = 5.4 Sq. In.

60° NS P-Scan achieved = 2.9 Sq. In.
60° FV S6 P-Scan achieved = 14.7 Sq. In.
Inner 15%T 45° & 60° IRS-Scan achieved = 5.4 Sq. In. (By modeling.)



 GE ENERGY, NUCLEAR		EXAMINATION SUMMARY SHEET				Report No.: Q1R19-126	
Site: <u>Quad Cities</u>		Component ID: <u>N7 NOZ</u>					
Outage: <u>RFO19</u>		Head to Nozzle (Head Vent)					
System: <u>RPV</u>		ASME Cat: <u>B-D</u>		ASME Item: <u>B3.90</u>		Aug Req: <u>N/A</u>	
Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60" Long.	UT-080	N/A	GE-UT-300 Ver. 9	99978BQC	Troy Huhe	II	5/12/2007
60" Long.	UT-081	N/A	GE-UT-300 Ver 9	CAL-IW2-053	Troy Huhe	II	5/12/2007
Examination Results This exam was performed in accordance with the ASME Section XI 1995 Edition with 1996 Addenda. 82.0% of the code required volume was examined, no limitations other than the geometrical configuration of the nozzle to shell weld are noted. There were no recordable indications.							
Examination results were compared to data report <u>N/A</u> from <u>N/A</u> outage with ☐ No Change These examinations were performed under Work Order: <u>944266042A</u> ☐ Change							
This Summary and the following data sheets have been reviewed and accepted by the following personnel:  Prepared By: <u>III</u> Level: <u>5.14.07</u> Date: <u>R.L. May Jr.</u> Utility Review: <u>5/17/07</u> Date:  ANIR Review: <u>5/19/07</u> Date:						RWP: <u>7821</u> Dose: <u>3.3</u> mr.	
						Page <u>1</u> of <u>4</u>	

GE ENERGY, NUCLEAR		Ultrasonic Calibration and Examination Record RPV Components																																																	
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>		Data Report Number: <u>Q1R19-126</u> Data Sheet Number: <u>UT-080</u> Ver.: <u>2</u> DRR: <u>N/A</u>																																																	
Calibration Block: <u>999788QC</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>5.0</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1129</u></td> <td></td> <td>Exam Start: <u>1430</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1730</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultracal II</u></td> <td style="text-align: center;"><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>1823</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>251891</u></td> <td style="text-align: center;"><u>86° F</u></td> <td style="text-align: center;"><u>86° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table>		<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0</u> Thickness	Initial Cal: <u>1129</u>		Exam Start: <u>1430</u>	Cal Check: <u>N/A</u>		Exam End: <u>1730</u>	Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>06225</u>	Final Cal: <u>1823</u>	Couplant:	Batch	<u>251891</u>	<u>86° F</u>	<u>86° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Sigma</u></td> <td style="text-align: center;"><u>229C-02002</u></td> <td style="text-align: center;"><u>20.17x627/Rect.</u></td> </tr> <tr> <td>Manufacturer:</td> <td>Serial Number:</td> <td>Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.70</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>61°</u></td> </tr> <tr> <td>Incident Point:</td> <td>Nominal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;"><u>SDC3</u></td> <td style="text-align: center;"><u>Long</u></td> </tr> <tr> <td>Frequency:</td> <td>Model:</td> <td>Mode:</td> </tr> </table>		<u>Sigma</u>	<u>229C-02002</u>	<u>20.17x627/Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>0.70</u>	<u>60°</u>	<u>61°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>	Frequency:	Model:	Mode:									
<u>CS</u> Material	<u>FLAT</u> Size	<u>5.0</u> Thickness																																																	
Initial Cal: <u>1129</u>		Exam Start: <u>1430</u>																																																	
Cal Check: <u>N/A</u>		Exam End: <u>1730</u>																																																	
Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>06225</u>																																																	
Final Cal: <u>1823</u>	Couplant:	Batch																																																	
<u>251891</u>	<u>86° F</u>	<u>86° F</u>																																																	
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																	
<u>Sigma</u>	<u>229C-02002</u>	<u>20.17x627/Rect.</u>																																																	
Manufacturer:	Serial Number:	Size / Shape:																																																	
<u>0.70</u>	<u>60°</u>	<u>61°</u>																																																	
Incident Point:	Nominal Angle:	Measured Angle:																																																	
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>																																																	
Frequency:	Model:	Mode:																																																	
DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID Notch</td> <td><u>5.0</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>8.8</u></td> <td><u>4.9</u></td> <td><u>6.6</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>		Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID Notch	<u>5.0</u>	<u>1X</u>	<u>80%</u>	<u>8.8</u>	<u>4.9</u>	<u>6.6</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>6'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Cable Type:</td> <td>Length:</td> <td>Connectors:</td> </tr> </table>		<u>RG-174</u>	<u>6'</u>	<u>0</u>	Cable Type:	Length:	Connectors:
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																													
ID Notch	<u>5.0</u>	<u>1X</u>	<u>80%</u>	<u>8.8</u>	<u>4.9</u>	<u>6.6</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
<u>RG-174</u>	<u>6'</u>	<u>0</u>																																																	
Cable Type:	Length:	Connectors:																																																	
DAC 1X= <u>65.5</u> Sweep 0-10 <u>7.5</u> <u>Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve		Instrument Settings <table style="width:100%;"> <tr> <td colspan="2" style="text-align: center;"><u>Parameters / Epoch 4</u></td> <td style="text-align: center;"><u>031574612</u></td> </tr> <tr> <td colspan="2">Manufacturer/Model:</td> <td>Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>7.95 μs</u></td> <td style="text-align: center;"><u>0.2246 in./μsec</u></td> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> </tr> <tr> <td>Delay/Zero:</td> <td>Velocity:</td> <td>Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> <td style="text-align: center;"><u>15.47 in.</u></td> </tr> <tr> <td>Rep Rate:</td> <td>Rectification:</td> <td>Range:</td> </tr> <tr> <td style="text-align: center;"><u>900 Ohms</u></td> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>3.03 MHz</u></td> </tr> <tr> <td>Damping:</td> <td>Reject:</td> <td>Frequency:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>Off</u></td> </tr> <tr> <td>DAC:</td> <td>TVG:</td> <td>CSC:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>Off</u></td> <td style="text-align: center;"><u>Off</u></td> </tr> <tr> <td></td> <td></td> <td>DGS:</td> </tr> </table>		<u>Parameters / Epoch 4</u>		<u>031574612</u>	Manufacturer/Model:		Serial Number:	<u>7.95 μs</u>	<u>0.2246 in./μsec</u>	<u>0.8 - 3.0 MHz</u>	Delay/Zero:	Velocity:	Narrowband Filter:	<u>Auto</u>	<u>Fullwave</u>	<u>15.47 in.</u>	Rep Rate:	Rectification:	Range:	<u>900 Ohms</u>	<u>Off</u>	<u>3.03 MHz</u>	Damping:	Reject:	Frequency:	<u>Off</u>	<u>Off</u>	<u>Off</u>	DAC:	TVG:	CSC:	<u>Off</u>	<u>Off</u>	<u>Off</u>			DGS:												
<u>Parameters / Epoch 4</u>		<u>031574612</u>																																																	
Manufacturer/Model:		Serial Number:																																																	
<u>7.95 μs</u>	<u>0.2246 in./μsec</u>	<u>0.8 - 3.0 MHz</u>																																																	
Delay/Zero:	Velocity:	Narrowband Filter:																																																	
<u>Auto</u>	<u>Fullwave</u>	<u>15.47 in.</u>																																																	
Rep Rate:	Rectification:	Range:																																																	
<u>900 Ohms</u>	<u>Off</u>	<u>3.03 MHz</u>																																																	
Damping:	Reject:	Frequency:																																																	
<u>Off</u>	<u>Off</u>	<u>Off</u>																																																	
DAC:	TVG:	CSC:																																																	
<u>Off</u>	<u>Off</u>	<u>Off</u>																																																	
		DGS:																																																	
Exam Data for Weld: <u>N7 NOZ</u> Head to Nozzle (Head Vent) Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD</u></td> <td style="text-align: center;"><u>86° F</u></td> </tr> <tr> <td>Exam Surface:</td> <td>Component Temperature</td> </tr> </table>		<u>OD</u>	<u>86° F</u>	Exam Surface:	Component Temperature	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>		Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																												
<u>OD</u>	<u>86° F</u>																																																		
Exam Surface:	Component Temperature																																																		
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Comments: Cal/Exam Date is the date of initial calibration. Calibration for full volume examination. Exams performed to maintain a 10 - 20% clad roll.		Acceptable Linearity performed : <u>4/27/2007</u>																																																	
<table style="width:100%;"> <tr> <td style="width:25%;"> <u>TH</u> <u>Troy Huhe</u> Initials: Examiner </td> <td style="width:25%;"> <u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date: </td> <td style="width:25%;"> <u>P.I. Mat</u> <u>4/17</u> <u>4/17/07</u> Utility Reviewed By: Date: </td> <td style="width:25%;"> <u>Jeff Snyder</u> <u>5/19/07</u> ANI/Reviewed By: Date: </td> </tr> <tr> <td> <u>N/A</u> Initials: Examiner </td> <td> <u>N/A</u> Level: </td> <td></td> <td></td> </tr> <tr> <td> <u>JWS</u> GE Reviewed By: </td> <td> <u>III</u> <u>5-14-07</u> Level: Date: </td> <td></td> <td></td> </tr> </table>				<u>TH</u> <u>Troy Huhe</u> Initials: Examiner	<u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date:	<u>P.I. Mat</u> <u>4/17</u> <u>4/17/07</u> Utility Reviewed By: Date:	<u>Jeff Snyder</u> <u>5/19/07</u> ANI/Reviewed By: Date:	<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:			<u>JWS</u> GE Reviewed By:	<u>III</u> <u>5-14-07</u> Level: Date:																																						
<u>TH</u> <u>Troy Huhe</u> Initials: Examiner	<u>II</u> <u>5/12/2007</u> Level: Cal/Exam Date:	<u>P.I. Mat</u> <u>4/17</u> <u>4/17/07</u> Utility Reviewed By: Date:	<u>Jeff Snyder</u> <u>5/19/07</u> ANI/Reviewed By: Date:																																																
<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:																																																		
<u>JWS</u> GE Reviewed By:	<u>III</u> <u>5-14-07</u> Level: Date:																																																		

GE ENERGY, NUCLEAR		Ultrasonic Calibration and Examination Record RPV Components																																																	
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>		Data Report Number: <u>Q1R19-126</u> Linearity Sheet: <u>L-007</u> Data Sheet Number: <u>UT-081</u> Ver.: <u>9</u> DRR: <u>N/A</u>																																																	
Calibration Block: <u>CAL-IIW2-053</u>		Search Unit Data																																																	
<table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>4.0</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1119</u></td> <td></td> <td>Exam Start: <u>1430</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1730</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultracel II</u></td> <td style="text-align: center;"><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>1822</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch:</td> </tr> <tr> <td style="text-align: center;"><u>251891</u></td> <td style="text-align: center;"><u>85° F</u></td> <td style="text-align: center;"><u>85° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table>		<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0</u> Thickness	Initial Cal: <u>1119</u>		Exam Start: <u>1430</u>	Cal Check: <u>N/A</u>		Exam End: <u>1730</u>	Cal Check: <u>N/A</u>	<u>Ultracel II</u>	<u>06225</u>	Final Cal: <u>1822</u>	Couplant:	Batch:	<u>251891</u>	<u>85° F</u>	<u>85° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	<table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>Sigma</u></td> <td style="text-align: center;"><u>228C-02002</u></td> <td style="text-align: center;"><u>20.1"x.62" Rect.</u></td> </tr> <tr> <td>Manufacturer:</td> <td>Serial Number:</td> <td>Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.70</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>63°</u></td> </tr> <tr> <td>Incident Point:</td> <td>Nominal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;"><u>SDC3</u></td> <td style="text-align: center;"><u>Long</u></td> </tr> <tr> <td>Frequency:</td> <td>Model:</td> <td>Mode:</td> </tr> </table>		<u>Sigma</u>	<u>228C-02002</u>	<u>20.1"x.62" Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>0.70</u>	<u>60°</u>	<u>63°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>	Frequency:	Model:	Mode:									
<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0</u> Thickness																																																	
Initial Cal: <u>1119</u>		Exam Start: <u>1430</u>																																																	
Cal Check: <u>N/A</u>		Exam End: <u>1730</u>																																																	
Cal Check: <u>N/A</u>	<u>Ultracel II</u>	<u>06225</u>																																																	
Final Cal: <u>1822</u>	Couplant:	Batch:																																																	
<u>251891</u>	<u>85° F</u>	<u>85° F</u>																																																	
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																	
<u>Sigma</u>	<u>228C-02002</u>	<u>20.1"x.62" Rect.</u>																																																	
Manufacturer:	Serial Number:	Size / Shape:																																																	
<u>0.70</u>	<u>60°</u>	<u>63°</u>																																																	
Incident Point:	Nominal Angle:	Measured Angle:																																																	
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>																																																	
Frequency:	Model:	Mode:																																																	
DAC Construction <u>0.45 5/16x7</u>		Search Unit Cable																																																	
<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> </thead> <tbody> <tr> <td>SDH</td> <td><u>0.60"</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>1.2</u></td> <td><u>-6.4</u></td> <td><u>3.2</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table>		Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	SDH	<u>0.60"</u>	<u>1X</u>	<u>80%</u>	<u>1.2</u>	<u>-6.4</u>	<u>3.2</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>6</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Cable Type:</td> <td>Length:</td> <td>Connectors:</td> </tr> </table>		<u>RG-174</u>	<u>6</u>	<u>0</u>	Cable Type:	Length:	Connectors:
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																													
SDH	<u>0.60"</u>	<u>1X</u>	<u>80%</u>	<u>1.2</u>	<u>-6.4</u>	<u>3.2</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
<u>RG-174</u>	<u>6</u>	<u>0</u>																																																	
Cable Type:	Length:	Connectors:																																																	
DAC 1X= <u>54.8</u> Sweep 0-10 <u>2.0</u> <u>Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve		Instrument Settings																																																	
Exam Data for Weld: <u>N7 NOZ</u> <u>Head to Nozzle (Head Vent)</u> Configuration:		<table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>OD</u></td> <td style="text-align: center;"><u>85° F</u></td> </tr> <tr> <td>Exam Surface:</td> <td>Component Temperature</td> </tr> </table>		<u>OD</u>	<u>85° F</u>	Exam Surface:	Component Temperature																																												
<u>OD</u>	<u>85° F</u>																																																		
Exam Surface:	Component Temperature																																																		
<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> </thead> <tbody> <tr> <td><u>0° to 360°</u></td> <td><u>T&P</u></td> <td><u>68.8</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table>		Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>0° to 360°</u>	<u>T&P</u>	<u>68.8</u>	<u>NRI</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Reflector</th> <th><u>N/A</u></th> <th><u>N/A</u></th> <th><u>N/A</u></th> </tr> </thead> <tbody> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table>		Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>							
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																															
<u>0° to 360°</u>	<u>T&P</u>	<u>68.8</u>	<u>NRI</u>	<u>60°</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																															
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																
Comments: Cal/Exam Date is the date of initial calibration. Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.		Calibration Verification Field Simulator Block S/N: <u>N/A</u> Acceptable Linearity performed : <u>4/27/2007</u>																																																	
TH <u>Troy Huhe</u> II <u>5/12/2007</u> Initials: Examiner Level: Cal/Exam Date:		<u>L.L. Pater</u> <u>4/14/07</u> <u>05/17/07</u> Utility Reviewed By: Date:																																																	
<u>N/A</u> <u>N/A</u> Initials: Examiner Level:		<u>Jeff Snyder</u> <u>5/19/07</u> ANII Reviewed By: Date:																																																	
<u>J. W. S.</u> <u>III</u> <u>5.14.07</u> GE Reviewed By: Level: Date:		Page 3 of 4																																																	

Quad Cities Unit-1 Q1R19

**Quad Cities Unit-1 Q1R19
N7 Top Head Vent Nozzle - Report Number Q1R19-126
Spring 2007**

		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
Weld Length = 360. Exam Volume = 37.5		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° NS T-Scan	A	11.0	4.9	13.1%	360.0	6.5%
60° S6 T-Scan	A	21.8	21.3	56.8%	360.0	28.4%
60° S4 T-Scan	A	4.7	4.7	12.5%	360.0	6.3%
60° NS P-Scan	A	11.0	4.9	13.1%	360.0	6.5%
60° S6 P-Scan	A	21.8	21.0	56.0%	360.0	28.0%
IRS S4 P-Scan	A	4.7	4.7	12.5%	360.0	6.3%
60° NS T-Scan						
60° S6 T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° S6 P-Scan						
IRS S4 P-Scan						

% Total Composite Coverage = 82.0%

Comments: A - Examined 360° scan limited due to nozzle configuration only.

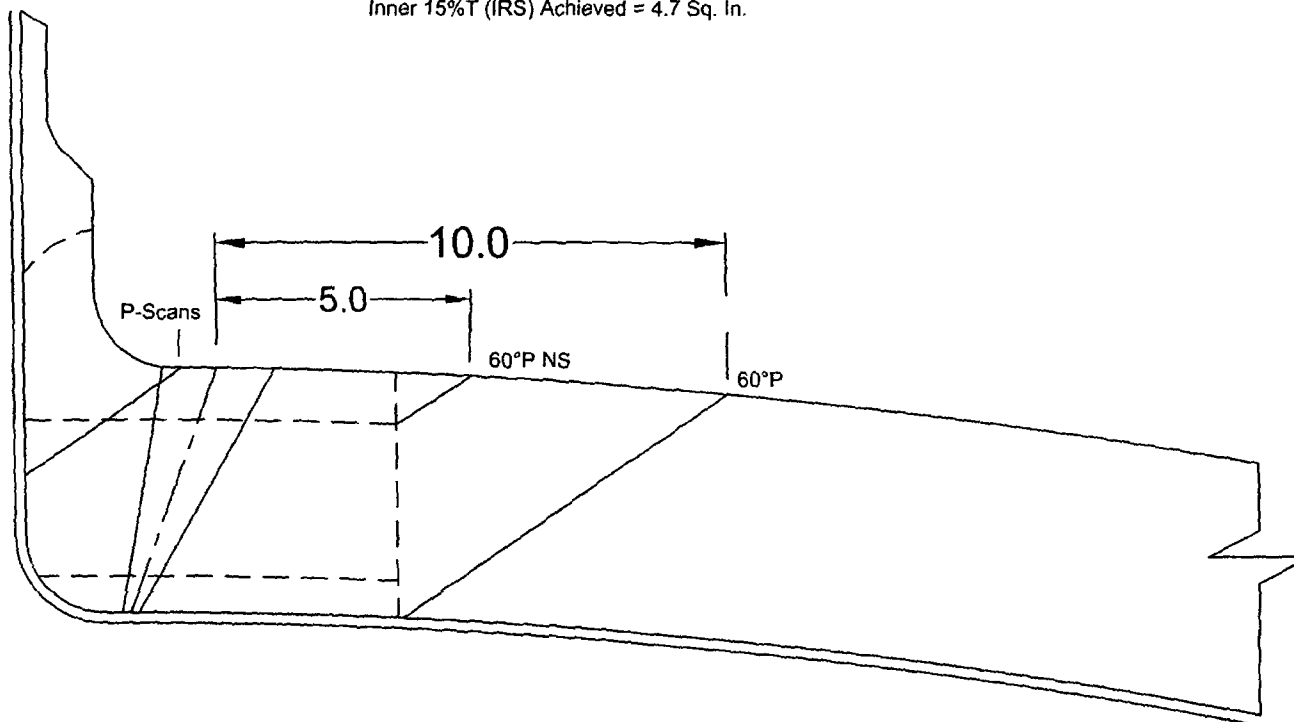
Note - Rounding methods may affect calculated values.

JWS TB 5.14.07

Quad Cities Unit1 Top Head Vent

60° NS Exam Volume = 11.0 Sq. In.
60° S6 Exam Volume = 21.8 Sq. In.
Inner 15%T Exam Volume (60°T & IRS) = 4.7 Sq. In.

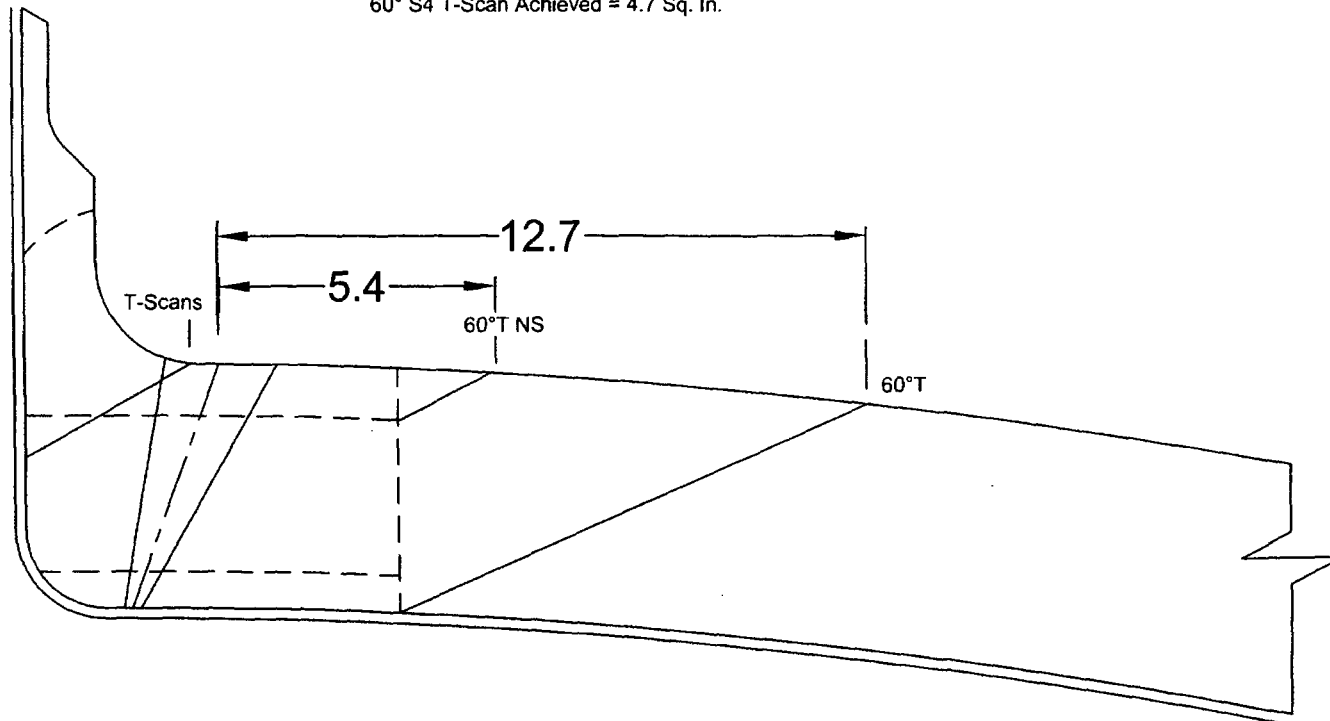
60° NS P-Scan Achieved = 4.9 Sq. In.
60° S6 P-Scan Achieved = 21.0 Sq. In.
Inner 15%T (IRS) Achieved = 4.7 Sq. In.



Quad Cities Unit1 Top Head Vent

60° NS Exam Volume = 11.0 Sq. In.
60° S6 Exam Volume = 21.8 Sq. In.
Inner 15%T Exam Volume (60°T & IRS) = 4.7 Sq. In.

60° NS T-Scan Achieved = 4.9 Sq. In.
60° S6 T-Scan Achieved = 21.3 Sq. In.
60° S4 T-Scan Achieved = 4.7 Sq. In.



HITACHI		EXAMINATION SUMMARY SHEET				Report No.: Q1R21-091	
Site: <u>Quad Cities</u>		Component ID: <u>N9 NOZ</u>					
Outage: <u>RFO 21</u>		<u>VESSEL-NOZZLE (CRD RETURN)</u>					
System: <u>RPV</u>		ASME Cat.: <u>B-D</u>	ASME Item: <u>B3.90</u>	Aug Req: <u>N/A</u>			

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Exam / Oper. Personnel	Cert Level	Date
60° Long	D-061	N/A	GE-UT-300 Ver/Rev 10	99978AQC	Jonathan Guillote	II	5/17/2011
60° Long	D-060	N/A	GE-UT-300 Ver/Rev 10	CAL-IIW2-036	Jonathan Guillote	II	5/17/2011
45° Shear	D-062	N/A	GEH-UT-311 Ver/Rev 16B	99978AQC	Jonathan Guillote	II	5/17/2011

Examination Results:

During the manual ultrasonic examination of the above referenced nozzle to shell weld, no recordable indications were detected utilizing the above procedures. The inner 15% examination volume as defined by 10 CFR 50 (Supplement 7), searching for flaws oriented perpendicular to the weld axis, was performed per procedure GEH-UT-311 V16B utilizing search units validated by modeling.

Manual examinations were restricted due to the nozzle configuration.

81.9% code coverage was achieved.

This examination meets the requirements of ASME Section XI, 1995 Edition through 1996 Addenda.

Examination results were compared to Data Report Q1R17-068 from: Q1R17 ☐ Change

These examinations were performed under Work Order: 1283274 ☒ No Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel

<u>Scott R. Erickson</u> Prepared By:	<u>III</u> Level:	<u>05/18/11</u> Date:	<u>[Signature]</u> Utility Review:	<u>5-19-11</u> Date:	RWP: <u>10011881</u> Dose: <u>20</u> mr.
					Page <u>1</u> of <u>B</u>

[Signature]
ANII Review:

5/22/11
Date:



HITACHI

**Ultrasonic Calibration and Examination Record
RPV Components - EPOCH 4**

Site/Unit: Quad Cities / 1

Data Report Number: 01821-091

Linearity Sheet: L-005

Outage: RFO 21

Data Sheet Number: D-061

Procedure: GE-UT-300

Rev.: 10

DRR: N/A

Calibration Block: 99978AQC

<u>CS</u> Material	<u>FLAT</u> Size	<u>7.0"</u> Thickness
Initial Cal: <u>0850</u>	Exam Start: <u>1006</u>	
Cal Check: <u>N/A</u>	Exam End: <u>1109</u>	
Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>08125</u>
Final Cal: <u>1315</u>	Couplant:	Batch
<u>273468</u> Thermometer	<u>72° F</u> Initial Cal Temp.	<u>72° F</u> Final Cal Temp.

DAC Construction

Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
ID Notch	<u>7.0</u>	1X	<u>80%</u>	<u>12.1</u>	<u>7.0</u>	<u>7.0</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

DAC 1X= 68.5

Sweep 0-10 = 10" Depth

Note: N/A dB difference between 3/8 and 5/8 Vee

Search Unit Data

<u>Sigma</u> Manufacturer:	<u>228C-09007</u> Serial Number:	<u>2 11.1"x0.62"/Rect.</u> Size / Shape:
<u>0.65"</u> Incident Point:	<u>60°</u> Nominal Angle:	<u>60°</u> Measured Angle:
<u>3.0 MHz</u> Frequency:	<u>SDC-3</u> Model:	<u>Long</u> Mode:

Search Unit Cable

<u>RG-174</u> Cable Type:	<u>12'</u> Length:	<u>0</u> Connectors:

Instrument Settings

<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>031540306</u> Serial Number:
<u>8.3 μs</u> Delay/Zero:	<u>0.231 in./μsec.</u> Velocity:
<u>0.8 - 3.0 MHz</u> Narrowband Filter:	
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:
<u>20.0 in.</u> Range:	<u>Sq. / Med</u> Pulser:
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:
<u>3.03 MHz</u> Frequency:	<u>Dual</u> Mode:
<u>Off:</u> DAC:	<u>Off:</u> TVG:
<u>Off:</u> CSC:	<u>Off:</u> DGS:

Exam Data for Weld: N9 NOZ

VESSEL-NOZZLE (CRD RETURN)

Configuration:

<u>OD Plate</u> Exam Surface:	<u>92° F</u> Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
<u>PLATE</u>	<u>I</u>	<u>68.5</u>	<u>NRI</u>	<u>60°</u>
<u>PLATE CW/CCW</u>	<u>P</u>	<u>68.5</u>	<u>NRI</u>	<u>60°</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Acceptable Linearity performed : 4/28/2011

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off.
Calibration for full volume examination.
Exams performed to maintain a 10 - 20% clad roll.

JG Jonathan Guillote II 5/17/2011

Initials: Examiner Level: Cal/Exam Date:

N/A N/A

Initials: Examiner Scott R. Erickson Level: III Date: 05/18/2011

GE Reviewed By: Level: Date:

See Summary Sheet for Signature

Utility Reviewed By: Date:

See Summary Sheet for Signature

ANII Reviewed By: Date:

HITACHI		Ultrasonic Calibration and Examination Record RPV Components - EPOCH 4																																														
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO 21</u> Procedure: <u>GE-UT-300</u>		Data Report Number: <u>Q1R21-091</u> Linearity Sheet: <u>L-005</u> Data Sheet Number: <u>D-060</u> Rev.: <u>10</u> DRR: <u>N/A</u>																																														
Calibration Block: <u>CAL-IIW2-036</u> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>4.0"</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>0840</u></td> <td></td> <td>Exam Start: <u>1006</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1109</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultrage II</u></td> <td style="text-align: center;"><u>08125</u></td> </tr> <tr> <td>Final Cal: <u>1310</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>273488</u> Thermometer</td> <td style="text-align: center;"><u>72° F</u> Initial Cal Temp.</td> <td style="text-align: center;"><u>72° F</u> Final Cal Temp.</td> </tr> </table>		<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness	Initial Cal: <u>0840</u>		Exam Start: <u>1006</u>	Cal Check: <u>N/A</u>		Exam End: <u>1109</u>	Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>08125</u>	Final Cal: <u>1310</u>	Couplant:	Batch	<u>273488</u> Thermometer	<u>72° F</u> Initial Cal Temp.	<u>72° F</u> Final Cal Temp.	Search Unit Data <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>Sigma</u> Manufacturer:</td> <td style="text-align: center;"><u>228C-09007</u> Serial Number:</td> <td style="text-align: center;"><u>2 0.1"x0.62" Rect.</u> Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.65°</u> Incident Point:</td> <td style="text-align: center;"><u>60°</u> Nominal Angle:</td> <td style="text-align: center;"><u>60°</u> Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u> Frequency:</td> <td style="text-align: center;"><u>SDC-3</u> Model:</td> <td style="text-align: center;"><u>Long</u> Mode:</td> </tr> </table>		<u>Sigma</u> Manufacturer:	<u>228C-09007</u> Serial Number:	<u>2 0.1"x0.62" Rect.</u> Size / Shape:	<u>0.65°</u> Incident Point:	<u>60°</u> Nominal Angle:	<u>60°</u> Measured Angle:	<u>3.0 MHz</u> Frequency:	<u>SDC-3</u> Model:	<u>Long</u> Mode:																		
<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness																																														
Initial Cal: <u>0840</u>		Exam Start: <u>1006</u>																																														
Cal Check: <u>N/A</u>		Exam End: <u>1109</u>																																														
Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>08125</u>																																														
Final Cal: <u>1310</u>	Couplant:	Batch																																														
<u>273488</u> Thermometer	<u>72° F</u> Initial Cal Temp.	<u>72° F</u> Final Cal Temp.																																														
<u>Sigma</u> Manufacturer:	<u>228C-09007</u> Serial Number:	<u>2 0.1"x0.62" Rect.</u> Size / Shape:																																														
<u>0.65°</u> Incident Point:	<u>60°</u> Nominal Angle:	<u>60°</u> Measured Angle:																																														
<u>3.0 MHz</u> Frequency:	<u>SDC-3</u> Model:	<u>Long</u> Mode:																																														
DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> </thead> <tbody> <tr> <td>SDH</td> <td><u>0.6</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>1.1</u></td> <td><u>0.66</u></td> <td><u>3.2</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </tbody> </table> DAC 1X= <u>57.1</u> Sweep 0-10 = <u>2" Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Vee		Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	SDH	<u>0.6</u>	<u>1X</u>	<u>80%</u>	<u>1.1</u>	<u>0.66</u>	<u>3.2</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Cable <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>RG-174</u> Cable Type:</td> <td style="text-align: center;"><u>6'</u> Length:</td> <td style="text-align: center;"><u>0</u> Connectors:</td> </tr> </table>		<u>RG-174</u> Cable Type:	<u>6'</u> Length:	<u>0</u> Connectors:
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																										
SDH	<u>0.6</u>	<u>1X</u>	<u>80%</u>	<u>1.1</u>	<u>0.66</u>	<u>3.2</u>																																										
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																										
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																										
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																										
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																										
<u>RG-174</u> Cable Type:	<u>6'</u> Length:	<u>0</u> Connectors:																																														
Exam Data for Weld: <u>N9 NOZ</u> <u>VESSEL-NOZZLE (CRD RETURN)</u> Configuration: <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>OD Plate</u> Exam Surface:</td> <td style="text-align: center;"><u>92° F</u> Component Temperature</td> </tr> </table>		<u>OD Plate</u> Exam Surface:	<u>92° F</u> Component Temperature	Instrument Settings <table style="width:100%; border: none;"> <tr> <td colspan="2" style="text-align: center;"><u>Panametrics / Epoch 4</u> Manufacturer/Model:</td> <td colspan="2" style="text-align: center;"><u>031540306</u> Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>8.3 us</u> Delay/Zero:</td> <td style="text-align: center;"><u>0.231 in./usac</u> Velocity:</td> <td colspan="2" style="text-align: center;"><u>0.8 - 3.0 MHz</u> Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u> Rep Rate:</td> <td style="text-align: center;"><u>Fullwave</u> Rectification:</td> <td style="text-align: center;"><u>4.0 in.</u> Range:</td> <td style="text-align: center;"><u>Sa / Med</u> Pulser:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u> Damping:</td> <td style="text-align: center;"><u>0%</u> Reject:</td> <td style="text-align: center;"><u>3.03 MHz</u> Frequency:</td> <td style="text-align: center;"><u>Dual</u> Mode:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> DAC:</td> <td style="text-align: center;"><u>Off</u> TVG:</td> <td style="text-align: center;"><u>Off</u> CSC:</td> <td style="text-align: center;"><u>Off</u> DGS:</td> </tr> </table>		<u>Panametrics / Epoch 4</u> Manufacturer/Model:		<u>031540306</u> Serial Number:		<u>8.3 us</u> Delay/Zero:	<u>0.231 in./usac</u> Velocity:	<u>0.8 - 3.0 MHz</u> Narrowband Filter:		<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:	<u>4.0 in.</u> Range:	<u>Sa / Med</u> Pulser:	<u>400 Ohms</u> Damping:	<u>0%</u> Reject:	<u>3.03 MHz</u> Frequency:	<u>Dual</u> Mode:	<u>Off</u> DAC:	<u>Off</u> TVG:	<u>Off</u> CSC:	<u>Off</u> DGS:																							
<u>OD Plate</u> Exam Surface:	<u>92° F</u> Component Temperature																																															
<u>Panametrics / Epoch 4</u> Manufacturer/Model:		<u>031540306</u> Serial Number:																																														
<u>8.3 us</u> Delay/Zero:	<u>0.231 in./usac</u> Velocity:	<u>0.8 - 3.0 MHz</u> Narrowband Filter:																																														
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:	<u>4.0 in.</u> Range:	<u>Sa / Med</u> Pulser:																																													
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:	<u>3.03 MHz</u> Frequency:	<u>Dual</u> Mode:																																													
<u>Off</u> DAC:	<u>Off</u> TVG:	<u>Off</u> CSC:	<u>Off</u> DGS:																																													
Weld Examination Area: <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>PLATE</u></td> <td style="text-align: center;"><u>I</u></td> <td style="text-align: center;"><u>72</u></td> <td style="text-align: center;"><u>NRI</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td style="text-align: center;"><u>PLATE CW/CCW</u></td> <td style="text-align: center;"><u>P</u></td> <td style="text-align: center;"><u>73</u></td> <td style="text-align: center;"><u>NRI</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> </tr> <tr> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> </tr> </table>		<u>PLATE</u>	<u>I</u>	<u>72</u>	<u>NRI</u>	<u>60°</u>	<u>PLATE CW/CCW</u>	<u>P</u>	<u>73</u>	<u>NRI</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> Acceptable Linearity performed : <u>4/28/2011</u>		Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>									
<u>PLATE</u>	<u>I</u>	<u>72</u>	<u>NRI</u>	<u>60°</u>																																												
<u>PLATE CW/CCW</u>	<u>P</u>	<u>73</u>	<u>NRI</u>	<u>60°</u>																																												
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																												
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																												
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																													
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off. Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.																																																
<u>JG</u> <u>Jonathan Guillote</u> <u>II</u> <u>5/17/2011</u> Initials: Examiner Level: Cal/Exam Date: <u>N/A</u> <u>N/A</u> Initials: Examiner Level: <u>Scott R. Erickson</u> <u>JTE</u> <u>05/18/2011</u> GE Reviewed By: Level: Date:		See Summary Sheet for Signature Utility Reviewed By: _____ Date: _____ See Summary Sheet for Signature ANII Reviewed By: _____ Date: _____																																														



HITACHI

**Ultrasonic Calibration and Examination Record
Inner Radius Examinations - EPOCH 4**

Site/Unit: Quad Cities / 1
Outage: RFO 21

Data Report Number: Q1R21-091 Linearity Sheet: L-005
Data Sheet Number: D-062

Procedure: GEH-UT-311

Rev: 168

DRR: 10-02/10-22

Calibration Data for Block: 99978AQC

<u>CS</u> Material	<u>FLAT</u> Size	<u>7.0"</u> Thickness
Initial Cal: <u>0847</u>	Exam Start: <u>1006</u>	
Cal Check: <u>N/A</u>	Exam End: <u>1109</u>	
Cal Check: <u>N/A</u>	<u>Ultrage II</u> Couplant:	<u>08125</u> Batch
Final Cal: <u>1320</u>		
<u>273488</u> Thermometer	<u>72° F</u> Initial Cal Temp.	<u>72° F</u> Final Cal Temp.

DAC Construction

Reflector	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
ID Notch	<u>7.0"</u>	1X	<u>80%</u>	<u>6.9</u>	<u>9.8</u>	<u>6.9</u>
<u>N/A</u>	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

DAC @ 1X= 35.9

Sweep 0-10 = 14.1" Metal Path

Acceptable Linearity performed: 4/28/2011

Exam Data for Component: N9 NOZ SEE 5/18/11
VESSEL-NOZZLE (RECIRCULATION) CRD RETURN
Configuration:

<u>OD Plate</u> Exam Surface:	<u>92° F</u> Component Temp.				
Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications
<u>0-6.5</u>	<u>45°</u>	<u>±20°-60°</u>	<u>N/A</u>	<u>50</u>	<u>NRI</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Search Unit Data

<u>KBA</u> Manufacturer:	<u>010H45</u> Serial No.:	<u>0.50"x1.0"/Rect.</u> Size/Shape:
<u>0.65 in.</u> Incident Point	<u>45°</u> Nominal Angle	<u>45°</u> Measured Angle
<u>1.0 MHz</u> Frequency:	<u>113-891-600</u> Model:	<u>Shear</u> Mode:

Search Unit Cable

<u>RG-174</u> Cable Type:	<u>2'</u> Length:	<u>0</u> Connectors:

Instrument Settings

<u>Panometrics / Epoch 4</u> Manufacturer/Model:	<u>011540306</u> Serial No.:
<u>12.72 us</u> Zero:	<u>0.1281 in / usac</u> Velocity:
<u>Auto</u> Rep Rate:	<u>1410 in.</u> Range:
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:
<u>Off:</u> DAC:	<u>Off:</u> TVG:
<u>Off:</u> CSC:	<u>Off:</u> DGS:
<u>0.8-3.0 MHz</u> Narrowband Filter:	<u>Sq. / Med</u> Pulser/Energy
<u>1.0 MHz</u> Frequency:	<u>P/E</u> Mode:

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	Amplitude	Gain (dB)	Sweep (SD)
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off.

Calibration for Nozzle to Vessel Inner 15% "T" examination volume.

Exams performed to maintain a 20-30% clad roll. See REX for Jonathan Guillote 5/18/2011

JG Jonathan Guillote

Initials: Examiner:

II

Level:

5/17/2011

Cal/Exam Date:

See Summary Sheet for Signature

Utility Reviewed By:

Date:

Scott R. Erickson

GE Reviewed By:

III

Level:

05/18/2011

Date:

See Summary Sheet for Signature

ANII Reviewed By:

Date:

Q1R21 - 091



HITACHI

Reactor Pressure Vessel Coverage Calculation Sheet

Quad Cities Unit 1 / Q1R21
N9 CRD
Spring / 2011

Weld Length = 360. Exam Volume = 50.6		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° T-Scan (S4 UC)	A*	6.7	6.7	13.2%	360	6.6%
60° T-Scan (S6 FV)	A	31.4	31	61.3%	360	30.6%
60° T-Scan (S6 NS)	A	12.5	5.5	10.9%	360	5.4%
IRS P-Scan (S4 UC)	A*	6.7	6.7	13.2%	360	6.6%
60° P-Scan (S6 FV)	A	31.4	28.2	55.7%	360	27.9%
60° P-Scan (S6 NS)	A	12.5	4.8	9.5%	360	4.7%
60° T-Scan (S4 UC)						
60° T-Scan (S6 FV)						
60° T-Scan (S6 NS)						
IRS P-Scan (S4 UC)						
60° P-Scan (S6 FV)						
60° P-Scan (S6 NS)						
60° T-Scan (S4 UC)						
60° T-Scan (S6 FV)						
60° T-Scan (S6 NS)						
IRS P-Scan (S4 UC)						
60° P-Scan (S6 FV)						
60° P-Scan (S6 NS)						

% Total Composite Coverage = 81.9%

Rev. 0 9/23/05

Comments: A - Manual scanning was not restricted.

A* - Single side access, 50% credit of the achieved Supplement 4 T-scan volume claimed.

Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in inches or degrees.

QIR21-091

Manual Detection

Nir_PDI Qc1_Rev 7.XLS

MANUAL DETECTION NOZZLE INNER RADIUS AND BORE INSPECTION REQUIREMENTS								
PLANT		Quad 1						
PREPARED BY		S.C. MORTENSON			DATE		04/07/2011	
NOZZLE EXAM ZONE	SCAN SURFACE	SCAN AREA	BEAM ANGLE	OFFSET	ROTATION ANGLE	WEDGE RADIUS	MAX MP	FREQ
RECIRC OUTLET								
N/V Weld (M)	PLATE	0 - 4.5"	80.0°	-	±40° - 80°	FLAT	14.0"	1 MHz
N/V Weld (M)	PLATE	0 - 4.0"	70.0°	-	±40° - 75°	FLAT	25.3"	1 MHz
Zone 1 (M)	ODBR	20° - 45°	35.0°	-	80.0°	5.5"	20.7"	1 MHz
Zone 2A (M)	ODBR	45° - 90°	80.0°	-	35.0°	5.5"	20.4"	1 MHz
CRD								
N/V Weld (M)	PLATE	0 - 6.5"	45°		± 20.0° - 60.0°	FLAT	9.3"	1 MHz
Zone 1 (M)	PLATE	0 - 7.5"	60.0°		± 15°	FLAT	13.9"	1 MHz
Zone 2A (M)	PLATE	0 - 11.0"	70.0°		± 15°	FLAT	17.2"	1 MHz
Zone 2A (M)	ODBR	55° - 90°	66.3°		16.7°	3.1"	3.6"	1 MHz

W-021, W-022
W-023, W-024

W-031, W-032

NOTES: (M) MANUAL
XXXX° (XXXX°) WEDGE / (FIXTURE) ROTATION ANGLE

Questions on this NIR requirements sheet shall be directed to S.C. Mortenson @ (704) 948-0253

Chris Minor

Digitally signed by Chris Minor
DN: cn=Chris Minor, o=GE Hitachi,
ou=Nuclear Energy,
email=Chris.Minor@ge.com, c=US
Date: 2011.04.14 23:16:25 -0400

SME Review / Date

R.L. May
4/14/11
SME Review / Date

Q1221-091

Quad Cities Unit-2 N9 - CRD

60° NS Exam Volume = 12.5 Sq. In. ✓

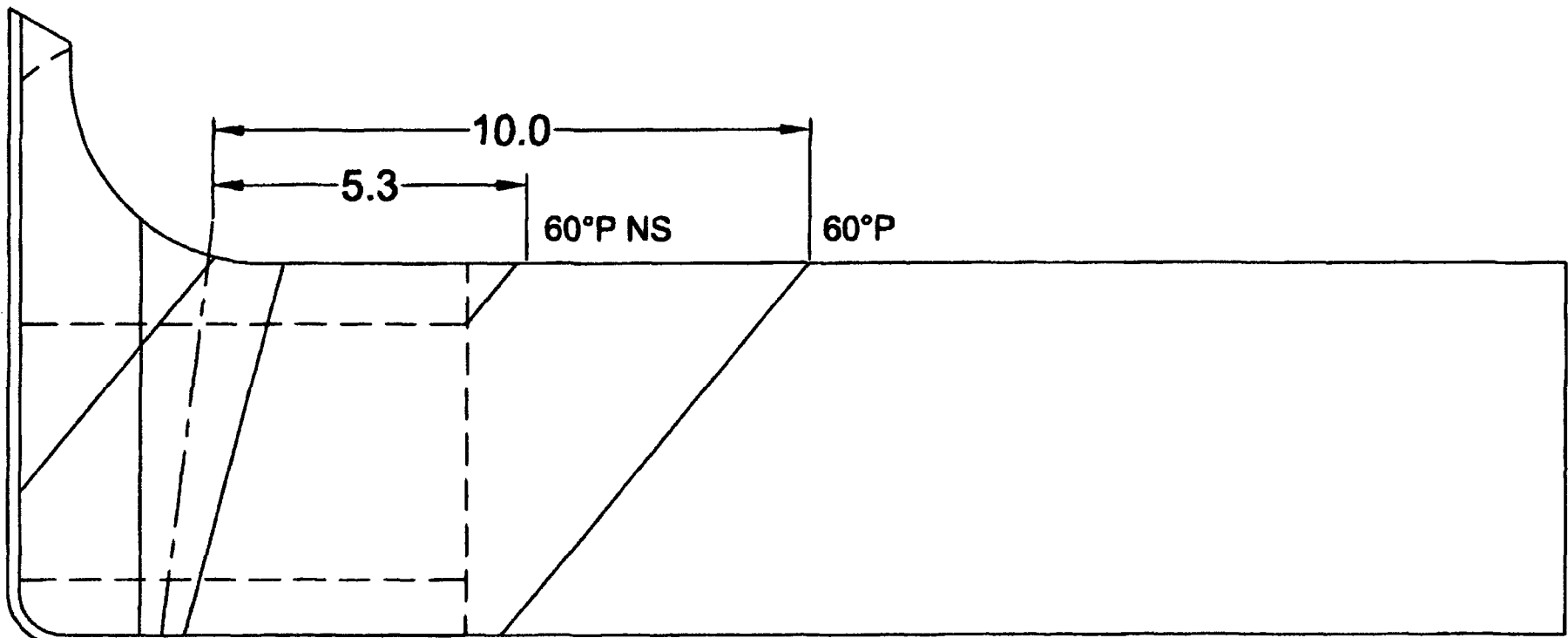
60° FV Exam Volume = 31.4 Sq. In. ✓

Inner 15%T Exam Volume (IRS & 60°T) = 6.7 Sq. In. ✓

60° NS P-Scan achieved = 4.8 Sq. In. ✓

60° FV P-Scan achieved = 28.2 Sq. In. ✓

Inner 15%T IRS Achieved = 6.7 Sq. In. (By Modeling) ✓



Q1221-091

Quad Cities Unit-2 N9 - CRD

60° T NS Exam Volume = 12.5 Sq. In.

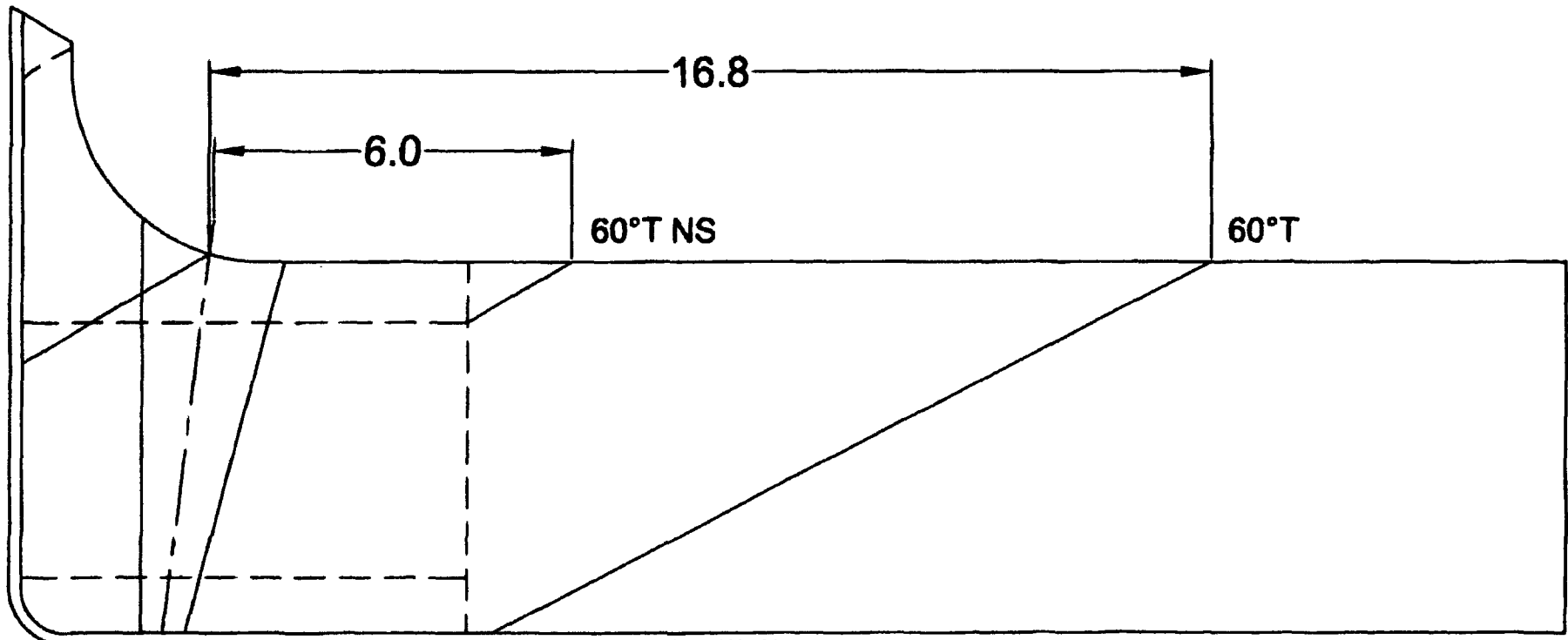
60°T FV Exam Volume = 31.4 Sq. In.

Inner 15%T Exam Volume (IRS & 60°T) = 6.7 Sq. In.

60° NS T-Scan achieved = 5.5 Sq. In. ✓

60° FV T-Scan achieved = 31.0 Sq. In. ✓

60°T Scan achieved = 6.7 Sq. In. ✓



 GE NUCLEAR ENERGY	EXAMINATION SUMMARY SHEET	Report No.: Q1R18-020
Site: Quad Cities Component ID: N2A NOZ		
Outage: Q1R18 VESSEL-NOZZLE (RECIRCULATION)		
System: RPV ASME Cat.: B-D ASME Item: B3.90 Aug Requirements: N/A		

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° Shear	UT-096	N/A	GE-UT-311	99978AQC	Troy Huhe	II	4/3/2005
60° Long.	UT-094	N/A	GE-UT-300	99978AQC	Wallace Reid	II	4/3/2005
60° Long.	UT-111	N/A	GE-UT-300	CAL-IIW2-017	Wallace Reid	II	4/3/2005

Examination Results:

Ultrasonic examination results were acceptable to the requirements of ASME B&PV Code, Section XI, 1995 Edition with 1996 Addenda as modified by the PDI program description and the Federal Register, Part II, Nuclear Regulatory Commission, 10CFR Part 50 for Category B-D Reactor Vessel (RPV) Assembly Welds.

Manual transverse and parallel scans were performed in accordance with procedure GE-UT-300 V8 using 60 RL° search units.

Scanning of the inner 15% T volume for radial flaws was performed in accordance with procedure GE-UT-311 V10 using shear wave search units as specified by the "Nozzle Inner Radius and Bore Requirements" sheet, which has been verified by modeling.

No indications were recorded.

Coverage ≈ 43%.

Examination results were compared to data report 94-029,30,31,32 from 1994 outage with ☒ No Change

These examinations were performed under Work Order: 0701196 ☐ Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel:

 Prepared By:	 Level:	4/1/05 Date:	 Utility Review:	7/8/05 Date:	 ANII Review:	4/1/05 Date:

RWP: 10004561

Dose: 263 mr

Page 1 of 8

GE NUCLEAR ENERGY		Ultrasonic Calibration and Examination Record RPV Components																																																	
Site/Unit: <u>Quad Cities/ 1</u> Outage: <u>Q1R18</u> Procedure: <u>GE-UT-300</u>		Data Report Number: <u>Q1R18-020</u> Data Sheet Number: <u>UT-094</u> Rev.: <u>V8</u>																																																	
		Linearity Sheet: <u>Lin-011</u> Beam Spread: <u>N/A</u> DRR: <u>N/A</u>																																																	
Calibration Block: <u>99978AQC</u> <table style="width:100%;"> <tr> <td><u>CSCI</u></td> <td><u>N/A</u></td> <td><u>7.0"</u></td> </tr> <tr> <td>Material</td> <td>Size</td> <td>Thickness</td> </tr> <tr> <td>Initial Cal: <u>10:43</u></td> <td></td> <td>Exam Start: <u>14:00</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>14:48</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td><u>Ultrage II</u></td> <td><u>02125</u></td> </tr> <tr> <td>Final Cal: <u>16:19</u></td> <td>Couplant:</td> <td>Batch</td> </tr> <tr> <td><u>245046</u></td> <td><u>100° F</u></td> <td><u>90° F</u></td> </tr> <tr> <td>Thermometer</td> <td>Initial Cal Temp.</td> <td>Final Cal Temp:</td> </tr> </table>		<u>CSCI</u>	<u>N/A</u>	<u>7.0"</u>	Material	Size	Thickness	Initial Cal: <u>10:43</u>		Exam Start: <u>14:00</u>	Cal Check: <u>N/A</u>		Exam End: <u>14:48</u>	Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>02125</u>	Final Cal: <u>16:19</u>	Couplant:	Batch	<u>245046</u>	<u>100° F</u>	<u>90° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp:	Search Unit Data <table style="width:100%;"> <tr> <td><u>Sigma</u></td> <td><u>22BC-02002</u></td> <td><u>2(1.1x.62)/Rect.</u></td> </tr> <tr> <td>Manufacturer:</td> <td>Serial Number:</td> <td>Size / Shape:</td> </tr> <tr> <td><u>0.65"</u></td> <td><u>60°</u></td> <td><u>60°</u></td> </tr> <tr> <td>Incident Point:</td> <td>Nominal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td><u>3.0 MHz</u></td> <td><u>SDC3</u></td> <td><u>Long.</u></td> </tr> <tr> <td>Frequency:</td> <td>Model:</td> <td>Mode:</td> </tr> </table>		<u>Sigma</u>	<u>22BC-02002</u>	<u>2(1.1x.62)/Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>0.65"</u>	<u>60°</u>	<u>60°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long.</u>	Frequency:	Model:	Mode:						
<u>CSCI</u>	<u>N/A</u>	<u>7.0"</u>																																																	
Material	Size	Thickness																																																	
Initial Cal: <u>10:43</u>		Exam Start: <u>14:00</u>																																																	
Cal Check: <u>N/A</u>		Exam End: <u>14:48</u>																																																	
Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>02125</u>																																																	
Final Cal: <u>16:19</u>	Couplant:	Batch																																																	
<u>245046</u>	<u>100° F</u>	<u>90° F</u>																																																	
Thermometer	Initial Cal Temp.	Final Cal Temp:																																																	
<u>Sigma</u>	<u>22BC-02002</u>	<u>2(1.1x.62)/Rect.</u>																																																	
Manufacturer:	Serial Number:	Size / Shape:																																																	
<u>0.65"</u>	<u>60°</u>	<u>60°</u>																																																	
Incident Point:	Nominal Angle:	Measured Angle:																																																	
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long.</u>																																																	
Frequency:	Model:	Mode:																																																	
DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Hole "t"</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> </thead> <tbody> <tr> <td>1/4</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>1/2</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>3/4</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>ID</td> <td><u>7.0"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>12.5</u></td> <td><u>7.1</u></td> <td><u>7.2</u></td> </tr> <tr> <td>5/4</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> </tbody> </table>		Hole "t"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	1/4	≈	1X	≈	≈	≈	≈	1/2	≈	1X	≈	≈	≈	≈	3/4	≈	1X	≈	≈	≈	≈	ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.5</u>	<u>7.1</u>	<u>7.2</u>	5/4	≈	1X	≈	≈	≈	≈	Search Unit Cable <table style="width:100%;"> <tr> <td><u>RG-174</u></td> <td><u>12'</u></td> <td><u>0</u></td> </tr> <tr> <td>Cable Type:</td> <td>Length:</td> <td>Connectors:</td> </tr> </table>		<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:
Hole "t"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																													
1/4	≈	1X	≈	≈	≈	≈																																													
1/2	≈	1X	≈	≈	≈	≈																																													
3/4	≈	1X	≈	≈	≈	≈																																													
ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.5</u>	<u>7.1</u>	<u>7.2</u>																																													
5/4	≈	1X	≈	≈	≈	≈																																													
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																	
Cable Type:	Length:	Connectors:																																																	
DAC 1X= <u>70.5</u> Sweep 0-10 <u>10.0" Depth</u> Note <u>N/A</u> dB difference between 3/8 and 5/8 Vee		Instrument Settings <table style="width:100%;"> <tr> <td colspan="2"><u>Panametrics / Epoch 4</u></td> <td><u>031575112</u></td> </tr> <tr> <td colspan="2">Manufacturer/Model:</td> <td>Serial Number:</td> </tr> <tr> <td><u>10.1 μs</u></td> <td><u>0.2356 in./usec.</u></td> <td><u>0.8 - 3.0 MHz</u></td> </tr> <tr> <td>Delay/Zero:</td> <td>Velocity:</td> <td>Narrowband Filter:</td> </tr> <tr> <td><u>Auto</u></td> <td><u>Fullwave</u></td> <td><u>20.0 in.</u></td> </tr> <tr> <td>Rep Rate:</td> <td>Rectification:</td> <td>Range:</td> </tr> <tr> <td><u>400 Ohms</u></td> <td><u>0%</u></td> <td><u>3.03 MHz</u></td> </tr> <tr> <td>Damping:</td> <td>Reject:</td> <td>Frequency:</td> </tr> <tr> <td><u>Off:</u></td> <td><u>Off:</u></td> <td><u>Off:</u></td> </tr> <tr> <td>DAC:</td> <td>TVG:</td> <td>CSC:</td> </tr> <tr> <td></td> <td></td> <td><u>Off:</u></td> </tr> <tr> <td></td> <td></td> <td>DGS:</td> </tr> </table>		<u>Panametrics / Epoch 4</u>		<u>031575112</u>	Manufacturer/Model:		Serial Number:	<u>10.1 μs</u>	<u>0.2356 in./usec.</u>	<u>0.8 - 3.0 MHz</u>	Delay/Zero:	Velocity:	Narrowband Filter:	<u>Auto</u>	<u>Fullwave</u>	<u>20.0 in.</u>	Rep Rate:	Rectification:	Range:	<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>	Damping:	Reject:	Frequency:	<u>Off:</u>	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	CSC:			<u>Off:</u>			DGS:												
<u>Panametrics / Epoch 4</u>		<u>031575112</u>																																																	
Manufacturer/Model:		Serial Number:																																																	
<u>10.1 μs</u>	<u>0.2356 in./usec.</u>	<u>0.8 - 3.0 MHz</u>																																																	
Delay/Zero:	Velocity:	Narrowband Filter:																																																	
<u>Auto</u>	<u>Fullwave</u>	<u>20.0 in.</u>																																																	
Rep Rate:	Rectification:	Range:																																																	
<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>																																																	
Damping:	Reject:	Frequency:																																																	
<u>Off:</u>	<u>Off:</u>	<u>Off:</u>																																																	
DAC:	TVG:	CSC:																																																	
		<u>Off:</u>																																																	
		DGS:																																																	
Exam Data for Weld: <u>N2A NOZ</u> <u>NOZZLE TO SHELL</u> Configuration:		Calibration Verification Field Simulator Block S/N: <u>N/A</u>																																																	
<table style="width:100%;"> <tr> <td><u>OD</u></td> <td><u>100° F</u></td> </tr> <tr> <td>Exam Surface:</td> <td>Component Temperature</td> </tr> </table>		<u>OD</u>	<u>100° F</u>	Exam Surface:	Component Temperature	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Amplitude</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Gain (dB)</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Sweep (SD)</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> </table>		Reflector	≈	≈	≈	Amplitude	≈	≈	≈	Gain (dB)	≈	≈	≈	Sweep (SD)	≈	≈	≈																												
<u>OD</u>	<u>100° F</u>																																																		
Exam Surface:	Component Temperature																																																		
Reflector	≈	≈	≈																																																
Amplitude	≈	≈	≈																																																
Gain (dB)	≈	≈	≈																																																
Sweep (SD)	≈	≈	≈																																																
<table style="width:100%;"> <tr> <td>Weld Examination Area:</td> <td>Exam Access</td> <td>Scan dB</td> <td>Recordable Indications</td> <td>Exam Angle</td> </tr> <tr> <td><u>Plate</u></td> <td><u>I</u></td> <td><u>70.5</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>Plate CW/CCW</u></td> <td><u>P</u></td> <td><u>70.5</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> </table>		Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>Plate</u>	<u>I</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>	<u>Plate CW/CCW</u>	<u>P</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>	Acceptable Linearity performed : <u>3/31/2005</u>																																		
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																															
<u>Plate</u>	<u>I</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>																																															
<u>Plate CW/CCW</u>	<u>P</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>																																															
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "≈" = N/A Calibration for full volume examination. Exams performed to maintain a 10-20% FSH clad roll.																																																			
<table style="width:100%;"> <tr> <td><u>WWR</u> <u>Wallace Reid</u></td> <td><u>II</u></td> <td><u>4/3/2005</u></td> <td></td> </tr> <tr> <td>Initials: Examiner</td> <td>Level</td> <td>Cal/Exam Date:</td> <td></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td></td> <td></td> </tr> <tr> <td>Initials: Examiner</td> <td>Level</td> <td></td> <td></td> </tr> <tr> <td><u>BMD</u></td> <td><u>III</u></td> <td><u>4-7-05</u></td> <td></td> </tr> <tr> <td>GE Reviewed By:</td> <td>Level:</td> <td>Date:</td> <td></td> </tr> </table>				<u>WWR</u> <u>Wallace Reid</u>	<u>II</u>	<u>4/3/2005</u>		Initials: Examiner	Level	Cal/Exam Date:		<u>N/A</u>	<u>N/A</u>			Initials: Examiner	Level			<u>BMD</u>	<u>III</u>	<u>4-7-05</u>		GE Reviewed By:	Level:	Date:																									
<u>WWR</u> <u>Wallace Reid</u>	<u>II</u>	<u>4/3/2005</u>																																																	
Initials: Examiner	Level	Cal/Exam Date:																																																	
<u>N/A</u>	<u>N/A</u>																																																		
Initials: Examiner	Level																																																		
<u>BMD</u>	<u>III</u>	<u>4-7-05</u>																																																	
GE Reviewed By:	Level:	Date:																																																	
		<table style="width:100%;"> <tr> <td><u>Randy Chubb</u></td> <td><u>7/8/05</u></td> </tr> <tr> <td>Utility Reviewed By:</td> <td>Date:</td> </tr> <tr> <td><u>John Smith HSB-CT</u></td> <td><u>4/11/05</u></td> </tr> <tr> <td>ANII Reviewed By:</td> <td>Date:</td> </tr> </table>		<u>Randy Chubb</u>	<u>7/8/05</u>	Utility Reviewed By:	Date:	<u>John Smith HSB-CT</u>	<u>4/11/05</u>	ANII Reviewed By:	Date:																																								
<u>Randy Chubb</u>	<u>7/8/05</u>																																																		
Utility Reviewed By:	Date:																																																		
<u>John Smith HSB-CT</u>	<u>4/11/05</u>																																																		
ANII Reviewed By:	Date:																																																		

GE NUCLEAR ENERGY		Ultrasonic Calibration and Examination Record Inner Radius Examinations																																																																																																														
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>Q1R18</u> Procedure: <u>GE-UT-311</u>		Data Report Number: <u>Q1R18-020</u> Linearity Sheet: <u>Lin-012</u> Data Sheet Number: <u>UT-096</u> Rev: <u>V10</u> DRR: <u>N/A</u>																																																																																																														
Calibration Data for Block: <u>99978AQC</u> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>CSCI</u></td> <td style="text-align: center;"><u>FLAT</u></td> <td style="text-align: center;"><u>7.0"</u></td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>10:41</u></td> <td></td> <td>Exam Start: <u>14:45</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>15:30</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultragel II</u></td> <td style="text-align: center;"><u>01125</u></td> </tr> <tr> <td>Final Cal: <u>16:04</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>242008</u></td> <td style="text-align: center;"><u>100° F</u></td> <td style="text-align: center;"><u>95° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Side</th> <th>Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID</td> <td><u>7.0</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>12.5</u></td> <td><u>14.30</u></td> <td><u>7.2</u></td> </tr> <tr> <td>~</td> <td>~</td> <td>1X</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> </table> DAC @ 1X <u>47.4</u> Sweep 0-10 <u>20.0" Metal Path</u> Acceptable Linearity performed : <u>3/31/2005</u>		<u>CSCI</u>	<u>FLAT</u>	<u>7.0"</u>	Material	Size	Thickness	Initial Cal: <u>10:41</u>		Exam Start: <u>14:45</u>	Cal Check: <u>N/A</u>		Exam End: <u>15:30</u>	Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>01125</u>	Final Cal: <u>16:04</u>	Couplant:	Batch	<u>242008</u>	<u>100° F</u>	<u>95° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID	<u>7.0</u>	1X	<u>80%</u>	<u>12.5</u>	<u>14.30</u>	<u>7.2</u>	~	~	1X	~	~	~	~	Search Unit Data <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>KBA</u></td> <td style="text-align: center;"><u>M21322</u></td> <td style="text-align: center;"><u>1.0" Round</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer:</td> <td style="text-align: center;">Serial No.:</td> <td style="text-align: center;">Size/Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.7 in.</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td style="text-align: center;">Incident Point:</td> <td style="text-align: center;">Nominal Angle:</td> <td style="text-align: center;">Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>1.0 MHz</u></td> <td style="text-align: center;"><u>113-291-600</u></td> <td style="text-align: center;"><u>Shear</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Model:</td> <td style="text-align: center;">Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>12'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td style="text-align: center;">Cable Type:</td> <td style="text-align: center;">Length:</td> <td style="text-align: center;">Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>Panametrics / Epoch 4</u></td> <td style="text-align: center;"><u>031570311</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer/Model:</td> <td style="text-align: center;">Serial No.:</td> </tr> <tr> <td style="text-align: center;"><u>14.96 µs</u></td> <td style="text-align: center;"><u>0.1253 in / µsec</u></td> </tr> <tr> <td style="text-align: center;">Zero:</td> <td style="text-align: center;">Velocity:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> </tr> <tr> <td style="text-align: center;">Rep Rate:</td> <td style="text-align: center;">Range:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> </tr> <tr> <td style="text-align: center;">Damping:</td> <td style="text-align: center;">Reject:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Mode:</td> </tr> <tr> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> <td style="text-align: center;"><u>Sq. / Med</u></td> </tr> <tr> <td style="text-align: center;">Narrowband Filter:</td> <td style="text-align: center;">Pulser/Energy</td> </tr> <tr> <td style="text-align: center;"><u>20.0 in.</u></td> <td style="text-align: center;"><u>P/E</u></td> </tr> <tr> <td style="text-align: center;">Range:</td> <td style="text-align: center;">Mode:</td> </tr> <tr> <td style="text-align: center;"><u>1.0 MHz</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">DGS:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">CSC:</td> <td style="text-align: center;"><u>Off:</u></td> </tr> </table>		<u>KBA</u>	<u>M21322</u>	<u>1.0" Round</u>	Manufacturer:	Serial No.:	Size/Shape:	<u>0.7 in.</u>	<u>60°</u>	<u>60°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>1.0 MHz</u>	<u>113-291-600</u>	<u>Shear</u>	Frequency:	Model:	Mode:	<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:	<u>Panametrics / Epoch 4</u>	<u>031570311</u>	Manufacturer/Model:	Serial No.:	<u>14.96 µs</u>	<u>0.1253 in / µsec</u>	Zero:	Velocity:	<u>Auto</u>	<u>Fullwave</u>	Rep Rate:	Range:	<u>400 Ohms</u>	<u>0%</u>	Damping:	Reject:	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	<u>Off:</u>	<u>Off:</u>	Frequency:	Mode:	<u>0.8 - 3.0 MHz</u>	<u>Sq. / Med</u>	Narrowband Filter:	Pulser/Energy	<u>20.0 in.</u>	<u>P/E</u>	Range:	Mode:	<u>1.0 MHz</u>	<u>Off:</u>	Frequency:	DGS:	<u>Off:</u>	<u>Off:</u>	CSC:	<u>Off:</u>
<u>CSCI</u>	<u>FLAT</u>	<u>7.0"</u>																																																																																																														
Material	Size	Thickness																																																																																																														
Initial Cal: <u>10:41</u>		Exam Start: <u>14:45</u>																																																																																																														
Cal Check: <u>N/A</u>		Exam End: <u>15:30</u>																																																																																																														
Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>01125</u>																																																																																																														
Final Cal: <u>16:04</u>	Couplant:	Batch																																																																																																														
<u>242008</u>	<u>100° F</u>	<u>95° F</u>																																																																																																														
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																																																																														
Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																										
ID	<u>7.0</u>	1X	<u>80%</u>	<u>12.5</u>	<u>14.30</u>	<u>7.2</u>																																																																																																										
~	~	1X	~	~	~	~																																																																																																										
<u>KBA</u>	<u>M21322</u>	<u>1.0" Round</u>																																																																																																														
Manufacturer:	Serial No.:	Size/Shape:																																																																																																														
<u>0.7 in.</u>	<u>60°</u>	<u>60°</u>																																																																																																														
Incident Point:	Nominal Angle:	Measured Angle:																																																																																																														
<u>1.0 MHz</u>	<u>113-291-600</u>	<u>Shear</u>																																																																																																														
Frequency:	Model:	Mode:																																																																																																														
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																																																																														
Cable Type:	Length:	Connectors:																																																																																																														
<u>Panametrics / Epoch 4</u>	<u>031570311</u>																																																																																																															
Manufacturer/Model:	Serial No.:																																																																																																															
<u>14.96 µs</u>	<u>0.1253 in / µsec</u>																																																																																																															
Zero:	Velocity:																																																																																																															
<u>Auto</u>	<u>Fullwave</u>																																																																																																															
Rep Rate:	Range:																																																																																																															
<u>400 Ohms</u>	<u>0%</u>																																																																																																															
Damping:	Reject:																																																																																																															
<u>Off:</u>	<u>Off:</u>																																																																																																															
DAC:	TVG:																																																																																																															
<u>Off:</u>	<u>Off:</u>																																																																																																															
Frequency:	Mode:																																																																																																															
<u>0.8 - 3.0 MHz</u>	<u>Sq. / Med</u>																																																																																																															
Narrowband Filter:	Pulser/Energy																																																																																																															
<u>20.0 in.</u>	<u>P/E</u>																																																																																																															
Range:	Mode:																																																																																																															
<u>1.0 MHz</u>	<u>Off:</u>																																																																																																															
Frequency:	DGS:																																																																																																															
<u>Off:</u>	<u>Off:</u>																																																																																																															
CSC:	<u>Off:</u>																																																																																																															
Exam Data for Component: <u>N2A NOZ</u> <u>VESSEL-NOZZLE (RECIRC INLET)</u> Configuration: <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>PLATE</u></td> <td style="text-align: center;"><u>100° F</u></td> </tr> <tr> <td style="text-align: center;">Exam Surface:</td> <td style="text-align: center;">Component Temp.</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Examination Area</th> <th>Exam Angle</th> <th>Rotation Angle</th> <th>Wedge S/N</th> <th>Scan dB</th> <th>Recordable Indications</th> </tr> <tr> <td><u>0"-5.5"</u></td> <td><u>60°</u></td> <td><u>± 60°</u></td> <td><u>N/A</u></td> <td><u>61.4</u></td> <td><u>NRI</u></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		<u>PLATE</u>	<u>100° F</u>	Exam Surface:	Component Temp.	Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications	<u>0"-5.5"</u>	<u>60°</u>	<u>± 60°</u>	<u>N/A</u>	<u>61.4</u>	<u>NRI</u>																			Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>		Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																											
<u>PLATE</u>	<u>100° F</u>																																																																																																															
Exam Surface:	Component Temp.																																																																																																															
Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications																																																																																																											
<u>0"-5.5"</u>	<u>60°</u>	<u>± 60°</u>	<u>N/A</u>	<u>61.4</u>	<u>NRI</u>																																																																																																											
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																													
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																													
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																													
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																													
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "~" = N/A Calibration for nozzle to vessel weld N/V. Exams performed to maintain a 20 - 30% FSH clad roll. Calibration sweep is 20.0" metal path, Examination Range setting is 20.0" metal path.																																																																																																																
<table style="width:100%; border: none;"> <tr> <td style="width:25%; vertical-align: top;"> <u>TH</u> Troy Huhe Initials: Examiner: </td> <td style="width:25%; vertical-align: top;"> <u>II</u> Level Level: </td> <td style="width:25%; vertical-align: top;"> <u>04/03/05</u> Cal/Exam Date: Date: </td> <td style="width:25%; vertical-align: top;"> Utility Reviewed By: Date: </td> </tr> <tr> <td style="vertical-align: top;"> GE Reviewed By: </td> <td style="vertical-align: top;"> <u>111</u> Level: </td> <td style="vertical-align: top;"> <u>4-6-05</u> Date: </td> <td style="vertical-align: top;"> ANM Reviewed By: Date: </td> </tr> </table>				<u>TH</u> Troy Huhe Initials: Examiner:	<u>II</u> Level Level:	<u>04/03/05</u> Cal/Exam Date: Date:	 Utility Reviewed By: Date:	 GE Reviewed By:	<u>111</u> Level:	<u>4-6-05</u> Date:	 ANM Reviewed By: Date:																																																																																																					
<u>TH</u> Troy Huhe Initials: Examiner:	<u>II</u> Level Level:	<u>04/03/05</u> Cal/Exam Date: Date:	 Utility Reviewed By: Date:																																																																																																													
 GE Reviewed By:	<u>111</u> Level:	<u>4-6-05</u> Date:	 ANM Reviewed By: Date:																																																																																																													



GE NUCLEAR ENERGY

Ultrasonic Calibration and Examination Record RPV Components

Site/Unit: **Quad Cities / 1**

Data Report Number: **Q1R18-020**

Linearity Sheet: **Lin-011**

Outage: **Q1R18**

Data Sheet Number: **UT-111**

Beam Spread: **N/A**

Procedure: **GE-UT-300**

Rev.: **V8**

DRR: **N/A**

Calibration Block: **CAL-IIW2-017**

CS	N/A	4.0"
Material	Size	Thickness
Initial Cal: 1048		Exam Start 14:00
Cal Check: N/A		Exam End 14:48
Cal Check: N/A	Ultrage II	02125
Final Cal: 1620	Couplant:	Batch
245046	95° F	90° F
Thermometer	Initial Cal Temp.	Final Cal Temp:

DAC Construction

Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
1/4	0.6"	1X	80%	1.2	0.60	3.0
1/2	"	1X	"	"	"	"
3/4	"	1X	"	"	"	"
ID	"	1X	"	"	"	"
5/4	"	1X	"	"	"	"

DAC 1X= **54.9**

Sweep 0-10 **2.0" Depth**

Note **N/A** dB difference between 3/8 and 5/8 Vee

Search Unit Data

Sigma	22BC-02002	2(1.1x.62)/Rect.
Manufacturer:	Serial Number:	Size / Shape:
.65"	60°	60°
Incident Point:	Nominal Angle:	Measured Angle:
3.0 MHz	SDC3	Long.
Frequency:	Model:	Mode:

Search Unit Cable

RG-174	12'	0
Cable Type:	Length:	Connectors:

Instrument Settings

Panametrics / Epoch 4	031575112
Manufacturer/Model:	Serial Number:
8.375 μs	0.2074 in./μsec.
Delay/Zero:	Velocity:
0.8 - 3.0 MHz	Narrowband Filter:
Auto	Fullwave
Rep Rate:	Rectification:
400 Ohms	0%
Damping:	Reject:
3.03 MHz	Dual
Frequency:	Mode:
Off:	Off:
DAC:	TVG:
Off:	Off:
CSC:	DGS:

Exam Data for Weld: **N2A NOZ**

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

OD	100° F
Exam Surface:	Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
Plate	I	68.9	NRI	60°
Plate CW/CCW	P	68.9	NRI	60°

Calibration Verification

Field Simulator Block S/N: **N/A**

Reflector	"	"	"
Amplitude	"	"	"
Gain (dB)	"	"	"
Sweep (SD)	"	"	"

Acceptable Linearity performed : **3/31/2005**

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "-" = N/A
Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.

WWR Wallace Reid

II

4/3/2005

Initials: Examiner

Level Cal/Exam Date:

N/A

N/A

Initials: Examiner

Level

6/7/5

GE Reviewed By:

Level:

Date:

Utility Reviewed By:

Date:

ANII Reviewed By:

Date:

Quad Cities, Unit-1

Quad Cities, Unit-1
N2A - Recirc Inlet Nozzle
Q1R18 - 2005

Weld Length = 360. Exam Volume = 82.5		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° NS T-Scan	A	29.8	2.5	3.0%	360.0	1.5%
60° FV T-Scan	A	43.3	31.2	37.8%	360.0	18.9%
60° S4 T-Scan	A	9.4	9.4	11.4%	360.0	5.7%
60° NS P-Scan	A	29.8	1.9	2.3%	360.0	1.2%
60° FV P-Scan	A	43.3	16.6	20.1%	360.0	10.1%
60° S4 IRS-Scan	A	9.4	9.4	11.4%	360.0	5.7%
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						

% Total Composite Coverage = 43%

Comments: A - Examined 360° length. Scanning limited due to nozzle configuration.
Weld length in degrees. IRS examination coverage determined by modeling.

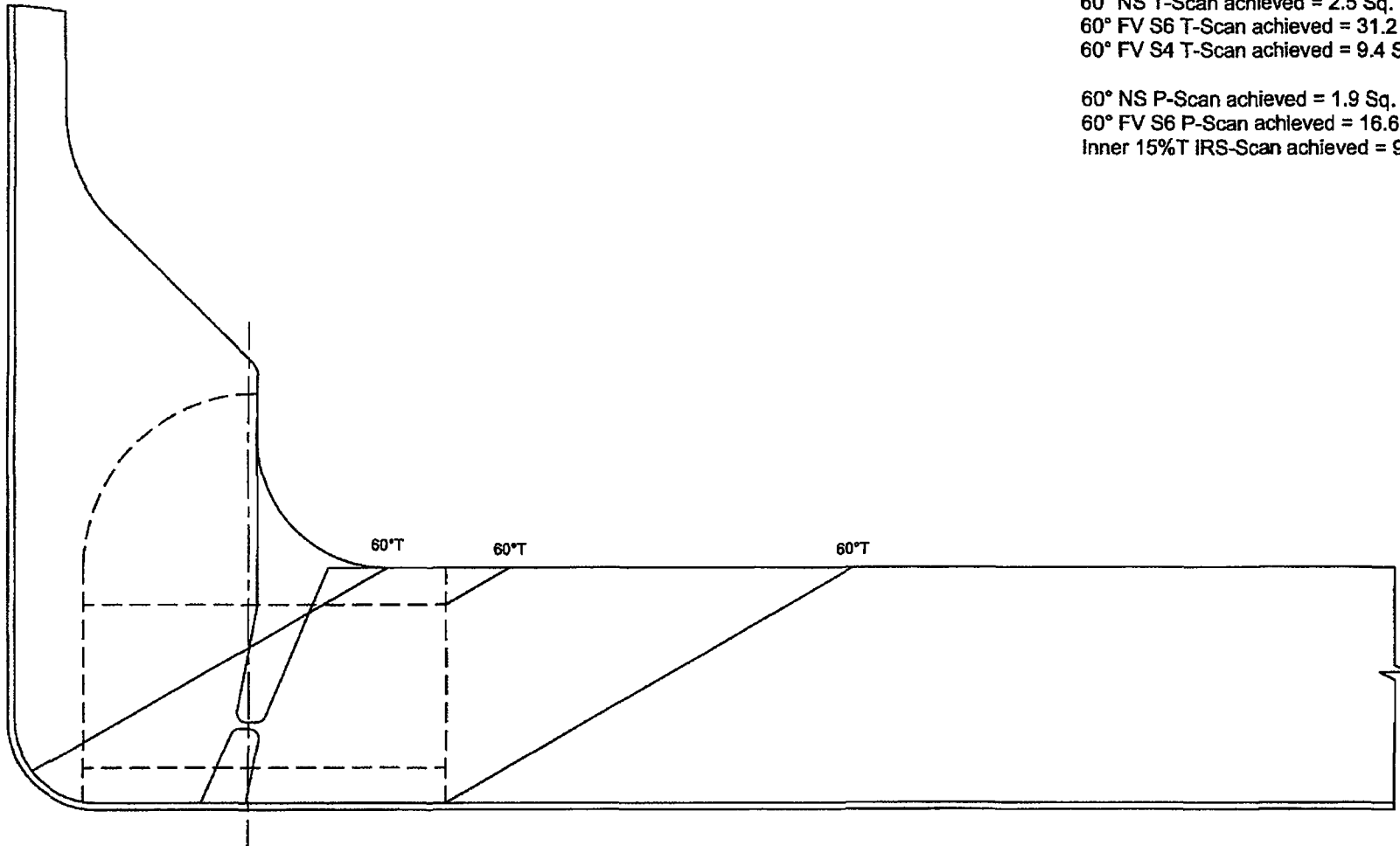
Note - Rounding methods may make calculated values appear in error.

Quad Cities Unit-1 N2 - Recirc Inlet

60° NS Exam Volume = 29.8 Sq. In.
60° FV S6 Exam Volume = 43.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 9.4 Sq. In.

60° NS T-Scan achieved = 2.5 Sq. In.
60° FV S6 T-Scan achieved = 31.2 Sq. In.
60° FV S4 T-Scan achieved = 9.4 Sq. In.

60° NS P-Scan achieved = 1.9 Sq. In.
60° FV S6 P-Scan achieved = 16.6 Sq. In.
Inner 15%T IRS-Scan achieved = 9.4 Sq. In. (By modeling.)

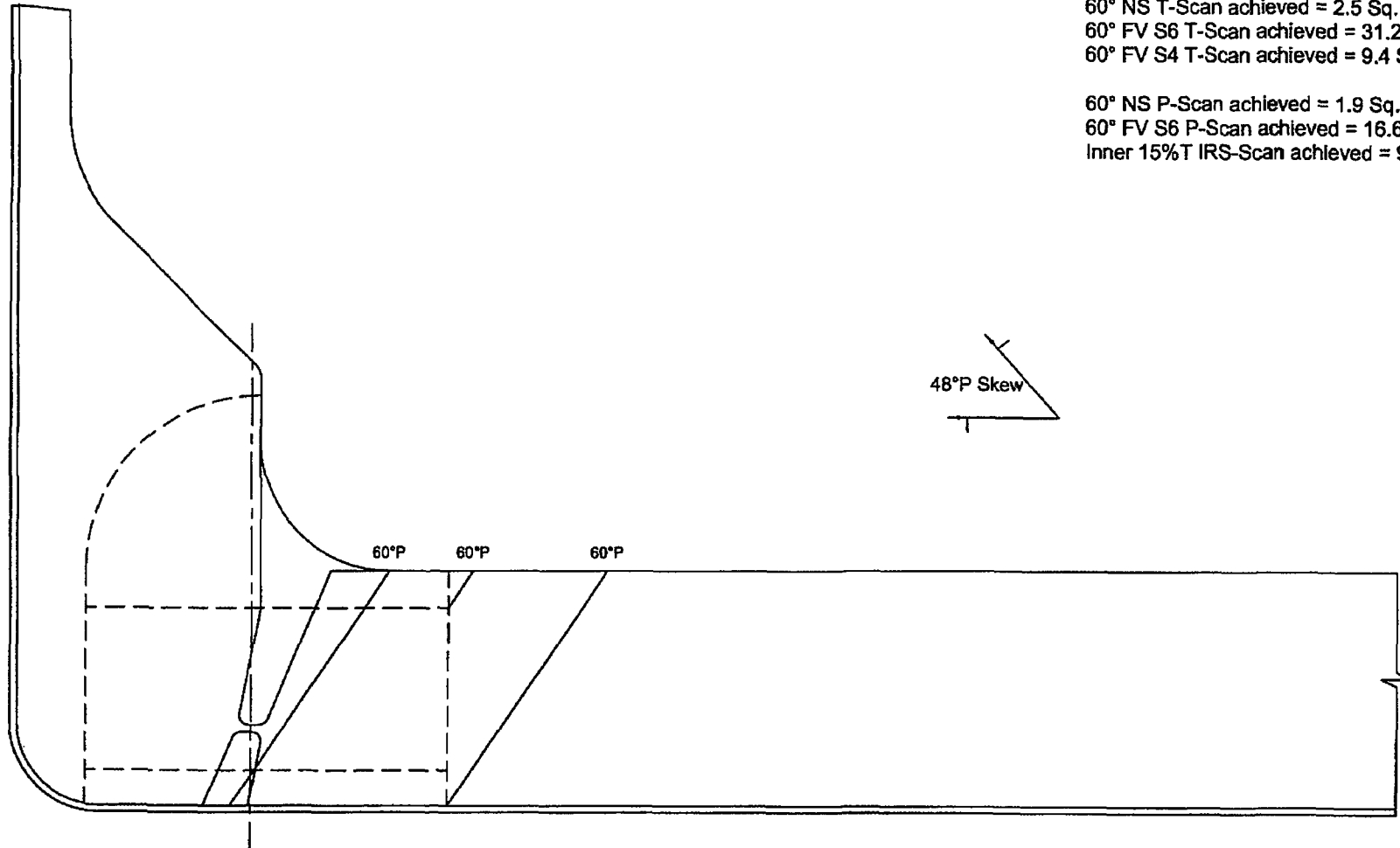


Quad Cities Unit-1 N2 - Recirc Inlet

60° NS Exam Volume = 29.8 Sq. In.
60° FV S6 Exam Volume = 43.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 9.4 Sq. In.

60° NS T-Scan achieved = 2.5 Sq. In.
60° FV S6 T-Scan achieved = 31.2 Sq. In.
60° FV S4 T-Scan achieved = 9.4 Sq. In.

60° NS P-Scan achieved = 1.9 Sq. In.
60° FV S6 P-Scan achieved = 16.6 Sq. In.
Inner 15%T IRS-Scan achieved = 9.4 Sq. In. (By modeling.)



Nir_PDI Qc1_Rev 1.XLS

MANUAL / GERIS DETECTION NOZZLE INNER RADIUS AND BORE INSPECTION REQUIREMENTS								
PLANT		Quad 1						
PREPARED BY		S.C. MORTENSON				DATE		02/22/05
NOZZLE EXAM ZONE	SCAN SURFACE	SCAN AREA	BEAM ANGLE	OFFSET	ROTATION ANGLE	WEDGE RADIUS	MAX MP	FREQ
RECIRC OUTLET								
N/V Weld (M)	PLATE	0 - 4.5"	60.0°	-	±40° - 80°	FLAT	14.0"	1 MHz
N/V Weld (M)	PLATE	0 - 4.0"	70.0°	-	±40° - 75°	FLAT	25.3"	1 MHz
Zone 1 (M)	ODBR	20° - 45°	35.0°	-	90.0°	5.5"	20.7"	1 MHz
Zone 2a (M)	ODBR	45° - 90°	60.0°	-	35.0°	5.5"	20.4"	1 MHz
RECIRC INLET								
N/V Weld (M)	PLATE	0 - 5.5"	60.0°	-	± 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 9.0"	70.0°	-	± 30°	FLAT	24.4"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	67.5°	-	18.1°	3.3"	12.0"	1 MHz
MAIN STEAM								
N/V Weld (M)	PLATE	0 - 4.0"	60.0°	-	± 25° - 70°	FLAT	14.0"	1 MHz
N/V Weld/Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 46°	FLAT	25.3"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	66.4°	-	24.1°	4.0"	16.3"	1 MHz
CORE SPRAY								
N/V Weld/Zone 1 (M)	PLATE	0 - 7.0"	60.0°	-	± 55°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 25°	FLAT	19.6"	1 MHz
Zone 2A (M)	ODBR	55° - 90°	66.3°	-	16.7°	3.1"	10.6"	1 MHz
JET PUMP INSTRUMENT								
N/V Weld (M)	PLATE	0 - 8.0"	45.0°	-	± 20° - 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 7.5"	60.0°	-	± 20°	FLAT	13.9"	1 MHz
Zone 2A (M)	PLATE	0 - 14.0"	70.0°	-	± 25°	FLAT	17.2"	1 MHz
Zone 2A (M)	PLATE	0 - 6.0"	80.0°	-	± 20°	FLAT	9.0"	1 MHz
SBLC N10								
N/V Weld (M)	PLATE	4.5" - 9.0"	45.0°	-	± 17° - 51°	FLAT	9.1"	1 MHz

W-021, W-022
W-023, W-024

W-025, W-026

W-039

W-031, W-032

NOTES: (M) MANUAL
XX.X° (XX.X°) WEDGE / (FIXTURE) ROTATION ANGLE

Questions on this NIR requirements sheet shall be directed
to S.C. Mortenson @ (704) 948-0253

GE NUCLEAR ENERGY		EXAMINATION SUMMARY SHEET				Report No.: Q1R18-022	
Site: Quad Cities		Component ID: N2B NOZ					
Outage: Q1R18		VESSEL-NOZZLE (RECIRCULATION)					
System: RPV	ASME Cat.: B-D	ASME Item: B3.90	Aug Requirements: N/A				

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° Shear	UT-146	N/A	GE-UT-311	99978AQC	Steve Snyder	II	4/7/2005
60° Long.	UT-144	N/A	GE-UT-300	CAL-IIW2-033	Wallace Reid	II	4/7/2005
60° Long.	UT-145	N/A	GE-UT-300	99978AQC	Wallace Reid	II	4/7/2005

Examination Results:

Ultrasonic examination results were acceptable to the requirements of ASME B&PV Code, Section XI, 1995 Edition with 1996 Addenda as modified by the PDI program description and the Federal Register, Part II, Nuclear Regulatory Commission, 10CFR Part 50 for Category B-D Reactor Vessel (RPV) Assembly Welds.

Manual transverse and parallel scans were performed in accordance with procedure GE-UT-300 V8 using 60 RL° search units.

Scanning of the Inner 15% T volume for radial flaws was performed in accordance with procedure GE-UT-311 V10 using shear wave search units as specified by the "Nozzle Inner Radius and Bore Requirements" sheet, which has been verified by modeling.

No Indications were recorded.

Coverage = 43%.

Examination results were compared to data report 94-034,35,36,37 from 1994 outage with ☒ No Change

These examinations were performed under Work Order: 0701776 ☐ Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel:

 Prepared By:	 Level:	4/11/05 Date:	 Utility Review:	4/8/05 Date:	RWP: 1000 4561 Dose: 280 mr
 ANII Review:				4/12/05 Date:	Page 1 of 8



GE NUCLEAR ENERGY

Ultrasonic Calibration and Examination Record RPV Components

Site/Unit: **Quad Cities / 1**

Data Report Number: **Q1R18-022**

Linearity Sheet: **Lin-011**

Outage: **Q1R18**

Data Sheet Number: **UT-144**

Beam Spread:

Procedure: **GE-UT-300**

Rev.: **V8**

DRR: **N/A**

Calibration Block: **CAL-IIW2-033**

CS	N/A	4.0"
Material	Size	Thickness
Initial Cal: 12:11		Exam Start: 12:35
Cal Check: N/A		Exam End: 13:30
Cal Check: N/A	Ultraquel II	02125
Final Cal: 13:52	Couplant:	Batch
245046	88° F	88° F
Thermometer	Initial Cal Temp.	Final Cal Temp.

DAC Construction

Hole "t"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
1/4	0.6"	1X	80%	1.2	.6	3.0
1/2	≈	1X	≈	≈	≈	≈
3/4	≈	1X	≈	≈	≈	≈
ID	≈	1X	≈	≈	≈	≈
5/4	≈	1X	≈	≈	≈	≈

DAC 1X= **54.9**

Sweep 0-10 **2.0" Depth**

Note **N/A** dB difference between 3/8 and 5/8 Vee

Search Unit Data

Sigma	22BC-02002	2(1.1x.62) / Rect.
Manufacturer:	Serial Number:	Size / Shape:
0.65"	60°	60°
Incident Point:	Nominal Angle:	Measured Angle:
3.0 MHz	SDC3	Long.
Frequency:	Model:	Mode:

Search Unit Cable

RG-174	12'	0
Cable Type:	Length:	Connectors:

Instrument Settings

Panametrics / EPOCH 4	031575112
Manufacturer/Model:	Serial Number:
8.375 μs	0.2074 in./μsec.
Delay/Zero:	Velocity:
Auto	Fullwave
Rep Rate:	Rectification:
400 Ohms	0%
Damping:	Reject:
Off:	Off:
DAC:	TVG:
4.0 in.	Sq. / Med
Range:	Pulser:
3.03 MHz	Dual
Frequency:	Mode:
Off:	Off:
CSC:	DGS:

Exam Data for Weld: **N2B NOZ**

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

OD	90° F
Exam Surface:	Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
Plate	I	68.9	NRI	60°
Plate CW/CCW	P	68.9	NRI	60°

Calibration Verification

Field Simulator Block S/N: **N/A**

Reflector	≈	≈	≈
Amplitude	≈	≈	≈
Gain (dB)	≈	≈	≈
Sweep (SD)	≈	≈	≈

Acceptable Linearity performed : **3/31/2005**

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "≈" = N/A
Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.

WWR **Wallace Reid**

Initials: Examiner

II **4/7/2005**

Level Cal/Exam Date:

N/A

N/A

Initials: Examiner

Level

B/M/D

III

GE Reviewed By:

Level:

4-7-05

Date:

David Chaffin **4/8/05**

Utility Reviewed By:

Date:

John Hault **HSB-CT** **4/12/05**

ANII Reviewed By:

Date:



GE NUCLEAR ENERGY

Ultrasonic Calibration and Examination Record RPV Components

Site/Unit: **Quad Cities / 1**

Data Report Number: **Q1R18-022**

Linearity Sheet: **Lin-011**

Outage: **Q1R18**

Data Sheet Number: **UT-145**

Beam Spread:

Procedure: **GE-UT-300**

Rev.: **V8**

DRR: **N/A**

Calibration Block: **99978AQC**

CSC **251"** **7.0"**
Material Size Thickness

Initial Cal: **12:13** Exam Start: **12:35**
Cal Check: **N/A** Exam End: **13:30**
Cal Check: **N/A** **Ultrage II** **02125**
Final Cal: **13:50** Couplant: Batch

245046 **88° F** **88° F**
Thermometer Initial Cal Temp. Final Cal Temp.

DAC Construction

Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
1/4	=	1X	=	=	=	=
1/2	=	1X	=	=	=	=
3/4	=	1X	=	=	=	=
ID	7.0"	1X	80%	12.5	7.1	7.2
5/4	=	1X	=	=	=	=

DAC 1X= **70.5**

Sweep 0-10 **10.0" Depth**

Note **N/A** dB difference between 3/8 and 5/8 Vee

Search Unit Data

Sigma **22BC-02002** **2(1.1x.62) / Rect.**
Manufacturer: Serial Number: Size / Shape:

0.65" **60°** **60°**
Incident Point: Nominal Angle: Measured Angle:

3.0 MHz **SDC3** **Long.**
Frequency: Model: Mode:

Search Unit Cable

RG-174 **12'** **0**
Cable Type: Length: Connectors:

Instrument Settings

Panametrics / EPOCH 4 **031575112**
Manufacturer/Model: Serial Number:

10.1 us **0.2356 in./usec.** **0.8 - 3.0 MHz**
Delay/Zero: Velocity: Narrowband Filter:

Auto **Fullwave** **20.0 in.** **Sq. / Med**
Rep Rate: Rectification: Range: Pulsar:

400 Ohms **0%** **3.03 MHz** **Dual**
Damping: Reject: Frequency: Mode:

Off: **Off:** **Off:** **Off:**
DAC: TVG: CSC: DGS:

Exam Data for Weld: **N2B NOZ**

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

OD **90° F**
Exam Surface: Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
Plate	I	70.5	NRI	60°
Plate CW/CCW	P	70.5	NRI	60°

Calibration Verification

Field Simulator Block S/N: **N/A**

Reflector	=	=	=
Amplitude	=	=	=
Gain (dB)	=	=	=
Sweep (SD)	=	=	=

Acceptable Linearity performed : **3/31/2005**

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "-" = N/A
Calibration for full volume examination. Exams performed to maintain a 10-20% FSH clad roll.

WUR **Wallace Reid**

Initials: Examiner

II **4/7/2005**

Level Cal/Exam Date:

N/A

N/A

Initials: Examiner

Level

GE Reviewed By:

Level:

4-7-05

Date:

Utility Reviewed By:

Date:

ANII Reviewed By:

Date:



GE NUCLEAR ENERGY

Ultrasonic Calibration and Examination Record Inner Radius Examinations

Site/Unit: Quad Cities / 1

Data Report Number: Q1R18-022

Linearity Sheet: Lin-014

Outage: Q1R18

Data Sheet Number: UT-146

Procedure: GE-UT-311

Rev: V10

DRR: N/A

Calibration Data for Block: 99978AQC

<u>CSCI</u>	<u>251"</u>	<u>7.0"</u>
Material	Size	Thickness
Initial Cal: <u>09:27</u>		Exam Start <u>10:33</u>
Cal Check: <u>N/A</u>		Exam End <u>11:17</u>
Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>02125</u>
Final Cal: <u>11:32</u>	Couplant:	Batch
<u>241894</u>	<u>78° F</u>	<u>85° F</u>
Thermometer	Initial Cal Temp.	Final Cal Temp:

DAC Construction

Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
ID	<u>7.0"</u>	1X	<u>80%</u>	<u>11.95</u>	<u>13.8</u>	<u>6.9</u>
=	=	1X	=	=	=	=

DAC @ 1X 47.2

Sweep 0-10 20.0" Metal Path

Acceptable Linearity performed : 3/31/2005

Search Unit Data

<u>KBA</u>	<u>010HWX</u>	<u>0.5"x1.0" / Rect</u>
Manufacturer:	Serial No.:	Size/Shape:
<u>0.75 in.</u>	<u>60°</u>	<u>60°</u>
Incident Point:	Nominal Angle:	Measured Angle:
<u>1.0 MHz</u>	<u>113-891-600</u>	<u>Shear</u>
Frequency:	Model:	Mode:

Search Unit Cable

<u>RG-174</u>	<u>12'</u>	<u>0</u>
Cable Type:	Length:	Connectors:

Instrument Settings

<u>Panametrics / Epoch 4</u>	<u>031574211</u>
Manufacturer/Model:	Serial No.:
<u>15.23 us</u>	<u>0.126 in /usec</u>
Zero:	Velocity:
	Narrowband Filter:
<u>Auto</u>	<u>Fullwave</u>
Rep Rate:	Rectification:
<u>20.0 in.</u>	<u>Sq. / Med</u>
Range:	Pulser/Energy
<u>400 Ohms</u>	<u>0%</u>
Damping:	Reject:
<u>1.0 MHz</u>	<u>P/E</u>
Frequency:	Mode:
<u>Off:</u>	<u>Off:</u>
DAC:	TVG:
<u>Off:</u>	<u>Off:</u>
CSC:	DGS:

Exam Data for Component: N2B NOZ

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

<u>Plate</u>	<u>88° F</u>
Exam Surface:	Component Temp.
Examination Area	Exam Angle
Rotation Angle	Wedge S/N
Scan dB	Recordable Indications
<u>0"-5.5"</u>	<u>60°</u>
<u>+/-60°</u>	<u>N/A</u>
<u>59.2</u>	<u>NRI</u>

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "-" = N/A

Exams performed to maintain a 20 - 30% FSH clad roll.
Calibration for nozzle to vessel weld (N/V).

SES Steve Snyder

Initials: Examiner:

II

Level

4/7/2005

Cal/Exam Date:

David R. [Signature] 4/8/05

Utility Reviewed By:

Date:

B/M [Signature]

GE Reviewed By:

III

Level:

4-7-05

Date:

[Signature] 4/12/05

ANII Reviewed By:

Date:

Quad Cities, Unit-1

Quad Cities, Unit-1
N2B - Recirc Inlet Nozzle
Q1R18 - 2005

		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
Weld Length = 360. Exam Volume = 82.5		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° NS T-Scan	A	29.8	2.5	3.0%	360.0	1.5%
60° FV T-Scan	A	43.3	31.2	37.8%	360.0	18.9%
60° S4 T-Scan	A	9.4	9.4	11.4%	360.0	5.7%
60° NS P-Scan	A	29.8	1.9	2.3%	360.0	1.2%
60° FV P-Scan	A	43.3	16.6	20.1%	360.0	10.1%
60° S4 IRS-Scan	A	9.4	9.4	11.4%	360.0	5.7%
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						

% Total Composite Coverage = 43%

Comments: A - Examined 360° length. Scanning limited due to nozzle configuration.
Weld length in degrees. IRS examination coverage determined by modeling.

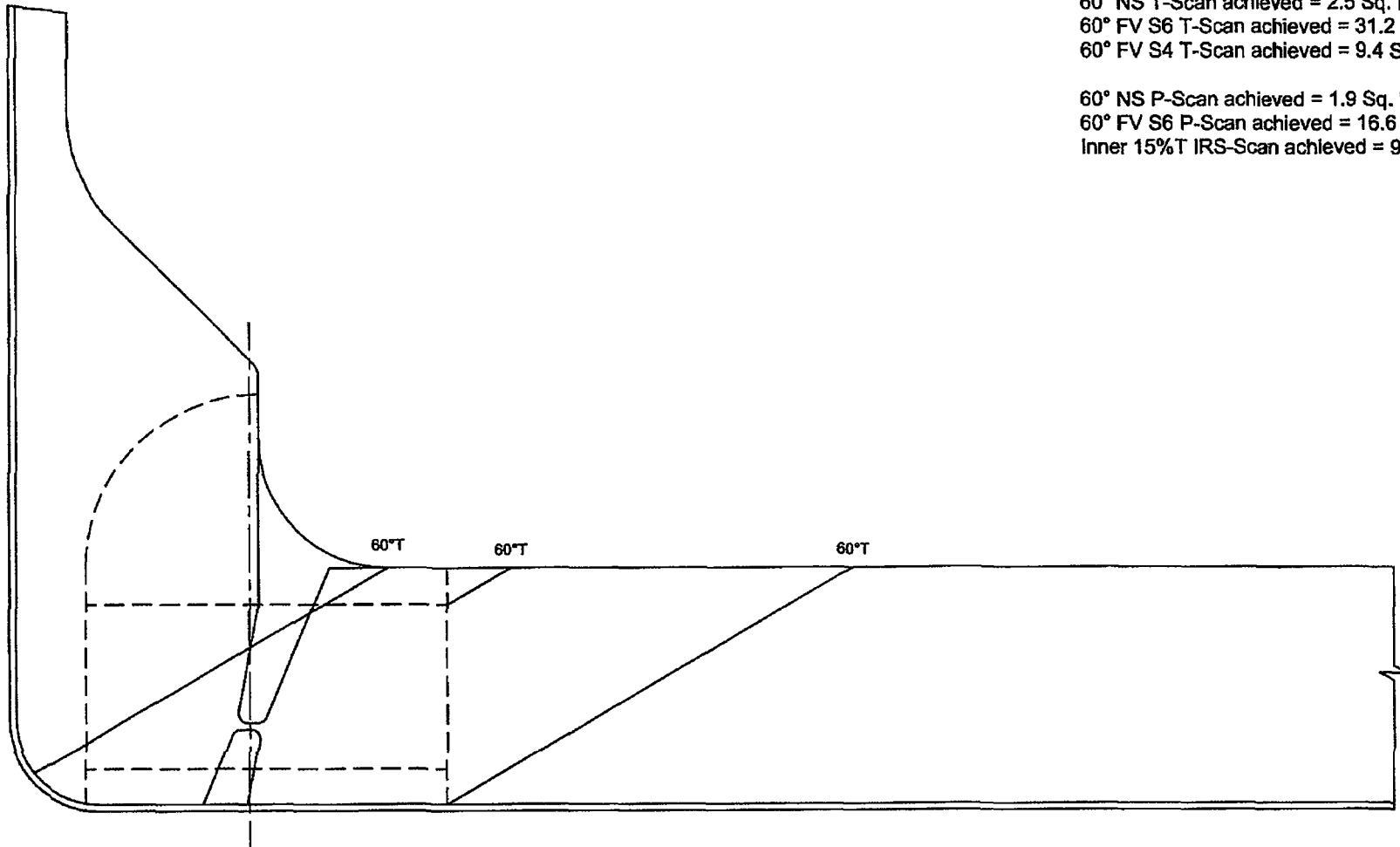
Note - Rounding methods may make calculated values appear in error.

Quad Cities Unit-1 N2 - Recirc Inlet

60° NS Exam Volume = 29.8 Sq. In.
60° FV S6 Exam Volume = 43.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 9.4 Sq. In.

60° NS T-Scan achieved = 2.5 Sq. In.
60° FV S6 T-Scan achieved = 31.2 Sq. In.
60° FV S4 T-Scan achieved = 9.4 Sq. In.

60° NS P-Scan achieved = 1.9 Sq. In.
60° FV S6 P-Scan achieved = 16.6 Sq. In.
Inner 15%T IRS-Scan achieved = 9.4 Sq. In. (By modeling.)

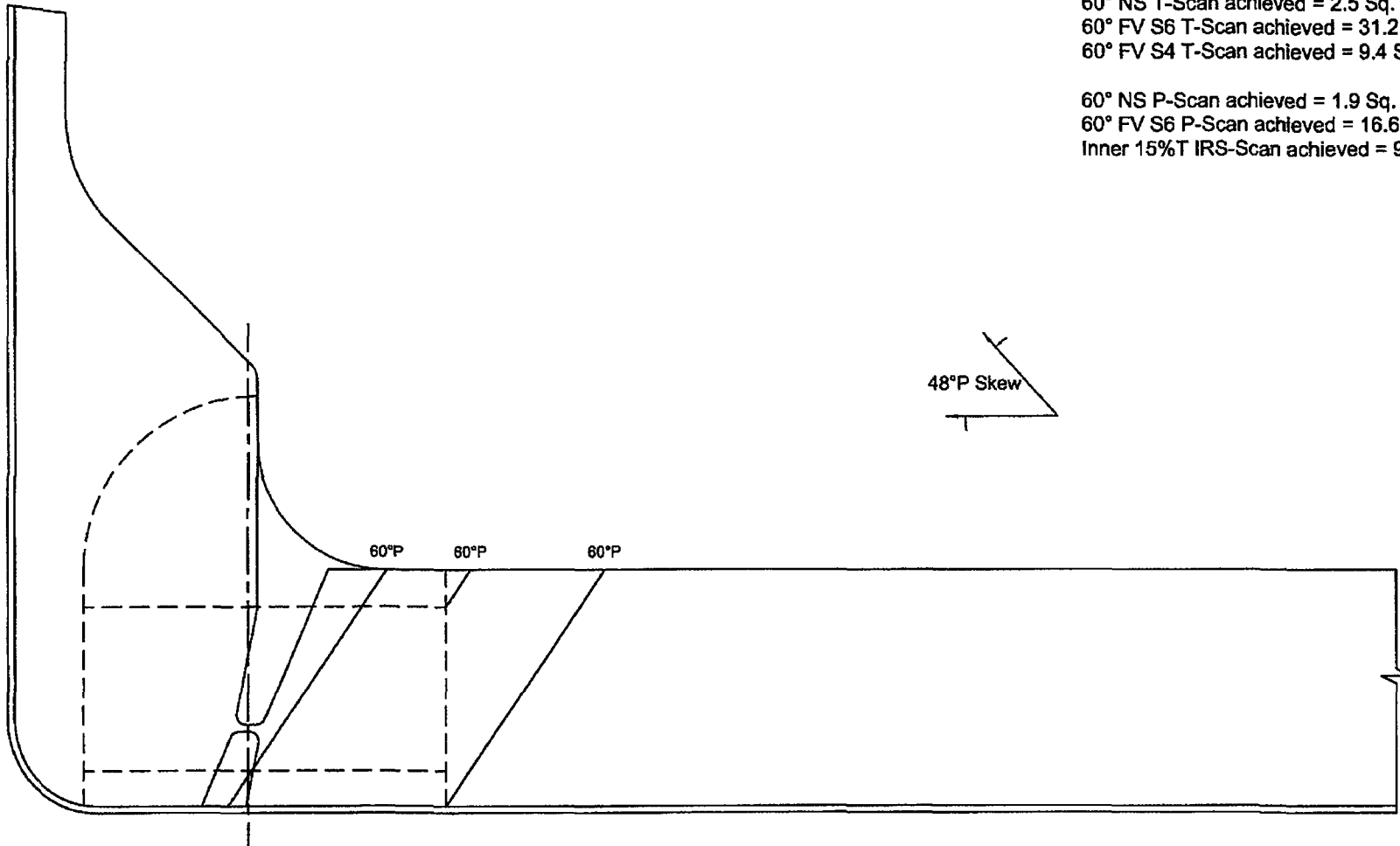


Quad Cities Unit-1 N2 - Recirc Inlet

60° NS Exam Volume = 29.8 Sq. In.
60° FV S6 Exam Volume = 43.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 9.4 Sq. In.

60° NS T-Scan achieved = 2.5 Sq. In.
60° FV S6 T-Scan achieved = 31.2 Sq. In.
60° FV S4 T-Scan achieved = 9.4 Sq. In.

60° NS P-Scan achieved = 1.9 Sq. In.
60° FV S6 P-Scan achieved = 16.6 Sq. In.
Inner 15%T IRS-Scan achieved = 9.4 Sq. In. (By modelling.)



Nir_PDI Qc1_Rev 1.XLS

MANUAL / GERIS DETECTION NOZZLE INNER RADIUS AND BORE INSPECTION REQUIREMENTS								
PLANT		Quad 1						
PREPARED BY		S.C. MORTENSON				DATE		02/22/05
NOZZLE EXAM ZONE	SCAN SURFACE	SCAN AREA	BEAM ANGLE	OFFSET	ROTATION ANGLE	WEDGE RADIUS	MAX MP	FREQ
RECIRC OUTLET								
N/V Weld (M)	PLATE	0 - 4.5"	60.0°	-	±40°- 80°	FLAT	14.0"	1 MHz
N/V Weld (M)	PLATE	0 - 4.0"	70.0°	-	±40°- 75°	FLAT	25.3"	1 MHz
Zone 1 (M)	ODBR	20° - 45°	35.0°	-	90.0°	5.5"	20.7"	1 MHz
Zone 2a (M)	ODBR	45° - 90°	60.0°	-	35.0°	5.5"	20.4"	1 MHz
RECIRC INLET								
N/V Weld (M)	PLATE	0 - 5.5"	60.0°	-	± 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 9.0"	70.0°	-	± 30°	FLAT	24.4"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	67.5°	-	18.1°	3.3"	12.0"	1 MHz
MAIN STEAM								
N/V Weld (M)	PLATE	0 - 4.0"	60.0°	-	± 25°- 70°	FLAT	14.0"	1 MHz
N/V Weld/Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 46°	FLAT	25.3"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	66.4°	-	24.1°	4.0"	16.3"	1 MHz
CORE SPRAY								
N/V Weld/Zone 1 (M)	PLATE	0 - 7.0"	60.0°	-	± 55°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 25°	FLAT	19.6"	1 MHz
Zone 2A (M)	ODBR	55° - 90°	66.3°	-	16.7°	3.1"	10.6"	1 MHz
JET PUMP INSTRUMENT								
N/V Weld (M)	PLATE	0 - 8.0"	45.0°	-	± 20°- 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 7.5"	60.0°	-	± 20°	FLAT	13.9"	1 MHz
Zone 2A (M)	PLATE	0 - 14.0"	70.0°	-	± 25°	FLAT	17.2"	1 MHz
Zone 2A (M)	PLATE	0 - 6.0"	80.0°	-	± 20°	FLAT	9.0"	1 MHz
SBLC N10								
N/V Weld (M)	PLATE	4.5" - 9.0"	45.0°	-	± 17°- 51°	FLAT	9.1"	1 MHz

W-021, W-022
W-023, W-024

W-025, W-026

W-039

W-031, W-032

NOTES: (M) MANUAL
xx.x° (xx.x") WEDGE / (FIXTURE) ROTATION ANGLE

Questions on this NIR requirements sheet shall be directed
to S.C. Mortenson @ (704) 948-0253

 GE ENERGY, NUCLEAR		EXAMINATION SUMMARY SHEET				Report No.: Q1R19-094	
Site: Quad Cities		Component ID: N2C NOZ					
Outage: RFO19		Vessel to Nozzle (Recirculation)					
System: RPV		ASME Cat: B-D		ASME Item: B3.90		Aug Req: N/A	

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° RL	UT-063	N/A	GE-UT-300 Rev. 9	CAL-IIW2-053	Karen Fish	II	5/10/2007
60° RL	UT-064	N/A	GE-UT-300 Rev. 9	99978AQC	Karen Fish	II	5/10/2007

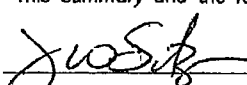
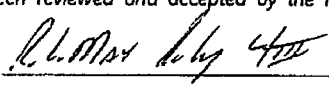
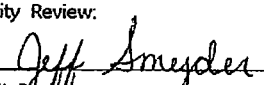
Examination Results

This exam was performed in accordance with the ASME Section XI 1995 Edition with 1996 Addenda.

39.5% of the code required volume was examined, no limitations other than the geometrical configuration of the nozzle to shell weld are noted.

There were no recordable indications.

Examination results were compared to data report		N/A	from	N/A	outage with	☐ No Change
These examinations were performed under Work Order:		94426322B				☐ Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel:						RWP: 7767 Dose: 196 mr.
Prepared By: 	Level: 	Date: 5-14-07	Utility Review: 	Date: 05/16/07	Page <u>1</u> of <u>4</u>	
ANII Review: 				Date: 5/19/07		

GE ENERGY, NUCLEAR	Ultrasonic Calibration and Examination Record RPV Components																																																																																													
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFO19</u> Procedure: <u>GE-UT-300</u>	Data Report Number: <u>Q1R19-094</u> Linearity Sheet: <u>L-002</u> Data Sheet Number: <u>UT-063</u> Ver.: <u>9</u> DRR: <u>N/A</u>																																																																																													
Calibration Block: <u>CAL-IIW2-053</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>4.0"</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1410</u></td> <td></td> <td>Exam Start: <u>1505</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1845</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultragel II</u></td> <td style="text-align: center;"><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>1922</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>252087</u> Thermometer</td> <td style="text-align: center;"><u>85° F</u> Initial Cal Temp.</td> <td style="text-align: center;"><u>85° F</u> Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>SDH</td> <td><u>0.600</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>1.132</u></td> <td><u>0.653</u></td> <td><u>3.2</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> DAC 1X= <u>56 dB</u> Sweep 0-10 <u>2.0</u> <u>Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve	<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness	Initial Cal: <u>1410</u>		Exam Start: <u>1505</u>	Cal Check: <u>N/A</u>		Exam End: <u>1845</u>	Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>06225</u>	Final Cal: <u>1922</u>	Couplant:	Batch	<u>252087</u> Thermometer	<u>85° F</u> Initial Cal Temp.	<u>85° F</u> Final Cal Temp.	Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	SDH	<u>0.600</u>	<u>1X</u>	<u>80%</u>	<u>1.132</u>	<u>0.653</u>	<u>3.2</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Sigma</u> Manufacturer:</td> <td style="text-align: center;"><u>22BC-02001</u> Serial Number:</td> <td style="text-align: center;"><u>2(1.1"x.62")/Rect.</u> Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.600</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td colspan="3">Incident Point: Nominal Angle: Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u> Frequency:</td> <td style="text-align: center;"><u>SDC3</u> Model:</td> <td style="text-align: center;"><u>RI</u> Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u> Cable Type:</td> <td style="text-align: center;"><u>12'</u> Length:</td> <td style="text-align: center;"><u>0</u> Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Panametrics / Epoch 4</u> Manufacturer/Model:</td> <td style="text-align: center;"><u>031570311</u> Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>9.1 us</u> Delay/Zero:</td> <td style="text-align: center;"><u>0.2336 in./usec.</u> Velocity:</td> </tr> <tr> <td colspan="2" style="text-align: center;"><u>0.8 - 3.0 MHz</u> Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u> Rep Rate:</td> <td style="text-align: center;"><u>Fullwave</u> Rectification:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u> Damping:</td> <td style="text-align: center;"><u>Off</u> Reject:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> DAC:</td> <td style="text-align: center;"><u>Off</u> TVG:</td> </tr> <tr> <td style="text-align: center;"><u>4.0 in.</u> Range:</td> <td style="text-align: center;"><u>Sq. / Med</u> Pulser:</td> </tr> <tr> <td style="text-align: center;"><u>3.03 MHz</u> Frequency:</td> <td style="text-align: center;"><u>DUAL</u> Mode:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> CSC:</td> <td style="text-align: center;"><u>Off</u> DGS:</td> </tr> </table>	<u>Sigma</u> Manufacturer:	<u>22BC-02001</u> Serial Number:	<u>2(1.1"x.62")/Rect.</u> Size / Shape:	<u>0.600</u>	<u>60°</u>	<u>60°</u>	Incident Point: Nominal Angle: Measured Angle:			<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>RI</u> Mode:	<u>RG-174</u> Cable Type:	<u>12'</u> Length:	<u>0</u> Connectors:	<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>031570311</u> Serial Number:	<u>9.1 us</u> Delay/Zero:	<u>0.2336 in./usec.</u> Velocity:	<u>0.8 - 3.0 MHz</u> Narrowband Filter:		<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:	<u>400 Ohms</u> Damping:	<u>Off</u> Reject:	<u>Off</u> DAC:	<u>Off</u> TVG:	<u>4.0 in.</u> Range:	<u>Sq. / Med</u> Pulser:	<u>3.03 MHz</u> Frequency:	<u>DUAL</u> Mode:	<u>Off</u> CSC:	<u>Off</u> DGS:
<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness																																																																																												
Initial Cal: <u>1410</u>		Exam Start: <u>1505</u>																																																																																												
Cal Check: <u>N/A</u>		Exam End: <u>1845</u>																																																																																												
Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>06225</u>																																																																																												
Final Cal: <u>1922</u>	Couplant:	Batch																																																																																												
<u>252087</u> Thermometer	<u>85° F</u> Initial Cal Temp.	<u>85° F</u> Final Cal Temp.																																																																																												
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																								
SDH	<u>0.600</u>	<u>1X</u>	<u>80%</u>	<u>1.132</u>	<u>0.653</u>	<u>3.2</u>																																																																																								
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																								
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																								
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																								
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																								
<u>Sigma</u> Manufacturer:	<u>22BC-02001</u> Serial Number:	<u>2(1.1"x.62")/Rect.</u> Size / Shape:																																																																																												
<u>0.600</u>	<u>60°</u>	<u>60°</u>																																																																																												
Incident Point: Nominal Angle: Measured Angle:																																																																																														
<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>RI</u> Mode:																																																																																												
<u>RG-174</u> Cable Type:	<u>12'</u> Length:	<u>0</u> Connectors:																																																																																												
<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>031570311</u> Serial Number:																																																																																													
<u>9.1 us</u> Delay/Zero:	<u>0.2336 in./usec.</u> Velocity:																																																																																													
<u>0.8 - 3.0 MHz</u> Narrowband Filter:																																																																																														
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:																																																																																													
<u>400 Ohms</u> Damping:	<u>Off</u> Reject:																																																																																													
<u>Off</u> DAC:	<u>Off</u> TVG:																																																																																													
<u>4.0 in.</u> Range:	<u>Sq. / Med</u> Pulser:																																																																																													
<u>3.03 MHz</u> Frequency:	<u>DUAL</u> Mode:																																																																																													
<u>Off</u> CSC:	<u>Off</u> DGS:																																																																																													
Exam Data for Weld: <u>N2C NOZ</u> <u>Vessel to Nozzle (Recirculation)</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD Plate</u> Exam Surface:</td> <td style="text-align: center;"><u>105° F</u> Component Temperature</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> <tr> <td><u>360°</u></td> <td><u>T&P</u></td> <td><u>70 dB</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>	<u>OD Plate</u> Exam Surface:	<u>105° F</u> Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>360°</u>	<u>T&P</u>	<u>70 dB</u>	<u>NRI</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Reflector</th> <th><u>N/A</u></th> <th><u>N/A</u></th> <th><u>N/A</u></th> </tr> <tr> <th>Amplitude</th> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <th>Gain (dB)</th> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <th>Sweep (SD)</th> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> Acceptable Linearity performed : <u>4/27/2007</u>	Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																		
<u>OD Plate</u> Exam Surface:	<u>105° F</u> Component Temperature																																																																																													
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																										
<u>360°</u>	<u>T&P</u>	<u>70 dB</u>	<u>NRI</u>	<u>60°</u>																																																																																										
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																										
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																										
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																										
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																											
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																											
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																											
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																											
Comments: Cal/Exam Date is the date of initial calibration. Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.																																																																																														
<table style="width:100%;"> <tr> <td style="width:33%;"> Karen Fish Initials: Examiner </td> <td style="width:33%;"> <u>II</u> Level: Cal/Exam Date: </td> <td style="width:33%;"> <u>5/10/2007</u> Date: </td> </tr> <tr> <td> <u>N/A</u> Initials: Examiner </td> <td> <u>N/A</u> Level: </td> <td> <u>5.14.07</u> Date: </td> </tr> <tr> <td> J. W. Smith GE Reviewed By: </td> <td> <u>911</u> Level: </td> <td> <u>5.14.07</u> Date: </td> </tr> </table>	 Karen Fish Initials: Examiner	<u>II</u> Level: Cal/Exam Date:	<u>5/10/2007</u> Date:	<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:	<u>5.14.07</u> Date:	 J. W. Smith GE Reviewed By:	<u>911</u> Level:	<u>5.14.07</u> Date:	<table style="width:100%;"> <tr> <td style="width:33%;"> R.L. Mar Utility Reviewed By: </td> <td style="width:33%;"> <u>05/16/07</u> Date: </td> <td style="width:33%;"></td> </tr> <tr> <td> Jeff Snyder ANS Reviewed By: </td> <td> <u>5/19/07</u> Date: </td> <td></td> </tr> </table>	 R.L. Mar Utility Reviewed By:	<u>05/16/07</u> Date:		 Jeff Snyder ANS Reviewed By:	<u>5/19/07</u> Date:																																																																															
 Karen Fish Initials: Examiner	<u>II</u> Level: Cal/Exam Date:	<u>5/10/2007</u> Date:																																																																																												
<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:	<u>5.14.07</u> Date:																																																																																												
 J. W. Smith GE Reviewed By:	<u>911</u> Level:	<u>5.14.07</u> Date:																																																																																												
 R.L. Mar Utility Reviewed By:	<u>05/16/07</u> Date:																																																																																													
 Jeff Snyder ANS Reviewed By:	<u>5/19/07</u> Date:																																																																																													
Page <u>2</u> of <u>4</u>																																																																																														

GE ENERGY, NUCLEAR	Ultrasonic Calibration and Examination Record RPV Components																																																																																																													
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>RFQ19</u> Procedure: <u>GE-UT-300</u>	Data Report Number: <u>Q1R19-094</u> Linearity Sheet: <u>L-002</u> Data Sheet Number: <u>UT-064</u> Ver.: <u>9</u> DRR: <u>N/A</u>																																																																																																													
Calibration Block: <u>99978AQC</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u> Material</td> <td style="text-align: center;"><u>FLAT</u> Size</td> <td style="text-align: center;"><u>7.0"</u> Thickness</td> </tr> <tr> <td>Initial Cal: <u>1415</u></td> <td></td> <td>Exam Start: <u>1505</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1845</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultrage II</u></td> <td style="text-align: center;"><u>06225</u></td> </tr> <tr> <td>Final Cal: <u>1927</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>252087</u> Thermometer</td> <td style="text-align: center;"><u>86° F</u> Initial Cal Temp.</td> <td style="text-align: center;"><u>86° F</u> Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Reflector</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID Notch</td> <td><u>7.0"</u></td> <td><u>1X</u></td> <td><u>80%</u></td> <td><u>12.25</u></td> <td><u>7.1</u></td> <td><u>7</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>N/A</td> <td><u>N/A</u></td> <td><u>1X</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> DAC 1X= <u>71.4</u> Sweep 0-10 <u>10</u> <u>Depth</u> Note: <u>N/A</u> dB difference between 3/8 and 5/8 Ve	<u>CS</u> Material	<u>FLAT</u> Size	<u>7.0"</u> Thickness	Initial Cal: <u>1415</u>		Exam Start: <u>1505</u>	Cal Check: <u>N/A</u>		Exam End: <u>1845</u>	Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>06225</u>	Final Cal: <u>1927</u>	Couplant:	Batch	<u>252087</u> Thermometer	<u>86° F</u> Initial Cal Temp.	<u>86° F</u> Final Cal Temp.	Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID Notch	<u>7.0"</u>	<u>1X</u>	<u>80%</u>	<u>12.25</u>	<u>7.1</u>	<u>7</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Sigma</u> Manufacturer:</td> <td style="text-align: center;"><u>22BC-02001</u> Serial Number:</td> <td style="text-align: center;"><u>2(1.1"x.62")/Rect.</u> Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.600</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td colspan="3">Incident Point: Nominal Angle: Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u> Frequency:</td> <td style="text-align: center;"><u>SDC3</u> Model:</td> <td style="text-align: center;"><u>RL</u> Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u> Cable Type:</td> <td style="text-align: center;"><u>12'</u> Length:</td> <td style="text-align: center;"><u>0</u> Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Panametrics / Epoch 4</u> Manufacturer/Model:</td> <td style="text-align: center;"><u>031570311</u> Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>9.1 µs</u> Delay/Zero:</td> <td style="text-align: center;"><u>0.2336 in./µsec.</u> Velocity:</td> </tr> <tr> <td colspan="2" style="text-align: center;"><u>0.8 - 3.0 MHz</u> Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u> Rep Rate:</td> <td style="text-align: center;"><u>Fullwave</u> Rectification:</td> </tr> <tr> <td style="text-align: center;"><u>20.0 in.</u> Range:</td> <td style="text-align: center;"><u>Sq. / Med</u> Pulser:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u> Damping:</td> <td style="text-align: center;"><u>Off</u> Reject:</td> </tr> <tr> <td style="text-align: center;"><u>3.03 MHz</u> Frequency:</td> <td style="text-align: center;"><u>DUAL</u> Mode:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> DAC:</td> <td style="text-align: center;"><u>Off</u> TVG:</td> </tr> <tr> <td style="text-align: center;"><u>Off</u> CSC:</td> <td style="text-align: center;"><u>Off</u> DGS:</td> </tr> </table> Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table> Acceptable Linearity performed : <u>4/27/2007</u>	<u>Sigma</u> Manufacturer:	<u>22BC-02001</u> Serial Number:	<u>2(1.1"x.62")/Rect.</u> Size / Shape:	<u>0.600</u>	<u>60°</u>	<u>60°</u>	Incident Point: Nominal Angle: Measured Angle:			<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>RL</u> Mode:	<u>RG-174</u> Cable Type:	<u>12'</u> Length:	<u>0</u> Connectors:	<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>031570311</u> Serial Number:	<u>9.1 µs</u> Delay/Zero:	<u>0.2336 in./µsec.</u> Velocity:	<u>0.8 - 3.0 MHz</u> Narrowband Filter:		<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:	<u>20.0 in.</u> Range:	<u>Sq. / Med</u> Pulser:	<u>400 Ohms</u> Damping:	<u>Off</u> Reject:	<u>3.03 MHz</u> Frequency:	<u>DUAL</u> Mode:	<u>Off</u> DAC:	<u>Off</u> TVG:	<u>Off</u> CSC:	<u>Off</u> DGS:	Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>CS</u> Material	<u>FLAT</u> Size	<u>7.0"</u> Thickness																																																																																																												
Initial Cal: <u>1415</u>		Exam Start: <u>1505</u>																																																																																																												
Cal Check: <u>N/A</u>		Exam End: <u>1845</u>																																																																																																												
Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>06225</u>																																																																																																												
Final Cal: <u>1927</u>	Couplant:	Batch																																																																																																												
<u>252087</u> Thermometer	<u>86° F</u> Initial Cal Temp.	<u>86° F</u> Final Cal Temp.																																																																																																												
Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																								
ID Notch	<u>7.0"</u>	<u>1X</u>	<u>80%</u>	<u>12.25</u>	<u>7.1</u>	<u>7</u>																																																																																																								
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																								
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																								
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																								
N/A	<u>N/A</u>	<u>1X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																								
<u>Sigma</u> Manufacturer:	<u>22BC-02001</u> Serial Number:	<u>2(1.1"x.62")/Rect.</u> Size / Shape:																																																																																																												
<u>0.600</u>	<u>60°</u>	<u>60°</u>																																																																																																												
Incident Point: Nominal Angle: Measured Angle:																																																																																																														
<u>3.0 MHz</u> Frequency:	<u>SDC3</u> Model:	<u>RL</u> Mode:																																																																																																												
<u>RG-174</u> Cable Type:	<u>12'</u> Length:	<u>0</u> Connectors:																																																																																																												
<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>031570311</u> Serial Number:																																																																																																													
<u>9.1 µs</u> Delay/Zero:	<u>0.2336 in./µsec.</u> Velocity:																																																																																																													
<u>0.8 - 3.0 MHz</u> Narrowband Filter:																																																																																																														
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:																																																																																																													
<u>20.0 in.</u> Range:	<u>Sq. / Med</u> Pulser:																																																																																																													
<u>400 Ohms</u> Damping:	<u>Off</u> Reject:																																																																																																													
<u>3.03 MHz</u> Frequency:	<u>DUAL</u> Mode:																																																																																																													
<u>Off</u> DAC:	<u>Off</u> TVG:																																																																																																													
<u>Off</u> CSC:	<u>Off</u> DGS:																																																																																																													
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																											
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																											
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																											
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																											
Exam Data for Weld: <u>N2C NOZ</u> <u>Vessel to Nozzle (Recirculation)</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD Plate</u> Exam Surface:</td> <td style="text-align: center;"><u>105° F</u> Component Temperature</td> </tr> </table> <table style="width:100%;"> <tr> <td style="text-align: center;">Weld Examination Area:</td> <td style="text-align: center;">Exam Access</td> <td style="text-align: center;">Scan dB</td> <td style="text-align: center;">Recordable Indications</td> <td style="text-align: center;">Exam Angle</td> </tr> <tr> <td style="text-align: center;"><u>360°</u></td> <td style="text-align: center;"><u>T&P</u></td> <td style="text-align: center;"><u>71.4 dB</u></td> <td style="text-align: center;"><u>NRI</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> </tr> <tr> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> </tr> <tr> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> </tr> </table> Comments: Cal/Exam Date is the date of initial calibration. Calibration for full volume examination. Exams performed to maintain a 10-20% clad roll.		<u>OD Plate</u> Exam Surface:	<u>105° F</u> Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>360°</u>	<u>T&P</u>	<u>71.4 dB</u>	<u>NRI</u>	<u>60°</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																		
<u>OD Plate</u> Exam Surface:	<u>105° F</u> Component Temperature																																																																																																													
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																																										
<u>360°</u>	<u>T&P</u>	<u>71.4 dB</u>	<u>NRI</u>	<u>60°</u>																																																																																																										
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																										
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																										
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																										
<table style="width:100%;"> <tr> <td style="width:30%;"> Initials: <u>KF</u> Examiner: <u>Karen Fish</u> </td> <td style="width:30%;"> Level: <u>II</u> Cal/Exam Date: <u>5/10/2007</u> </td> <td style="width:30%;"> Utility Reviewed By: <u>R. L. May</u> Date: <u>05/16/07</u> </td> <td style="width:10%;"></td> </tr> <tr> <td> Initials: <u>N/A</u> Examiner: <u>N/A</u> </td> <td> Level: <u>N/A</u> Cal/Exam Date: <u>N/A</u> </td> <td> ANII Reviewed By: <u>Jeff Snyder</u> Date: <u>5/19/07</u> </td> <td></td> </tr> <tr> <td> GE Reviewed By: <u>S. J. D.</u> </td> <td> Level: <u>III</u> Date: <u>5.14.07</u> </td> <td></td> <td></td> </tr> </table>		 Initials: <u>KF</u> Examiner: <u>Karen Fish</u>	Level: <u>II</u> Cal/Exam Date: <u>5/10/2007</u>	 Utility Reviewed By: <u>R. L. May</u> Date: <u>05/16/07</u>		Initials: <u>N/A</u> Examiner: <u>N/A</u>	Level: <u>N/A</u> Cal/Exam Date: <u>N/A</u>	 ANII Reviewed By: <u>Jeff Snyder</u> Date: <u>5/19/07</u>		 GE Reviewed By: <u>S. J. D.</u>	Level: <u>III</u> Date: <u>5.14.07</u>																																																																																																			
 Initials: <u>KF</u> Examiner: <u>Karen Fish</u>	Level: <u>II</u> Cal/Exam Date: <u>5/10/2007</u>	 Utility Reviewed By: <u>R. L. May</u> Date: <u>05/16/07</u>																																																																																																												
Initials: <u>N/A</u> Examiner: <u>N/A</u>	Level: <u>N/A</u> Cal/Exam Date: <u>N/A</u>	 ANII Reviewed By: <u>Jeff Snyder</u> Date: <u>5/19/07</u>																																																																																																												
 GE Reviewed By: <u>S. J. D.</u>	Level: <u>III</u> Date: <u>5.14.07</u>																																																																																																													

Quad Cities Unit-1 Q1R19

Quad Cities Unit-1 Q1R19
N2C Recirc Inlet - Report Number Q1R19-094
Spring 2007

		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
Weld Length = 360. Exam Volume = 80.2		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° NS T-Scan	A	29.0	1.9	2.4%	360.0	1.2%
60° S6 T-Scan	A	42.1	30.5	38.0%	360.0	19.0%
60° S4 T-Scan	A	9.1	9.1	11.3%	360.0	5.7%
60° NS P-Scan	A	29.0	1.0	1.2%	360.0	0.6%
60° S6 P-Scan	A	42.1	11.8	14.7%	360.0	7.4%
IRS S4 P-Scan	A	9.1	9.1	11.3%	360.0	5.7%
60° NS T-Scan						
60° S6 T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° S6 P-Scan						
IRS S4 P-Scan						

% Total Composite Coverage = 39.5%

Comments: A - Examined 360° scan limited due to nozzle configuration only.

Note - Rounding methods may affect calculated values.

JWS
5.1407

Page 4 of 4

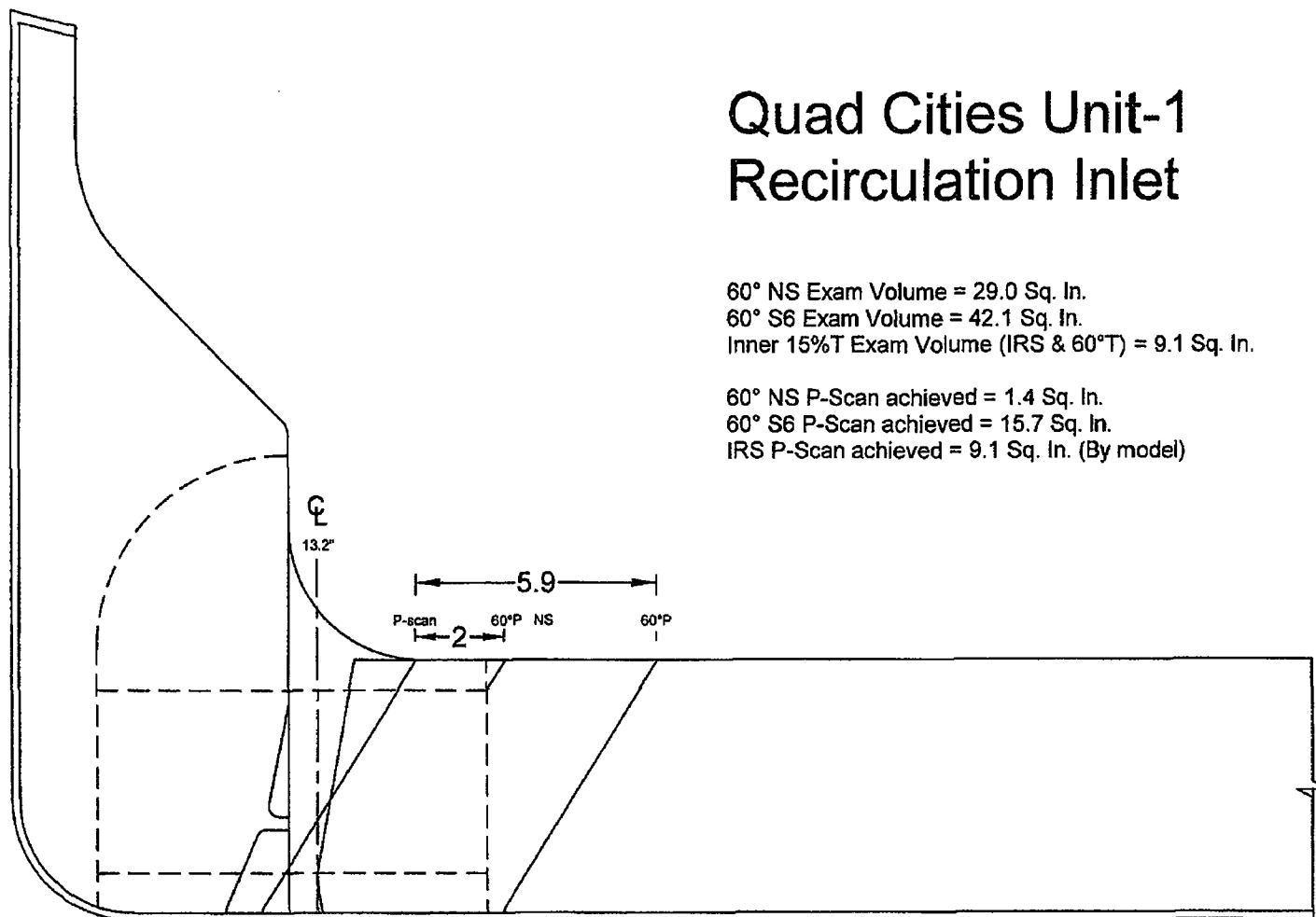
Quad Cities Unit 1, Q1R19, 2007

Page ____

Quad Cities Unit-1 Recirculation Inlet

60° NS Exam Volume = 29.0 Sq. In.
60° S6 Exam Volume = 42.1 Sq. In.
Inner 15%T Exam Volume (IRS & 60°T) = 9.1 Sq. In.

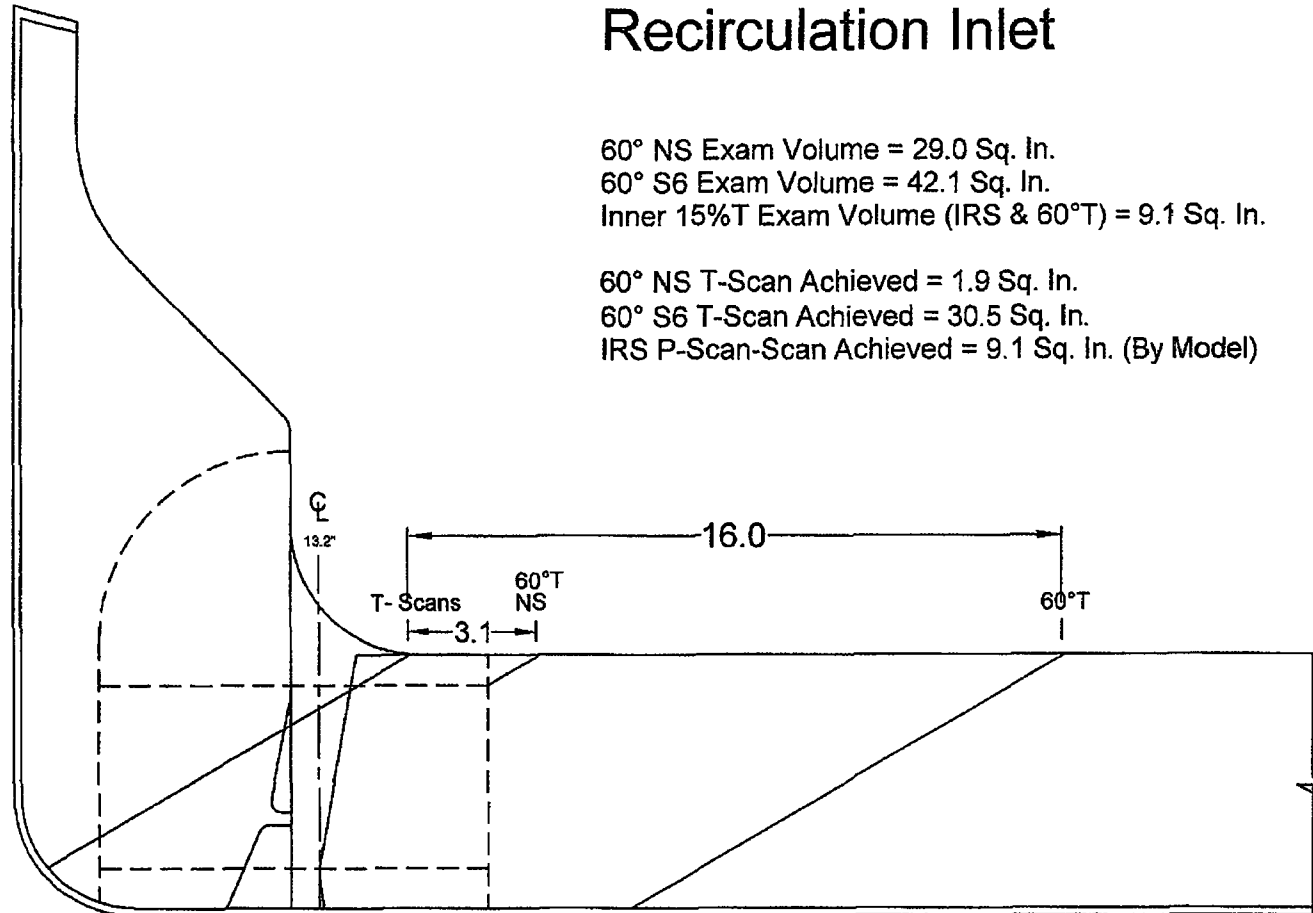
60° NS P-Scan achieved = 1.4 Sq. In.
60° S6 P-Scan achieved = 15.7 Sq. In.
IRS P-Scan achieved = 9.1 Sq. In. (By model)



Quad Cities Unit 1 Recirculation Inlet

60° NS Exam Volume = 29.0 Sq. In.
60° S6 Exam Volume = 42.1 Sq. In.
Inner 15%T Exam Volume (IRS & 60°T) = 9.1 Sq. In.

60° NS T-Scan Achieved = 1.9 Sq. In.
60° S6 T-Scan Achieved = 30.5 Sq. In.
IRS P-Scan-Scan Achieved = 9.1 Sq. In. (By Model)



Quad Cities Unit 1, Q1R19, 2007

Page _____

GE NUCLEAR ENERGY		EXAMINATION SUMMARY SHEET				Report No.: Q1R18-024	
Site: Quad Cities		Component ID: N2D NOZ					
Outage: Q1R18		VESSEL-NOZZLE (RECIRCULATION)					
System: RPV	ASME Cat.: B-D	ASME Item: B3.90	Aug Requirements: N/A				

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° Shear	UT-126	N/A	GE-UT-311	99978AQC	Troy Huhe	II	4/4/2005
60° RL	UT-086	N/A	GE-UT-300	CAL-IIW2-017	Shane Gauthier	II	4/4/2005
60° RL	UT-087	N/A	GE-UT-300	99978AQC	Shane Gauthier	II	4/4/2005

Examination Results:

Ultrasonic examination results were acceptable to the requirements of ASME B&PV Code, Section XI, 1995 Edition with 1998 Addenda as modified by the PDI program description and the Federal Register, Part II, Nuclear Regulatory Commission, 10CFR Part 50 for Category B-D Reactor Vessel (RPV) Assembly Welds.

Manual transverse and parallel scans were performed in accordance with procedure GE-UT-300 V8 using 60 RL° search units.

Scanning of the inner 15% T volume for radial flaws was performed in accordance with procedure GE-UT-311 V10 using shear wave search units as specified by the "Nozzle Inner Radius and Bore Requirements" sheet, which has been verified by modeling.

No indications were recorded.

Coverage = 43%

Examination results were compared to data report R-228, 231, 233 from 1998 outage with ☒ No Change

These examinations were performed under Work Order: 0701775 ☐ Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel:

Prepared By:	Level:	Date: 4/6/05	Utility Review:	Date: 4/8/05	RWP: 10004561 Dose: 241
ANII Review:					Page 1 of 8



GE NUCLEAR ENERGY

Ultrasonic Calibration and Examination Record Inner Radius Examinations

Site/Unit: **Quad Cities / 1**

Data Report Number: **Q1R18-024**

Linearity Sheet: **Lin-012**

Outage: **Q1R18**

Data Sheet Number: **UT-126**

Procedure: **GE-UT-311**

Rev: **V10**

DRR: **N/A**

Calibration Data for Block: **99978AQC**

CS	Flat	7.3"
Material	Size	Thickness
Initial Cal: 1129		Exam Start: 14:00
Cal Check: N/A		Exam End: 14:41
Cal Check: N/A	Ultrage II	01125
Final Cal: 1530	Couplant:	Batch
242008	80° F	80° F
Thermometer	Initial Cal Temp.	Final Cal Temp:

DAC Construction

Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
ID	7.0"	1X	80%	12.5	14.3	7.2
=	=	1X	=	=	=	=

DAC @ 1X **47.4**

Sweep 0-10 **20.0" Metal Path**

Acceptable Linearity performed : **3/31/2005**

Search Unit Data

KBA	M21322	0.5"x1.0"/Rect
Manufacturer:	Serial No.:	Size/Shape:
0.7 in.	60°	60°
Incident Point:	Nominal Angle:	Measured Angle:
1.0 MHz	113-291-600	Shear
Frequency:	Model:	Mode:

Search Unit Cable

RG-174	12'	0
Cable Type:	Length:	Connectors:

Instrument Settings

Panametrics / EPOCH 4	031570311
Manufacturer/Model:	Serial No.:
14.96 us	0.1253 in / us
Zero:	Velocity:
	Narrowband Filter:
Auto	Fullwave
Rep Rate:	Rectification:
20.0 in.	Sq. / Med
Range:	Pulsar/Energy
400 Ohms	0%
Damping:	Reject:
1.0 MHz	P/E
Frequency:	Mode:
Off:	Off:
DAC:	TVG:
Off:	Off:
CSC:	DGS:

Exam Data for Component: **N2D NOZ**

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

PLATE	95° F
Exam Surface:	Component Temp.
Examination Area	Exam Angle
Rotation Angle	Wedge S/N
Scan dB	Recordable Indications
0"-5.5"	60°
± 60°	N/A
63.4	NRI

Calibration Verification

Field Simulator Block S/N: **N/A**

Reflector	N/A	N/A	N/A
Amplitude	N/A	N/A	N/A
Gain (dB)	N/A	N/A	N/A
Sweep (SD)	N/A	N/A	N/A

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "-" = N/A

Calibration for nozzle to vessel weld (N/V).
Calibration Range = 20.0". Exam Range = 20.0"

TH **Troy Huhe**

Initials: Examiner:

II

Level:

04/04/05

Cal/Exam Date:

Utility Reviewed By:

Date:

CD MT

GE Reviewed By:

Level:

Date:

ANII Reviewed By:

Date:

GE NUCLEAR ENERGY		Ultrasonic Calibration and Examination Record RPV Components																																																	
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>Q1R18</u>		Data Report Number: <u>Q1R18-024</u> Data Sheet Number: <u>UT-086</u>																																																	
Procedure: <u>GE-UT-300</u>		Rev.: <u>V8</u> DRR: <u>N/A</u>																																																	
Calibration Block: <u>CAL-IIW2-017</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>4.0"</u></td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>15:44</u></td> <td></td> <td>Exam Start: <u>16:10</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>17:05</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultragel II</u></td> <td style="text-align: center;"><u>02125</u></td> </tr> <tr> <td>Final Cal: <u>18:25</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>245046</u></td> <td style="text-align: center;"><u>85° F</u></td> <td style="text-align: center;"><u>88° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp:</td> </tr> </table>		<u>CS</u>	<u>N/A</u>	<u>4.0"</u>	Material	Size	Thickness	Initial Cal: <u>15:44</u>		Exam Start: <u>16:10</u>	Cal Check: <u>N/A</u>		Exam End: <u>17:05</u>	Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>02125</u>	Final Cal: <u>18:25</u>	Couplant:	Batch	<u>245046</u>	<u>85° F</u>	<u>88° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp:	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Sigma</u></td> <td style="text-align: center;"><u>22BC-03006</u></td> <td style="text-align: center;"><u>2(1.1X.62)/Rect.</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer:</td> <td style="text-align: center;">Serial Number:</td> <td style="text-align: center;">Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>.65"</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td colspan="3">Incident Point: Nominal Angle: Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;"><u>SDC3</u></td> <td style="text-align: center;"><u>Long</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Model:</td> <td style="text-align: center;">Mode:</td> </tr> </table>		<u>Sigma</u>	<u>22BC-03006</u>	<u>2(1.1X.62)/Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>.65"</u>	<u>60°</u>	<u>60°</u>	Incident Point: Nominal Angle: Measured Angle:			<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>	Frequency:	Model:	Mode:						
<u>CS</u>	<u>N/A</u>	<u>4.0"</u>																																																	
Material	Size	Thickness																																																	
Initial Cal: <u>15:44</u>		Exam Start: <u>16:10</u>																																																	
Cal Check: <u>N/A</u>		Exam End: <u>17:05</u>																																																	
Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>02125</u>																																																	
Final Cal: <u>18:25</u>	Couplant:	Batch																																																	
<u>245046</u>	<u>85° F</u>	<u>88° F</u>																																																	
Thermometer	Initial Cal Temp.	Final Cal Temp:																																																	
<u>Sigma</u>	<u>22BC-03006</u>	<u>2(1.1X.62)/Rect.</u>																																																	
Manufacturer:	Serial Number:	Size / Shape:																																																	
<u>.65"</u>	<u>60°</u>	<u>60°</u>																																																	
Incident Point: Nominal Angle: Measured Angle:																																																			
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>																																																	
Frequency:	Model:	Mode:																																																	
DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Hole "I"</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> </thead> <tbody> <tr> <td>1/4</td> <td><u>0.6"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>1.145</u></td> <td><u>0.661</u></td> <td><u>3.30</u></td> </tr> <tr> <td>1/2</td> <td>=</td> <td>1X</td> <td>=</td> <td>=</td> <td>=</td> <td>=</td> </tr> <tr> <td>3/4</td> <td>=</td> <td>1X</td> <td>=</td> <td>=</td> <td>=</td> <td>=</td> </tr> <tr> <td>ID</td> <td>=</td> <td>1X</td> <td>=</td> <td>=</td> <td>=</td> <td>=</td> </tr> <tr> <td>5/4</td> <td>=</td> <td>1X</td> <td>=</td> <td>=</td> <td>=</td> <td>=</td> </tr> </tbody> </table> DAC 1X= <u>60.8</u> Sweep 0-10 <u>2.0" Depth</u> Note <u>N/A</u> dB difference between 3/8 and 5/8 Vee		Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	1/4	<u>0.6"</u>	1X	<u>80%</u>	<u>1.145</u>	<u>0.661</u>	<u>3.30</u>	1/2	=	1X	=	=	=	=	3/4	=	1X	=	=	=	=	ID	=	1X	=	=	=	=	5/4	=	1X	=	=	=	=	Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>12'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td style="text-align: center;">Cable Type:</td> <td style="text-align: center;">Length:</td> <td style="text-align: center;">Connectors:</td> </tr> </table>		<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:
Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																													
1/4	<u>0.6"</u>	1X	<u>80%</u>	<u>1.145</u>	<u>0.661</u>	<u>3.30</u>																																													
1/2	=	1X	=	=	=	=																																													
3/4	=	1X	=	=	=	=																																													
ID	=	1X	=	=	=	=																																													
5/4	=	1X	=	=	=	=																																													
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																	
Cable Type:	Length:	Connectors:																																																	
Exam Data for Weld: <u>N2D NOZ</u> <u>VESSEL-NOZZLE (RECIRCULATION)</u> Configuration: <u>96° F</u> Exam Surface: <u>OD</u> Component Temperature		Instrument Settings <table style="width:100%;"> <tr> <td colspan="2" style="text-align: center;"><u>Panometrics / Epoch 4</u></td> <td colspan="2" style="text-align: center;"><u>031572811</u></td> </tr> <tr> <td colspan="2" style="text-align: center;">Manufacturer/Model:</td> <td colspan="2" style="text-align: center;">Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>16.05 us</u></td> <td style="text-align: center;"><u>0.2528 in./usec.</u></td> <td colspan="2" style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> </tr> <tr> <td style="text-align: center;">Delay/Zero:</td> <td style="text-align: center;">Velocity:</td> <td colspan="2" style="text-align: center;">Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> <td style="text-align: center;"><u>4.0 in.</u></td> <td style="text-align: center;"><u>Sq. / Med</u></td> </tr> <tr> <td style="text-align: center;">Rep Rate:</td> <td style="text-align: center;">Rectification:</td> <td style="text-align: center;">Range:</td> <td style="text-align: center;">Pulsar:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> <td style="text-align: center;"><u>3.03 MHz</u></td> <td style="text-align: center;"><u>Dual</u></td> </tr> <tr> <td style="text-align: center;">Damping:</td> <td style="text-align: center;">Reject:</td> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Mode:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> <td style="text-align: center;">CSC:</td> <td style="text-align: center;">DGS:</td> </tr> </table>		<u>Panometrics / Epoch 4</u>		<u>031572811</u>		Manufacturer/Model:		Serial Number:		<u>16.05 us</u>	<u>0.2528 in./usec.</u>	<u>0.8 - 3.0 MHz</u>		Delay/Zero:	Velocity:	Narrowband Filter:		<u>Auto</u>	<u>Fullwave</u>	<u>4.0 in.</u>	<u>Sq. / Med</u>	Rep Rate:	Rectification:	Range:	Pulsar:	<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>	<u>Dual</u>	Damping:	Reject:	Frequency:	Mode:	<u>Off:</u>	<u>Off:</u>	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	CSC:	DGS:								
<u>Panometrics / Epoch 4</u>		<u>031572811</u>																																																	
Manufacturer/Model:		Serial Number:																																																	
<u>16.05 us</u>	<u>0.2528 in./usec.</u>	<u>0.8 - 3.0 MHz</u>																																																	
Delay/Zero:	Velocity:	Narrowband Filter:																																																	
<u>Auto</u>	<u>Fullwave</u>	<u>4.0 in.</u>	<u>Sq. / Med</u>																																																
Rep Rate:	Rectification:	Range:	Pulsar:																																																
<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>	<u>Dual</u>																																																
Damping:	Reject:	Frequency:	Mode:																																																
<u>Off:</u>	<u>Off:</u>	<u>Off:</u>	<u>Off:</u>																																																
DAC:	TVG:	CSC:	DGS:																																																
Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td>=</td> <td>=</td> <td>=</td> </tr> <tr> <td>Amplitude</td> <td>=</td> <td>=</td> <td>=</td> </tr> <tr> <td>Gain (dB)</td> <td>=</td> <td>=</td> <td>=</td> </tr> <tr> <td>Sweep (SD)</td> <td>=</td> <td>=</td> <td>=</td> </tr> </table> Acceptable Linearity performed : <u>3/10/2005</u>		Reflector	=	=	=	Amplitude	=	=	=	Gain (dB)	=	=	=	Sweep (SD)	=	=	=	Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "-" = N/A Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.																																	
Reflector	=	=	=																																																
Amplitude	=	=	=																																																
Gain (dB)	=	=	=																																																
Sweep (SD)	=	=	=																																																
<table style="width:100%;"> <tr> <td style="width:25%;"> Shane Gauthier </td> <td style="width:10%; text-align: center;"> II </td> <td style="width:20%; text-align: center;"> 4/4/2005 </td> <td style="width:45%;"></td> </tr> <tr> <td>Initials: Examiner</td> <td>Level</td> <td>Cal/Exam Date:</td> <td>Utility Reviewed By:</td> </tr> <tr> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>N/A</u></td> <td></td> <td style="text-align: center;"><u>4/8/05</u></td> </tr> <tr> <td>Initials: Examiner</td> <td>Level</td> <td></td> <td>Date:</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"><u>III</u></td> <td style="text-align: center;"><u>4/6/05</u></td> <td style="text-align: center;"><u>4/12/05</u></td> </tr> <tr> <td>GE Reviewed By:</td> <td>Level:</td> <td>Date:</td> <td>ANII Reviewed By:</td> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;"><u>#56-CT</u></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Date:</td> </tr> </table>				 Shane Gauthier	II	4/4/2005		Initials: Examiner	Level	Cal/Exam Date:	Utility Reviewed By:	<u>N/A</u>	<u>N/A</u>		<u>4/8/05</u>	Initials: Examiner	Level		Date:		<u>III</u>	<u>4/6/05</u>	<u>4/12/05</u>	GE Reviewed By:	Level:	Date:	ANII Reviewed By:				<u>#56-CT</u>				Date:																
 Shane Gauthier	II	4/4/2005																																																	
Initials: Examiner	Level	Cal/Exam Date:	Utility Reviewed By:																																																
<u>N/A</u>	<u>N/A</u>		<u>4/8/05</u>																																																
Initials: Examiner	Level		Date:																																																
	<u>III</u>	<u>4/6/05</u>	<u>4/12/05</u>																																																
GE Reviewed By:	Level:	Date:	ANII Reviewed By:																																																
			<u>#56-CT</u>																																																
			Date:																																																



GE NUCLEAR ENERGY

Ultrasonic Calibration and Examination Record RPV Components

Site/Unit: Quad Cities / 1

Data Report Number: Q1R18-024

Linearity Sheet: Lin-009

Outage: Q1R18

Data Sheet Number: UT-087

Beam Spread: N/A

Procedure: GE-UT-300

Rev.: V8

DRR: N/A

Calibration Block: 99978AQC

CS 251" 7.0"
Material Size Thickness
Initial Cal: 15:40 Exam Start: 16:10
Cal Check: N/A Exam End: 17:05
Cal Check: N/A Ultracal II 02125
Final Cal: 18:20 Couplant: Batch
245046 85° F 88° F
Thermometer Initial Cal Temp. Final Cal Temp.

DAC Construction

Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
1/4	=	1X	=	=	=	=
1/2	=	1X	=	=	=	=
3/4	=	1X	=	=	=	=
ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.17</u>	<u>7.029</u>	<u>7.0</u>
5/4	=	1X	=	=	=	=

DAC 1X= 71.3

Sweep 0-10 10.0" Depth

Note N/A dB difference between 3/8 and 5/8 Vee

Search Unit Data

Sigma 22BC-03006 2(1.1X.62)/Rect.
Manufacturer: Serial Number: Size / Shape:
.65" 60° 60°
Incident Point: Nominal Angle: Measured Angle:
3.0 MHz SDC3 Long
Frequency: Model: Mode:

Search Unit Cable

RG-174 12' 0
Cable Type: Length: Connectors:

Instrument Settings

Panametrics / Epoch 4 031572811
Manufacturer/Model: Serial Number:
16.05 us 0.2528 in./usec. 0.8 - 3.0 MHz
Delay/Zero: Velocity: Narrowband Filter:
Auto Fullwave 20.0 in. Sq. / Med
Rep Rate: Rectification: Range: Pulsar:
400 Ohms 0% 3.03 MHz Dual
Damping: Reject: Frequency: Mode:
Off: Off: Off: Off:
DAC: TVG: CSC: DGS:

Exam Data for Weld: N2D NOZ

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

OD 96° F
Exam Surface: Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
<u>Plate</u>	<u>I</u>	<u>71.3</u>	<u>NRI</u>	<u>60°</u>
<u>Plate CW/CCW</u>	<u>P</u>	<u>71.3</u>	<u>NRI</u>	<u>60°</u>

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	=	=	=
Amplitude	=	=	=
Gain (dB)	=	=	=
Sweep (SD)	=	=	=

Acceptable Linearity performed : 3/10/2005

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "-" = N/A

Calibration for full volume examination. Exams performed to maintain a 10-20% FSH clad roll.

Shane Gauthier II 4/4/2005
Initials: Examiner Level Cal/Exam Date:
N/A N/A
Initials: Examiner Level
CD III 4/6/05
GE Reviewed By: Level: Date:

David H. Chitt 4/8/05
Utility Reviewed By: Date:
Joe Hault HSB-CT 4/12/05
ANII Reviewed By: Date:

Quad Cities, Unit-1

**Quad Cities, Unit-1
N2D - Recirc Inlet Nozzle
Q1R18 - 2005**

		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
Weld Length = 360. Exam Volume = 82.5		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° NS T-Scan	A	29.8	2.5	3.0%	360.0	1.5%
60° FV T-Scan	A	43.3	31.2	37.8%	360.0	18.9%
60° S4 T-Scan	A	9.4	9.4	11.4%	360.0	5.7%
60° NS P-Scan	A	29.8	1.9	2.3%	360.0	1.2%
60° FV P-Scan	A	43.3	16.6	20.1%	360.0	10.1%
60° S4 IRS-Scan	A	9.4	9.4	11.4%	360.0	5.7%
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						

% Total Composite Coverage = 43%

Comments: A - Examined 360° length. Scanning limited due to nozzle configuration.
Weld length in degrees. IRS examination coverage determined by modeling.

Note - Rounding methods may make calculated values appear in error.

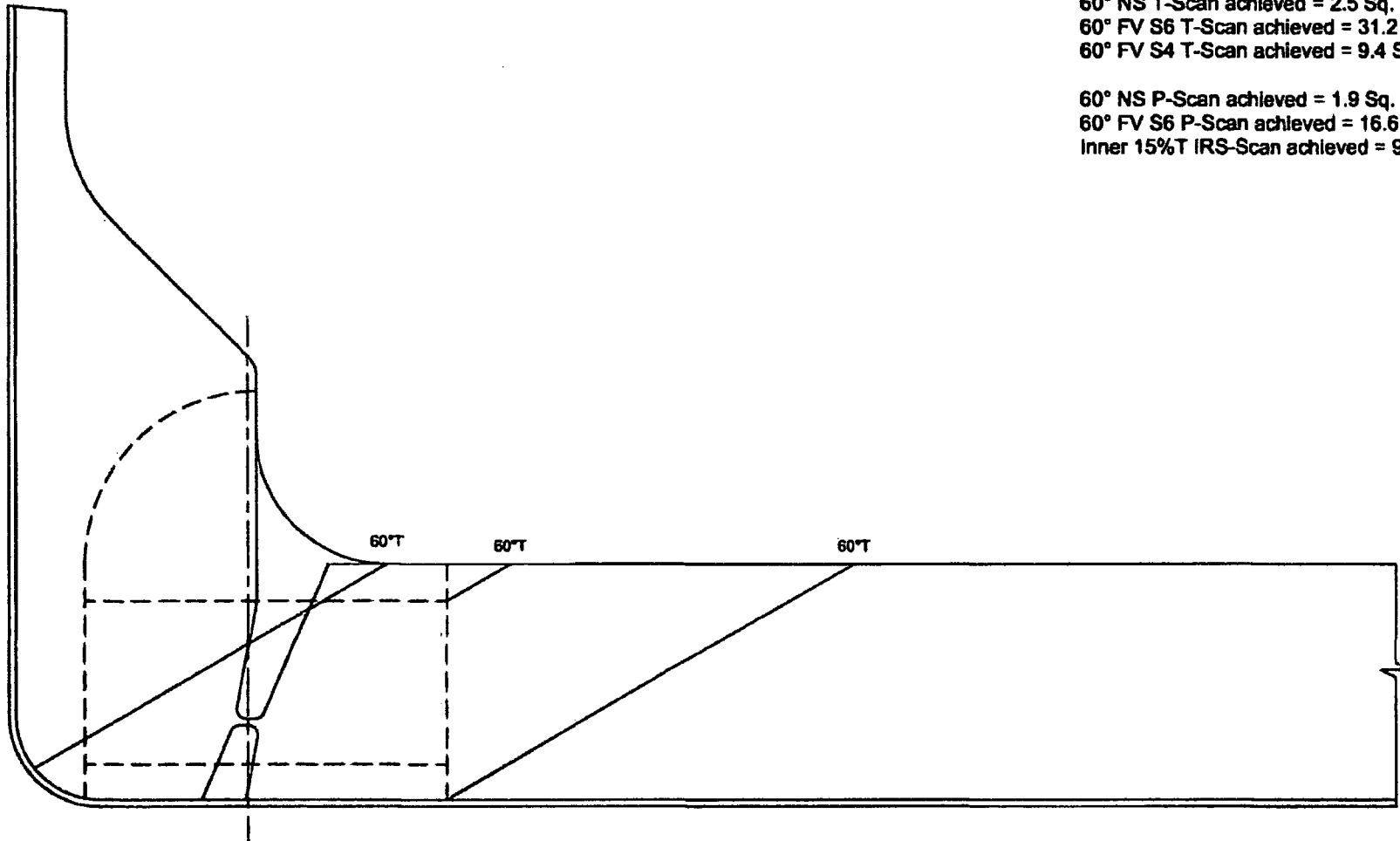
Page 5 of 8

Quad Cities Unit-1 N2 - Recirc Inlet

60° NS Exam Volume = 29.8 Sq. In.
60° FV S6 Exam Volume = 43.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 9.4 Sq. In.

60° NS T-Scan achieved = 2.5 Sq. In.
60° FV S6 T-Scan achieved = 31.2 Sq. In.
60° FV S4 T-Scan achieved = 9.4 Sq. In.

60° NS P-Scan achieved = 1.9 Sq. In.
60° FV S6 P-Scan achieved = 16.6 Sq. In.
Inner 15%T IRS-Scan achieved = 9.4 Sq. In. (By modeling.)

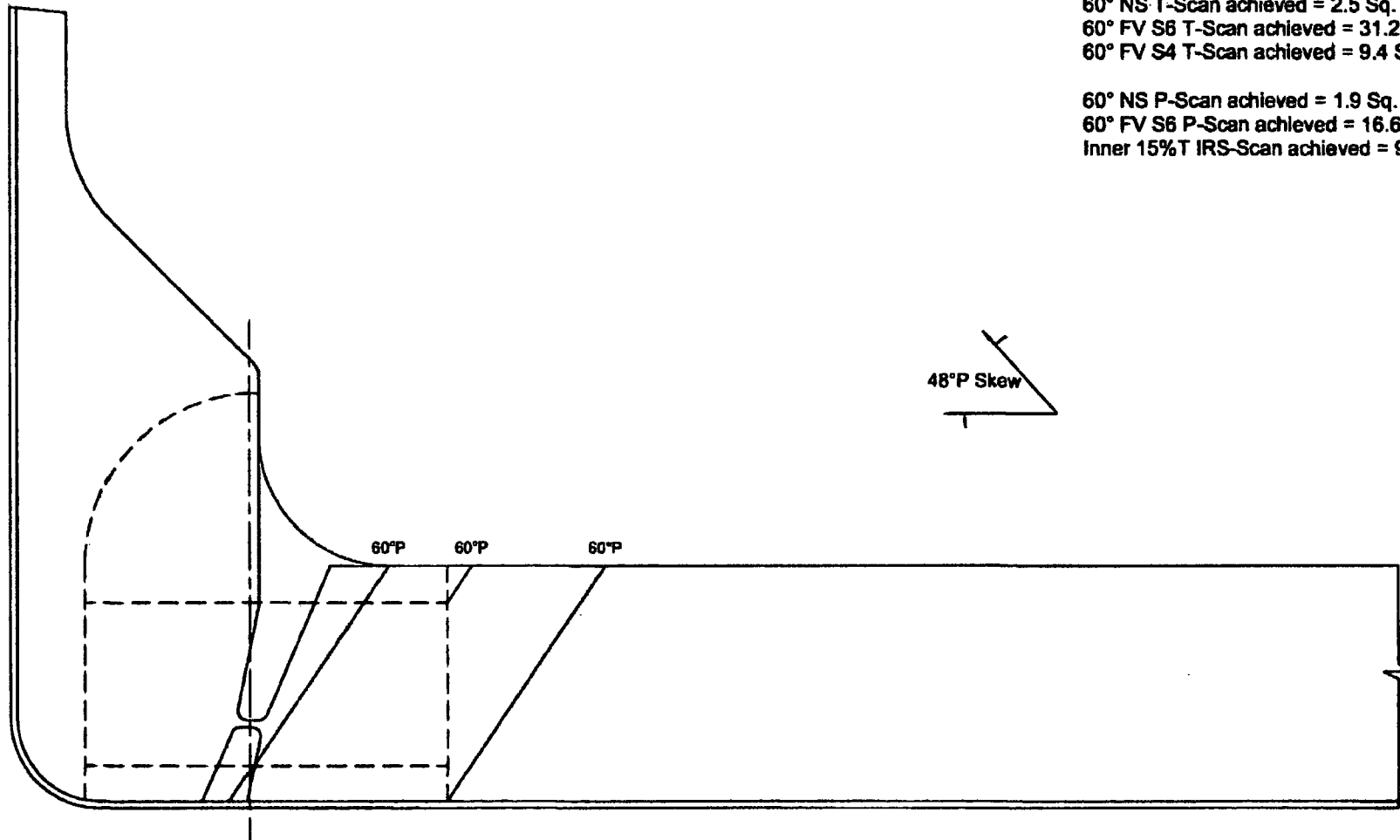


Quad Cities Unit-1 N2 - Recirc Inlet

60° NS Exam Volume = 29.8 Sq. In.
60° FV S6 Exam Volume = 43.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 9.4 Sq. In.

60° NS T-Scan achieved = 2.5 Sq. In.
60° FV S6 T-Scan achieved = 31.2 Sq. In.
60° FV S4 T-Scan achieved = 9.4 Sq. In.

60° NS P-Scan achieved = 1.9 Sq. In.
60° FV S6 P-Scan achieved = 16.6 Sq. In.
Inner 15%T IRS-Scan achieved = 9.4 Sq. In. (By modeling.)



Nir_PDI Qc1_Rev1.XLS

MANUAL / GERIS DETECTION NOZZLE INNER RADIUS AND BORE INSPECTION REQUIREMENTS								
PLANT		Quad 1						
PREPARED BY		S.C. MORTENSON				DATE		
						02/22/05		
NOZZLE EXAM ZONE	SCAN SURFACE	SCAN AREA	BEAM ANGLE	OFFSET	ROTATION ANGLE	WEDGE RADIUS	MAX MP	FREQ
RECIRC OUTLET								
N/V Weld (M)	PLATE	0 - 4.5"	60.0°	-	±40° - 80°	FLAT	14.0"	1 MHz
N/V Weld (M)	PLATE	0 - 4.0"	70.0°	-	±40° - 75°	FLAT	25.3"	1 MHz
Zone 1 (M)	ODBR	20° - 45°	35.0°	-	90.0°	5.5"	20.7"	1 MHz
Zone 2a (M)	ODBR	45° - 90°	60.0°	-	35.0°	5.5"	20.4"	1 MHz
RECIRC INLET								
N/V Weld (M)	PLATE	0 - 5.5"	60.0°	-	± 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 9.0"	70.0°	-	± 30°	FLAT	24.4"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	67.5°	-	18.1°	3.3"	12.0"	1 MHz
MAIN STEAM								
N/V Weld (M)	PLATE	0 - 4.0"	60.0°	-	± 25° - 70°	FLAT	14.0"	1 MHz
N/V Weld/Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 48°	FLAT	25.3"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	68.4°	-	24.1°	4.0"	16.3"	1 MHz
CORE SPRAY								
N/V Weld/Zone 1 (M)	PLATE	0 - 7.0"	60.0°	-	± 55°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 25°	FLAT	19.6"	1 MHz
Zone 2A (M)	ODBR	55° - 90°	66.3°	-	16.7°	3.1"	10.6"	1 MHz
JET PUMP INSTRUMENT								
N/V Weld (M)	PLATE	0 - 8.0"	45.0°	-	± 20° - 80°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 7.5"	60.0°	-	± 20°	FLAT	13.9"	1 MHz
Zone 2A (M)	PLATE	0 - 14.0"	70.0°	-	± 25°	FLAT	17.2"	1 MHz
Zone 2A (M)	PLATE	0 - 6.0"	80.0°	-	± 20°	FLAT	9.0"	1 MHz
SBLC N10								
N/V Weld (M)	PLATE	4.5" - 9.0"	45.0°	-	± 17° - 51°	FLAT	9.1"	1 MHz

W-021, W-022
W-023, W-024

W-025, W-028

W-039

W-031, W-032

NOTES: (M) MANUAL
XX.X° (XX.X°) WEDGE / (FIXTURE) ROTATION ANGLE

Questions on this NIR requirements sheet shall be directed to S.C. Mortenson @ (704) 948-0253

GE NUCLEAR ENERGY		EXAMINATION SUMMARY SHEET			Report No.: Q1R18-026	
Site: <u>Quad Cities</u>		Component ID: <u>N2E NOZ</u>				
Outage: <u>Q1R18</u>		<u>VESSEL-NOZZLE (RECIRCULATION)</u>				
System: <u>RPV</u>	ASME Cat.: <u>B-D</u>	ASME Item: <u>B3.90</u>	Aug Requirements: <u>N/A</u>			

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° Shear	UT-136	N/A	GE-UT-311	99978AQC	Jack Reisewitz	II	4/6/2005
60° Long.	UT-139	N/A	GE-UT-300	99978AQC	Scott Erickson	II	4/6/2005
60° Long.	UT-140	N/A	GE-UT-300	CAL-IIW2-033	Scott Erickson	II	4/6/2005

Examination Results:

Ultrasonic examination results were acceptable to the requirements of ASME B&PV Code, Section XI, 1995 Edition with 1996 Addenda as modified by the PDI program description and the Federal Register, Part II, Nuclear Regulatory Commission, 10CFR Part 50 for Category B-D Reactor Vessel (RPV) Assembly Welds.

Manual transverse and parallel scans were performed in accordance with procedure GE-UT-300 V8 using 60 RL° search units.

Scanning of the inner 15% T volume for radial flaws was performed in accordance with procedure GE-UT-311 V10 using shear wave search units as specified by the "Nozzle Inner Radius and Bore Requirements" sheet, which has been verified by modeling.

No indications were recorded.

Coverage = 43%.

Examination results were compared to data report R-232 from 1998 outage with ☒ No Change

These examinations were performed under Work Order: 070174 ☐ Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel:

 Prepared By:	 Level:	4/7/5 Date:	 Utility Review:	4/8/05 Date:	RWP: 10005546 Dose: 306 mR
					Page 1 of 8

GE NUCLEAR ENERGY		Ultrasonic Calibration and Examination Record Inner Radius Examinations																																																																																																														
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>Q1R18</u> Procedure: <u>GE-UT-311</u>		Data Report Number: <u>Q1R18-026</u> Linearity Sheet: <u>Lin-014</u> Data Sheet Number: <u>UT-136</u> Rev: <u>V10</u> DRR: <u>N/A</u>																																																																																																														
Calibration Data for Block: <u>99978AQC</u> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>CSCI</u></td> <td style="text-align: center;"><u>251"</u></td> <td style="text-align: center;"><u>7.0"</u></td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>21:20</u></td> <td></td> <td>Exam Start: <u>12:30</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>1:32</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultragel II</u></td> <td style="text-align: center;"><u>02125</u></td> </tr> <tr> <td>Final Cal: <u>01:43</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>241894</u></td> <td style="text-align: center;"><u>76° F</u></td> <td style="text-align: center;"><u>74° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp:</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Side</th> <th>Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID</td> <td><u>7.0"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>12.1</u></td> <td><u>13.8</u></td> <td><u>7.9</u></td> </tr> <tr> <td>~</td> <td>~</td> <td>1X</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> </table> DAC @ 1X <u>46.0</u> Sweep 0-10 <u>17.5"</u> <u>Metal Path</u> Acceptable Linearity performed : <u>3/31/2005</u>		<u>CSCI</u>	<u>251"</u>	<u>7.0"</u>	Material	Size	Thickness	Initial Cal: <u>21:20</u>		Exam Start: <u>12:30</u>	Cal Check: <u>N/A</u>		Exam End: <u>1:32</u>	Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>02125</u>	Final Cal: <u>01:43</u>	Couplant:	Batch	<u>241894</u>	<u>76° F</u>	<u>74° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp:	Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.1</u>	<u>13.8</u>	<u>7.9</u>	~	~	1X	~	~	~	~	Search Unit Data <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>KBA</u></td> <td style="text-align: center;"><u>010HWX</u></td> <td style="text-align: center;"><u>0.5"x1.0" / Rect</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer:</td> <td style="text-align: center;">Serial No.:</td> <td style="text-align: center;">Size/Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.75 in.</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td style="text-align: center;">Incident Point:</td> <td style="text-align: center;">Nominal Angle:</td> <td style="text-align: center;">Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>1.0 MHz</u></td> <td style="text-align: center;"><u>113-891-600</u></td> <td style="text-align: center;"><u>Shear</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Model:</td> <td style="text-align: center;">Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>12'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td style="text-align: center;">Cable Type:</td> <td style="text-align: center;">Length:</td> <td style="text-align: center;">Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>Panametrics / EPOCH 4</u></td> <td style="text-align: center;"><u>031574211</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer/Model:</td> <td style="text-align: center;">Serial No.:</td> </tr> <tr> <td style="text-align: center;"><u>15.23 µs</u></td> <td style="text-align: center;"><u>0.1265 in / µsec</u></td> </tr> <tr> <td style="text-align: center;">Zero:</td> <td style="text-align: center;">Velocity:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> </tr> <tr> <td style="text-align: center;">Rep Rate:</td> <td style="text-align: center;">Rectification:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> </tr> <tr> <td style="text-align: center;">Damping:</td> <td style="text-align: center;">Reject:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">CSC:</td> <td style="text-align: center;">DGS:</td> </tr> </table> Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>		<u>KBA</u>	<u>010HWX</u>	<u>0.5"x1.0" / Rect</u>	Manufacturer:	Serial No.:	Size/Shape:	<u>0.75 in.</u>	<u>60°</u>	<u>60°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>1.0 MHz</u>	<u>113-891-600</u>	<u>Shear</u>	Frequency:	Model:	Mode:	<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:	<u>Panametrics / EPOCH 4</u>	<u>031574211</u>	Manufacturer/Model:	Serial No.:	<u>15.23 µs</u>	<u>0.1265 in / µsec</u>	Zero:	Velocity:	<u>Auto</u>	<u>Fullwave</u>	Rep Rate:	Rectification:	<u>400 Ohms</u>	<u>0%</u>	Damping:	Reject:	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	<u>Off:</u>	<u>Off:</u>	CSC:	DGS:	Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>CSCI</u>	<u>251"</u>	<u>7.0"</u>																																																																																																														
Material	Size	Thickness																																																																																																														
Initial Cal: <u>21:20</u>		Exam Start: <u>12:30</u>																																																																																																														
Cal Check: <u>N/A</u>		Exam End: <u>1:32</u>																																																																																																														
Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>02125</u>																																																																																																														
Final Cal: <u>01:43</u>	Couplant:	Batch																																																																																																														
<u>241894</u>	<u>76° F</u>	<u>74° F</u>																																																																																																														
Thermometer	Initial Cal Temp.	Final Cal Temp:																																																																																																														
Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																										
ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.1</u>	<u>13.8</u>	<u>7.9</u>																																																																																																										
~	~	1X	~	~	~	~																																																																																																										
<u>KBA</u>	<u>010HWX</u>	<u>0.5"x1.0" / Rect</u>																																																																																																														
Manufacturer:	Serial No.:	Size/Shape:																																																																																																														
<u>0.75 in.</u>	<u>60°</u>	<u>60°</u>																																																																																																														
Incident Point:	Nominal Angle:	Measured Angle:																																																																																																														
<u>1.0 MHz</u>	<u>113-891-600</u>	<u>Shear</u>																																																																																																														
Frequency:	Model:	Mode:																																																																																																														
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																																																																														
Cable Type:	Length:	Connectors:																																																																																																														
<u>Panametrics / EPOCH 4</u>	<u>031574211</u>																																																																																																															
Manufacturer/Model:	Serial No.:																																																																																																															
<u>15.23 µs</u>	<u>0.1265 in / µsec</u>																																																																																																															
Zero:	Velocity:																																																																																																															
<u>Auto</u>	<u>Fullwave</u>																																																																																																															
Rep Rate:	Rectification:																																																																																																															
<u>400 Ohms</u>	<u>0%</u>																																																																																																															
Damping:	Reject:																																																																																																															
<u>Off:</u>	<u>Off:</u>																																																																																																															
DAC:	TVG:																																																																																																															
<u>Off:</u>	<u>Off:</u>																																																																																																															
CSC:	DGS:																																																																																																															
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																													
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																													
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																													
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																													
Exam Data for Component: <u>N2E NOZ</u> <u>VESSEL-NOZZLE</u> Configuration: <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>PLATE</u></td> <td style="text-align: center;"><u>96° F</u></td> </tr> <tr> <td style="text-align: center;">Exam Surface:</td> <td style="text-align: center;">Component Temp.</td> </tr> </table> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;">Examination Area</td> <td style="text-align: center;">Exam Angle</td> <td style="text-align: center;">Rotation Angle</td> <td style="text-align: center;">Wedge S/N</td> <td style="text-align: center;">Scan dB</td> <td style="text-align: center;">Recordable Indications</td> </tr> <tr> <td style="text-align: center;"><u>0"-5.5"</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>± 60°</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>64</u></td> <td style="text-align: center;"><u>NRI</u></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>				<u>PLATE</u>	<u>96° F</u>	Exam Surface:	Component Temp.	Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications	<u>0"-5.5"</u>	<u>60°</u>	<u>± 60°</u>	<u>N/A</u>	<u>64</u>	<u>NRI</u>																																																																																													
<u>PLATE</u>	<u>96° F</u>																																																																																																															
Exam Surface:	Component Temp.																																																																																																															
Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications																																																																																																											
<u>0"-5.5"</u>	<u>60°</u>	<u>± 60°</u>	<u>N/A</u>	<u>64</u>	<u>NRI</u>																																																																																																											
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "~" = N/A Calibration for nozzle to vessel weld. Exams performed to maintain a 20 - 30% FSH clad roll. Scanned CW and CCW.																																																																																																																
<table style="width:100%; border: none;"> <tr> <td style="width:25%; vertical-align: top;"> <u>JAR</u> <u>Jack Reisewitz</u> Initials: Examiner: </td> <td style="width:10%; vertical-align: top;"> <u>II</u> Level: </td> <td style="width:20%; vertical-align: top;"> <u>04/06/05</u> Cal/Exam Date: </td> <td style="width:25%; vertical-align: top;"> Utility Reviewed By: </td> <td style="width:20%; vertical-align: top;"> <u>4/8/05</u> Date: </td> </tr> <tr> <td style="vertical-align: top;"> GE Reviewed By: </td> <td style="vertical-align: top;"> <u>III</u> Level: </td> <td style="vertical-align: top;"> <u>4/12/05</u> Date: </td> <td style="vertical-align: top;"> ANII Reviewed By: </td> <td style="vertical-align: top;"> <u>4/12/05</u> Date: </td> </tr> </table>				<u>JAR</u> <u>Jack Reisewitz</u> Initials: Examiner:	<u>II</u> Level:	<u>04/06/05</u> Cal/Exam Date:	 Utility Reviewed By:	<u>4/8/05</u> Date:	 GE Reviewed By:	<u>III</u> Level:	<u>4/12/05</u> Date:	 ANII Reviewed By:	<u>4/12/05</u> Date:																																																																																																			
<u>JAR</u> <u>Jack Reisewitz</u> Initials: Examiner:	<u>II</u> Level:	<u>04/06/05</u> Cal/Exam Date:	 Utility Reviewed By:	<u>4/8/05</u> Date:																																																																																																												
 GE Reviewed By:	<u>III</u> Level:	<u>4/12/05</u> Date:	 ANII Reviewed By:	<u>4/12/05</u> Date:																																																																																																												



GE NUCLEAR ENERGY

Ultrasonic Calibration and Examination Record RPV Components

Site/Unit: Quad Cities/ 1

Data Report Number: Q1R18-026

Linearity Sheet: Lin-017

Outage: Q1R18

Data Sheet Number: UT-139

Beam Spread: N/A

Procedure: GE-UT-300

Rev.: V8

DRR: N/A

Calibration Block: 99978AQC

CSCI 251" 7.0"
Material Size Thickness

Initial Cal: 21:35 Exam Start: 21:55
Cal Check: N/A Exam End: 22:50
Cal Check: N/A Ultracel II 02125
Final Cal: 23:06 Couplant: Batch

245046 78° F 78° F
Thermometer Initial Cal Temp. Final Cal Temp.

DAC Construction

Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
1/4	≈	1X	≈	≈	≈	≈
1/2	≈	1X	≈	≈	≈	≈
3/4	≈	1X	≈	≈	≈	≈
ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.5</u>	<u>7.1</u>	<u>7.2</u>
5/4	≈	1X	≈	≈	≈	≈

DAC 1X= 68.6

Sweep 0-10 10.0" Depth

Note N/A dB difference between 3/8 and 5/8 Vee

Search Unit Data

Sigma 22BC-02002 2(1.1x.62)/Rect.
Manufacturer: Serial Number: Size / Shape:

.65" 60° 60°
Incident Point: Nominal Angle: Measured Angle:

3.0 MHz SDC3 Long.
Frequency: Model: Mode:

Search Unit Cable

RG-174 12' 0
Cable Type: Length: Connectors:

Instrument Settings

Panametrics/ Epoch 4 031539506
Manufacturer/Model: Serial Number:

7.5 us 0.2184 in./usec. 0.8 - 3.0 MHz
Delay/Zero: Velocity: Narrowband Filter:

Auto Fullwave 20.0 in. Sq. / Med
Rep Rate: Rectification: Range: Pulsar:

400 Ohms 0% 3.03 MHz Dual
Damping: Reject: Frequency: Mode:

Off: Off: Off: Off:
DAC: TVG: CSC: DGS:

Exam Data for Weld: N2E NOZ

NOZZLE TO SHELL

Configuration:

OD 98° F
Exam Surface: Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
<u>Plate</u>	<u>I</u>	<u>70.6</u>	<u>NRI</u>	<u>60°</u>
<u>Plate CW/CCW</u>	<u>P</u>	<u>70.6</u>	<u>NRI</u>	<u>60°</u>

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	≈	≈	≈
Amplitude	≈	≈	≈
Gain (dB)	≈	≈	≈
Sweep (SD)	≈	≈	≈

Acceptable Linearity performed : 3/31/2005

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "-" = N/A
Calibration for full volume examination. Exams performed to maintain a 10-20% FSH clad roll.

SRE Scott Erickson II 4/6/2005
Initials: Examiner Level Cal/Exam Date:

N/A N/A
Initials: Examiner Level

CD GE 4/7/05
GE Reviewed By: Level: Date:

Don A. Chitt 4/8/05
Utility Reviewed By: Date:

Jim Spert HSS-CT 4/12/05
ANII Reviewed By: Date:

GE NUCLEAR ENERGY		Ultrasonic Calibration and Examination Record RPV Components																																																	
Site/Unit: <u>Quad Cities/ 1</u> Outage: <u>Q1R18</u> Procedure: <u>GE-UT-300</u>		Data Report Number: <u>Q1R18-026</u> Data Sheet Number: <u>UT-140</u> Rev.: <u>V8</u>																																																	
		Linearity Sheet: <u>Lin-017</u> Beam Spread: <u>N/A</u> DRR: <u>N/A</u>																																																	
Calibration Block: <u>CAL-IIW2-033</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>4.0"</u></td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>21:38</u></td> <td></td> <td>Exam Start: <u>21:55</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>22:50</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td><u>Ultracal II</u></td> <td><u>02125</u></td> </tr> <tr> <td>Final Cal: <u>23:05</u></td> <td>Couplant:</td> <td>Batch</td> </tr> <tr> <td><u>245046</u></td> <td><u>78° F</u></td> <td><u>78° F</u></td> </tr> <tr> <td>Thermometer</td> <td>Initial Cal Temp.</td> <td>Final Cal Temp.</td> </tr> </table>		<u>CS</u>	<u>N/A</u>	<u>4.0"</u>	Material	Size	Thickness	Initial Cal: <u>21:38</u>		Exam Start: <u>21:55</u>	Cal Check: <u>N/A</u>		Exam End: <u>22:50</u>	Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>02125</u>	Final Cal: <u>23:05</u>	Couplant:	Batch	<u>245046</u>	<u>78° F</u>	<u>78° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Search Unit Data <table style="width:100%;"> <tr> <td><u>Sigma</u></td> <td><u>22BC-02002</u></td> <td><u>2(1.1x.62)/Rect.</u></td> </tr> <tr> <td>Manufacturer:</td> <td>Serial Number:</td> <td>Size / Shape:</td> </tr> <tr> <td><u>.65"</u></td> <td><u>60°</u></td> <td><u>60°</u></td> </tr> <tr> <td>Incident Point:</td> <td>Nominal Angle:</td> <td>Measured Angle:</td> </tr> <tr> <td><u>3.0 MHz</u></td> <td><u>SDC3</u></td> <td><u>Long</u></td> </tr> <tr> <td>Frequency:</td> <td>Model:</td> <td>Mode:</td> </tr> </table>		<u>Sigma</u>	<u>22BC-02002</u>	<u>2(1.1x.62)/Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>.65"</u>	<u>60°</u>	<u>60°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>	Frequency:	Model:	Mode:						
<u>CS</u>	<u>N/A</u>	<u>4.0"</u>																																																	
Material	Size	Thickness																																																	
Initial Cal: <u>21:38</u>		Exam Start: <u>21:55</u>																																																	
Cal Check: <u>N/A</u>		Exam End: <u>22:50</u>																																																	
Cal Check: <u>N/A</u>	<u>Ultracal II</u>	<u>02125</u>																																																	
Final Cal: <u>23:05</u>	Couplant:	Batch																																																	
<u>245046</u>	<u>78° F</u>	<u>78° F</u>																																																	
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																	
<u>Sigma</u>	<u>22BC-02002</u>	<u>2(1.1x.62)/Rect.</u>																																																	
Manufacturer:	Serial Number:	Size / Shape:																																																	
<u>.65"</u>	<u>60°</u>	<u>60°</u>																																																	
Incident Point:	Nominal Angle:	Measured Angle:																																																	
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>																																																	
Frequency:	Model:	Mode:																																																	
DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Hole "I"</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> </thead> <tbody> <tr> <td>1/4</td> <td><u>0.6"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>1.2</u></td> <td><u>0.60</u></td> <td><u>3.0</u></td> </tr> <tr> <td>1/2</td> <td>"</td> <td>1X</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> </tr> <tr> <td>3/4</td> <td>"</td> <td>1X</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> </tr> <tr> <td>ID</td> <td>"</td> <td>1X</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> </tr> <tr> <td>5/4</td> <td>"</td> <td>1X</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> </tr> </tbody> </table> DAC 1X= <u>55.7</u> Sweep 0-10 <u>2.0"</u> <u>Depth</u> Note <u>N/A</u> dB difference between 3/8 and 5/8 Vee		Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	1/4	<u>0.6"</u>	1X	<u>80%</u>	<u>1.2</u>	<u>0.60</u>	<u>3.0</u>	1/2	"	1X	"	"	"	"	3/4	"	1X	"	"	"	"	ID	"	1X	"	"	"	"	5/4	"	1X	"	"	"	"	Search Unit Cable <table style="width:100%;"> <tr> <td><u>RG-174</u></td> <td><u>12'</u></td> <td><u>0</u></td> </tr> <tr> <td>Cable Type:</td> <td>Length:</td> <td>Connectors:</td> </tr> </table>		<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:
Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																													
1/4	<u>0.6"</u>	1X	<u>80%</u>	<u>1.2</u>	<u>0.60</u>	<u>3.0</u>																																													
1/2	"	1X	"	"	"	"																																													
3/4	"	1X	"	"	"	"																																													
ID	"	1X	"	"	"	"																																													
5/4	"	1X	"	"	"	"																																													
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																	
Cable Type:	Length:	Connectors:																																																	
Exam Data for Weld: <u>N2E NOZ</u> <u>NOZZLE TO SHELL</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD</u></td> <td style="text-align: center;"><u>98° F</u></td> </tr> <tr> <td>Exam Surface:</td> <td>Component Temperature</td> </tr> </table>		<u>OD</u>	<u>98° F</u>	Exam Surface:	Component Temperature	Instrument Settings <table style="width:100%;"> <tr> <td><u>Panametrics/ Epoch 4</u></td> <td><u>031539506</u></td> </tr> <tr> <td>Manufacturer/Model:</td> <td>Serial Number:</td> </tr> <tr> <td><u>8.375 us</u></td> <td><u>0.2074 in./usec.</u></td> </tr> <tr> <td>Delay/Zero:</td> <td>Velocity:</td> </tr> <tr> <td><u>Auto</u></td> <td><u>Fullwave</u></td> </tr> <tr> <td>Rep Rate:</td> <td>Rectification:</td> </tr> <tr> <td><u>400 Ohms</u></td> <td><u>0%</u></td> </tr> <tr> <td>Damping:</td> <td>Reject:</td> </tr> <tr> <td><u>Off:</u></td> <td><u>Off:</u></td> </tr> <tr> <td>DAC:</td> <td>TVG:</td> </tr> <tr> <td><u>Off:</u></td> <td><u>Off:</u></td> </tr> <tr> <td>DAC:</td> <td>CSC:</td> </tr> <tr> <td><u>Off:</u></td> <td><u>Off:</u></td> </tr> <tr> <td>DAC:</td> <td>DGS:</td> </tr> </table>		<u>Panametrics/ Epoch 4</u>	<u>031539506</u>	Manufacturer/Model:	Serial Number:	<u>8.375 us</u>	<u>0.2074 in./usec.</u>	Delay/Zero:	Velocity:	<u>Auto</u>	<u>Fullwave</u>	Rep Rate:	Rectification:	<u>400 Ohms</u>	<u>0%</u>	Damping:	Reject:	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	<u>Off:</u>	<u>Off:</u>	DAC:	CSC:	<u>Off:</u>	<u>Off:</u>	DAC:	DGS:																
<u>OD</u>	<u>98° F</u>																																																		
Exam Surface:	Component Temperature																																																		
<u>Panametrics/ Epoch 4</u>	<u>031539506</u>																																																		
Manufacturer/Model:	Serial Number:																																																		
<u>8.375 us</u>	<u>0.2074 in./usec.</u>																																																		
Delay/Zero:	Velocity:																																																		
<u>Auto</u>	<u>Fullwave</u>																																																		
Rep Rate:	Rectification:																																																		
<u>400 Ohms</u>	<u>0%</u>																																																		
Damping:	Reject:																																																		
<u>Off:</u>	<u>Off:</u>																																																		
DAC:	TVG:																																																		
<u>Off:</u>	<u>Off:</u>																																																		
DAC:	CSC:																																																		
<u>Off:</u>	<u>Off:</u>																																																		
DAC:	DGS:																																																		
Weld Examination Area: <u>Plate</u> Exam Access: <u>I</u> Scan dB: <u>69.7</u> Recordable Indications: <u>NRI</u> Exam Angle: <u>60°</u>		Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td>"</td> <td>"</td> <td>"</td> </tr> <tr> <td>Amplitude</td> <td>"</td> <td>"</td> <td>"</td> </tr> <tr> <td>Gain (dB)</td> <td>"</td> <td>"</td> <td>"</td> </tr> <tr> <td>Sweep (SD)</td> <td>"</td> <td>"</td> <td>"</td> </tr> </table>		Reflector	"	"	"	Amplitude	"	"	"	Gain (dB)	"	"	"	Sweep (SD)	"	"	"																																
Reflector	"	"	"																																																
Amplitude	"	"	"																																																
Gain (dB)	"	"	"																																																
Sweep (SD)	"	"	"																																																
Weld Examination Area: <u>Plate CW/CCW</u> Exam Access: <u>P</u> Scan dB: <u>69.7</u> Recordable Indications: <u>NRI</u> Exam Angle: <u>60°</u>		Acceptable Linearity performed : <u>3/31/2005</u>																																																	
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "-" = N/A Calibration for full volume examination. Exams performed to maintain a 10-20% FSH clad roll.																																																			
<table style="width:100%;"> <tr> <td style="width:25%;"> <u>SRE</u> <u>Scott Erickson</u> Initials: Examiner <u>N/A</u> Initials: Examiner <u>CP</u> </td> <td style="width:25%;"> <u>II</u> Level <u>II</u> </td> <td style="width:25%;"> <u>4/6/2005</u> Cal/Exam Date: <u>4/6/5</u> Date: </td> <td style="width:25%;"> Utility Reviewed By: ANII Reviewed By: Date: </td> </tr> </table>				<u>SRE</u> <u>Scott Erickson</u> Initials: Examiner <u>N/A</u> Initials: Examiner <u>CP</u>	<u>II</u> Level <u>II</u>	<u>4/6/2005</u> Cal/Exam Date: <u>4/6/5</u> Date:	 Utility Reviewed By: ANII Reviewed By: Date:																																												
<u>SRE</u> <u>Scott Erickson</u> Initials: Examiner <u>N/A</u> Initials: Examiner <u>CP</u>	<u>II</u> Level <u>II</u>	<u>4/6/2005</u> Cal/Exam Date: <u>4/6/5</u> Date:	 Utility Reviewed By: ANII Reviewed By: Date:																																																
Page 4 of 8																																																			

Quad Cities, Unit-1
N2E - Recirc Inlet Nozzle
Q1R18 - 2005

Weld Length = 360. Exam Volume = 82.5		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° NS T-Scan	A	29.8	2.5	3.0%	360.0	1.5%
60° FV T-Scan	A	43.3	31.2	37.8%	360.0	18.9%
60° S4 T-Scan	A	9.4	9.4	11.4%	360.0	5.7%
60° NS P-Scan	A	29.8	1.9	2.3%	360.0	1.2%
60° FV P-Scan	A	43.3	16.6	20.1%	360.0	10.1%
60° S4 IRS-Scan	A	9.4	9.4	11.4%	360.0	5.7%
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						

% Total Composite Coverage = 43%

Comments: A - Examined 360° length. Scanning limited due to nozzle configuration.
Weld length in degrees. IRS examination coverage determined by modeling.

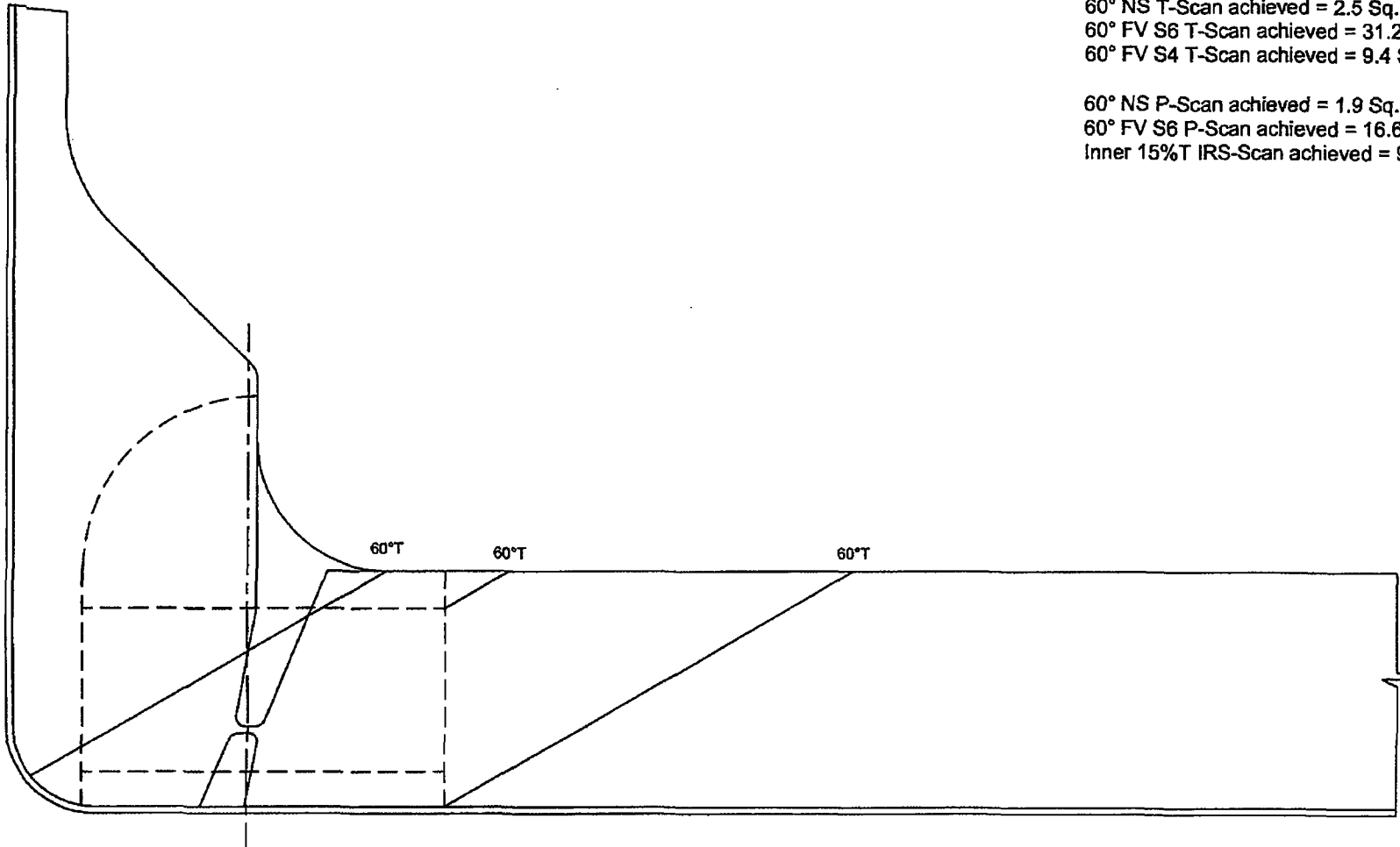
Note - Rounding methods may make calculated values appear in error.

Quad Cities Unit-1 N2 - Recirc Inlet

60° NS Exam Volume = 29.8 Sq. In.
60° FV S6 Exam Volume = 43.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 9.4 Sq. In.

60° NS T-Scan achieved = 2.5 Sq. In.
60° FV S6 T-Scan achieved = 31.2 Sq. In.
60° FV S4 T-Scan achieved = 9.4 Sq. In.

60° NS P-Scan achieved = 1.9 Sq. In.
60° FV S6 P-Scan achieved = 16.6 Sq. In.
Inner 15%T IRS-Scan achieved = 9.4 Sq. In. (By modeling.)

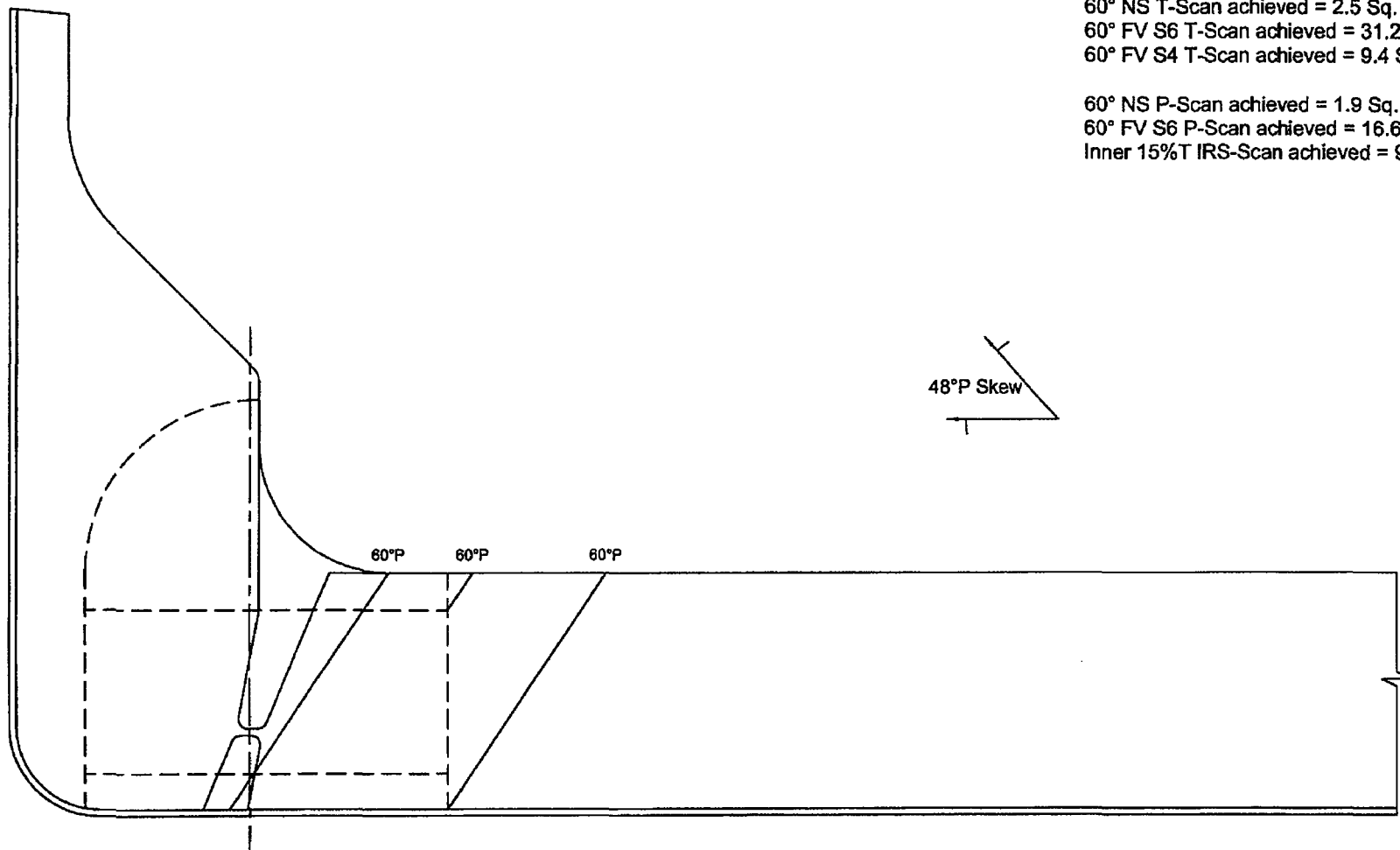


Quad Cities Unit-1 N2 - Recirc Inlet

60° NS Exam Volume = 29.8 Sq. In.
60° FV S6 Exam Volume = 43.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 9.4 Sq. In.

60° NS T-Scan achieved = 2.5 Sq. In.
60° FV S6 T-Scan achieved = 31.2 Sq. In.
60° FV S4 T-Scan achieved = 9.4 Sq. In.

60° NS P-Scan achieved = 1.9 Sq. In.
60° FV S6 P-Scan achieved = 16.6 Sq. In.
Inner 15%T IRS-Scan achieved = 9.4 Sq. In. (By modeling.)



Nir_PDI Qc1_Rev 1.XLS

MANUAL / GERIS DETECTION NOZZLE INNER RADIUS AND BORE INSPECTION REQUIREMENTS								
PLANT		Quad 1						
PREPARED BY		S.C. MORTENSON				DATE		02/22/05
NOZZLE EXAM ZONE	SCAN SURFACE	SCAN AREA	BEAM ANGLE	OFFSET	ROTATION ANGLE	WEDGE RADIUS	MAX MP	FREQ
RECIRC OUTLET								
N/V Weld (M)	PLATE	0 - 4.5"	60.0°	-	±40°- 80°	FLAT	14.0"	1 MHz
N/V Weld (M)	PLATE	0 - 4.0"	70.0°	-	±40°- 75°	FLAT	25.3"	1 MHz
Zone 1 (M)	ODBR	20° - 45°	35.0°	-	90.0°	5.5"	20.7"	1 MHz
Zone 2a (M)	ODBR	45° - 90°	60.0°	-	35.0°	5.5"	20.4"	1 MHz
RECIRC INLET								
N/V Weld (M)	PLATE	0 - 5.5"	60.0°	-	± 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 9.0"	70.0°	-	± 30°	FLAT	24.4"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	67.5°	-	18.1°	3.3"	12.0"	1 MHz
MAIN STEAM								
N/V Weld (M)	PLATE	0 - 4.0"	60.0°	-	± 25°- 70°	FLAT	14.0"	1 MHz
N/V Weld/Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 46°	FLAT	25.3"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	66.4°	-	24.1°	4.0"	16.3"	1 MHz
CORE SPRAY								
N/V Weld/Zone 1 (M)	PLATE	0 - 7.0"	60.0°	-	± 55°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 25°	FLAT	19.6"	1 MHz
Zone 2a (M)	ODBR	55° - 90°	66.3°	-	16.7°	3.1"	10.6"	1 MHz
JET PUMP INSTRUMENT								
N/V Weld (M)	PLATE	0 - 8.0"	45.0°	-	± 20°- 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 7.5"	60.0°	-	± 20°	FLAT	13.9"	1 MHz
Zone 2A (M)	PLATE	0 - 14.0"	70.0°	-	± 25°	FLAT	17.2"	1 MHz
Zone 2A (M)	PLATE	0 - 6.0"	80.0°	-	± 20°	FLAT	9.0"	1 MHz
SBLC N10								
N/V Weld (M)	PLATE	4.5" - 9.0"	45.0°	-	± 17°- 51°	FLAT	9.1"	1 MHz

W-021, W-022
W-023, W-024

W-025, W-026

W-039

W-031, W-032

NOTES:	(M)	MANUAL
	xx.x" (xx.x°)	WEDGE / (FIXTURE) ROTATION ANGLE

Questions on this NIR requirements sheet shall be directed to S.C. Mortenson @ (704) 948-0253

HITACHI		EXAMINATION SUMMARY SHEET				Report No.: Q1R21-087	
Site: <u>Quad Cities</u>		Component ID: <u>N1A NOZ</u>					
Outage: <u>RFO 21</u>		VESSEL-NOZZLE (RECIRCULATION)					
System: <u>RPV</u>		ASME Cat.: <u>B-D</u>		ASME Item <u>B3.90</u>		Aug Req <u>N/A</u>	

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Exam / Oper. Personnel	Cert Level	Date
60° Long	D-018	N/A	GE-UT-300 Ver/Rev 10	99978AQC	Jonathan Guillote	II	5/12/2011
60° Long	D-017	N/A	GE-UT-300 Ver/Rev 10	CAL-IIW2-036	Jonathan Guillote	II	5/12/2011
70° Shear	D-020	N/A	GEH-UT-311 Ver/Rev 16B	99978AQC	Jimmy Johnson	II	5/12/2011
60° Shear	D-019	N/A	GEH-UT-311 Ver/Rev 16B	99978AQC	Jonathan Guillote	II	5/12/2011

Examination Results:

During the manual ultrasonic examination of the above referenced nozzle to shell weld, no recordable indications were detected utilizing the above procedures. The inner 15% examination volume as defined by 10 CFR 50 (Supplement 7), searching for flaws oriented perpendicular to the weld axis, was performed per procedure GEH-UT-311 V16B utilizing search units validated by modeling.

Manual examinations were restricted due to the nozzle configuration.

34.2% code coverage was achieved.

This examination meets the requirements of ASME Section XI, 1995 Edition through 1996 Addenda.

Examination results were compared to Data Report <u>Q1R18-016</u> from: <u>Q1R18</u>		☐ Change
These examinations were performed under Work Order: <u>1283273</u>		☒ No Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel:				RWP: <u>10011881</u> Dose: <u>123</u> mr.	
Prepared By: <u>Scott Erickson III</u>	Level: <u>III</u>	Date: <u>05/13/11</u>	Utility Review: <u>[Signature]</u>	Date: <u>5-18-11</u>	Page <u>1</u> of <u>9</u>
ANII Review: <u>[Signature]</u>				Date: <u>5/22/11</u>	



HITACHI

**Ultrasonic Calibration and Examination Record
RPV Components - EPOCH 4**

Site/Unit: Quad Cities / 1

Data Report Number: Q1R21-087

Linearity Sheet: L-007

Outage: RFO 21

Data Sheet Number: D-018

Procedure: GE-UT-300

Rev.: 10

DRR: N/A

Calibration Block: 99978AQC

CS FLAT 7.0"
Material Size Thickness
Initial Cal: 1348 Exam Start: 1440
Cal Check: N/A Exam End: 1607
Cal Check: N/A Ultragel II 07225
Final Cal: 1717 Couplant: Batch
272757 92° F 92° F
Thermometer Initial Cal Temp. Final Cal Temp.

DAC Construction

Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
IDN	<u>7.0"</u>	1X	<u>80%</u>	<u>12.1</u>	<u>7.0</u>	<u>7.0</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

DAC 1X= 68.5

Sweep 0-10 = 10.0 Depth

Note: dB difference between 3/8 and 5/8 Vee

Exam Data for Weld: N1A NOZ

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

OD 92° F
Exam Surface: Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
<u>PLATE</u>	<u>I</u>	<u>68.5</u>	<u>NRI</u>	<u>60°</u>
<u>PLATE CW/CCW</u>	<u>P</u>	<u>68.5</u>	<u>NRI</u>	<u>60°</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Search Unit Data

Sigma 228C-09007 2 (1.1"x0.62") / Rect.
Manufacturer: Serial Number: Size / Shape:
0.65 60° 60°
Incident Point: Nominal Angle: Measured Angle:
3.0 MHz SDC-3 Long
Frequency: Model: Mode:

Search Unit Cable

RG-174 6' 0
Cable Type: Length: Connectors:

Instrument Settings

Panametrics / Epoch 4 061487310
Manufacturer/Model: Serial Number:
8.3 μs 0.231 in./μsec. 0.8 - 3.0 MHz
Delay/Zero: Velocity: Narrowband Filter:
Auto Fullwave 20.0 In. Sa. / Med
Rep Rate: Rectification: Range: Pulsar:
400 Ohms 0% 3.03 MHz DUAL
Damping: Reject: Frequency: Mode:
Off; Off; Off; Off;
DAC: TVG: CSC: DGS:

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Acceptable Linearity performed: 4/30/2011

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off.
Calibration for full volume examination.
Exams performed to maintain a 10 - 20% clad roll.

JG Jonathan Guillote II 5/12/2011
Initials: Examiner Level: Cal/Exam Date:
N/A N/A
Initials: Examiner Level: 05/13/2011
Scott R Erickson III
GE Reviewed By: Level: Date:

See Summary Sheet for Signature

Utility Reviewed By: Date:
See Summary Sheet for Signature

ANII Reviewed By: Date:



HITACHI

**Ultrasonic Calibration and Examination Record
RPV Components - EPOCH 4**

Site/Unit: Quad Cities / 1

Data Report Number: Q1R21-087

Linearity Sheet: L-007

Outage: RFO 21

Data Sheet Number: D-017

Procedure: GE-UT-300

Rev.: 10

ORR: N/A

Calibration Block: CAL-IIW2-036

<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness
Initial Cal: <u>1354</u>	Exam Start: <u>1440</u>	
Cal Check: <u>N/A</u>	Exam End: <u>1607</u>	
Cal Check: <u>N/A</u>	<u>Ultrage II</u> Couplant:	<u>07225</u> Batch
Final Cal: <u>1744</u>		
<u>272757</u> Thermometer	<u>92° F</u> Initial Cal Temp.	<u>92° F</u> Final Cal Temp.

DAC Construction

Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
SDH	<u>0.6</u>	1X	<u>80%</u>	<u>1.1</u>	<u>0.66</u>	<u>3.2</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

DAC 1X= 57.1

Sweep 0-10 = 2.0 Depth

Note: dB difference between 3/8 and 5/8 Vee

Exam Data for Weld: N1A NOZ

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

<u>OD</u> Exam Surface:	<u>92° F</u> Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
<u>PLATE</u>	<u>I</u>	<u>72.0</u>	<u>NRI</u>	<u>60°</u>
<u>PLATE CW/CCW</u>	<u>P</u>	<u>72.0</u>	<u>NRI</u>	<u>60°</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Search Unit Data

<u>Sigma</u> Manufacturer:	<u>22BC-06002</u> Serial Number:	<u>2 (1.1"x0.62") / Rect.</u> Size / Shape:
<u>0.65</u> Incident Point:	<u>60°</u> Nominal Angle:	<u>60°</u> Measured Angle:
<u>3.0 MHz</u> Frequency:	<u>SDC-3</u> Model:	<u>Long</u> Mode:

Search Unit Cable

<u>RG-174</u> Cable Type:	<u>6'</u> Length:	<u>0</u> Connectors:

Instrument Settings

<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>061487310</u> Serial Number:
<u>8.3 µs</u> Delay/Zero:	<u>0.231 in./µsec.</u> Velocity:
<u>0.8 - 3.0 MHz</u> Narrowband Filter:	
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:
<u>Off:</u> DAC:	<u>Off:</u> TVG:
<u>4.0 in.</u> Range:	<u>Sq. / Med</u> Pulser:
<u>3.03 MHz</u> Frequency:	<u>DUAL</u> Mode:
<u>Off:</u> CSC:	<u>Off:</u> DGS:

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Acceptable Linearity performed : 4/30/2011

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off.

Calibration for near surface examination.

Exams performed a minimum of 14 dB above reference.

JG Jonathan Guillote II 5/12/2011

Initials: Examiner Level: Cal/Exam Date:

N/A N/A

Scott R. Erickson III 05/13/2011

GE Reviewed By: Level: Date:

See Summary Sheet for Signature

Utility Reviewed By: Date:

See Summary Sheet for Signature

ANII Reviewed By: Date:



HITACHI

**Ultrasonic Calibration and Examination Record
Inner Radius Examinations - EPOCH 4**

Site/Unit: Quad Cities / 1

Data Report Number: Q1R21-087

Linearity Sheet: L-005

Outage: RFO 21

Data Sheet Number: D-020

Procedure: GEH-UT-311

Rev: 16B

DRR: 10-02/10-22

Calibration Data for Block: 99978AQC

<u>CS</u> Material	<u>FLAT</u> Size	<u>7.0"</u> Thickness
Initial Cal: <u>1336</u>	Exam Start: <u>1440</u>	
Cal Check: <u>N/A</u>	Exam End: <u>1607</u>	
Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>07225</u>
Final Cal: <u>1729</u>	Couplant:	Batch
<u>272757</u> Thermometer	<u>92° F</u> Initial Cal Temp.	<u>92° F</u> Final Cal Temp:

DAC Construction

Reflector	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
ID Notch	<u>7.0"</u>	1X	<u>80%</u>	<u>19.0</u>	<u>20.73</u>	<u>5.9</u>
<u>N/A</u>	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

DAC @ 1X= 46.1

Sweep 0-10 = 35.0' Metal Path

Acceptable Linearity performed : 4/28/2011

Search Unit Data

<u>KBA</u> Manufacturer:	<u>01LK55</u> Serial No.:	<u>0.50"x1.0"/Rect</u> Size/Shape:
<u>1.1 in.</u> Incident Point:	<u>70°</u> Nominal Angle:	<u>70°</u> Measured Angle:
<u>1.0 MHz</u> Frequency:	<u>113-891-600</u> Model:	<u>Shear</u> Mode:

Search Unit Cable

<u>RG-174</u> Cable Type:	<u>9'</u> Length:	<u>0</u> Connectors:

Instrument Settings

<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>031540306</u> Serial No.:
<u>16.22 μs</u> Zero:	<u>0.128 in / μsec</u> Velocity:
	<u>0.8 - 3.0 MHz</u> Narrowband Filter:
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:
	<u>35.00 in.</u> Range:
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:
	<u>1.0 MHz</u> Frequency:
<u>Off:</u> DAC:	<u>Off:</u> TVG:
	<u>Off:</u> CSC:
	<u>Off:</u> DGS:

Exam Data for Component: N1A NOZ

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

<u>PLATE</u>		<u>92° F</u>			
Exam Surface:		Component Temp.			
Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications
<u>0" - 4.0"</u>	<u>70°</u>	<u>±40°-75°</u>	<u>N/A</u>	<u>60.1</u>	<u>NRI</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off.

Exams performed to maintain a 20 - 30% FSH clad roll.
Scanned CW and CCW.
Calibration for nozzle to vessel weld (N/V).

jj Jimmy Johnson

Initials: Examiner:

II

Level:

5/12/2011

Cal/Exam Date:

See Summary Sheet for Signature

Utility Reviewed By:

Date:

Scott R Erickson

GE Reviewed By:

III

Level:

05/13/2011

Date:

See Summary Sheet for Signature

ANII Reviewed By:

Date:

**HITACHI****Ultrasonic Calibration and Examination Record
Inner Radius Examinations - EPOCH 4**Site/Unit: Quad Cities / 1Data Report Number: Q1R21-087Linearity Sheet: L-007Outage: RFO 21Data Sheet Number: D-019Procedure: GEH-UT-311Rev: 16BDRR: 10-02/10-22Calibration Data for Block: 99978AQC

<u>CS</u> Material	<u>FLAT</u> Size	<u>7.0'</u> Thickness
Initial Cal: <u>1350</u>	Exam Start: <u>1440</u>	
Cal Check: <u>N/A</u>	Exam End: <u>1607</u>	
Cal Check: <u>N/A</u>	<u>Ultragel II</u>	<u>07225</u>
Final Cal: <u>1715</u>	Couplant:	Batch
<u>272757</u> Thermometer	<u>92° F</u> Initial Cal Temp.	<u>92° F</u> Final Cal Temp.

DAC Construction

Reflector	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
ID Notch	<u>7.0'</u>	1X	<u>80%</u>	<u>12.4</u>	<u>14.3</u>	<u>7.2</u>
<u>N/A</u>	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

DAC @ 1X= 47.0Sweep 0-10 = 20.0' Metal PathAcceptable Linearity performed : 4/30/2011Search Unit Data

<u>KBA</u> Manufacturer:	<u>010HX8</u> Serial No.:	<u>0.50"x1.0"/Rect.</u> Size/Shape:
<u>0.7 in.</u> Incident Point:	<u>60°</u> Nominal Angle:	<u>60°</u> Measured Angle:
<u>1.0 MHz</u> Frequency:	<u>113-891-600</u> Model:	<u>Shear</u> Mode:

Search Unit Cable

<u>RG-174</u> Cable Type:	<u>9'</u> Length:	<u>0</u> Connectors:

Instrument Settings

<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>061487310</u> Serial No.:

<u>15.09 µs</u> Zero:	<u>0.1285 in /µsec</u> Velocity:	<u>0.8 - 3.0 MHz</u> Narrowband Filter:
<u>Auto</u> Rep Rate:	<u>Fullwave</u> Rectification:	<u>20.00 in.</u> Range:
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:	<u>1.0 MHz</u> Frequency:
<u>Off:</u> DAC:	<u>Off:</u> TVG:	<u>Off:</u> CSC:
		<u>Off:</u> DGS:

Exam Data for Component: N1A NOZVESSEL-NOZZLE (RECIRCULATION)

Configuration:

<u>OD</u> Exam Surface:	<u>92° F</u> Component Temp.				
Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications
<u>0" - 4.5"</u>	<u>60°</u>	<u>±40°-80°</u>	<u>N/A</u>	<u>61.0</u>	<u>NRI</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Calibration VerificationField Simulator Block S/N: N/A

Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off.

Exams performed to maintain a 20 - 30% FSH clad roll.
Scanned CW and CCW.
Calibration for nozzle to vessel weld (N/V).

JG Jonathan Guillote

Initials: Examiner:

II

Level:

5/12/2011

Cal/Exam Date:

See Summary Sheet for Signature

Utility Reviewed By:

Date:

Scott R. Echom

GE Reviewed By:

III

Level:

05/13/2011

Date:

See Summary Sheet for Signature

ANII Reviewed By:

Date:

Page 5 of 9

Q1R21-087



HITACHI

Reactor Pressure Vessel Coverage Calculation Sheet

Quad Cities Unit 1 / Q1R21
N1A Recirculation Outlet (Noz-Shell)
Spring / 2011

Weld Length = 360. Exam Volume = 79.2		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
		Required Exam Area Sq. In.	Area Scanned Manual	Percent of Area Manual	Weld Length Manual	Percent Manual
60° T-Scan (S4 UC)	A*	8.7	8.7	11.0%	360	5.5%
60° T-Scan (S6 FV)	A	40.3	28	35.4%	360	17.7%
60° T-Scan (S6 NS)	A	30.2	0.9	1.1%	360	0.6%
IRS P-Scan (S4 UC)	A*	8.7	8.7	11.0%	360	5.5%
60° P-Scan (S6 FV)	A	40.3	7.9	10.0%	360	5.0%
60° P-Scan (S6 NS)	A	30.2	0	0.0%	360	0.0%
60° T-Scan (S4 UC)						
60° T-Scan (S6 FV)						
60° T-Scan (S6 NS)						
IRS P-Scan (S4 UC)						
60° P-Scan (S6 FV)						
60° P-Scan (S6 NS)						
60° T-Scan (S4 UC)						
60° T-Scan (S6 FV)						
60° T-Scan (S6 NS)						
IRS P-Scan (S4 UC)						
60° P-Scan (S6 FV)						
60° P-Scan (S6 NS)						

% Total Composite Coverage = 34.2%

Rev. 0 9/23/05

Comments: A - Manual scanning was not restricted.

A* - Single side access, 50% credit of the achieved Supplement 4 T-scan volume claimed.

Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in inches or degrees.

Q121-087

Manual Detection

Nir_PDI Qc1_Rev 7.XLS

MANUAL DETECTION NOZZLE INNER RADIUS AND BORE INSPECTION REQUIREMENTS								
PLANT		Quad 1						
PREPARED BY		S.C. MORTENSON				DATE 04/07/2011		
NOZZLE EXAM ZONE	SCAN SURFACE	SCAN AREA	BEAM ANGLE	OFFSET	ROTATION ANGLE	WEDGE RADIUS	MAX MP	FREQ
RECIRC OUTLET								
N/V Weld (M)	PLATE	0 - 4.5"	80.0°	-	±40° - 80°	FLAT	14.0"	1 MHz
N/V Weld (M)	PLATE	0 - 4.0"	70.0°	-	±40° - 75°	FLAT	25.3"	1 MHz
Zone 1 (M)	ODBR	20° - 45°	35.0°	-	90.0°	5.5"	20.7"	1 MHz
Zone 2A (M)	ODBR	45° - 90°	80.0°	-	35.0°	5.5"	20.4"	1 MHz
CRD								
N/V Weld (M)	PLATE	0 - 6.5"	45°		± 20.0° - 60.0°	FLAT	9.3"	1 MHz
Zone 1 (M)	PLATE	0 - 7.5"	60.0°		± 15°	FLAT	13.9"	1 MHz
Zone 2A (M)	PLATE	0 - 11.0"	70.0°		± 15°	FLAT	17.2"	1 MHz
Zone 2A (M)	ODBR	55° - 90°	66.3°		16.7°	3.1"	3.6"	1 MHz

W-021, W-022
W-023, W-024

W-031, W-032

NOTES: (M) MANUAL
xx.x° (xx.x°) WEDGE / (FIXTURE) ROTATION ANGLE

Questions on this NIR requirements sheet shall be directed to S.C. Mortenson @ (704) 948-0253

Chris Minor

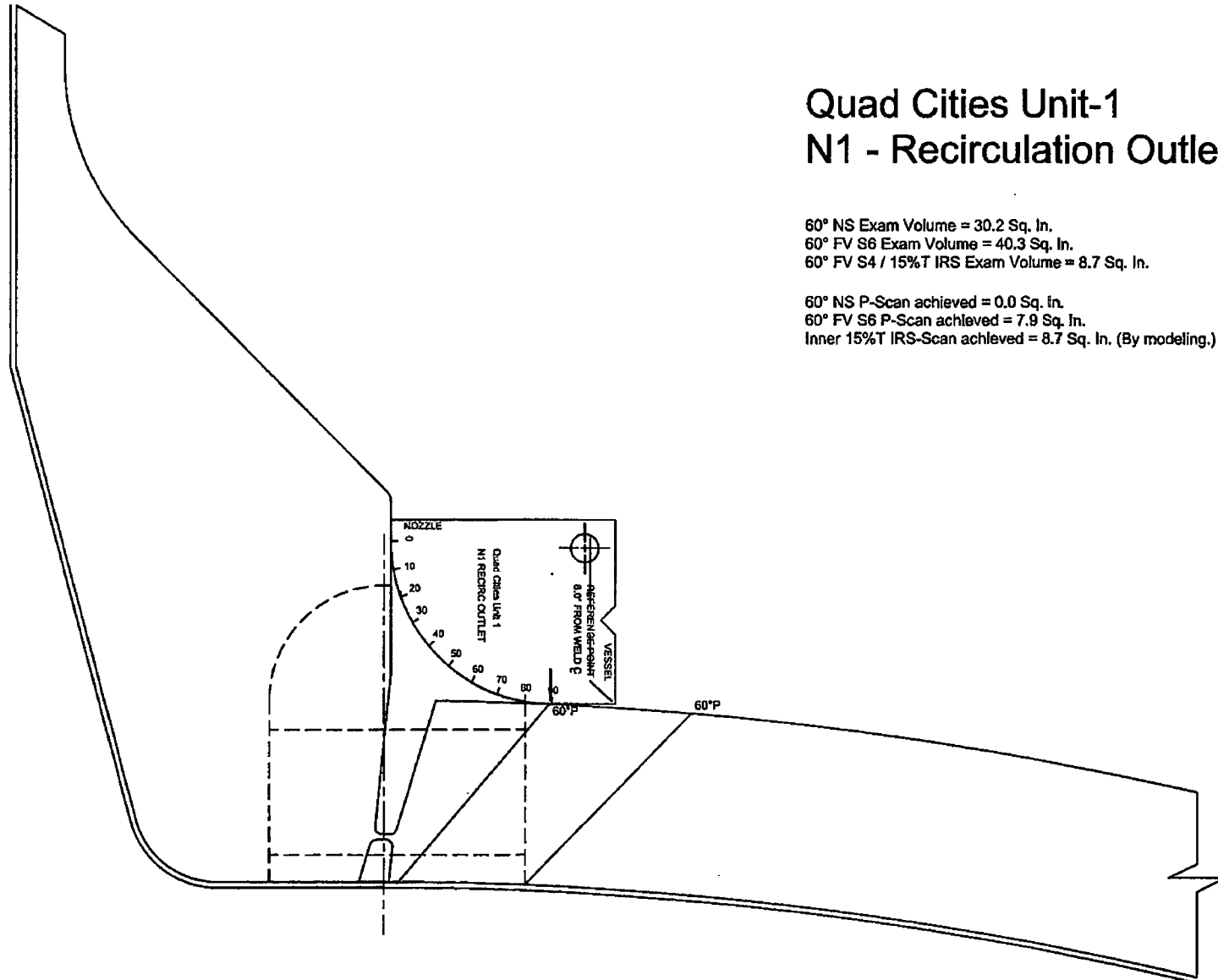
Digitally signed by Chris Minor
DN: cn=Chris Minor, o=GE Hitachi,
ou=Nuclear Energy,
email=Chris.Minor@ge.com, c=US
Date: 2011.04.14 22:16:26 -0400

SME Review / Date

R.L. MAY
4/14/11
Site Review / Date

60° NS Exam Volume = 30.2 Sq. In.
60° FV S6 Exam Volume = 40.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 8.7 Sq. In.

60° NS P-Scan achieved = 0.0 Sq. In.
60° FV S6 P-Scan achieved = 7.9 Sq. In.
Inner 15°T IRS-Scan achieved = 8.7 Sq. In. (By modeling.)



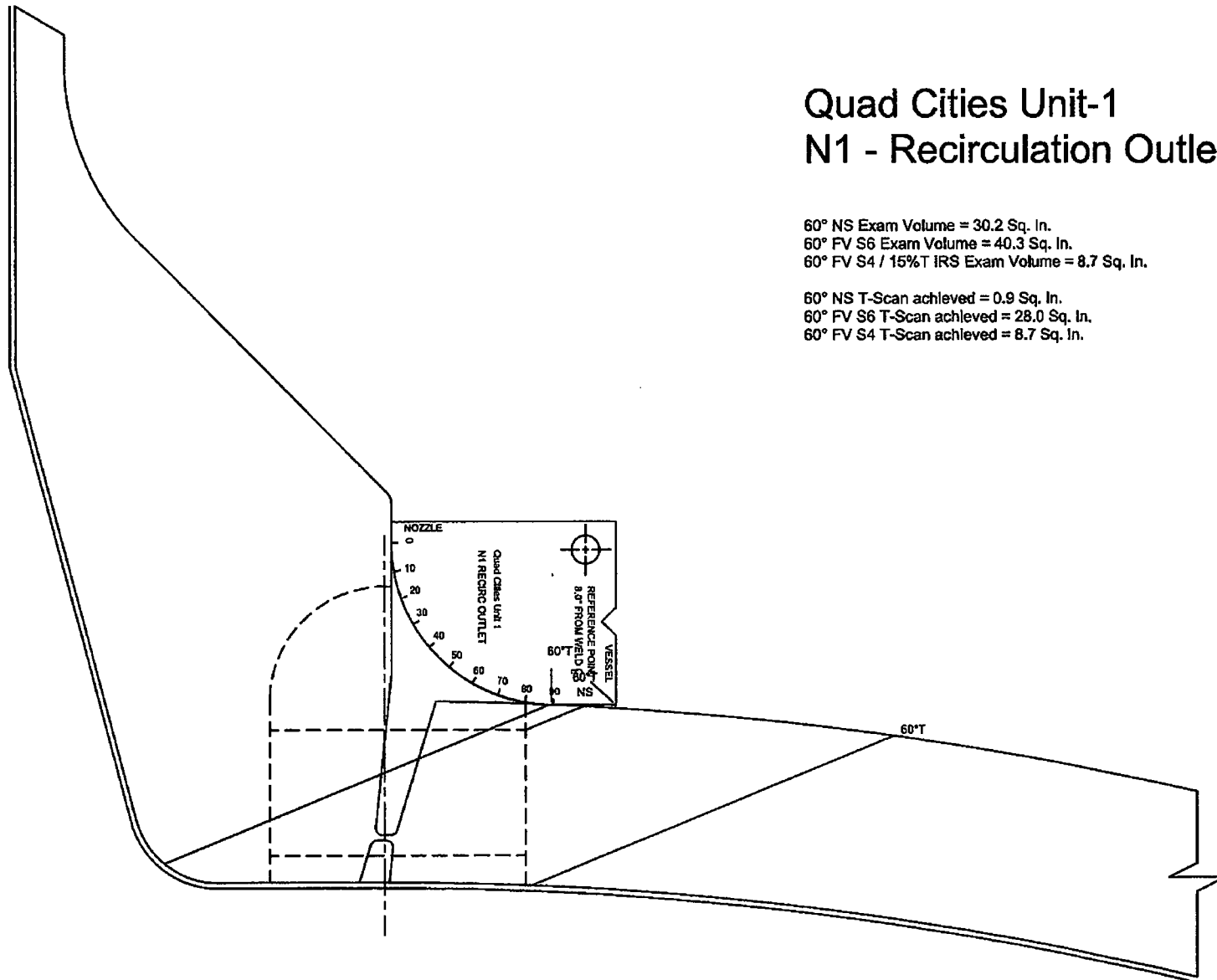
ps 8 of 9

Q1R21-687

Quad Cities Unit-1 N1 - Recirculation Outlet

60° NS Exam Volume = 30.2 Sq. In.
60° FV S6 Exam Volume = 40.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 8.7 Sq. In.

60° NS T-Scan achieved = 0.9 Sq. In.
60° FV S6 T-Scan achieved = 28.0 Sq. In.
60° FV S4 T-Scan achieved = 8.7 Sq. In.



EXAMINATION SUMMARY SHEET

Report No.:
Q1R18-016

N1A NOZ

VESSEL-NOZZLE (RECIRCULATION)

N/A

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Examination Personnel	Cert Level	Date
60° Shear	UT-121	N/A	GE-UT-311	99978AQC	J. Montgomery	II	4/4/2005
70° Shear	UT-122	N/A	GE-UT-311	99978AQC	J. Montgomery	II	4/4/2005
60° Long.	UT-066	N/A	GE-UT-300	CAL-IIW2-033	Wallace Reid	II	4/4/2005
60° Long.	UT-067	N/A	GE-UT-300	99978AQC	Wallace Reid	II	4/4/2005

ANII Review:

GE NUCLEAR ENERGY	Ultrasonic Calibration and Examination Record RPV Components																																																																																																																														
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>Q1R18</u> Procedure: <u>GE-UT-300</u>	Data Report Number: <u>Q1R18-016</u> Data Sheet Number: <u>UT-066</u> Rev.: <u>V8</u> DRR: <u>N/A</u>																																																																																																																														
Linearity Sheet: <u>Lin-011</u> Beam Spread:																																																																																																																															
Calibration Block: <u>CAL-IIW2-033</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>4.0"</u></td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>15:57</u></td> <td></td> <td>Exam Start: <u>16:40</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>17:35</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultracel II</u></td> <td style="text-align: center;"><u>02125</u></td> </tr> <tr> <td>Final Cal: <u>18:03</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>245046</u></td> <td style="text-align: center;"><u>90° F</u></td> <td style="text-align: center;"><u>86° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Hole "t"</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>1/4</td> <td><u>0.6"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>1.2</u></td> <td><u>0.60</u></td> <td><u>3.0</u></td> </tr> <tr> <td>1/2</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>3/4</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>ID</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>5/4</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> </table> DAC 1X= <u>54.9</u> Sweep 0-10 <u>2.0" Depth</u> Note <u>N/A</u> dB difference between 3/8 and 5/8 Vee	<u>CS</u>	<u>N/A</u>	<u>4.0"</u>	Material	Size	Thickness	Initial Cal: <u>15:57</u>		Exam Start: <u>16:40</u>	Cal Check: <u>N/A</u>		Exam End: <u>17:35</u>	Cal Check: <u>N/A</u>	<u>Ultracel II</u>	<u>02125</u>	Final Cal: <u>18:03</u>	Couplant:	Batch	<u>245046</u>	<u>90° F</u>	<u>86° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Hole "t"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	1/4	<u>0.6"</u>	1X	<u>80%</u>	<u>1.2</u>	<u>0.60</u>	<u>3.0</u>	1/2	≈	1X	≈	≈	≈	≈	3/4	≈	1X	≈	≈	≈	≈	ID	≈	1X	≈	≈	≈	≈	5/4	≈	1X	≈	≈	≈	≈	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Sigma</u></td> <td style="text-align: center;"><u>22BC-02002</u></td> <td style="text-align: center;"><u>2(1.1x.62)/Rect.</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer:</td> <td style="text-align: center;">Serial Number:</td> <td style="text-align: center;">Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>.65"</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td colspan="3">Incident Point: Nominal Angle: Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;"><u>SDC3</u></td> <td style="text-align: center;"><u>Long</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Model:</td> <td style="text-align: center;">Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>12'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td style="text-align: center;">Cable Type:</td> <td style="text-align: center;">Length:</td> <td style="text-align: center;">Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td colspan="2" style="text-align: center;"><u>Panametrics / Epoch 4</u></td> <td style="text-align: center;"><u>031575112</u></td> </tr> <tr> <td colspan="2" style="text-align: center;">Manufacturer/Model:</td> <td style="text-align: center;">Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>8.375 us</u></td> <td style="text-align: center;"><u>0.2074 in./usec.</u></td> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> </tr> <tr> <td style="text-align: center;">Delay/Zero:</td> <td style="text-align: center;">Velocity:</td> <td style="text-align: center;">Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> <td style="text-align: center;"><u>4.0 in.</u></td> </tr> <tr> <td style="text-align: center;">Rep Rate:</td> <td style="text-align: center;">Rectification:</td> <td style="text-align: center;">Range:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> <td style="text-align: center;"><u>3.03 MHz</u></td> </tr> <tr> <td style="text-align: center;">Damping:</td> <td style="text-align: center;">Reject:</td> <td style="text-align: center;">Frequency:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> <td style="text-align: center;">CSC:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> <td style="text-align: center;">DGS:</td> </tr> </table>	<u>Sigma</u>	<u>22BC-02002</u>	<u>2(1.1x.62)/Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>.65"</u>	<u>60°</u>	<u>60°</u>	Incident Point: Nominal Angle: Measured Angle:			<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>	Frequency:	Model:	Mode:	<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:	<u>Panametrics / Epoch 4</u>		<u>031575112</u>	Manufacturer/Model:		Serial Number:	<u>8.375 us</u>	<u>0.2074 in./usec.</u>	<u>0.8 - 3.0 MHz</u>	Delay/Zero:	Velocity:	Narrowband Filter:	<u>Auto</u>	<u>Fullwave</u>	<u>4.0 in.</u>	Rep Rate:	Rectification:	Range:	<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>	Damping:	Reject:	Frequency:	<u>Off:</u>	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	CSC:	<u>Off:</u>	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	DGS:
<u>CS</u>	<u>N/A</u>	<u>4.0"</u>																																																																																																																													
Material	Size	Thickness																																																																																																																													
Initial Cal: <u>15:57</u>		Exam Start: <u>16:40</u>																																																																																																																													
Cal Check: <u>N/A</u>		Exam End: <u>17:35</u>																																																																																																																													
Cal Check: <u>N/A</u>	<u>Ultracel II</u>	<u>02125</u>																																																																																																																													
Final Cal: <u>18:03</u>	Couplant:	Batch																																																																																																																													
<u>245046</u>	<u>90° F</u>	<u>86° F</u>																																																																																																																													
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																																																																																													
Hole "t"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																																									
1/4	<u>0.6"</u>	1X	<u>80%</u>	<u>1.2</u>	<u>0.60</u>	<u>3.0</u>																																																																																																																									
1/2	≈	1X	≈	≈	≈	≈																																																																																																																									
3/4	≈	1X	≈	≈	≈	≈																																																																																																																									
ID	≈	1X	≈	≈	≈	≈																																																																																																																									
5/4	≈	1X	≈	≈	≈	≈																																																																																																																									
<u>Sigma</u>	<u>22BC-02002</u>	<u>2(1.1x.62)/Rect.</u>																																																																																																																													
Manufacturer:	Serial Number:	Size / Shape:																																																																																																																													
<u>.65"</u>	<u>60°</u>	<u>60°</u>																																																																																																																													
Incident Point: Nominal Angle: Measured Angle:																																																																																																																															
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>																																																																																																																													
Frequency:	Model:	Mode:																																																																																																																													
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																																																																																													
Cable Type:	Length:	Connectors:																																																																																																																													
<u>Panametrics / Epoch 4</u>		<u>031575112</u>																																																																																																																													
Manufacturer/Model:		Serial Number:																																																																																																																													
<u>8.375 us</u>	<u>0.2074 in./usec.</u>	<u>0.8 - 3.0 MHz</u>																																																																																																																													
Delay/Zero:	Velocity:	Narrowband Filter:																																																																																																																													
<u>Auto</u>	<u>Fullwave</u>	<u>4.0 in.</u>																																																																																																																													
Rep Rate:	Rectification:	Range:																																																																																																																													
<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>																																																																																																																													
Damping:	Reject:	Frequency:																																																																																																																													
<u>Off:</u>	<u>Off:</u>	<u>Off:</u>																																																																																																																													
DAC:	TVG:	CSC:																																																																																																																													
<u>Off:</u>	<u>Off:</u>	<u>Off:</u>																																																																																																																													
DAC:	TVG:	DGS:																																																																																																																													
Exam Data for Weld: <u>N1A NOZ</u> <u>VESSEL-NOZZLE (RECIRCULATION)</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>OD</u></td> <td style="text-align: center;"><u>96° F</u></td> </tr> <tr> <td style="text-align: center;">Exam Surface:</td> <td style="text-align: center;">Component Temperature</td> </tr> </table> <table style="width:100%;"> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> <tr> <td><u>Plate</u></td> <td style="text-align: center;"><u>I</u></td> <td style="text-align: center;"><u>68.9</u></td> <td style="text-align: center;"><u>NRI</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td><u>Plate CW/CCW</u></td> <td style="text-align: center;"><u>P</u></td> <td style="text-align: center;"><u>68.9</u></td> <td style="text-align: center;"><u>NRI</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> </table>	<u>OD</u>	<u>96° F</u>	Exam Surface:	Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>Plate</u>	<u>I</u>	<u>68.9</u>	<u>NRI</u>	<u>60°</u>	<u>Plate CW/CCW</u>	<u>P</u>	<u>68.9</u>	<u>NRI</u>	<u>60°</u>	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Amplitude</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Gain (dB)</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Sweep (SD)</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> </table> Acceptable Linearity performed : <u>3/31/2005</u>	Reflector	≈	≈	≈	Amplitude	≈	≈	≈	Gain (dB)	≈	≈	≈	Sweep (SD)	≈	≈	≈																																																																																											
<u>OD</u>	<u>96° F</u>																																																																																																																														
Exam Surface:	Component Temperature																																																																																																																														
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																																																											
<u>Plate</u>	<u>I</u>	<u>68.9</u>	<u>NRI</u>	<u>60°</u>																																																																																																																											
<u>Plate CW/CCW</u>	<u>P</u>	<u>68.9</u>	<u>NRI</u>	<u>60°</u>																																																																																																																											
Reflector	≈	≈	≈																																																																																																																												
Amplitude	≈	≈	≈																																																																																																																												
Gain (dB)	≈	≈	≈																																																																																																																												
Sweep (SD)	≈	≈	≈																																																																																																																												
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "≈" = N/A Calibration for near surface examination. Exams performed a minimum of 14 dB above reference.																																																																																																																															
WWR <u>Wallace Reid</u> II <u>4/4/2005</u> Initials: Examiner Level Cal/Exam Date: <u>N/A</u> <u>N/A</u> Initials: Examiner Level <u>4/7/05</u> GE Reviewed By: Level: Date:	 Utility Reviewed By: Date: <u>04-08-05</u> ANII Reviewed By: Date: <u>4/9/05</u>																																																																																																																														

GE NUCLEAR ENERGY	Ultrasonic Calibration and Examination Record RPV Components																																																																																																																														
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>Q1R18</u> Procedure: <u>GE-UT-300</u>	Data Report Number: <u>Q1R18-016</u> Linearity Sheet: <u>Lin-011</u> Data Sheet Number: <u>UT-067</u> Beam Spread: Rev.: <u>V8</u> DRR: <u>N/A</u>																																																																																																																														
Calibration Block: <u>99978AQC</u> <table style="width:100%;"> <tr> <td style="text-align: center;"><u>CS</u></td> <td style="text-align: center;"><u>251"</u></td> <td style="text-align: center;"><u>7.0"</u></td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>15:59</u></td> <td></td> <td>Exam Start: <u>16:40</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>17:35</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultracel II</u></td> <td style="text-align: center;"><u>02125</u></td> </tr> <tr> <td>Final Cal: <u>18:05</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>245046</u></td> <td style="text-align: center;"><u>90° F</u></td> <td style="text-align: center;"><u>86° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Hole "I"</th> <th>Hole Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>1/4</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>1/2</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>3/4</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>ID</td> <td><u>7.0"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>12.5</u></td> <td><u>7.1</u></td> <td><u>7.2</u></td> </tr> <tr> <td>5/4</td> <td>≈</td> <td>1X</td> <td>≈</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> </table> DAC 1X= <u>70.5</u> Sweep 0-10 <u>10.0" Depth</u> Note <u>N/A</u> dB difference between 3/8 and 5/8 Vee	<u>CS</u>	<u>251"</u>	<u>7.0"</u>	Material	Size	Thickness	Initial Cal: <u>15:59</u>		Exam Start: <u>16:40</u>	Cal Check: <u>N/A</u>		Exam End: <u>17:35</u>	Cal Check: <u>N/A</u>	<u>Ultracel II</u>	<u>02125</u>	Final Cal: <u>18:05</u>	Couplant:	Batch	<u>245046</u>	<u>90° F</u>	<u>86° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	1/4	≈	1X	≈	≈	≈	≈	1/2	≈	1X	≈	≈	≈	≈	3/4	≈	1X	≈	≈	≈	≈	ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.5</u>	<u>7.1</u>	<u>7.2</u>	5/4	≈	1X	≈	≈	≈	≈	Search Unit Data <table style="width:100%;"> <tr> <td style="text-align: center;"><u>Sigma</u></td> <td style="text-align: center;"><u>22BC-02002</u></td> <td style="text-align: center;"><u>2(1.1x.62)/Rect.</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer:</td> <td style="text-align: center;">Serial Number:</td> <td style="text-align: center;">Size / Shape:</td> </tr> <tr> <td style="text-align: center;"><u>.65"</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td colspan="3" style="text-align: center;">Incident Point: Nominal Angle: Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>3.0 MHz</u></td> <td style="text-align: center;"><u>SDC3</u></td> <td style="text-align: center;"><u>Long</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Model:</td> <td style="text-align: center;">Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>12'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td style="text-align: center;">Cable Type:</td> <td style="text-align: center;">Length:</td> <td style="text-align: center;">Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%;"> <tr> <td colspan="2" style="text-align: center;"><u>Panametrics / Epoch 4</u></td> <td style="text-align: center;"><u>031575112</u></td> </tr> <tr> <td colspan="2" style="text-align: center;">Manufacturer/Model:</td> <td style="text-align: center;">Serial Number:</td> </tr> <tr> <td style="text-align: center;"><u>10.1 us</u></td> <td style="text-align: center;"><u>0.2356 in./usec.</u></td> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> </tr> <tr> <td style="text-align: center;">Delay/Zero:</td> <td style="text-align: center;">Velocity:</td> <td style="text-align: center;">Narrowband Filter:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> <td style="text-align: center;"><u>20.0 in.</u></td> </tr> <tr> <td style="text-align: center;">Rep Rate:</td> <td style="text-align: center;">Rectification:</td> <td style="text-align: center;">Range:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> <td style="text-align: center;"><u>3.03 MHz</u></td> </tr> <tr> <td style="text-align: center;">Damping:</td> <td style="text-align: center;">Reject:</td> <td style="text-align: center;">Frequency:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> <td style="text-align: center;">CSC:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> <td style="text-align: center;">DGS:</td> </tr> </table>	<u>Sigma</u>	<u>22BC-02002</u>	<u>2(1.1x.62)/Rect.</u>	Manufacturer:	Serial Number:	Size / Shape:	<u>.65"</u>	<u>60°</u>	<u>60°</u>	Incident Point: Nominal Angle: Measured Angle:			<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>	Frequency:	Model:	Mode:	<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:	<u>Panametrics / Epoch 4</u>		<u>031575112</u>	Manufacturer/Model:		Serial Number:	<u>10.1 us</u>	<u>0.2356 in./usec.</u>	<u>0.8 - 3.0 MHz</u>	Delay/Zero:	Velocity:	Narrowband Filter:	<u>Auto</u>	<u>Fullwave</u>	<u>20.0 in.</u>	Rep Rate:	Rectification:	Range:	<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>	Damping:	Reject:	Frequency:	<u>Off:</u>	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	CSC:	<u>Off:</u>	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	DGS:
<u>CS</u>	<u>251"</u>	<u>7.0"</u>																																																																																																																													
Material	Size	Thickness																																																																																																																													
Initial Cal: <u>15:59</u>		Exam Start: <u>16:40</u>																																																																																																																													
Cal Check: <u>N/A</u>		Exam End: <u>17:35</u>																																																																																																																													
Cal Check: <u>N/A</u>	<u>Ultracel II</u>	<u>02125</u>																																																																																																																													
Final Cal: <u>18:05</u>	Couplant:	Batch																																																																																																																													
<u>245046</u>	<u>90° F</u>	<u>86° F</u>																																																																																																																													
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																																																																																													
Hole "I"	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																																									
1/4	≈	1X	≈	≈	≈	≈																																																																																																																									
1/2	≈	1X	≈	≈	≈	≈																																																																																																																									
3/4	≈	1X	≈	≈	≈	≈																																																																																																																									
ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.5</u>	<u>7.1</u>	<u>7.2</u>																																																																																																																									
5/4	≈	1X	≈	≈	≈	≈																																																																																																																									
<u>Sigma</u>	<u>22BC-02002</u>	<u>2(1.1x.62)/Rect.</u>																																																																																																																													
Manufacturer:	Serial Number:	Size / Shape:																																																																																																																													
<u>.65"</u>	<u>60°</u>	<u>60°</u>																																																																																																																													
Incident Point: Nominal Angle: Measured Angle:																																																																																																																															
<u>3.0 MHz</u>	<u>SDC3</u>	<u>Long</u>																																																																																																																													
Frequency:	Model:	Mode:																																																																																																																													
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																																																																																													
Cable Type:	Length:	Connectors:																																																																																																																													
<u>Panametrics / Epoch 4</u>		<u>031575112</u>																																																																																																																													
Manufacturer/Model:		Serial Number:																																																																																																																													
<u>10.1 us</u>	<u>0.2356 in./usec.</u>	<u>0.8 - 3.0 MHz</u>																																																																																																																													
Delay/Zero:	Velocity:	Narrowband Filter:																																																																																																																													
<u>Auto</u>	<u>Fullwave</u>	<u>20.0 in.</u>																																																																																																																													
Rep Rate:	Rectification:	Range:																																																																																																																													
<u>400 Ohms</u>	<u>0%</u>	<u>3.03 MHz</u>																																																																																																																													
Damping:	Reject:	Frequency:																																																																																																																													
<u>Off:</u>	<u>Off:</u>	<u>Off:</u>																																																																																																																													
DAC:	TVG:	CSC:																																																																																																																													
<u>Off:</u>	<u>Off:</u>	<u>Off:</u>																																																																																																																													
DAC:	TVG:	DGS:																																																																																																																													
Exam Data for Weld: <u>N1A NOZ</u> <u>VESSEL-NOZZLE (RECIRCULATION)</u> Configuration: <table style="width:100%;"> <tr> <td style="text-align: center;"><u>QD</u></td> <td style="text-align: center;"><u>96° F</u></td> </tr> <tr> <td style="text-align: center;">Exam Surface:</td> <td style="text-align: center;">Component Temperature</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Weld Examination Area:</th> <th>Exam Access</th> <th>Scan dB</th> <th>Recordable Indications</th> <th>Exam Angle</th> </tr> <tr> <td><u>Plate</u></td> <td><u>I</u></td> <td><u>70.5</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> <tr> <td><u>Plate CW/CCW</u></td> <td><u>P</u></td> <td><u>70.5</u></td> <td><u>NRI</u></td> <td><u>60°</u></td> </tr> </table>	<u>QD</u>	<u>96° F</u>	Exam Surface:	Component Temperature	Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle	<u>Plate</u>	<u>I</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>	<u>Plate CW/CCW</u>	<u>P</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>	Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Amplitude</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Gain (dB)</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> <tr> <td>Sweep (SD)</td> <td>≈</td> <td>≈</td> <td>≈</td> </tr> </table> Acceptable Linearity performed : <u>3/31/2005</u>	Reflector	≈	≈	≈	Amplitude	≈	≈	≈	Gain (dB)	≈	≈	≈	Sweep (SD)	≈	≈	≈																																																																																											
<u>QD</u>	<u>96° F</u>																																																																																																																														
Exam Surface:	Component Temperature																																																																																																																														
Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle																																																																																																																											
<u>Plate</u>	<u>I</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>																																																																																																																											
<u>Plate CW/CCW</u>	<u>P</u>	<u>70.5</u>	<u>NRI</u>	<u>60°</u>																																																																																																																											
Reflector	≈	≈	≈																																																																																																																												
Amplitude	≈	≈	≈																																																																																																																												
Gain (dB)	≈	≈	≈																																																																																																																												
Sweep (SD)	≈	≈	≈																																																																																																																												
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "≈" = N/A Calibration for full volume examination. Exams performed to maintain a 10-20% FSH clad roll.																																																																																																																															
WWR <u>Wallace Reid</u> <u>II</u> <u>4/4/2005</u> Initials: Examiner Level Cal/Exam Date: <u>N/A</u> <u>N/A</u> Initials: Examiner Level <u>CPM</u> <u>III</u> <u>4/7/05</u> GE Reviewed By: Level: Date:	 Utility Reviewed By: Date: <u>04-08-05</u> ANII Reviewed By: Date: <u>4/9/05</u>																																																																																																																														

		Ultrasonic Calibration and Examination Record Inner Radius Examinations																																																																																																																						
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>Q1R18</u> Procedure: <u>GE-UT-311</u>		Data Report Number: <u>Q1R18-016</u> Linearity Sheet: <u>Lin-016</u> Data Sheet Number: <u>UT-121</u> Rev: <u>V10</u> DRR: <u>N/A</u>																																																																																																																						
Calibration Data for Block: <u>99978AQC</u> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>CSC</u></td> <td style="text-align: center;"><u>251"</u></td> <td style="text-align: center;"><u>7.0"</u></td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>2045</u></td> <td></td> <td>Exam Start: <u>21:55</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>22:45</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultrage II</u></td> <td style="text-align: center;"><u>01125</u></td> </tr> <tr> <td>Final Cal: <u>2318</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>241763</u></td> <td style="text-align: center;"><u>85° F</u></td> <td style="text-align: center;"><u>80° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp.</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Side</th> <th>Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID</td> <td><u>7.0"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>12.2</u></td> <td><u>14.4</u></td> <td><u>5.8</u></td> </tr> <tr> <td>~</td> <td>~</td> <td>1X</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> </table> DAC @ 1X <u>47.0</u> Sweep 0-10 <u>25"</u> <u>Metal Path</u> Acceptable Linearity performed : <u>3/31/2005</u>		<u>CSC</u>	<u>251"</u>	<u>7.0"</u>	Material	Size	Thickness	Initial Cal: <u>2045</u>		Exam Start: <u>21:55</u>	Cal Check: <u>N/A</u>		Exam End: <u>22:45</u>	Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>01125</u>	Final Cal: <u>2318</u>	Couplant:	Batch	<u>241763</u>	<u>85° F</u>	<u>80° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp.	Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.2</u>	<u>14.4</u>	<u>5.8</u>	~	~	1X	~	~	~	~	Search Unit Data <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>KBA</u></td> <td style="text-align: center;"><u>M21322</u></td> <td style="text-align: center;"><u>0.5"x1.0"/Rect.</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer:</td> <td style="text-align: center;">Serial No.:</td> <td style="text-align: center;">Size/Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.7 in.</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>60°</u></td> </tr> <tr> <td style="text-align: center;">Incident Point:</td> <td style="text-align: center;">Nominal Angle:</td> <td style="text-align: center;">Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>1.0 MHz</u></td> <td style="text-align: center;"><u>113-291-600</u></td> <td style="text-align: center;"><u>Shear</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Model:</td> <td style="text-align: center;">Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>12'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td style="text-align: center;">Cable Type:</td> <td style="text-align: center;">Length:</td> <td style="text-align: center;">Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>Panametrics / EPOCH 4</u></td> <td style="text-align: center;"><u>031535906</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer/Model:</td> <td style="text-align: center;">Serial No.:</td> </tr> <tr> <td style="text-align: center;"><u>16.65 µs</u></td> <td style="text-align: center;"><u>0.128 in /µsec</u></td> </tr> <tr> <td style="text-align: center;">Zero:</td> <td style="text-align: center;">Velocity:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>25.0 in.</u></td> </tr> <tr> <td style="text-align: center;">Rep Rate:</td> <td style="text-align: center;">Range:</td> </tr> <tr> <td style="text-align: center;"><u>Fullwave</u></td> <td style="text-align: center;"><u>Sq. / Med</u></td> </tr> <tr> <td style="text-align: center;">Rectification:</td> <td style="text-align: center;">Pulse/Energy</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> </tr> <tr> <td style="text-align: center;">Damping:</td> <td style="text-align: center;">Reject:</td> </tr> <tr> <td style="text-align: center;"><u>1.0 MHz</u></td> <td style="text-align: center;"><u>P/E</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Mode:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">CSC:</td> <td style="text-align: center;">DGS:</td> </tr> </table> Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>		<u>KBA</u>	<u>M21322</u>	<u>0.5"x1.0"/Rect.</u>	Manufacturer:	Serial No.:	Size/Shape:	<u>0.7 in.</u>	<u>60°</u>	<u>60°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>1.0 MHz</u>	<u>113-291-600</u>	<u>Shear</u>	Frequency:	Model:	Mode:	<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:	<u>Panametrics / EPOCH 4</u>	<u>031535906</u>	Manufacturer/Model:	Serial No.:	<u>16.65 µs</u>	<u>0.128 in /µsec</u>	Zero:	Velocity:	<u>Auto</u>	<u>25.0 in.</u>	Rep Rate:	Range:	<u>Fullwave</u>	<u>Sq. / Med</u>	Rectification:	Pulse/Energy	<u>400 Ohms</u>	<u>0%</u>	Damping:	Reject:	<u>1.0 MHz</u>	<u>P/E</u>	Frequency:	Mode:	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	<u>Off:</u>	<u>Off:</u>	CSC:	DGS:	Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>CSC</u>	<u>251"</u>	<u>7.0"</u>																																																																																																																						
Material	Size	Thickness																																																																																																																						
Initial Cal: <u>2045</u>		Exam Start: <u>21:55</u>																																																																																																																						
Cal Check: <u>N/A</u>		Exam End: <u>22:45</u>																																																																																																																						
Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>01125</u>																																																																																																																						
Final Cal: <u>2318</u>	Couplant:	Batch																																																																																																																						
<u>241763</u>	<u>85° F</u>	<u>80° F</u>																																																																																																																						
Thermometer	Initial Cal Temp.	Final Cal Temp.																																																																																																																						
Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																																		
ID	<u>7.0"</u>	1X	<u>80%</u>	<u>12.2</u>	<u>14.4</u>	<u>5.8</u>																																																																																																																		
~	~	1X	~	~	~	~																																																																																																																		
<u>KBA</u>	<u>M21322</u>	<u>0.5"x1.0"/Rect.</u>																																																																																																																						
Manufacturer:	Serial No.:	Size/Shape:																																																																																																																						
<u>0.7 in.</u>	<u>60°</u>	<u>60°</u>																																																																																																																						
Incident Point:	Nominal Angle:	Measured Angle:																																																																																																																						
<u>1.0 MHz</u>	<u>113-291-600</u>	<u>Shear</u>																																																																																																																						
Frequency:	Model:	Mode:																																																																																																																						
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																																																																																						
Cable Type:	Length:	Connectors:																																																																																																																						
<u>Panametrics / EPOCH 4</u>	<u>031535906</u>																																																																																																																							
Manufacturer/Model:	Serial No.:																																																																																																																							
<u>16.65 µs</u>	<u>0.128 in /µsec</u>																																																																																																																							
Zero:	Velocity:																																																																																																																							
<u>Auto</u>	<u>25.0 in.</u>																																																																																																																							
Rep Rate:	Range:																																																																																																																							
<u>Fullwave</u>	<u>Sq. / Med</u>																																																																																																																							
Rectification:	Pulse/Energy																																																																																																																							
<u>400 Ohms</u>	<u>0%</u>																																																																																																																							
Damping:	Reject:																																																																																																																							
<u>1.0 MHz</u>	<u>P/E</u>																																																																																																																							
Frequency:	Mode:																																																																																																																							
<u>Off:</u>	<u>Off:</u>																																																																																																																							
DAC:	TVG:																																																																																																																							
<u>Off:</u>	<u>Off:</u>																																																																																																																							
CSC:	DGS:																																																																																																																							
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																					
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																					
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																					
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																																					
Exam Data for Component: <u>N1A NOZ</u> <u>VESSEL-NOZZLE (RECIRCULATION)</u> Configuration: <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>PLATE</u></td> <td style="text-align: center;"><u>95° F</u></td> </tr> <tr> <td style="text-align: center;">Exam Surface:</td> <td style="text-align: center;">Component Temp.</td> </tr> </table> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;">Examination Area</td> <td style="text-align: center;">Exam Angle</td> <td style="text-align: center;">Rotation Angle</td> <td style="text-align: center;">Wedge S/N</td> <td style="text-align: center;">Scan dB</td> <td style="text-align: center;">Recordable Indications</td> </tr> <tr> <td style="text-align: center;"><u>0"-4.5"</u></td> <td style="text-align: center;"><u>60°</u></td> <td style="text-align: center;"><u>± 40°-80°</u></td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>61.0</u></td> <td style="text-align: center;"><u>NRI</u></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>				<u>PLATE</u>	<u>95° F</u>	Exam Surface:	Component Temp.	Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications	<u>0"-4.5"</u>	<u>60°</u>	<u>± 40°-80°</u>	<u>N/A</u>	<u>61.0</u>	<u>NRI</u>																																																																																																					
<u>PLATE</u>	<u>95° F</u>																																																																																																																							
Exam Surface:	Component Temp.																																																																																																																							
Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications																																																																																																																			
<u>0"-4.5"</u>	<u>60°</u>	<u>± 40°-80°</u>	<u>N/A</u>	<u>61.0</u>	<u>NRI</u>																																																																																																																			
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "~" = N/A Exams performed to maintain a 20 - 30% FSH clad roll. Scanned CW and CCW. Calibration for nozzle to vessel weld (N/V).																																																																																																																								
<table style="width:100%; border: none;"> <tr> <td style="width:25%; text-align: center;"> Initials: Examiner: </td> <td style="width:10%; text-align: center;"> II </td> <td style="width:20%; text-align: center;"> <u>04/04/05</u> Cal/Exam Date: </td> <td style="width:25%; text-align: center;"> Utility Reviewed By: </td> <td style="width:20%; text-align: center;"> <u>04/08/05</u> Date: </td> </tr> <tr> <td style="text-align: center;"> GE Reviewed By: </td> <td style="text-align: center;"> Level: </td> <td style="text-align: center;"> <u>4/12/5</u> Date: </td> <td style="text-align: center;"> ANI Reviewed By: </td> <td style="text-align: center;"> <u>4/9/05</u> Date: </td> </tr> </table>				 Initials: Examiner:	II	<u>04/04/05</u> Cal/Exam Date:	 Utility Reviewed By:	<u>04/08/05</u> Date:	 GE Reviewed By:	 Level:	<u>4/12/5</u> Date:	 ANI Reviewed By:	<u>4/9/05</u> Date:																																																																																																											
 Initials: Examiner:	II	<u>04/04/05</u> Cal/Exam Date:	 Utility Reviewed By:	<u>04/08/05</u> Date:																																																																																																																				
 GE Reviewed By:	 Level:	<u>4/12/5</u> Date:	 ANI Reviewed By:	<u>4/9/05</u> Date:																																																																																																																				

GE NUCLEAR ENERGY		Ultrasonic Calibration and Examination Record Inner Radius Examinations																																																																																																										
Site/Unit: <u>Quad Cities / 1</u> Outage: <u>Q1R18</u> Procedure: <u>GE-UT-311</u>		Data Report Number: <u>Q1R18-016</u> Linearity Sheet: <u>Lin-016</u> Data Sheet Number: <u>UT-122</u> Rev: <u>V10</u> DRR: <u>N/A</u>																																																																																																										
Calibration Data for Block: <u>99978AQC</u> <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>CSC</u></td> <td style="text-align: center;"><u>251"</u></td> <td style="text-align: center;"><u>7.0"</u></td> </tr> <tr> <td style="text-align: center;">Material</td> <td style="text-align: center;">Size</td> <td style="text-align: center;">Thickness</td> </tr> <tr> <td>Initial Cal: <u>2047</u></td> <td></td> <td>Exam Start: <u>21:55</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td></td> <td>Exam End: <u>22:45</u></td> </tr> <tr> <td>Cal Check: <u>N/A</u></td> <td style="text-align: center;"><u>Ultrage II</u></td> <td style="text-align: center;"><u>01125</u></td> </tr> <tr> <td>Final Cal: <u>2322</u></td> <td style="text-align: center;">Couplant:</td> <td style="text-align: center;">Batch</td> </tr> <tr> <td style="text-align: center;"><u>241763</u></td> <td style="text-align: center;"><u>85° F</u></td> <td style="text-align: center;"><u>80° F</u></td> </tr> <tr> <td style="text-align: center;">Thermometer</td> <td style="text-align: center;">Initial Cal Temp.</td> <td style="text-align: center;">Final Cal Temp:</td> </tr> </table> DAC Construction <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Side</th> <th>Depth</th> <th>Gain @ 1X</th> <th>Max Amp</th> <th>"W" Dim.</th> <th>Sweep</th> <th>Screen Div.</th> </tr> <tr> <td>ID</td> <td><u>7.0"</u></td> <td>1X</td> <td><u>80%</u></td> <td><u>19.2</u></td> <td><u>20.6</u></td> <td><u>6.5</u></td> </tr> <tr> <td>~</td> <td>~</td> <td>1X</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> </table> DAC @ 1X <u>49.0</u> Sweep 0-10 <u>32"</u> <u>Metal Path</u> Acceptable Linearity performed : <u>3/31/2005</u>		<u>CSC</u>	<u>251"</u>	<u>7.0"</u>	Material	Size	Thickness	Initial Cal: <u>2047</u>		Exam Start: <u>21:55</u>	Cal Check: <u>N/A</u>		Exam End: <u>22:45</u>	Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>01125</u>	Final Cal: <u>2322</u>	Couplant:	Batch	<u>241763</u>	<u>85° F</u>	<u>80° F</u>	Thermometer	Initial Cal Temp.	Final Cal Temp:	Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.	ID	<u>7.0"</u>	1X	<u>80%</u>	<u>19.2</u>	<u>20.6</u>	<u>6.5</u>	~	~	1X	~	~	~	~	Search Unit Data <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>KBA</u></td> <td style="text-align: center;"><u>0000LS</u></td> <td style="text-align: center;"><u>0.5"x1.0"/Rect</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer:</td> <td style="text-align: center;">Serial No.:</td> <td style="text-align: center;">Size/Shape:</td> </tr> <tr> <td style="text-align: center;"><u>0.8 in.</u></td> <td style="text-align: center;"><u>70°</u></td> <td style="text-align: center;"><u>68°</u></td> </tr> <tr> <td style="text-align: center;">Incident Point:</td> <td style="text-align: center;">Nominal Angle:</td> <td style="text-align: center;">Measured Angle:</td> </tr> <tr> <td style="text-align: center;"><u>1.0 MHz</u></td> <td style="text-align: center;"><u>113-291-600</u></td> <td style="text-align: center;"><u>Shear</u></td> </tr> <tr> <td style="text-align: center;">Frequency:</td> <td style="text-align: center;">Model:</td> <td style="text-align: center;">Mode:</td> </tr> </table> Search Unit Cable <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>RG-174</u></td> <td style="text-align: center;"><u>12'</u></td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td style="text-align: center;">Cable Type:</td> <td style="text-align: center;">Length:</td> <td style="text-align: center;">Connectors:</td> </tr> </table> Instrument Settings <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>Panametrics / EPOCH 4</u></td> <td style="text-align: center;"><u>031535906</u></td> </tr> <tr> <td style="text-align: center;">Manufacturer/Model:</td> <td style="text-align: center;">Serial No.:</td> </tr> <tr> <td style="text-align: center;"><u>18.15 µs</u></td> <td style="text-align: center;"><u>0.128 in /usec</u></td> </tr> <tr> <td style="text-align: center;">Zero:</td> <td style="text-align: center;">Velocity:</td> </tr> <tr> <td style="text-align: center;"><u>Auto</u></td> <td style="text-align: center;"><u>Fullwave</u></td> </tr> <tr> <td style="text-align: center;">Rep Rate:</td> <td style="text-align: center;">Rectification:</td> </tr> <tr> <td style="text-align: center;"><u>400 Ohms</u></td> <td style="text-align: center;"><u>0%</u></td> </tr> <tr> <td style="text-align: center;">Damping:</td> <td style="text-align: center;">Reject:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DAC:</td> <td style="text-align: center;">TVG:</td> </tr> <tr> <td style="text-align: center;"><u>0.8 - 3.0 MHz</u></td> <td style="text-align: center;"><u>0.8 in.</u></td> </tr> <tr> <td style="text-align: center;">Narrowband Filter:</td> <td style="text-align: center;">Range:</td> </tr> <tr> <td style="text-align: center;"><u>Sq. / Med</u></td> <td style="text-align: center;"><u>32.0 in.</u></td> </tr> <tr> <td style="text-align: center;">Pulser/Energy</td> <td style="text-align: center;">Frequency:</td> </tr> <tr> <td style="text-align: center;"><u>P/E</u></td> <td style="text-align: center;"><u>1.0 MHz</u></td> </tr> <tr> <td style="text-align: center;">Mode:</td> <td style="text-align: center;">Mode:</td> </tr> <tr> <td style="text-align: center;"><u>Off:</u></td> <td style="text-align: center;"><u>Off:</u></td> </tr> <tr> <td style="text-align: center;">DGS:</td> <td style="text-align: center;">DGS:</td> </tr> </table>		<u>KBA</u>	<u>0000LS</u>	<u>0.5"x1.0"/Rect</u>	Manufacturer:	Serial No.:	Size/Shape:	<u>0.8 in.</u>	<u>70°</u>	<u>68°</u>	Incident Point:	Nominal Angle:	Measured Angle:	<u>1.0 MHz</u>	<u>113-291-600</u>	<u>Shear</u>	Frequency:	Model:	Mode:	<u>RG-174</u>	<u>12'</u>	<u>0</u>	Cable Type:	Length:	Connectors:	<u>Panametrics / EPOCH 4</u>	<u>031535906</u>	Manufacturer/Model:	Serial No.:	<u>18.15 µs</u>	<u>0.128 in /usec</u>	Zero:	Velocity:	<u>Auto</u>	<u>Fullwave</u>	Rep Rate:	Rectification:	<u>400 Ohms</u>	<u>0%</u>	Damping:	Reject:	<u>Off:</u>	<u>Off:</u>	DAC:	TVG:	<u>0.8 - 3.0 MHz</u>	<u>0.8 in.</u>	Narrowband Filter:	Range:	<u>Sq. / Med</u>	<u>32.0 in.</u>	Pulser/Energy	Frequency:	<u>P/E</u>	<u>1.0 MHz</u>	Mode:	Mode:	<u>Off:</u>	<u>Off:</u>	DGS:	DGS:
<u>CSC</u>	<u>251"</u>	<u>7.0"</u>																																																																																																										
Material	Size	Thickness																																																																																																										
Initial Cal: <u>2047</u>		Exam Start: <u>21:55</u>																																																																																																										
Cal Check: <u>N/A</u>		Exam End: <u>22:45</u>																																																																																																										
Cal Check: <u>N/A</u>	<u>Ultrage II</u>	<u>01125</u>																																																																																																										
Final Cal: <u>2322</u>	Couplant:	Batch																																																																																																										
<u>241763</u>	<u>85° F</u>	<u>80° F</u>																																																																																																										
Thermometer	Initial Cal Temp.	Final Cal Temp:																																																																																																										
Side	Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.																																																																																																						
ID	<u>7.0"</u>	1X	<u>80%</u>	<u>19.2</u>	<u>20.6</u>	<u>6.5</u>																																																																																																						
~	~	1X	~	~	~	~																																																																																																						
<u>KBA</u>	<u>0000LS</u>	<u>0.5"x1.0"/Rect</u>																																																																																																										
Manufacturer:	Serial No.:	Size/Shape:																																																																																																										
<u>0.8 in.</u>	<u>70°</u>	<u>68°</u>																																																																																																										
Incident Point:	Nominal Angle:	Measured Angle:																																																																																																										
<u>1.0 MHz</u>	<u>113-291-600</u>	<u>Shear</u>																																																																																																										
Frequency:	Model:	Mode:																																																																																																										
<u>RG-174</u>	<u>12'</u>	<u>0</u>																																																																																																										
Cable Type:	Length:	Connectors:																																																																																																										
<u>Panametrics / EPOCH 4</u>	<u>031535906</u>																																																																																																											
Manufacturer/Model:	Serial No.:																																																																																																											
<u>18.15 µs</u>	<u>0.128 in /usec</u>																																																																																																											
Zero:	Velocity:																																																																																																											
<u>Auto</u>	<u>Fullwave</u>																																																																																																											
Rep Rate:	Rectification:																																																																																																											
<u>400 Ohms</u>	<u>0%</u>																																																																																																											
Damping:	Reject:																																																																																																											
<u>Off:</u>	<u>Off:</u>																																																																																																											
DAC:	TVG:																																																																																																											
<u>0.8 - 3.0 MHz</u>	<u>0.8 in.</u>																																																																																																											
Narrowband Filter:	Range:																																																																																																											
<u>Sq. / Med</u>	<u>32.0 in.</u>																																																																																																											
Pulser/Energy	Frequency:																																																																																																											
<u>P/E</u>	<u>1.0 MHz</u>																																																																																																											
Mode:	Mode:																																																																																																											
<u>Off:</u>	<u>Off:</u>																																																																																																											
DGS:	DGS:																																																																																																											
Exam Data for Component: <u>N1A NOZ</u> <u>VESSEL-NOZZLE (RECIRCULATION)</u> Configuration: <table style="width:100%; border: none;"> <tr> <td style="text-align: center;"><u>PLATE</u></td> <td style="text-align: center;"><u>95° F</u></td> </tr> <tr> <td style="text-align: center;">Exam Surface:</td> <td style="text-align: center;">Component Temp.</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <th>Examination Area</th> <th>Exam Angle</th> <th>Rotation Angle</th> <th>Wedge S/N</th> <th>Scan dB</th> <th>Recordable Indications</th> </tr> <tr> <td><u>0"-4.0"</u></td> <td><u>70°</u></td> <td><u>± 40°-75°</u></td> <td><u>N/A</u></td> <td><u>63.0</u></td> <td><u>NRI</u></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		<u>PLATE</u>	<u>95° F</u>	Exam Surface:	Component Temp.	Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications	<u>0"-4.0"</u>	<u>70°</u>	<u>± 40°-75°</u>	<u>N/A</u>	<u>63.0</u>	<u>NRI</u>																			Calibration Verification Field Simulator Block S/N: <u>N/A</u> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>Reflector</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Amplitude</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Gain (dB)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> <tr> <td>Sweep (SD)</td> <td><u>N/A</u></td> <td><u>N/A</u></td> <td><u>N/A</u></td> </tr> </table>		Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																							
<u>PLATE</u>	<u>95° F</u>																																																																																																											
Exam Surface:	Component Temp.																																																																																																											
Examination Area	Exam Angle	Rotation Angle	Wedge S/N	Scan dB	Recordable Indications																																																																																																							
<u>0"-4.0"</u>	<u>70°</u>	<u>± 40°-75°</u>	<u>N/A</u>	<u>63.0</u>	<u>NRI</u>																																																																																																							
Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																									
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																									
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																									
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>																																																																																																									
Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. "~" = N/A Calibration for nozzle to vessel weld (N/V). Exams performed to maintain a 20 - 30% FSH clad roll. Scanned CW and CCW.																																																																																																												
<table style="width:100%; border: none;"> <tr> <td style="width:25%; text-align: center;"> J. Montgomery Initials: Examiner: </td> <td style="width:10%; text-align: center;"> II </td> <td style="width:20%; text-align: center;"> <u>04/04/05</u> Cal/Exam Date: </td> <td style="width:25%; text-align: center;"> J. Bell Utility Reviewed By: </td> <td style="width:20%; text-align: center;"> <u>04/08/05</u> Date: </td> </tr> <tr> <td style="text-align: center;"> CP GE Reviewed By: </td> <td style="text-align: center;"> J Level: </td> <td style="text-align: center;"> <u>4/7/5</u> Date: </td> <td style="text-align: center;"> J ANII Reviewed By: </td> <td style="text-align: center;"> <u>4/9/05</u> Date: </td> </tr> </table>				 J. Montgomery Initials: Examiner:	II	<u>04/04/05</u> Cal/Exam Date:	 J. Bell Utility Reviewed By:	<u>04/08/05</u> Date:	 CP GE Reviewed By:	 J Level:	<u>4/7/5</u> Date:	 J ANII Reviewed By:	<u>4/9/05</u> Date:																																																																																															
 J. Montgomery Initials: Examiner:	II	<u>04/04/05</u> Cal/Exam Date:	 J. Bell Utility Reviewed By:	<u>04/08/05</u> Date:																																																																																																								
 CP GE Reviewed By:	 J Level:	<u>4/7/5</u> Date:	 J ANII Reviewed By:	<u>4/9/05</u> Date:																																																																																																								

Quad Cities, Unit-1
N1A - Recirc Outlet Nozzle
Q1R18 - 2005

		CODE CROSS-SECTIONAL AREA		TOTAL CODE COVERAGE		
Weld Length =	360.	Required Exam	Area Scanned	Percent	Weld Length	Percent
Exam Volume =	79.2	Area Sq. In.	Manual	of Area	Manual	Manual
60° NS T-Scan	A	30.2	0.2	0.3%	360.0	0.1%
60° FV T-Scan	A	40.3	20.3	25.6%	360.0	12.8%
60° S4 T-Scan	A	8.7	8.6	10.9%	360.0	5.4%
60° NS P-Scan	A	30.2	0.0	0.0%	360.0	0.0%
60° FV P-Scan	A	40.3	9.8	12.4%	360.0	6.2%
60° S4 IRS-Scan	A	8.7	8.7	11.0%	360.0	5.5%
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						
60° NS T-Scan						
60° FV T-Scan						
60° S4 T-Scan						
60° NS P-Scan						
60° FV P-Scan						
60° S4 IRS-Scan						

% Total Composite Coverage = 30%

Comments: A - Examined 360° length. Scanning limited due to nozzle configuration.
Weld length in degrees. IRS examination coverage determined by modeling.

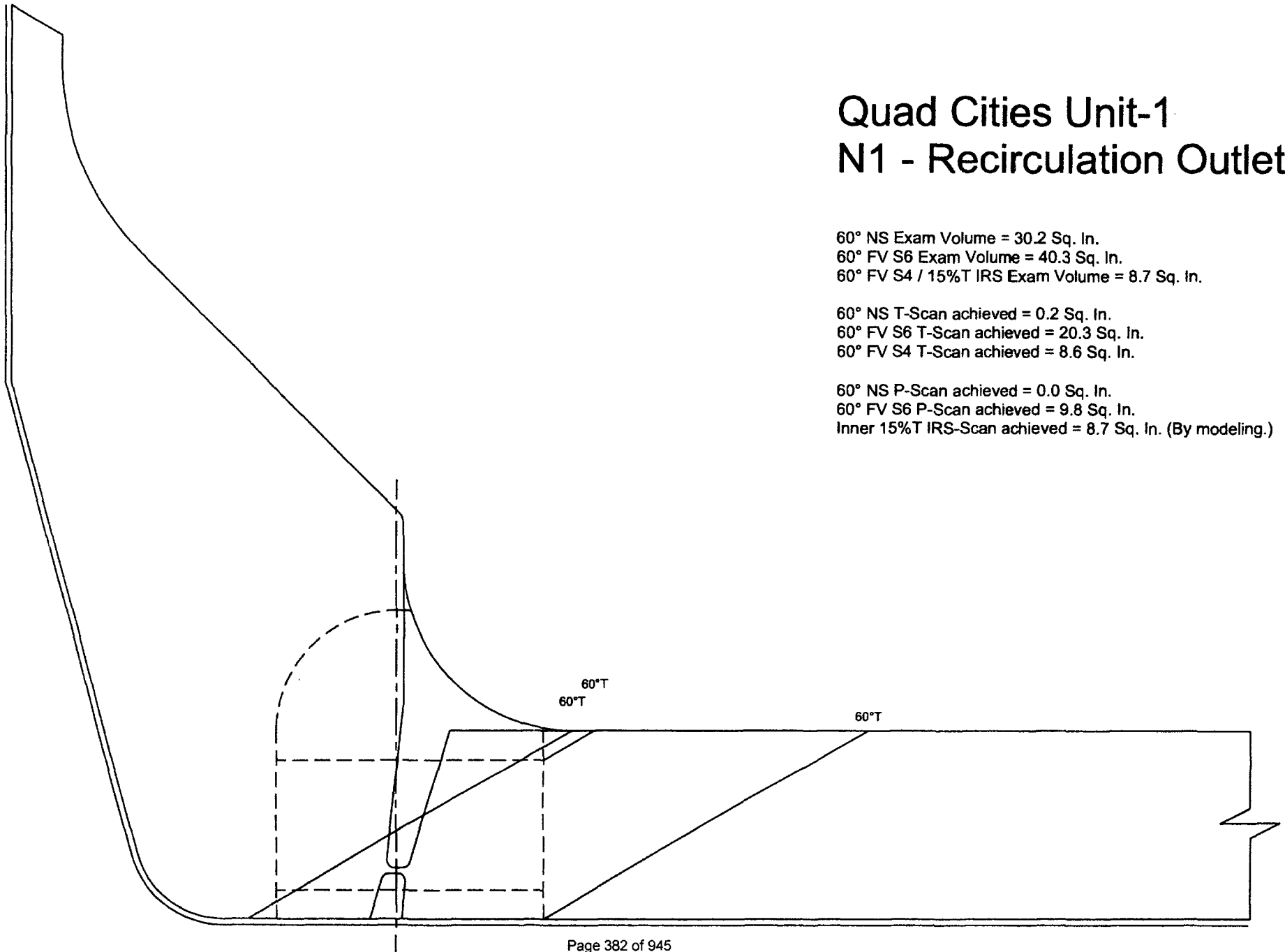
Note - Rounding methods may make calculated values appear in error.

Quad Cities Unit-1 N1 - Recirculation Outlet

60° NS Exam Volume = 30.2 Sq. In.
60° FV S6 Exam Volume = 40.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 8.7 Sq. In.

60° NS T-Scan achieved = 0.2 Sq. In.
60° FV S6 T-Scan achieved = 20.3 Sq. In.
60° FV S4 T-Scan achieved = 8.6 Sq. In.

60° NS P-Scan achieved = 0.0 Sq. In.
60° FV S6 P-Scan achieved = 9.8 Sq. In.
Inner 15%T IRS-Scan achieved = 8.7 Sq. In. (By modeling.)



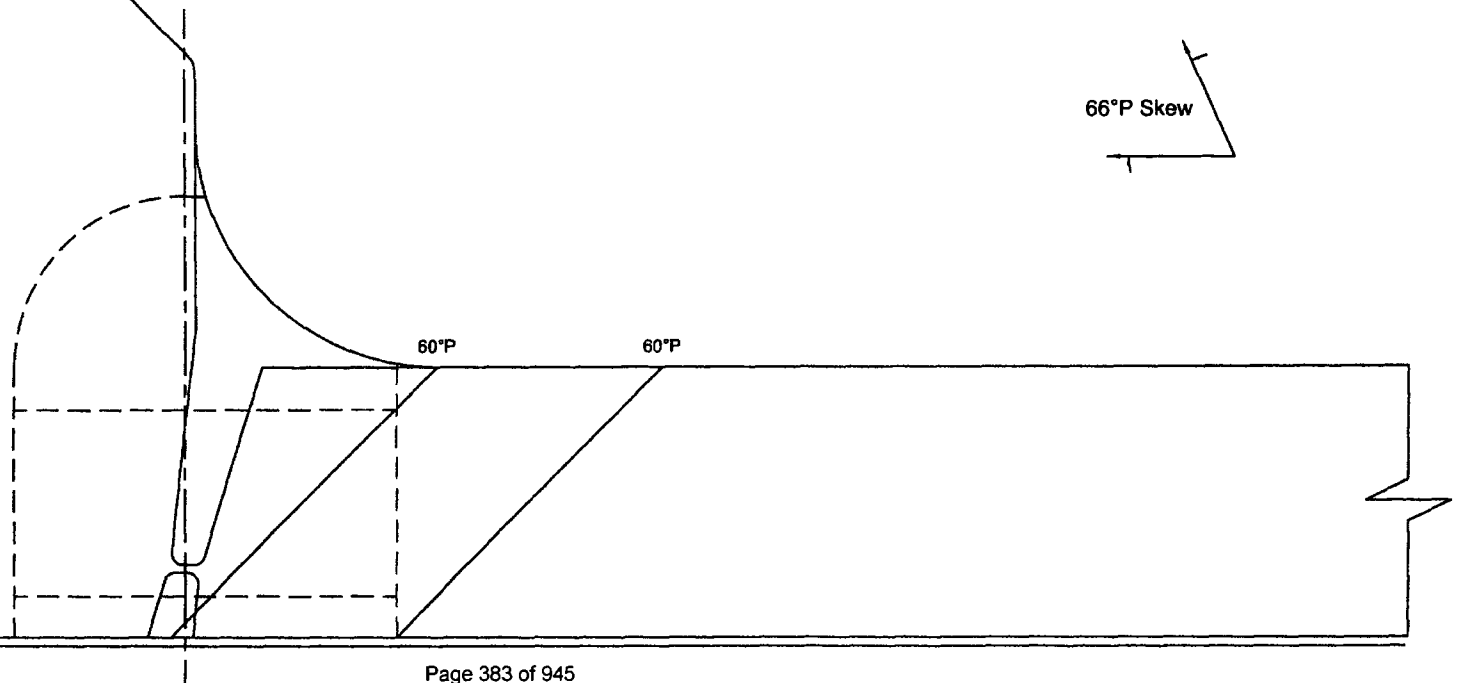
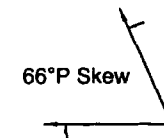
Quad Cities Unit-1, 2005

Quad Cities Unit-1 N1 - Recirculation Outlet

60° NS Exam Volume = 30.2 Sq. In.
60° FV S6 Exam Volume = 40.3 Sq. In.
60° FV S4 / 15%T IRS Exam Volume = 8.7 Sq. In.

60° NS T-Scan achieved = 0.2 Sq. In.
60° FV S6 T-Scan achieved = 20.3 Sq. In.
60° FV S4 T-Scan achieved = 8.6 Sq. In.

60° NS P-Scan achieved = 0.0 Sq. In.
60° FV S6 P-Scan achieved = 9.8 Sq. In.
Inner 15%T IRS-Scan achieved = 8.7 Sq. In. (By modeling.)



Nir_PDI Qc1_Rev 1.XLS

MANUAL / GERIS DETECTION NOZZLE INNER RADIUS AND BORE INSPECTION REQUIREMENTS								
PLANT		Quad 1						
PREPARED BY		S.C. MORTENSON				DATE		02/22/05
NOZZLE EXAM ZONE	SCAN SURFACE	SCAN AREA	BEAM ANGLE	OFFSET	ROTATION ANGLE	WEDGE RADIUS	MAX MP	FREQ
RECIRC OUTLET								
N/V Weld (M)	PLATE	0 - 4.5"	60.0°	-	±40° - 80°	FLAT	14.0"	1 MHz
N/V Weld (M)	PLATE	0 - 4.0"	70.0°	-	±40° - 75°	FLAT	25.3"	1 MHz
Zone 1 (M)	ODBR	20° - 45°	35.0°	-	90.0°	5.5"	20.7"	1 MHz
Zone 2a (M)	ODBR	45° - 90°	60.0°	-	35.0°	5.5"	20.4"	1 MHz
RECIRC INLET								
N/V Weld (M)	PLATE	0 - 5.5"	60.0°	-	± 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 9.0"	70.0°	-	± 30°	FLAT	24.4"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	67.5°	-	18.1°	3.3"	12.0"	1 MHz
MAIN STEAM								
N/V Weld (M)	PLATE	0 - 4.0"	60.0°	-	± 25° - 70°	FLAT	14.0"	1 MHz
N/V Weld/Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 46°	FLAT	25.3"	1 MHz
Zone 2a (M)	ODBR	60° - 90°	66.4°	-	24.1°	4.0"	16.3"	1 MHz
CORE SPRAY								
N/V Weld/Zone 1 (M)	PLATE	0 - 7.0"	60.0°	-	± 55°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 6.0"	70.0°	-	± 25°	FLAT	19.6"	1 MHz
Zone 2A (M)	ODBR	55° - 90°	66.3°	-	16.7°	3.1"	10.6"	1 MHz
JET PUMP INSTRUMENT								
N/V Weld (M)	PLATE	0 - 8.0"	45.0°	-	± 20° - 60°	FLAT	14.0"	1 MHz
Zone 1 (M)	PLATE	0 - 7.5"	60.0°	-	± 20°	FLAT	13.9"	1 MHz
Zone 2A (M)	PLATE	0 - 14.0"	70.0°	-	± 25°	FLAT	17.2"	1 MHz
Zone 2A (M)	PLATE	0 - 6.0"	60.0°	-	± 20°	FLAT	9.0"	1 MHz
SBLC N10								
N/V Weld (M)	PLATE	4.5" - 9.0"	45.0°	-	± 17° - 51°	FLAT	9.1"	1 MHz

W-021, W-022
W-023, W-024

W-025, W-026

W-039

W-031, W-032

NOTES:	(M)	MANUAL
	xx.x° (xx.x°)	WEDGE / (FIXTURE) ROTATION ANGLE

Questions on this NIR requirements sheet shall be directed to S.C. Mortenson @ (704) 948-0253

		EXAMINATION SUMMARY SHEET				Report No.: Q1R21-089	
Site: Quad Cities		Component ID: N18 NOZ					
Outage: RFO 21		VESSEL-NOZZLE (RECIRCULATION)					
System: RPV		ASME Cat.: B-D		ASME Item B3.90		Aug Req N/A	

Exams Performed	Data Sheet	Cal Sheet	Procedure	Calibration Block	Exam / Oper. Personnel	Cert. Level	Date
60° Long	D-036	N/A	GE-UT-300 Ver/Rev 10	99978AQC	Jonathan Guillote	II	5/14/2011
60° Long	D-035	N/A	GE-UT-300 Ver/Rev 10	CAL-IIW2-036	Jonathan Guillote	II	5/14/2011
70° Shear	D-038	N/A	GEH-UT-311 Ver/Rev 16B	99978AQC	Jimmy Johnson	II	5/14/2011
60° Shear	D-037	N/A	GEH-UT-311 Ver/Rev 16B	99978AQC	Jonathan Guillote	II	5/14/2011

Examination Results:

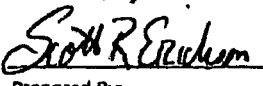
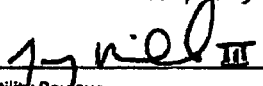
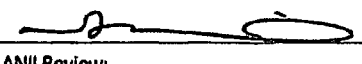
During the manual ultrasonic examination of the above referenced nozzle to shell weld, no recordable indications were detected utilizing the above procedures. The inner 15% examination volume as defined by 10 CFR 50 (Supplement 7), searching for flaws oriented perpendicular to the weld axis, was performed per procedure GEH-UT-311 V16B utilizing search units validated by modeling.

Manual examinations were restricted due to the nozzle configuration.

34.2% code coverage was achieved.

This examination meets the requirements of ASME Section XI, 1995 Edition through 1996 Addenda.

Examination results were compared to Data Report Q1R18-018 from: Q1R18		☐ Change
These examinations were performed under Work Order: 1283273		☒ No Change

This Summary and the following data sheets have been reviewed and accepted by the following personnel:				RWP: 10011881	
Prepared By: 	Level: III	Date: 05/15/11	Utility Review: 	Date: 5-18-11	Dose: 115 mr.
ANII Review: 				Date: 5/22/11	Page <u>1</u> of <u>9</u>



HITACHI

**Ultrasonic Calibration and Examination Record
RPV Components - EPOCH 4**

Site/Unit: Quad Cities / 1

Data Report Number: Q1R21-089

Linearity Sheet: L-005

Outage: RFO 21

Data Sheet Number: D-036

Procedure: GE-UT-300

Rev.: 10

DRR: N/A

Calibration Block: 99978AQC

<u>CS</u> Material	<u>FLAT</u> Size	<u>7.0"</u> Thickness
Initial Cal: <u>0825</u>	Exam Start: <u>0928</u>	
Cal Check: <u>N/A</u>	Exam End: <u>1055</u>	
Cal Check: <u>N/A</u>	<u>Ultracel II</u> Couplant:	<u>08125</u> Batch
Final Cal: <u>1345</u>		
<u>272757</u> Thermometer	<u>80° F</u> Initial Cal Temp.	<u>80° F</u> Final Cal Temp.

DAC Construction

Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
N/A	N/A	1X	N/A	N/A	N/A	N/A
N/A	N/A	1X	N/A	N/A	N/A	N/A
N/A	N/A	1X	N/A	N/A	N/A	N/A
IDN	7.0	1X	80%	12.1	7.0	7.0
N/A	N/A	1X	N/A	N/A	N/A	N/A

DAC 1X= 68.5

Sweep 0-10 = 10' Depth

Note: N/A dB difference between 3/8 and 5/8 Vee

Exam Data for Weld: N18 NOZ

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

<u>OD Plate</u> Exam Surface:	<u>90° F</u> Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
<u>Plate</u>	<u>I</u>	<u>68.5</u>	<u>NRI</u>	<u>60°</u>
<u>Plate CW/CCW</u>	<u>P</u>	<u>68.5</u>	<u>NRI</u>	<u>60°</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Search Unit Data

<u>Sigma</u> Manufacturer:	<u>228C-09007</u> Serial Number:	<u>2.0.1"x0.62"/ Rect.</u> Size / Shape:
<u>65</u> Incident Point:	<u>60°</u> Nominal Angle:	<u>60°</u> Measured Angle:
<u>3.0 MHz</u> Frequency:	<u>SDC-3</u> Model:	<u>Long</u> Mode:

Search Unit Cable

<u>RG-174</u> Cable Type:	<u>12'</u> Length:	<u>0</u> Connectors:

Instrument Settings

<u>Panametrics / Epoch 4</u> Manufacturer/Model:	<u>Q31540306</u> Serial Number:
<u>8.3 μs</u> Delay/Zero:	<u>0.231 in./μsec.</u> Velocity:
<u>Auto</u> Rep Rate:	<u>20.0 in.</u> Range:
<u>Fullwave</u> Rectification:	<u>Sq. / Med</u> Pulser:
<u>400 Ohms</u> Damping:	<u>0%</u> Reject:
<u>3.03 MHz</u> Frequency:	<u>Dual</u> Mode:
<u>Off:</u> DAC:	<u>Off:</u> TVG:
<u>Off:</u> CSC:	<u>Off:</u> DGS:

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	Amplitude	Gain (dB)	Sweep (SD)
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Acceptable Linearity performed : 4/28/2011

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off.
Calibration for full volume examination.
Exams performed to maintain a 10 - 20% clad roll.

<u>JG</u> <u>Jonathan Gullote</u> Initials: Examiner	<u>II</u> Level:	<u>5/14/2011</u> Date:
<u>N/A</u> Initials: Examiner	<u>N/A</u> Level:	<u>05/15/2011</u> Date:
<u>Scott R. Erickson</u> GE Reviewed By:	<u>III</u> Level:	<u>05/15/2011</u> Date:

See Summary Sheet for Signature

Utility Reviewed By: _____ Date: _____

See Summary Sheet for Signature

ANII Reviewed By: _____ Date: _____



HITACHI

**Ultrasonic Calibration and Examination Record
RPV Components - EPOCH 4**

Site/Unit: Quad Cities / 1
Outage: RFO 21

Data Report Number: Q1R21-089 Linearity Sheet: L-005
Data Sheet Number: D-035

Procedure: GE-UT-300

Rev.: 10 DRR: N/A

Calibration Block: CAL-IIW2-036

<u>CS</u> Material	<u>FLAT</u> Size	<u>4.0"</u> Thickness
Initial Cal: <u>0822</u>	Exam Start: <u>0928</u>	
Cal Check: <u>N/A</u>	Exam End: <u>1055</u>	
Cal Check: <u>N/A</u>	<u>Ultracal II</u> Couplant:	<u>08125</u> Batch
Final Cal: <u>1340</u>		
<u>272757</u> Thermometer	<u>80° F</u> Initial Cal Temp.	<u>80° F</u> Final Cal Temp:

DAC Construction

Reflector	Hole Depth	Gain @ 1X	Max Amp	"W" Dim.	Sweep	Screen Div.
SDH	<u>.6</u>	1X	<u>80%</u>	<u>1.1</u>	<u>.66</u>	<u>3.2</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
N/A	<u>N/A</u>	1X	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

DAC 1X= 57.1

Sweep 0-10 = 2" Depth

Note: N/A dB difference between 3/8 and 5/8 Vee

Exam Data for Weld: N18 NOZ

VESSEL-NOZZLE (RECIRCULATION)

Configuration:

OD Plate 90° F
Exam Surface: Component Temperature

Weld Examination Area:	Exam Access	Scan dB	Recordable Indications	Exam Angle
<u>Plate</u>	<u>I</u>	<u>72</u>	<u>NRI</u>	<u>60°</u>
<u>Plate CW/CCW</u>	<u>P</u>	<u>72</u>	<u>NRI</u>	<u>60°</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Search Unit Data

Sigma 228C-06002 2 IL1"x0.627" / Rect.
Manufacturer: Serial Number: Size / Shape:
.65 60° 60°
Incident Point: Nominal Angle: Measured Angle:
3.0 MHz SDC-3 Long
Frequency: Model: Mode:

Search Unit Cable

RG-174 12' 0
Cable Type: Length: Connectors:

Instrument Settings

Panometrics / Epoch 4 Q31540306
Manufacturer/Model: Serial Number:

8.3 μs 0.231 in./μsec. 0.8 - 3.0 MHz
Delay/Zero: Velocity: Narrowband Filter:

Auto Fullwave 4.0 in. Sa / Med
Rep Rate: Rectification: Range: Pulsar:

400 Ohms 0% 3.03 MHz Dual
Damping: Reject: Frequency: Mode:

Off: Off: Off: Off:
DAC: TVG: CSC: DGS:

Calibration Verification

Field Simulator Block S/N: N/A

Reflector	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Amplitude	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Gain (dB)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sweep (SD)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Acceptable Linearity performed: 4/28/2011

Comments: Cal/Exam Date is the date of initial calibration. See coverage sheet for limitations. 0% Reject = Off.
Calibration for near surface examination.
Exams performed a minimum of 14 dB above reference.

JG Jonathan Gullote II 5/14/2011
Initials: Examiner Level: Cal/Exam Date:

N/A N/A
Initials: Examiner Level: 05/15/2011
Scott R Erickson TTE 05/15/2011
GE Reviewed By: Level: Date:

See Summary Sheet for Signature

Utility Reviewed By: Date:

See Summary Sheet for Signature

ANII Reviewed By: Date: