

September 13, 2004

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

Subject: Duke Energy
Oconee Nuclear Station, Unit 3
Docket Nos. 50-287
Third Ten Year Inservice Inspection Interval
Requests for Relief No. 04-ON-004

Pursuant to 10 CFR 50.55a(g)(5)(iii), attached is a Request for Relief from the requirement to examine 100% of the volume specified by the ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition with no Addenda (as modified by Code Case N-460).

Request for Relief 04-ON-004 is to allow Duke Energy to take credit for ten (10) limited ultrasonic examinations on welds associated with various systems and components described in the attached request.

During examination of the subject Unit 3 welds, the ultrasonic examination coverage did not meet the 90% examination requirements of Code Case N-460. The obtainable volume coverage for each weld examination is indicated on the attached request. Achievement of greater examination coverage for these welds is impractical due to piping/valve geometry, interferences, and existing examination technology. Therefore, Duke Energy requests that the NRC grant relief as authorized under 10 CFR 50.55a(g)(6)(i).

A047

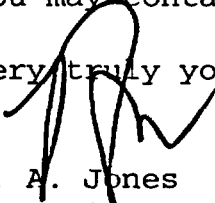
U. S. Nuclear Regulatory Commission

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Page 2

If there are any questions or further information is needed
you may contact R. P. Todd at (864) 885-3418.

Very truly yours,



R. A. Jones
Site Vice President

Attachment

xc w/att: Mr. William D. Travers
Administrator, Region II
U.S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth St., SWW, Suite 23T85
Atlanta, GA 30303

L. N. Olshan, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

xc(w/o attch):

M. C. Shannon
Senior NRC Resident Inspector
Oconee Nuclear Station

Mr. Henry Porter
Division of Radioactive Waste Management
Bureau of Land and Waste Management
SC Dept. of Health & Environmental Control
2600 Bull St.
Columbia, SC 29201

Request for Relief

04-ON-004

Limited Examinations
Associated With Various
Systems and Components

3EOC-20

Proposed Relief in Accordance with 10 CFR 50.55a(g)(5)(iii)**Inservice Inspection Impracticability****Duke Energy Corporation****Oconee Nuclear Station – Unit 3 (EOC-20)****Third 10-Year Interval – Inservice Inspection Plan****Interval Start Date = 12-16-1994 Interval End Date = 12-16-2004****ASME Section XI Code – 1989 Edition with No Addenda****Code Case N-460 is Applicable**

	I.	II. & III.	IV.	V.	VI.	VII.
Limited Area/Weld I.D. Number	System / Component for Which Relief is Requested: Area or Weld to be Examined	Code Requirement from Which Relief is Requested: 100% Exam Volume Coverage Exam Category Item No. Fig. No. Limitation Percentage	Basis for Relief	Alternate Examinations or Testing	Justification for Granting Relief	Implementation Schedule
3-PDB2-1	Reactor Coolant System 3B2 Reactor Coolant Pump Nozzle to Safe End Weld	Exam Category B-J Item No. B09.011.023 Fig. IWB-2500-8 (c) 37.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "A"	See Paragraph "K"	See Paragraph "L"	See Paragraph "N"
3LP-131-2	Low Pressure Injection System Pipe to Valve 3LP-1 Weld	Exam Category B-J Item No. B09.011.051 Fig. IWB-2500-8 (c) 37.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "B"	See Paragraph "K"	See Paragraph "L"	See Paragraph "N"
3-51A-120-10	High Pressure Injection System Flange to Pipe Weld	Exam Category C-F-1 Item No. C05.021.016 Fig. IWC-2500-7 (a) 37.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "C"	See Paragraph "K"	See Paragraph "M"	See Paragraph "N"

Limited Area/Weld I.D. Number	I. System / Component for Which Relief is Requested: Area or Weld to be Examined	II. & III. Code Requirement from Which Relief is Requested: 100% Exam Volume Coverage Exam Category Item No. Fig. No. Limitation Percentage	IV. Basis for Relief	V. Alternate Examinations or Testing	VI. Justification for Granting Relief	VII. Implementation Schedule
3-51A-121-22	High Pressure Injection System Pipe to Valve 3HP-409 Weld	Exam Category C-F-1 Item No. C05.021.021 Fig. IWC-2500-7 (a) 37.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "D"	See Paragraph "K"	See Paragraph "M"	See Paragraph "N"
3-51A-52-20	High Pressure Injection System Tee to Valve 3HP-117 Weld	Exam Category C-F-1 Item No. C05.021.035 Fig. IWC-2500-7 (a) 37.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "E"	See Paragraph "K"	See Paragraph "M"	See Paragraph "N"
3-51A-119-41	High Pressure Injection System Pipe to Valve 3HP-410 Weld	Exam Category C-F-1 Item No. C05.021.044 Fig. IWC-2500-7 (a) 62.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "F"	See Paragraph "K"	See Paragraph "M"	See Paragraph "N"
3-51A-75-34	High Pressure Injection System Tee to Valve 3HP-140 Weld	Exam Category C-F-1 Item No. C05.021.056 Fig. IWC-2500-7 (a) 37.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "G"	See Paragraph "K"	See Paragraph "M"	See Paragraph "N"

	I.	II. & III.	IV.	V.	VI.	VII.
Limited Area/Weld I.D. Number	System / Component for Which Relief is Requested: Area or Weld to be Examined	Code Requirement from Which Relief is Requested: 100% Exam Volume Coverage Exam Category Item No. Fig. No. Limitation Percentage	Basis for Relief	Alternate Examinations or Testing	Justification for Granting Relief	Implementation Schedule
3-51A-87-8	High Pressure Injection System Tee to Valve 3HP-029 Weld	Exam Category C-F-1 Item No. C05.021.066 Fig. IWC-2500-7 (a) 62.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "H"	See Paragraph "K"	See Paragraph "M"	See Paragraph "N"
3-51A-87-9	High Pressure Injection System Valve 3HP-029 to Pipe Weld	Exam Category C-F-1 Item No. C05.021.067 Fig. IWC-2500-7 (a) 37.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "I"	See Paragraph "K"	See Paragraph "M"	See Paragraph "N"
3-51A-59-42	High Pressure Injection System Tee to Valve 3HP-122 Weld	Exam Category C-F-1 Item No. C05.021.090 Fig. IWC-2500-7 (a) 62.5% Volume Coverage Limited Scan of Examination Volume C-D-E-F (examination from one side)	See Paragraph "J"	See Paragraph "K"	See Paragraph "M"	See Paragraph "N"

See Attachment A for B09.011.023 area/weld locations.

See Attachment B for inspection data on all items listed in the above table for this Relief Request.

Note: Items C05.021.016, C05.021.021, C05.021.035, C05.021.044, C05.021.056, and C05.021.090 were inspected in January of 2003 and the remaining items listed above were inspected in May of 2003.

IV. Basis for Relief

Paragraph A: (The reactor coolant pump nozzle material is A351-CF8 and the safe-end material is SA 376 TP 316. Weld 3-PDB2-1 has a diameter of 33.5 inches and a wall thickness of 2.33 inches.)

During the ultrasonic examination of weld 3-PDB2-1, only 37.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan covering 50% of the required examination volume was performed on the wrought safe end side of the weld in two circumferential directions and a 60° shear wave and 60° longitudinal wave scan covering 50% of the examination volume on the wrought safe end side was performed in one axial direction from the safe end side. No scanning was performed from the cast stainless steel nozzle side of the weld. Scanning limitations were caused by the configuration the reactor coolant pump nozzle which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the reactor coolant pump nozzle would have to be redesigned to allow scanning from both sides of the weld, which is impractical. There were no recordable indications found during the inspection of this weld.

Paragraph B: (The valve and pipe material is stainless steel. Weld 3LP-131-2 has a diameter of 12 inches and a wall thickness of 1.125 inches.)

During the ultrasonic examination of weld 3LP-131-2, only 37.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the pipe and 50% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the pipe side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the pipe side. No scanning was performed from the valve side of the weld. Scanning limitations were caused by the valve configuration which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the valve would have to be redesigned to allow scanning from both sides of the weld, which is impractical. There were no recordable indications found during the inspection of this weld.

Paragraph C: (The flange and pipe material is stainless steel. Weld 3-51A-120-10 has a diameter of 4 inches and a wall thickness of .531 inches.)

During the ultrasonic examination of weld 3-51A-120-10, only 37.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the pipe and 50% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the pipe side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the pipe side. No scanning was performed from the flange side of the weld. Scanning limitations were caused by the flange to pipe configuration which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the flange would have to be redesigned to allow scanning from both sides of the weld, which is impractical. There were no recordable indications found during the inspection of this weld.

Paragraph D: (The valve and pipe material is stainless steel. Weld 3-51A-121-22 has a diameter of 4 inches and a wall thickness of .674 inches.)

During the ultrasonic examination of weld 3-51A-121-22, only 37.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the pipe and 50% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the pipe side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the pipe side. No scanning was performed from the valve

side of the weld. Scanning limitations were caused by the valve configuration which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the valve would have to be redesigned to allow scanning from both sides of the weld, which is impractical. There were no recordable indications found during the inspection of this weld.

Paragraph E: (The valve and tee material is stainless steel. Weld 3-51A-52-20 has a diameter of 4 inches and a wall thickness of .531 inches.)

During the ultrasonic examination of weld 3-51A-52-20, only 37.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the tee and 50% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the tee side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the tee side. No scanning was performed from the valve side of the weld. Scanning limitations were caused by the tee to valve configuration which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the valve and tee would have to be redesigned to allow scanning from both sides of the weld, which is impractical. There were no recordable indications found during the inspection of this weld.

Paragraph F: (The valve and pipe material is stainless steel. Weld 3-51A-119-41 has a diameter of 4 inches and a wall thickness of .674 inches.)

During the ultrasonic examination of weld 3-51A-119-41, only 62.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the pipe and 100% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the pipe side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the pipe side. No scanning was performed from the valve side of the weld. Scanning limitations were caused by the pipe to valve configuration which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the valve would have to be redesigned to allow scanning from both sides of the weld, which is impractical. There were no recordable indications found during the inspection of this weld.

Paragraph G: (The valve and tee material is stainless steel. Weld 3-51A-75-34 has a diameter of 4 inches and a wall thickness of .531 inches.)

During the ultrasonic examination of weld 3-51A-75-34, only 37.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the tee and 50% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the tee side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the tee side. No scanning was performed from the valve side of the weld. Scanning limitations were caused by the valve configuration which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the valve would have to be redesigned to allow scanning from both sides of the weld, which is impractical.

There was a recordable indication found during the inspection of this weld. The indication was a geometric reflector due to the I.D. counter-bore. This assessment was confirmed by review of RT film.

Paragraph H: (The valve and tee material is stainless steel. Weld 3-51A-87-8 has a diameter of 4 inches and a wall thickness of .531 inches.)

During the ultrasonic examination of weld 3-51A-87-8, only 62.5% coverage of the required examination volume could not be obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the tee and 100% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the tee side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the tee side. No scanning was performed from the valve side of the weld. Limitations were caused by the valve to tee configuration which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the valve and tee would have to be redesigned to allow scanning from both sides of the weld, which is impractical. There were no recordable indications found during the inspection of this weld.

Paragraph I: (The valve and pipe material is stainless steel. Weld 3-51A-87-9 has a diameter of 4 inches and a wall thickness of .531 inches.)

During the ultrasonic examination of weld 3-51A-87-9, only 37.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the pipe and 50% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the pipe side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the pipe side. No scanning was performed from the valve side of the weld. Scanning limitations were caused by the valve configuration which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the valve would have to be redesigned to allow scanning from both sides of the weld, which is impractical.

There was a recordable indication found during the inspection of this weld. The indication was a geometric reflector from the weld root. This assessment was confirmed by review of RT film.

Paragraph J: (The valve and tee material is stainless steel. Weld 3-51A-59-42 has a diameter of 2 inches and a wall thickness of .552 inches.)

During the ultrasonic examination of weld 3-51A-59-42, only 62.5% coverage of the required examination volume was obtained. The coverage reported represents the aggregate coverage of all scans performed. A 45° shear wave scan was performed in two circumferential directions covering 100% the base metal portion of the tee and 100% of the weld. A 60° shear wave scan covering 100% of the adjacent base material on the tee side was performed in one axial direction. A 60° longitudinal wave scan covering 100% of the weld metal and adjacent base material on both sides of the weld was performed in one axial direction from the tee side. No scanning was performed from the valve side of the weld. Scanning limitations were caused by the valve and tee configurations which prevented scanning from both sides of the weld. In order to scan all of the required surfaces for the inspection of this weld, the valve and tee would have to be redesigned to allow scanning from both sides of the weld, which is impractical. There were no recordable indications found during the inspection of this weld.

V. Alternate Examinations or Testing

Paragraph K:

The scheduled 10-year code examination was performed on the referenced weld and it resulted in the noted limited coverage of the required ultrasonic volume. No additional examinations are planned for the weld during the current inspection interval.

VI. Justification for Granting Relief

Paragraph L:

Ultrasonic examination of weld for item number B09.011 was conducted using personnel, equipment and procedures qualified in accordance with ASME Section XI, Appendix VIII Supplement 2 of the 1995 Edition with the 1996 Addenda as administered by the PDI. Although 100% of the required scanning could not be achieved, the amount of coverage of the examination volume provides an acceptable level of quality and integrity. In addition to the volumetric examination with limited scan, Duke Energy performed a surface examination (code required) on the B09.011 item and achieved 100% coverage. The result from the surface examination was acceptable.

Duke Energy Corporation does not claim credit for coverage of the far side of austenitic piping welds. The characteristics of austenitic weld metal attenuate and distort the sound beam when shear waves pass through the weld metal. Refracted longitudinal waves provide better penetration but cannot be used beyond the first sound path leg. Duke Energy Corporation uses a combination of shear waves and longitudinal waves to examine single sided austenitic piping welds.

Although the procedures, personnel and equipment were qualified through PDI using longitudinal and shear waves search units and cracks were detected through the weld metal, PDI does not provide a qualification for single sided examination similar metal austenitic piping welds.

Duke Energy will use Class 1, Examination Category B-P, pressure testing and VT-2 visual examination to compliment the limited scan examinations. The Code requires that a pressure test be performed after each refueling outage for Class 1. These tests require a VT-2 visual examination for evidence of leakage. This testing provides adequate assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), there are other activities which provide a high level of confidence that, in the unlikely event that leakage did occur through the weld, it would be detected and isolated. Specifically, leakage from the weld would be detected by monitoring of the Reactor Coolant System (RCS), which is performed once each shift under station procedure PT/1,2,3/A/0600/10, "RCS Leakage". This RCS leakage monitoring is a requirement of Technical Specification 3.4.13, "Reactor Coolant System Leakage". Any discovered leakage is also evaluated in accordance with this Technical Specification. The leakage could also be detected through several other methods. One is the RCS mass balance calculation. A second is the Reactor Building air particulate monitor. This monitor is sensitive to low leak rates; the iodine monitor, gaseous monitor, and area monitor are capable of detecting any fission products in the coolant. A third is the level indicator in the Reactor Building normal sump. A fourth is a loss of level in the Letdown Storage Tank. Based on the results of the required volumetric, surface, and VT-2 examinations performed during this outage, it's Duke's belief that this combination of examinations provides a reasonable assurance of component integrity.

Paragraph M:

Ultrasonic examination of the weld for item number C05.021 was conducted using personnel, equipment and procedures qualified in accordance with ASME Section XI, Appendix VIII Supplement 2 of the 1995 Edition with the 1996 Addenda as administered by the Performance Demonstration Initiative (PDI). Although 100% coverage of the examination volume could not be achieved, the amount of coverage obtained for this examination provides an acceptable level of quality and integrity. In addition to the volumetric examination with limited coverage, Duke Energy performed a surface examination (code required) on the C05.021 item and achieved 100% coverage. The result from the surface examination was acceptable.

Duke Energy Corporation does not claim credit for coverage of the far side of austenitic piping welds. The characteristics of austenitic weld metal attenuate and distort the sound beam when shear waves pass through the weld metal. Refracted longitudinal waves provide better penetration but cannot be used beyond the first sound path leg. Duke Energy Corporation uses a combination of shear waves and longitudinal waves to examine single sided austenitic piping welds.

Although the procedures, personnel and equipment were qualified through PDI using longitudinal and shear waves search units and cracks were detected through the weld metal, PDI does not provide a qualification for single sided examination similar metal austenitic piping welds.

Duke Energy will use Class 2, Examination Category C-H, pressure testing and VT-2 visual examination to compliment the limited examination coverage. The Code requires that a pressure test be performed once each period for Class 2 items. These tests require a VT-2 visual examination for evidence of leakage. This testing provides adequate assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface and pressure test), there are other activities which provide a high level of confidence that, in the unlikely case that leakage did occur through the weld, it would be detected and isolated. One is that leakage from these welds would be detected by Operations personnel during their regular rounds (reference station procedure OP/3/A/1102/020A. The Nuclear Equipment Operator has been trained to look for any unusual conditions, such as leaks. In addition the procedure addresses leaks as being an item to consider during rounds. The C05.021 item is located in an area where operations personnel will be walking through as part of their rounds; therefore, any leak would be identified by visual observation.

Duke Energy has examined the weld/component referenced in this request to the maximum extent possible utilizing the latest in examination techniques and equipment. The weld/component identified in Section I of this request was rigorously inspected by volumetric NDE methods during construction and verified to be free from unacceptable fabrication defects. Based on the coverage and results of the required volumetric exams and surface exams this outage and the additional and pressure testing (VT-2) exams, it is Duke's belief that this combination of examinations provides a reasonable assurance of component integrity.

VII. Implementation Schedule

Paragraph N:

The scheduled third 10-year interval plan code examination was performed on the referenced area/weld resulting in limited scan and volumetric coverage. No additional examinations are planned for the area/weld during the current inspection interval. The same area/weld may be examined again as part of the next (fourth) 10-year interval plan, depending on the applicable code year edition and addenda requirements adopted in the future.

VIII. Other Information

The following individuals contributed to the development of this relief request:

James J. McArdle (Principal UT NDE Level III Examiner) provided Sections II through V and part of Section VI.

B. W. Carney, Jr. (Oconee Engineering) provided part of Section VI.

Larry C. Keith (Oconee ISI Plan Manager) compiled the remaining sections.

Sponsored By: Larry C Keith Date 7-8-04

Approved By: R. Kevin Rhyme Date 7/8/04

Oconee Unit #3

EOC20

NO DATA

CALIBRATION SHEET # 0303043-45360

0303044-606

COMPONENT I.D.# 3-PDB2-1

ITEM # B09.011.023

MD 5/14/03

DUKE POWER COMPANY ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS												Exam Start: 1240		NDE-UT-3A	
												Exam Finish: 1249		Revision 2	
Station: Oconee				Unit: 3		Component/Weld ID: 3-PDB2-1						Date: 5/7/2003			
Nominal Material Thickness (in): 2.33				Weld Length (in.): 105.24				Surface Temperature: 74 Deg F							
Measured Material Thickness (in): 2.80				Lo: 9.1.1.1				Pyrometer S/N: MCNDE 27219							
Surface Condition: AS GROUND				Calibration Sheet No: 0303042				Cal Due: 7/20/2003							
Examiner: David Zimmerman <i>David L. Zimmerman</i> Level: III								Configuration: CIRC. WELD							
Examiner: James H. Resor <i>James H. Resor</i> Level: II								S2 Flow S1							
Procedure: NDE-640 Rev: 1 FC: *								SAFE END to NOZZLE							
IND NO.		Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps	
NRI	0°														

Remarks: * F.C.: 95-18, 95-19, 03-02, 03-04, 03-08.					
		Limitations: see NDE-UT-4 <input type="checkbox"/> None: <input checked="" type="checkbox"/>		Sheet <u>2</u> of <u>5</u>	
Reviewed By: <i>Gay Moss</i>		Level: <u>D</u> Date: <u>5-8-03</u>		Authorized Inspector: <i>[Signature]</i> Date: <u>5/14/03</u>	
				Item No: B09.011.023	

DUKE POWER COMPANY UT PROFILE/PLOT SHEET		NDE-UT-5
		Revision 1
EXAMINATION SURFACE 1 <i>2</i>	WELD	EXAMINATION SURFACE 2 <i>1</i>
4 3 2 1	1 2 3 4	
.5		
1		
1.5		
2		
2.5		
3		
Component ID/Weld No. <u>3PDB2-1</u> : Remarks: <u>100% COVERAGE</u> 		
<div style="display: flex; justify-content: space-between;"> <div> Examiner: <u><i>Tommy D. Ryan</i></u> Reviewed By: <u><i>Don Moore</i></u> Authorized Inspector: <u><i>[Signature]</i></u> </div> <div> Item No: <u>B09.011.023</u> Level: <u>IR</u> Level: <u>B</u> </div> <div> Date: <u>5-7-03</u> Date: <u>5-8-03</u> Date: <u>6/1/03</u> </div> </div>		
<div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: right; margin-right: 10px;">270</div> <div style="text-align: center;"> </div> <div style="text-align: left; margin-left: 10px;">90</div> </div>		
180 Sheet <u>3</u> of <u>5</u>		

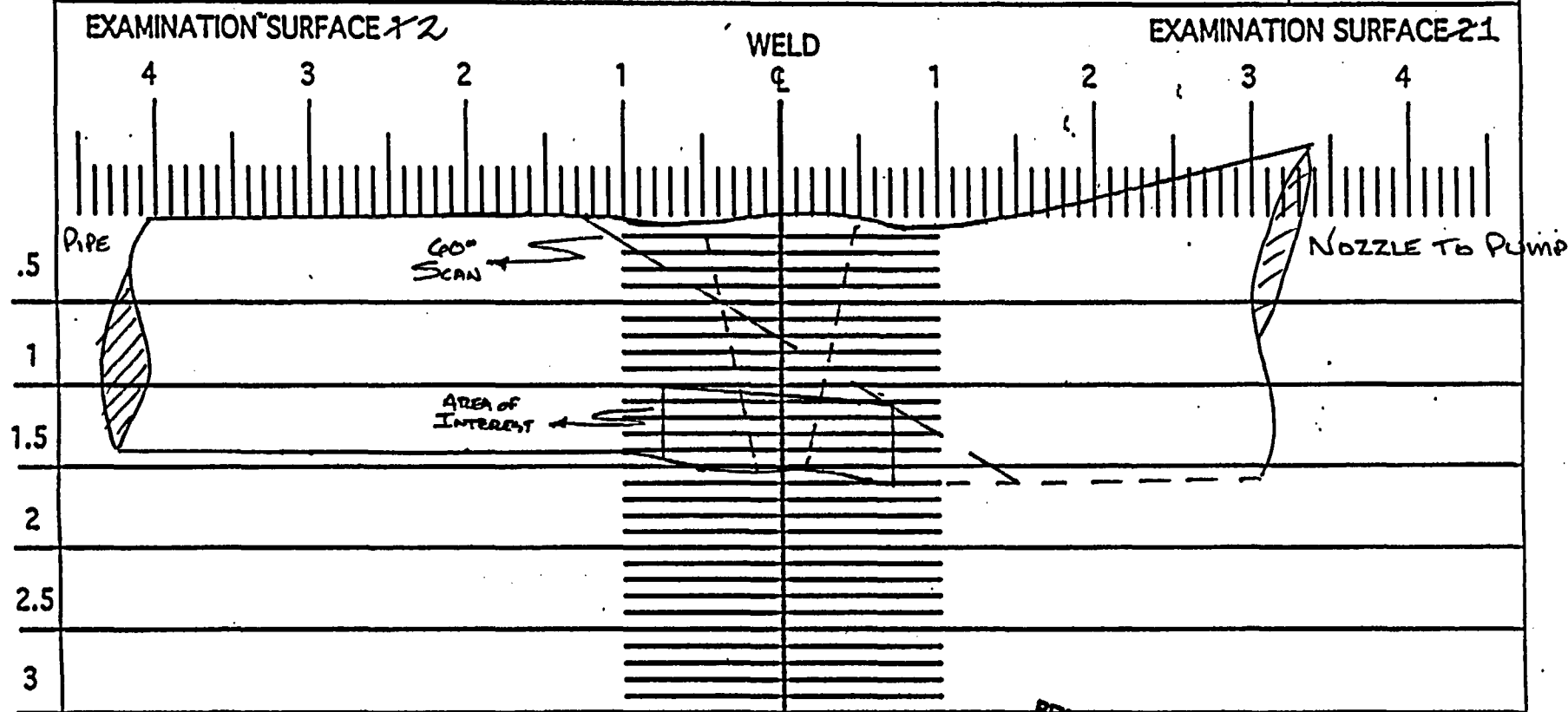
DUKE POWER COMPANY ISI LIMITATION REPORT				FORM NDE-UT-4	
				Revision 1	
Component/Weld ID: 3-PDB2-1		Item No: B09.011.023		Remarks:	
<input checked="" type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> N/A </u> to L <u> N/A </u> INCHES FROM WO <u> 1.2 </u> to <u> BEYOND </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input checked="" type="checkbox"/> Other <u> 60L </u> FROM <u> 0 </u> DEG to <u> 360 </u> DEG		SURFACE <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw		NOZZLE CONFIGURATION	
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG		SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw			
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG		SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw			
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG		SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw			
Prepared By: DAVID ZIMMERMAN <i>David K. 3</i> Level: III Date: 5/7/2003 Sketch(s) attached <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Sheet <u>4</u> of <u>5</u>					
Reviewed By: <i>Gary Mor</i> Date: <u>5-12-03</u> Authorized Inspector: <i>[Signature]</i> Date: <u>5/14/03</u>					

DUKE POWER COMPANY
UT PROFILE/PLOT SHEET

2:1 SCALE

NDE-UT-5

Revision 1



Component ID/Weld No. 3PDB2-1

Remarks: 100% COVERAGE DRAWING 2:1 SCALE
37.5% of IM 3-2-04

Item No: B09.011.023

Examiner: [Signature] Level: II Date: 5-7-03

Reviewed By: [Signature] Level: ID Date: 5-8-03

Authorized Inspector: [Signature] Date: 5/14/03

REVIEWED
Initial ☐ Final ☒
AMT Date 3/4/04
HSBCT

270

Profile taken
at: 0°

90

180 Sheet 5 of 5

Oconee Unit #3

EOC20

NO DATA

CALIBRATION SHEET # 0303078-45°160

0303079-60°L

COMPONENT I.D.# 3LP-131-2

ITEM # B09.011.051

DUKE POWER COMPANY										Exam Start: 0950		NDE-UT-3A		
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS										Exam Finish: 0955		Revision 2		
Station: Oconee			Unit: 3		Component/Weld ID: 3LP-131-2						Date: 5/16/2003			
Nominal Material Thickness (in): 1.125				Weld Length (in.): 40.0"				Surface Temperature: 74 Deg F						
Measured Material Thickness (in): 1.05				Lo: 9.1.1.1				Pyrometer S/N: MCNDE 27220						
Surface Condition: AS GROUND				Calibration Sheet No: 0303080				Cal Due: 7/20/2003						
Examiner: Marion T. Weaver <i>Marion T. Weaver</i> Level: II								Configuration: Pipe to Valve (Valve 3LP-1)						
Examiner: James H. Resor <i>James H. Resor</i> Level: II								S1 Flow S2						
Procedure: NDE-640 Rev: 1 FC: *								Pipe to Valve						
IND NO.		Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps
NRI	0°													

Remarks: *FC 95-18, 95-19, 03-02, 03-04, 03-08			
		Limitations: see NDE-UT-4 <input type="checkbox"/> None: <input checked="" type="checkbox"/>	Sheet <u>2</u> of <u>4</u>
Reviewed By: <i>[Signature]</i>	Level: <u>III</u> Date: <u>5/16/03</u>	Authorized Inspector: <i>[Signature]</i> Date: <u>5/14/03</u>	Item No: B09.011.051

DUKE POWER COMPANY ISI LIMITATION REPORT				FORM NDE-UT-4	
				Revision 1	
Component/Weld ID: 3LP-131-2		Item No: B09.011.051		Remarks:	
<input checked="" type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> N/A </u> to L <u> N/A </u> INCHES FROM WO <u> C/L </u> to <u> Beyond </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> 0 </u> DEG to <u> 360 </u> DEG		SURFACE <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 BEAM DIRECTION <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw		Due to Valve Configuration- 100% coverage obtained	
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG		SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw			
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG		SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw			
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG		SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw			
Prepared By: James H Resor <i>[Signature]</i> Level: II Date: 5/16/2003		Sketch(s) attached <input checked="" type="checkbox"/> yes <input type="checkbox"/> no		Sheet <u> 3 </u> of <u> 4 </u>	
Reviewed By: <i>[Signature]</i> III Date: <u> 5/16/03 </u>		Authorized Inspector: <i>[Signature]</i>		Date: <u> 5/16/03 </u>	

DUKE POWER COMPANY
UT PROFILE/PLOT SHEET

NDE-UT-5

Revision 1

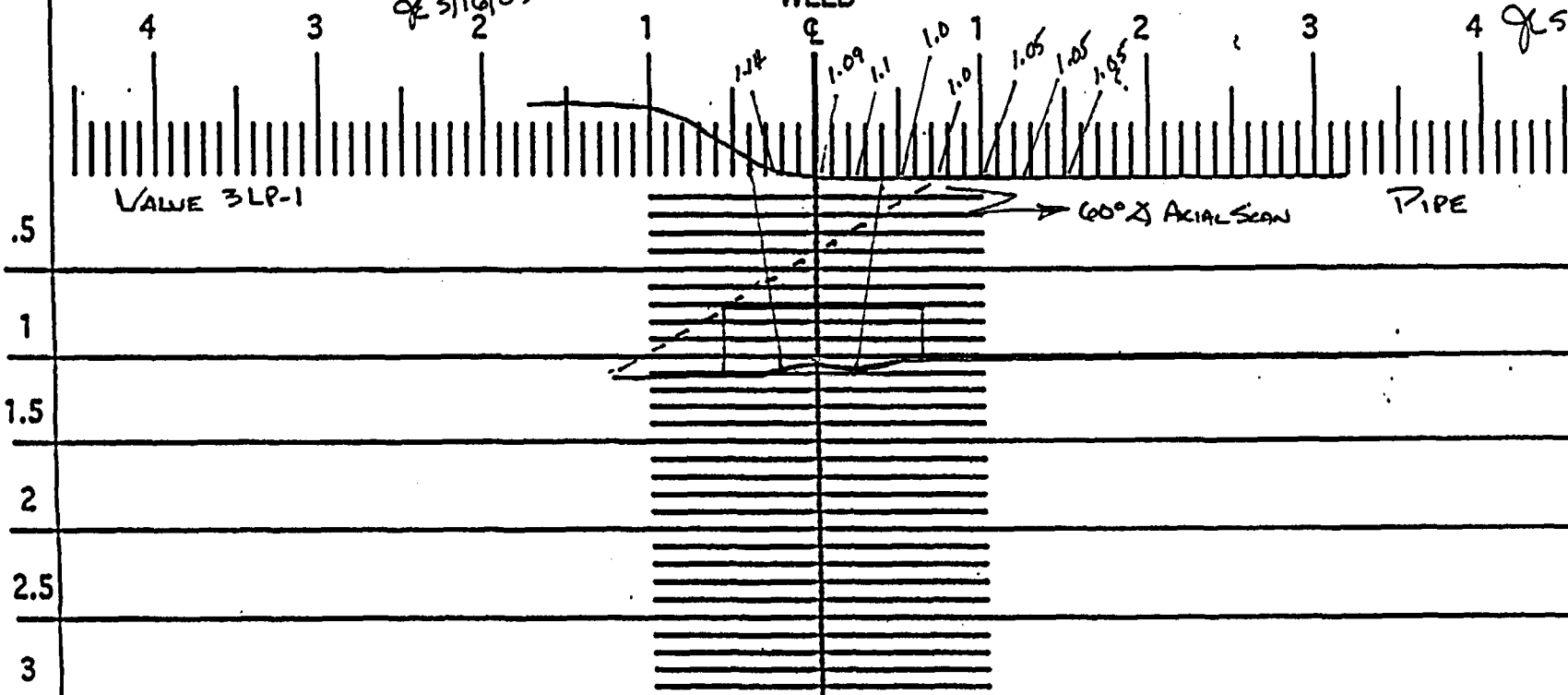
EXAMINATION SURFACE 2

5/16/03

WELD

EXAMINATION SURFACE 21

5/16/03



Component ID/Weld No. 3LP-131-2

Remarks: 100% COVERAGE
37.5% 3-2-04

Item No: B09.D11.051

Examiner: [Signature]

Level: II

Date: 5-16-03

Reviewed By: [Signature]

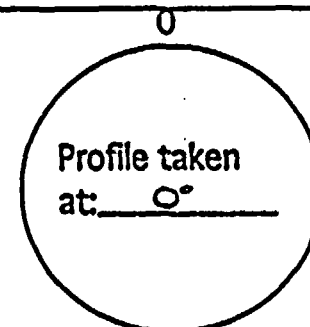
Level: III

Date: 5/16/03

Authorized Inspector: [Signature]

Date: 5/16/03

270



90

180 Sheet 4 of 4

Oconee Unit #3
EOC20
NO DATA

CALIBRATION SHEET # 0303016-45° + 60°

0303015-60°L

#

COMPONENT I.D.# 3-51A-120-10

ITEM # C05.021.0/6

DUKE POWER COMPANY										Exam Start: 1010		NDE-UT-3A		
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS										Exam Finish: 1034		Revision 2		
Station: Ocone			Unit: 3		Component/Weld ID: 3-51A-120-10						Date: 1/14/2003			
Nominal Material Thickness (in): 0.531				Weld Length (in.): 14.1				Surface Temperature: 80 Deg F						
Measured Material Thickness (in): .56				Lo: 9.1.1.1				Pyrometer S/N: MCNDE 27228						
Surface Condition: GROUND				Calibration Sheet No: 0303012				Cal Due: 5/11/2003						
Examiner: James H. Resor <i>James H. Resor</i> Level: II								Configuration: CIRC						
Examiner: Marion T. Weaver <i>Marion T. Weaver</i> Level: II								S2 Flow S1						
Procedure: NDE-640 Rev: 1 FC: *								PIPE to FLANGE						
IND NO.	<i>4</i>	Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps
NRI	0													

Remarks: * FC 95-19, 02-29					
		Limitations: see NDE-UT-4 <input checked="" type="checkbox"/> None: <input type="checkbox"/>		Sheet <u>2</u> of <u>4</u>	
Reviewed By: <i>Harry Moss</i>		Level: <i>D</i>	Date: <i>1-16-03</i>	Authorized Inspector: <i>[Signature]</i> Date: <i>1/23/03</i>	
				Item No: C05.021.016	

DUKE POWER COMPANY UT PROFILE/PLOT SHEET		NDE-UT-5
		Revision 1
<p>EXAMINATION SURFACE 1 <i>JHh 3-31-03</i></p> <p style="text-align: center;">4 3 2 2 1</p>	<p style="text-align: center;">WELD</p> <p style="text-align: center;">1 2 3 4 1</p> <p style="text-align: right;">EXAMINATION SURFACE 2 <i>JHh 3-31-03</i></p>	
<p>Component ID/Weld No. <u>3-51A-120-10</u></p> <p>Remarks: <u>100% COVERAGE</u></p> <p><u>37.5% g/m 3-2-04</u></p>		
<p>Item No: <u>CD5.021.016</u></p> <p>Examiner: <u><i>James P. B...</i></u> Level: <u>II</u> Date: <u>3-31-03</u></p> <p>Reviewed By: <u><i>Ray M...</i></u> Level: <u>I</u> Date: <u>3-31-03</u></p> <p>Authorized Inspector: <u><i>[Signature]</i></u> Date: <u>4-22-03</u></p>		

REVIEWED
Initial ☐ Final ☒
ANIR Date 3/4/04
HSBCT

270

0

180

90

Profile taken
at: 0°

180 Sheet 3 of 4

DUKE POWER COMPANY ISI LIMITATION REPORT			FORM NDE-UT-4
			Revision 1
Component/Weld ID: 3-51A-120-10	Item No: C05.021.016	Remarks:	
<div style="display: flex; justify-content: space-between;"> <div> ^{THM} <input checked="" type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div> <div style="margin-top: 10px;"> FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM <u> 0° </u> DEG to <u> 360° </u> DEG </div>	60° limited due to flange to pipe configuration		
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div> <div style="margin-top: 10px;"> FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG </div>			
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div> <div style="margin-top: 10px;"> FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG </div>			
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div> <div style="margin-top: 10px;"> FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG </div>			
Prepared By: <u>James A. Buser</u>	Level: <u>II</u>	Date: <u>1-14-03</u>	Sketch(s) attached <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Reviewed By: <u>Gary J. Moss</u>	Date: <u>1-16-03</u>	Authorized Inspector: <u>[Signature]</u>	Date: <u>1/23/03</u>

Oconee Unit #3
EOC20
NO DATA

CALIBRATION SHEET # 0303005-38°+60°

0303004-602

#

COMPONENT I.D.# 3-51A-121-22

ITEM # C05.021.021

DUKE POWER COMPANY										Exam Start: 1550		NDE-UT-3A		
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS										Exam Finish: 1553		Revision 2		
Station: Oconee			Unit: 3		Component/Weld ID: 3-51A-121-22						Date: 1/13/2003			
Nominal Material Thickness (in): 0.674				Weld Length (in.): 14.1				Surface Temperature: 80° Deg F						
Measured Material Thickness (in): .65				Lo: 9.1.1.1				Pyrometer S/N: MCNDE 27228						
Surface Condition: GROUND				Calibration Sheet No: 0303007				Cal Due: 5/11/2003						
Examiner: James H. Resor <i>James H. Resor</i> Level: II								Configuration: CIRC. WELD						
Examiner: Marion T. Weaver <i>Marion T. Weaver</i> Level: II								S2 Flow S1						
Procedure: NDE-640 Rev: 1 FC: *								VALVE to PIPE						
IND NO.	4	Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps
NRI	0°													

Remarks: *FC 95-19, 02-29		
Limitations: see NDE-UT-4 <input type="checkbox"/> None: <input checked="" type="checkbox"/>		Sheet <u>2</u> of <u>4</u>
Reviewed By: <i>Nancy Moss</i> Level: <u>B</u> Date: <u>1-15-03</u>	Authorized Inspector: <i>[Signature]</i> Date: <u>1/23/03</u>	Item No: C05.021.021

DUKE POWER COMPANY UT PROFILE/PLOT SHEET		NDE-UT-5
		Revision 1
EXAMINATION SURFACE 1	WELD	EXAMINATION SURFACE 2
4 3 2 1	1 2 3 4	
<p>Component ID/Weld No. 3-5/A-121.22</p> <p>Remarks: 100% COVERAGE 37.5°/10 JIM 3-2-04</p>		
<p>Item No: C05.021.021</p> <p>Examiner: <i>James H. Spivey</i> Level: II Date: 3-31-03</p> <p>Reviewed By: <i>Mark Moore</i> Level: IF Date: 3-31-03</p> <p>Authorized Inspector: <i>[Signature]</i> Date: 4-22-03</p>		
<p>REVIEWED Initial <input type="checkbox"/> Final <input checked="" type="checkbox"/> ANIR Date 3/4/04 HSBCT</p> <p>270 0 90</p> <p>Profile taken at: 0°</p> <p>180 Sheet 3 of 4</p>		

DUKE POWER COMPANY ISI LIMITATION REPORT			FORM NDE-UT-4
			Revision 1
Component/Weld ID: 3-51A-121-22		Item No: C05.021.021	Remarks:
<input checked="" type="checkbox"/> NO SCAN 1-13-03 <input checked="" type="checkbox"/> LIMITED SCAN	SURFACE 1-13-03 <input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2	BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	60° SCAN LIMITED DUE TO VALVE CONFIGURATION
FROM L _____ to L _____		INCHES FROM WO _____ to _____	
ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input type="checkbox"/> Other _____		FROM _____ 0 _____ DEG to _____ 360 _____ DEG	
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2	BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	
FROM L _____ to L _____		INCHES FROM WO _____ to _____	
ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____		FROM _____ DEG to _____ DEG	
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2	BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	
FROM L _____ to L _____		INCHES FROM WO _____ to _____	
ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____		FROM _____ DEG to _____ DEG	
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2	BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	
FROM L _____ to L _____		INCHES FROM WO _____ to _____	
ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____		FROM _____ DEG to _____ DEG	
Prepared By: <i>James H. B...</i>	Level: <i>II</i>	Date: <i>1-13-03</i>	Sketch(s) attached <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Reviewed By: <i>Dan Moss</i>		Date: <i>1-15-03</i>	Authorized Inspector: <i>[Signature]</i> Date: <i>1/23/03</i>

Oconee Unit #3
EOC20
NO DATA

CALIBRATION SHEET # 0303027-45° & 60°

6303028 - 60°L

COMPONENT I.D.# 3-51A-52-20

ITEM # C05.021.035

DUKE POWER COMPANY												Exam Start: 1030		NDE-UT-3A	
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS												Exam Finish: 1100		Revision 2	
Station: Oconee				Unit: 3		Component/Weld ID: 3-51A-52-20						Date: 1/20/2003			
Nominal Material Thickness (in): 531				Weld Length (in.): 14.1				Surface Temperature: 68° Deg F							
Measured Material Thickness (in): .7				Lo: 9.1.1.1				Pyrometer S/N: MCNDE 27228							
Surface Condition: GROUND				Calibration Sheet No: 0303026				Cal Due: 5/11/2003							
Examiner: James H. Resor <i>James H. Resor</i> Level: II								Configuration: CIRC. WELD							
Examiner: Level:								S1 Flow S2							
Procedure: NDE-640 Rev: 1 FC: *								PIPE to VALVE							
IND NO.	<i>4</i>	Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps	
NRI	0°														

Remarks: *FC 95-19, 02-29					
		Limitations: see NDE-UT-4 <input type="checkbox"/> None: <input checked="" type="checkbox"/>		Sheet <u>2</u> of <u>4</u>	
Reviewed By: <i>Sam Moss</i>		Level: <i>B</i> Date: <i>1-21-03</i>		Authorized Inspector: <i>[Signature]</i> Date: <i>1/23/03</i>	
				Item No: C05.021.035	

DUKE POWER COMPANY				NDE-UT-5	
UT PROFILE/PLOT SHEET				Revision 1	
EXAMINATION SURFACE 1		WELD	EXAMINATION SURFACE 2		
4 3 TEE 2		1	2 3 VALVE 4		
.5					
SCAN: AREA INSP. TOTAL VOLUME		100% COVERAGE OBTAINED 60° AXIAL SHEAR			
1 AXIAL SCAN 3.1 ² 3.1 ²		.22 x 1.0 = .22"			
CIRC SCAN #1 3.1 ² 3.1 ²		.22 x 14.3 = 3.1 ² TOTAL INSP AREA By VOLUME			
1.5 CIRC SCAN #2 3.1 ² 3.1 ²		11.96 ² IN 12.4 ² IN			
60° LWAVE 2.66 ² 3.1 ²		2.5			
2		$\frac{11.96^2 \text{ in}}{12.4^2 \text{ in}} = 96\%$			
3		<p>Component ID/Weld No. 3-51A-52-20</p> <p>Remarks: 96% Coverage, SINGLE SIDED ACCESS</p> <p>37.5909 IN 3-2-04</p>			
Item No: COS. 021. 035		<p>REVIEWED Initial <input type="checkbox"/> Final <input checked="" type="checkbox"/></p> <p>ANYN Date 3/4/04</p> <p>HSBCT 270</p>			
Examiner: <i>James R. Brown</i>		<p>Profile taken at: 90°</p> <p>SEE UT FORM 4 FOR LIMITED SCAN INFO.</p> <p>90</p>			
Reviewed By: <i>Sam A. Moss</i>		<p>180 Sheet 3 of 4</p>			
Authorized Inspector: <i>[Signature]</i>		<p>Date: 3-22-03</p>			

DUKE POWER COMPANY ISI LIMITATION REPORT			FORM NDE-UT-4
			Revision 1
Component/Weld ID: 3-51A-52-20		Item No: C05.021.035	
<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> NO SCAN <input checked="" type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div>		Remarks: Limited 60° scan due to Pipe to Valve configuration.	
FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM <u>0</u> DEG to <u>360</u> DEG			
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input checked="" type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div>		Limited 60°L scan- Physical restriction of cable & transducer makeup against "Tee" side.	
FROM L <u>13.5"</u> to L <u>1.5"</u> INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input checked="" type="checkbox"/> Other <u>60°L</u> FROM _____ DEG to _____ DEG			
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div>		Greater than 90% coverage achieved.	
FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG			
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div>			
FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG			
Prepared By: <u>[Signature]</u> Level: <u>II</u> Date: <u>1-20-03</u>		Sketch(s) attached <input type="checkbox"/> yes <input checked="" type="checkbox"/> no Sheet <u>4</u> of <u>4</u>	
Reviewed By: <u>[Signature]</u> Date: <u>1-21-03</u>		Authorized Inspector: <u>[Signature]</u> Date: <u>1/23/03</u>	

Oconee Unit #3
EOC20
NO DATA

CALIBRATION SHEET # 0303014 - 38° & 60°

0303015 - 60%

COMPONENT I.D.# 3-51A-119-41

ITEM # C05.021.044

DUKE POWER COMPANY										Exam Start: 0951		NDE-UT-3A		
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS										Exam Finish: 1014		Revision 2		
Station: Oconee			Unit: 3		Component/Weld ID: 3-51A-119-41						Date: 1/14/2003			
Nominal Material Thickness (in): 0.674				Weld Length (in.): 14.1				Surface Temperature: 99 Deg F						
Measured Material Thickness (in): .77				Lo: 9.1.1.1				Pyrometer S/N: MCNDE 27228						
Surface Condition: GROUND				Calibration Sheet No: 0303013				Cal Due: 5/11/2003						
Examiner: James H. Resor <i>James H. Resor</i> Level: II								Configuration: CIRC WELD						
Examiner: Marion T. Weaver <i>Marion T. Weaver</i> Level: II								S2 Flow S1						
Procedure: NDE-640 Rev: 1 FC: *								VALVE to PIPE						
IND NO.		Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps
NRI	0													

Remarks: *FC 95-19, 02-29					
		Limitations: see NDE-UT-4 <input checked="" type="checkbox"/> None: <input type="checkbox"/>		Sheet <u>2</u> of <u>4</u>	
Reviewed By: <i>Harry Moss</i>		Level: II Date: 1-16-03		Authorized Inspector: <i>[Signature]</i> Date: 1/23/03	
				Item No: C05.021.044	

DUKE POWER COMPANY UT PROFILE/PLOT SHEET		NDE-UT-5
		Revision 1
<p>EXAMINATION SURFACE 1 2 MTW 3-31-03</p> <p style="text-align: center;">4 3 2 1</p>	<p style="text-align: center;">WELD</p> <p style="text-align: center;">.83" .91" .82" .80" .77" .77"</p> <p style="text-align: center;">1 2 3 4</p> <p style="text-align: right;">EXAMINATION SURFACE 2 1 MTW 3-31-03</p>	
<p>Component ID/Weld No. <u>3-51A-119-41</u></p>		
<p>Remarks: <u>100% Coverage w/ 60° 89m 3-2-04</u></p> <p><u>Single Sided Access</u></p> <p><u>62.5% Coverage 89m 3-2-04</u></p>		
<p style="text-align: right;">Item No: <u>05.021.044</u></p>		
Examiner: <u>Martin T. Weaver</u>	Level: <u>II</u>	Date: <u>3-31-03</u>
Reviewed By: <u>Paul Moss</u>	Level: <u>II</u>	Date: <u>3-31-03</u>
Authorized Inspector: <u>[Signature]</u>	Date: <u>4-22-03</u>	

REVIEWED
 Initial ☐ Final ☒
 AMIP Date 3/4/04
 HSBCT

0

Profile taken at: 0

270 90

180 Sheet 3 of 4

DUKE POWER COMPANY ISI LIMITATION REPORT			FORM NDE-UT-4
			Revision 1
Component/Weld ID: 3-51A-119-41	Item No: C05.021.044	Remarks:	
<input checked="" type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN	SURFACE <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2	BEAM DIRECTION <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	60° Ax scan limited due to valve to pipe configuration
FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM <u>0</u> DEG to <u>360</u> DEG			
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2	BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	
FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG			
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2	BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	
FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG			
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2	BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	
FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG			
Prepared By: <i>James H. Brown</i>	Level: <i>II</i>	Date: <i>1-14-03</i>	Sketch(s) attached <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Reviewed By: <i>Gary Moss</i>		Date: <i>1-16-03</i>	Authorized Inspector: <i>[Signature]</i> Date: <i>1/23/03</i>

Oconee Unit #3

EOC20

NO DATA


CALIBRATION SHEET # 0303019 - 45° + 60°

COMPONENT I.D.# 3-51A-75-34

ITEM # C05.021.056

DUKE POWER COMPANY										Exam Start: 1030		NDE-UT-3A		
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS										Exam Finish: 1032		Revision 2		
Station: Oconee			Unit: 3		Component/Weld ID: 3-51A-75-34						Date: 1/15/2003			
Nominal Material Thickness (in): 0.531				Weld Length (in.): 14.13				Surface Temperature: 92° Deg F						
Measured Material Thickness (in): .600				Lo: 9.1.1.3				Pyrometer S/N: MCNDE 27218						
Surface Condition: GROUND				Calibration Sheet No: 0303018				Cal Due: 5/11/2003						
Examiner: Gayle E. Houser <i>GE Houser</i> Level: III			Configuration: CIRC. WELD											
Examiner: Joey Jordan <i>JA Jordan</i> Level: II			S2 Flow S1											
Procedure: NDE-640 Rev: 1 FC: *								TEE to VALVE						
IND NO.	<i>4</i>	Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps
NRI	0°													

Remarks: * FC 95-19, 02-29					
		Limitations: see NDE-UT-4 <input type="checkbox"/> None: <input checked="" type="checkbox"/>		Sheet <u>2</u> of <u>6</u>	
Reviewed By: <i>Gay/Moro</i>		Level: <i>II</i> Date: <i>1-20-03</i>		Authorized Inspector: <i>[Signature]</i> Date: <i>1/23/03</i>	
				Item No: C05.021.056	

DUKE POWER COMPANY ULTRASONIC INDICATION RECORD FOR PIPING										FORM NDE-UT-10		
										Revision 0		
Station: Ocone			Unit: 3		Component/Weld ID: 3-51A-75-34					Date: 1/15/2003		
Surface Condition: GROUND					Item No: C05.021.056							
Examiner: Gayle E. Houser <i>GE Houser</i> Level: III					Procedure: NDE-600			Rev: 14		FC: <i>02-15</i> <i>02-16</i>		
Examiner: Joey Jordan <i>J Jordan</i> Level: II					Lo: 9.1.1.3 Configuration: CIRC. WELD							
Calibration Sheet No: 0303020					S2 - TEE to S1 - VALVE Scan Surface: OD							
IND #		% FSH	Mp Max	W Max	L Max	L1 20 % FSH	L2 20 % FSH	Beam Dir.	Exam Surf.	Scan	Damps	Remarks
1	60°L	159	.98	.65	0	360	360	S2	S1	AX	NO	

Reviewed By: <i>Sam Moss</i>		Level: <i>II</i>	Date: 1-20-03	Authorized Inspector: <i>[Signature]</i>		Date: 1/23/03	Sheet <u>3</u> of <u>6</u>
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DUKE POWER COMPANY UT PROFILE/PLOT SHEET		NDE-UT-5
		Revision 1
EXAMINATION SURFACE 1	WELD	EXAMINATION SURFACE 2
4 Valve 3 2 1	ε 1 2 3 Pipe Tee 4	
.5	#1	
1		
1.5		
2		
2.5		
3		
Component ID/Weld No. <u>3-51A-75-34</u> : Remarks: <u>100% COVERAGE</u> <u>37.5% g/m 3-2-04</u>		
REVIEWED Initial <input type="checkbox"/> Final <input checked="" type="checkbox"/> AMT Date <u>2/4/04</u> HSBCT 270		
Examiner: <u>DeHouwer</u> Reviewed By: <u>Ray/Mora</u> Authorized Inspector: <u>[Signature]</u>		Profile taken at: <u>0°</u>
Item No: <u>05.621.056</u> Level: <u>III</u> Date: <u>3-31-03</u> Level: <u>II</u> Date: <u>3-31-03</u> Date: <u>4-22-03</u>		180 Sheet <u>4</u> of <u>6</u>

DUKE POWER COMPANY ISI LIMITATION REPORT			FORM NDE-UT-4
			Revision 1
Component/Weld ID: 3-51A-75-34	Item No: C05.021.056	Remarks:	
<input checked="" type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u>0</u> to L <u>14.13</u> INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM <u>0</u> DEG to <u>360</u> DEG	SURFACE <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	NO SCAN DUE TO VALVE. > 90% COVERAGE OBTAINED FROM OPPOSITE SIDE SCANS.	
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw		
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw		
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ FROM _____ DEG to _____ DEG	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw		
Prepared By: <u>ME Houser</u>	Level: <u>T.I.</u>	Date: <u>1-15-03</u>	Sketch(s) attached <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Reviewed By: <u>Mark Moss</u>		Date: <u>1-20-03</u>	Authorized Inspector: <u>[Signature]</u> Date: <u>1/23/03</u>

DUKE POWER COMPANY				Form NDE-UT-8	
ULTRASONIC INDICATION RESOLUTION SHEET				Revision 1	
Acceptance Standard: INDICATION #1 IS A 360° INTERMITTANT REFLECTOR DUE TO ID COUNTERBORE. .200 FROM THE WELD CENTERLINE ON THE VALVE SIDE OF THE WELD. CONDITION CONFIRMED BY RT FILM REVIEW.					
Item No: C05.021.056					
Acceptable Indications: IND. #1					
Rejectable Indications: N/A					
These indications have been compared with previous ultrasonic data <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No previous data available					
Examiner: Gayle E. Houser		Level: III	Date: 1/15/2003	Sheet <u>6</u> of <u>6</u>	
Reviewer: Mary Moro		Level: D	Date: 1-20-03	Authorized Inspector: Date: 1/23/03	

Oconee Unit #3

EOC20

NO DATA

CALIBRATION SHEET # 0303064-45°

0303065-60°

0303039-60°L

COMPONENT I.D.# 3-51A-87-8

ITEM # C05.021.066

CP 8/14/03

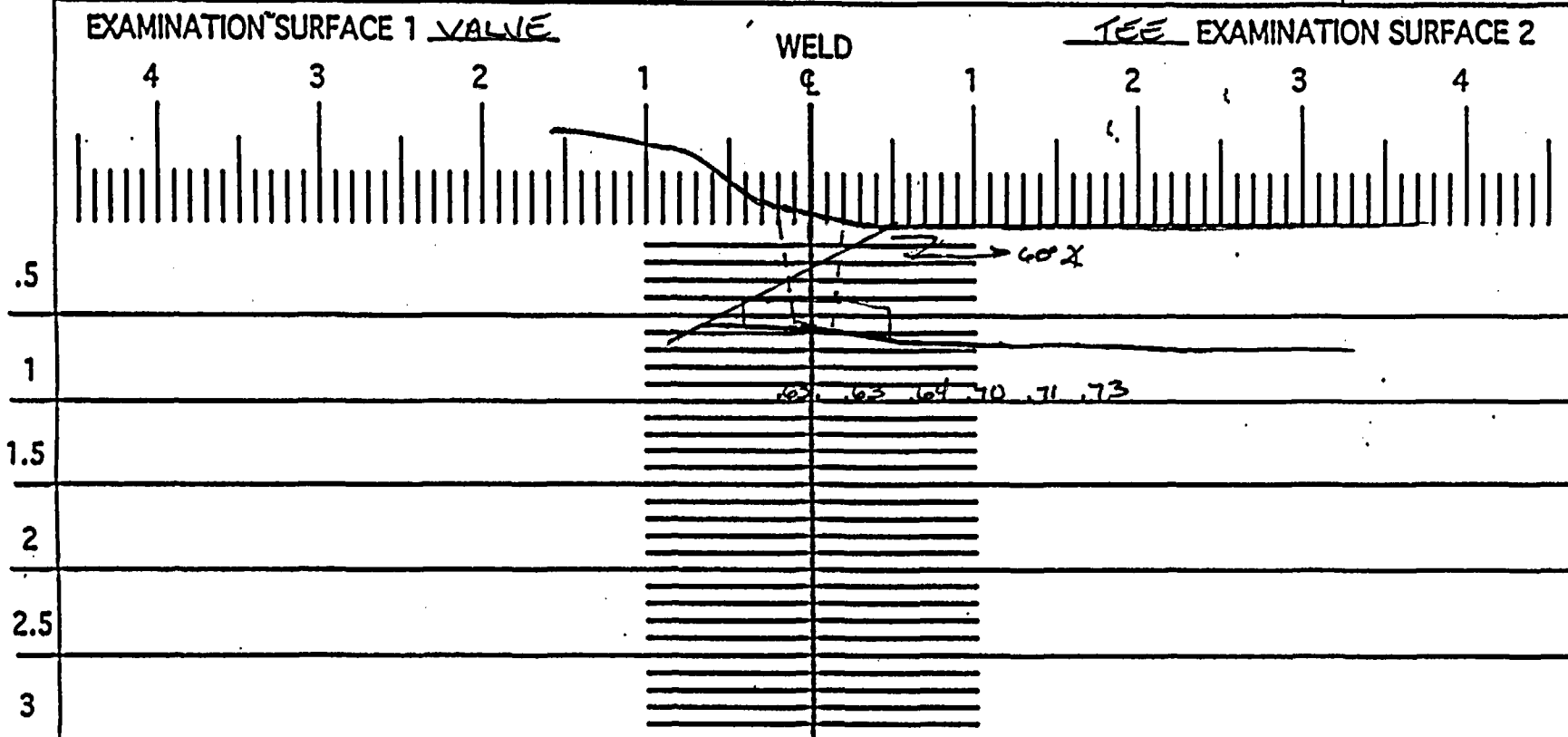
DUKE POWER COMPANY										Exam Start: 1035		NDE-UT-3A		
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS										Exam Finish: 1037		Revision 2		
Station: Ocone			Unit: 3		Component/Weld ID: 3-51A-87-8						Date: 5/1/2003			
Nominal Material Thickness (in): 0.531			Weld Length (in.): 14.1			Surface Temperature: 78			Deg F					
Measured Material Thickness (in): 0.640			Lo: 9.1.1.1			Pyrometer S/N: MCNDE 27217								
Surface Condition: AS GROUND			Calibration Sheet No: 0303035			Cal Due: 7/20/2003								
Examiner: David Zimmerman <i>David Zimmerman</i> Level: III						Configuration: CIRC. WELD								
Examiner: James H. Resor <i>James H. Resor</i> Level: II						S2 Flow S1								
Procedure: NDE-640 Rev: 1 FC: *						TEE to VALVE								
IND NO.	<i>4</i>	Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps
NRI	0°													

Remarks: * F.C. 95-18, 95-19, 03-02, 03-04, 03-08														
					Limitations: see NDE-UT-4 <input type="checkbox"/> None: <input checked="" type="checkbox"/>					Sheet <u>2</u> of <u>6</u>				
Reviewed By: <i>Gayl Moss</i>			Level: <i>D</i>		Date: <i>5-4-03</i>		Authorized Inspector: <i>[Signature]</i>			Date: <i>5/14/03</i>		Item No: C05.021.066		

DUKE POWER COMPANY
UT PROFILE/PLOT SHEET

NDE-UT-5

Revision 1



Component ID/Weld No. 3-51A-87-8

Remarks: 80% to 100% Coverage

62.5909 m 3-2-04

REVIEWED
Initial ☐ Final ☒
ANNEX Date 3/4/04
HSBCT

270

Profile taken
at: Lo

90

Item No: 05.021.066

Examiner: David L. 3

Level: TIL

Date: 05/01/03

Reviewed By: David L. 3

Level: #

Date: 5.3.03

Authorized Inspector: [Signature]

Date: 5/19/03

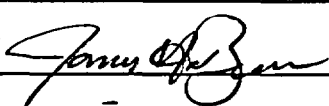

180 Sheet 3 of 6

66

DUKE POWER COMPANY ISI LIMITATION REPORT		FORM NDE-UT-4
		Revision 1
Component/Weld ID: 3-51A-87-8	Item No: C05.021.066	Remarks:
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input checked="" type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div> <p>FROM L <u>1.7"</u> to L <u>4.5"</u> INCHES FROM WO <u>0.5</u> to <u>BEYOND</u></p> <p>ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input checked="" type="checkbox"/> Other <u>60°RL</u> FROM <u>N/A</u> DEG to <u>N/A</u> DEG</p>		Valve to tee configuration
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input checked="" type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div> <p>FROM L <u>9.2</u> to L <u>12.0</u> INCHES FROM WO <u>0.5</u> to <u>BEYOND</u></p> <p>ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input checked="" type="checkbox"/> Other <u>60°RL</u> FROM <u> </u> DEG to <u> </u> DEG</p>		Valve to tee configuration
<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div> <p>FROM L <u> </u> to L <u> </u> INCHES FROM WO <u>0.5</u> to <u>BEYOND</u></p> <p>ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input checked="" type="checkbox"/> Other <u>60°RL</u> FROM <u>0</u> DEG to <u>360</u> DEG</p>		Valve configuration
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN </div> <div> SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw </div> </div> <p>FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u></p> <p>ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u></p>		
Prepared By: Jamie H. Resor <i>[Signature]</i> Level: II Date: 5/1/2003 Sketch(s) attached <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Sheet <u>4</u> of <u>6</u>		
Reviewed By: Gary J. Moss <i>[Signature]</i> Date: <u>5/6/03</u> Authorized Inspector: <i>[Signature]</i> Date: <u>5/14/03</u>		

DUKE POWER COMPANY						NDE-91-1	
Limited Examination Coverage Worksheet						Revision 0	
Examination Volume/Area Defined							
<input checked="" type="checkbox"/> Base Metal		<input checked="" type="checkbox"/> Weld		<input type="checkbox"/> Near Surface		<input type="checkbox"/> Bolting	
						<input type="checkbox"/> Inner Radius	
Area Calculation				Volume Calculation			
0.18in. X 0.90in. = 0.162in. sq.				0.162in. X 14.1in. = 2.28in. cu.			
Coverage Calculations							
Scan #	Angle	Beam Direction	Area Examined (sq.in.)	Length Examined (in.)	Volume Examined (cu.in.)	Volume Required (cu.in.)	Percent Coverage
1	60	S2	1.36	14.1	19.18	31.87	
2	45	CW	2.26	14.1	31.87	31.87	
3	45	CCW	2.26	14.1	31.87	31.87	
4	60 RL	S2	1.36	14.1	19.18	31.87	
		TOTAL	AGGREGATE	COVERAGE	102.1	127.48	80.09


506

			Item No:	C05.021.066
Prepared By: Jamie H. Resor		Level: II	Date: 5/1/2003	
Reviewed By: 		Level: III	Date: 5/1/2003	

DUKE POWER COMPANY UT PROFILE/PLOT SHEET				NDE-UT-5	
				Revision 1	
EXAMINATION SURFACE 1		WELD	EXAMINATION SURFACE 2		
4 3" VALVE 2 1		C	1" TEE 2 3 4		
.5		4.5" OD CIRCUMFERENCE = 14.13"			
1		.18" .9"			
1.5		.18 x .9 = .16 .16 x C(14.13) = 2.26 ² in			
2		2.26 ² in TOTAL INSP. AREA			
2.5		NO SCAN 1.7" TO 4.5" 9.2" TO 12"			
3		14.13 - 5.6 = 8.53" AX SCAN AREA			
7.24 / 9.04 = 80%		5.6" TOTAL NO SCAN DUE TO "T"			
<div style="display: flex; justify-content: space-between;"> <div> <p>Component ID/Weld No. 3-51A-87-8</p> <p>Remarks:</p> </div> <div> <p>Item No: C05.021.066</p> <p>Examiner: <i>James H. Brown</i> Level: II Date: 5-1-03</p> <p>Reviewed By: <i>James H. Brown</i> Level: II Date: 5-4-03</p> <p>Authorized Inspector: <i>James H. Brown</i> Date: 5/14/03</p> </div> </div>					
180 Sheet 6 of 6					

DUKE POWER COMPANY										Exam Start: 1032		NDE-UT-3A		
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS										Exam Finish: 1034		Revision 2		
Station: Oconee			Unit: 3		Component/Weld ID: 3-51A-87-9						Date: 5/1/2003			
Nominal Material Thickness (in): 0.531				Weld Length (in.): 14.1				Surface Temperature: 78 Deg F						
Measured Material Thickness (in): 0.540				Lo: 9.1.1.1				Pyrometer S/N: MCNDE 27217						
Surface Condition: AS GROUND				Calibration Sheet No: 0303036				Cal Due: 7/20/2003						
Examiner: David Zimmerman <i>David K. Zimmerman</i> Level: III								Configuration: CIRC. WELD						
Examiner: James H. Resor <i>James H. Resor</i> Level: II								S2 Flow S1						
Procedure: NDE-640 Rev: 1 FC: *								VALVE to PIPE						
IND NO.	4	Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps
NRI	0°													

Remarks: * F.C. 95-18, 95-19, 03-02, 03-04, 03-08					
		Limitations: see NDE-UT-4 <input type="checkbox"/> None: <input checked="" type="checkbox"/>		Sheet 1 of 8	
Reviewed By: <i>Ray Moss</i>		Level: B Date: 5-4-03		Authorized Inspector: <i>[Signature]</i> Date: 5/14/03	
				Item No: C05.021.067	

DUKE POWER COMPANY											FORM NDE-UT-10	
ULTRASONIC INDICATION RECORD FOR PIPING											Revision 0	
Station: Ocone			Unit: 3		Component/Weld ID: 3-51A-87-9					Date: 5/12/2003		
Surface Condition: AS GROUND					Item No: C05.021.067							
Examiner: David Zimmerman <i>David L. Z</i>			Level: III		Procedure: NDE-600			Rev: 14		FC: 02-15 02-16		
Examiner: James H. Resor <i>James H. Resor</i>			Level: II		Lo: 9.1.1.1 Configuration: CIRC. WELD							
Calibration Sheet No: 0303039, 0303064, 0303065					S2-VALVE to S1-PIPE Scan Surface: OD							
IND #		% FSH	Mp Max	W Max	L Max	L1 20 % FSH	L2 20 % FSH	Beam Dir.	Exam Surf.	Scan	Damps	Remarks
1	60°	80	1.10	0.80	360	INT.	IND.	2	1	AXIAL	NO	
NRI	45°											
NRI	60°L											

Reviewed By: <i>Gay Moss</i>	Level: <i>II</i>	Date: 5-13-03	Authorized Inspector: <i>[Signature]</i>	Date: 5/14/03	Sheet <u>2</u> of <u>8</u>
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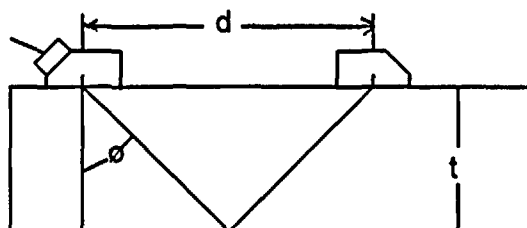
DUKE POWER COMPANY UT PROFILE/PLOT SHEET		NDE-UT-5
		Revision 1
EXAMINATION SURFACE 1	WELD	EXAMINATION SURFACE 2
4 3 2 1	1 2 3 4	
<p>Component ID/Weld No. <u>3-51A-87-9</u></p> <p>Remarks: <u>700% COVERAGE</u></p> <p><u>37.590 gpm</u> <u>3-2-04</u></p>		
<p>Item No: <u>605.021.067</u></p> <p>Examiner: <u>Daniel K. Zi</u> Level: <u>III</u> Date: <u>05/01/03</u></p> <p>Reviewed By: <u>Sam Moss</u> Level: <u>IV</u> Date: <u>5-4-03</u></p> <p>Authorized Inspector: <u>[Signature]</u> Date: <u>5/14/03</u></p>		
<p>REVIEWED Initial <input type="checkbox"/> Final <input checked="" type="checkbox"/></p> <p>ANVT Date <u>3/4/04</u></p> <p>HSBCT</p> <p>270</p> <p>Profile taken at: <u>60</u></p> <p>180 Sheet <u>3</u> of <u>8</u></p>		

DUKE POWER COMPANY ULTRASONIC INDICATION RESOLUTION SHEET			Form NDE-UT-8	
			Revision 1	
Acceptance Standard: IND. 1: Geometrical indication from the weld root. Signal would not hold up to skew. 70° produced less than 50% amplitude. Plotting and review of past radiographs supports this determination				
Item No: C05.021.067				
Acceptable Indications: IND. 1				
Rejectable Indications: NONE				
These indications have been compared with previous ultrasonic data <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No previous data available				
Examiner: David Zimmerman <i>David K. Zimmerman</i>	Level: III	Date: 5/1/2003		Sheet <u>4</u> of <u>8</u>
Reviewer: <i>Harry Moss</i>	Level: I	Date: 5-3-03	Authorized Inspector: 	Date: 5/14/03

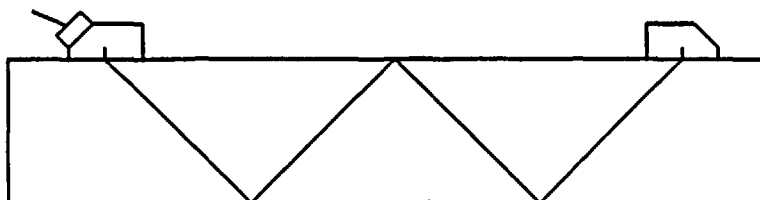
DUKE POWER COMPANY
ULTRASONIC BEAM ANGLE MEASUREMENT RECORD

Form NDE-UT-9

Revision 3



$$\tan \phi = \frac{(d/2)}{t}$$



For thin wall pipe use 2nd Vee path

$$\tan \phi = \frac{(d/2)}{2t}$$

1. Take thickness measurements between . wedge locations.
2. Place search unit on straight turn of pipe, and peak the signal.
3. Measure distance (d) between exit points.
4. Calculate beam angle with formula as shown using measured wall thickness.
5. Use the measured beam angle to determine coverage and when plotting any indications.

Pipe Size: _____ 4.0 _____

Pipe Schedule: _____

Nominal 45 deg: d= 0 ; t= 0 ; measured angle= 0.00 deg

Nominal 60 deg: d= 1.8 ; t= 0.54 ; measured angle= 59.04 deg

Nominal 70 deg: d= 0 ; t= 0 ; measured angle= 0.00 deg

Item No.
C05.021.067

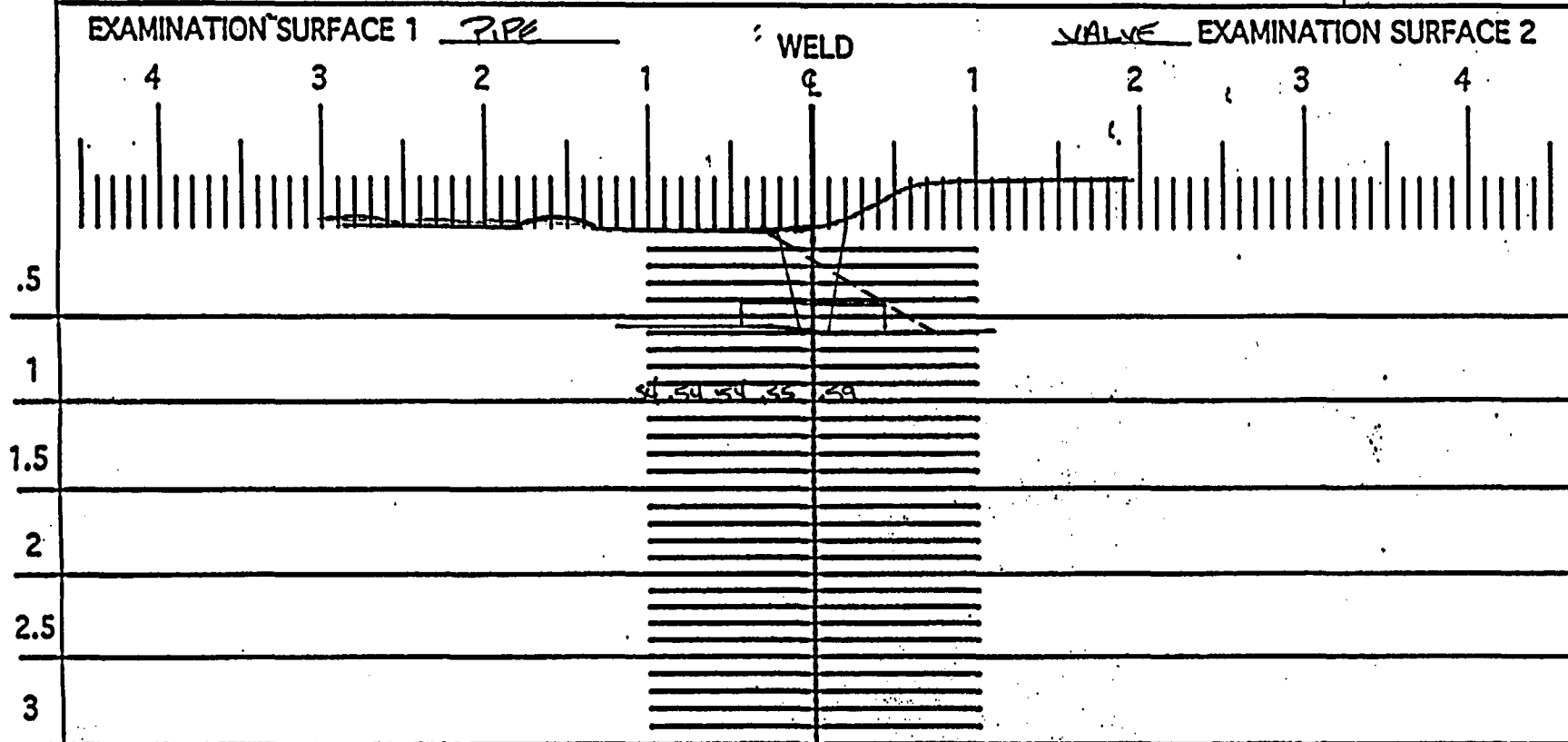
Examiner	Level	Date	Examiner	Level	Date
David Zimmerman <i>David K. Zimmerman</i>	III	5/1/2003	James H. Resor <i>James H. Resor</i>	II	5/1/2003
Reviewed By	Level	Date	Authorized Inspector		Date
<i>Harry Morris</i>	<i>B</i>	<i>5-3-03</i>	<i>[Signature]</i>		<i>5/1/03</i>

DUKE POWER COMPANY ISI LIMITATION REPORT			FORM NDE-UT-4
			Revision 1
Component/Weld ID: 3-51A-87-9	Item No: C05.021.067	Remarks:	
<input checked="" type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> N/A </u> to L <u> N/A </u> INCHES FROM WO <u> 0.9" </u> to <u> BEYOND </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input checked="" type="checkbox"/> Other <u> 60 RL </u> FROM <u> 0 </u> DEG to <u> 360 </u> DEG	SURFACE <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 BEAM DIRECTION <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw	ADJACENT WELD - COVERAGE EXCEEDS 90%	
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw		
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw		
<input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L <u> </u> to L <u> </u> INCHES FROM WO <u> </u> to <u> </u> ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other <u> </u> FROM <u> </u> DEG to <u> </u> DEG	SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw		
Prepared By: David K. Zimmerman <i>David K. Zimmerman</i>	Level: III	Date: 5/1/2003	Sketch(s) attached <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Reviewed By: <i>Mary A. Moss</i>	Date: <i>5.7.03</i>	Authorized Inspector: <i>[Signature]</i>	Sheet <u>6</u> of <u>8</u>

DUKE POWER COMPANY
UT PROFILE/PLOT SHEET

NDE-UT-5

Revision 1

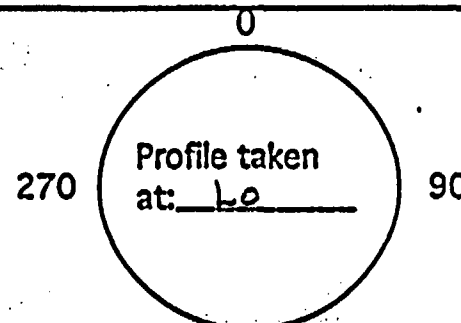


Component ID/Weld No. 3-51A-87-9

Remarks: 100% COVERAGE OF 5/4/03
62.5% IAW 3-2-04

Item No: 05.021.067

Examiner: David K. 3 Level: III Date: 05/01/03
Reviewed By: Ray J. Moss Level: B Date: 5-4-03
Authorized Inspector: [Signature] Date: 5/1/03



180 Sheet 7 of 8

DUKE POWER COMPANY
UT PROFILE/PLOT SHEET

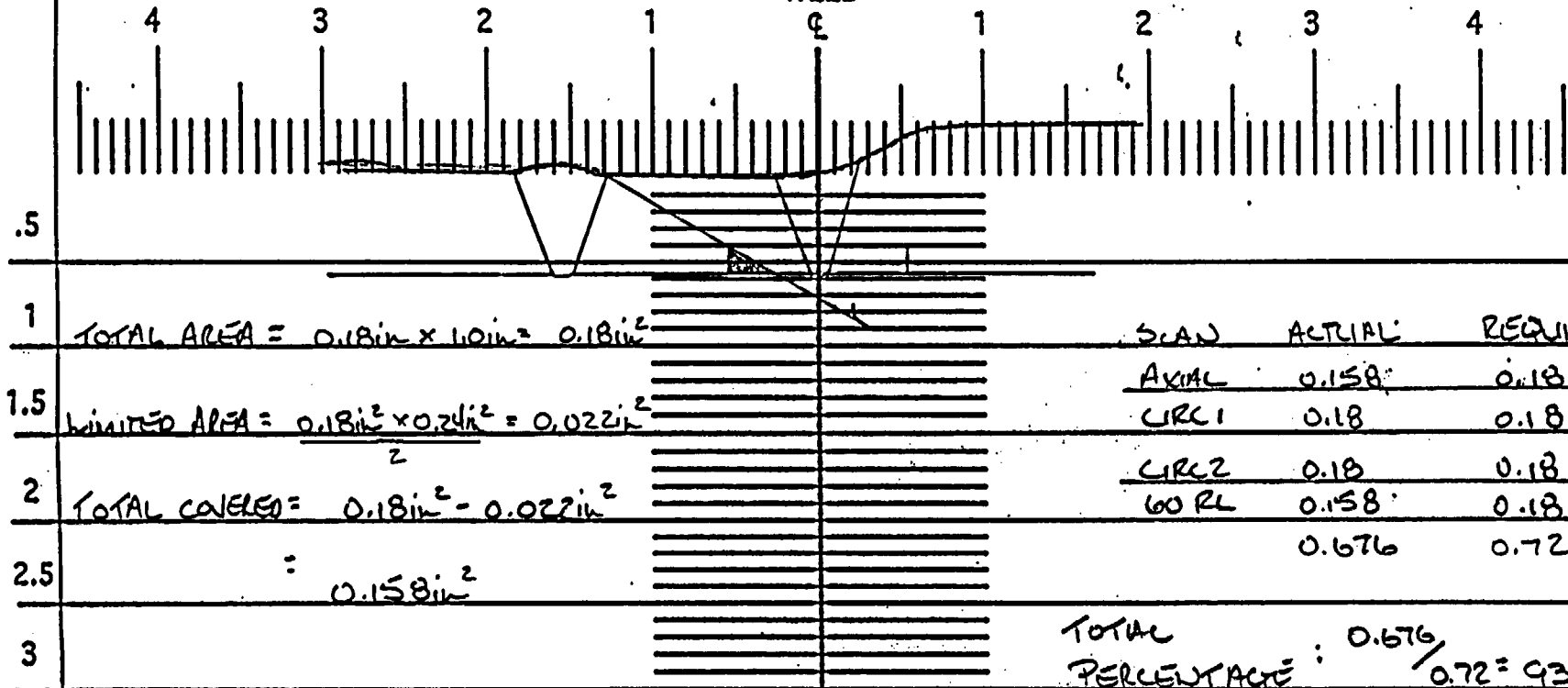
NDE-UT-5

Revision 1

EXAMINATION SURFACE 1 Pipe

WELD

VALVE EXAMINATION SURFACE 2



Component ID/Weld No. 3-51A-87-9

Remarks:

Examiner: Daniel K. 3

Reviewed By: Ray P. Moore

Authorized Inspector: [Signature]

Item No: 105,021,067

Level: III

Date: 05/01/03

Level: B

Date: 5-3-03

Date: 5/14/03

270

Profile taken
at: Lo

90

180 Sheet 8 of 8

Oconee Unit #3

EOC20

NO DATA

CALIBRATION SHEET # 0303024 - 35° & 60°

0303025 - 60°

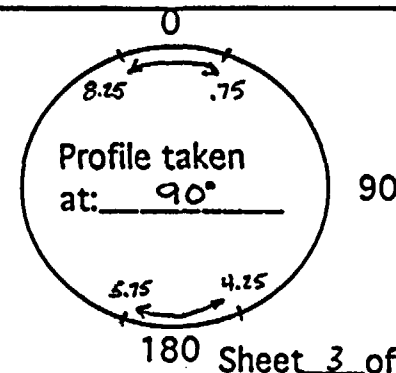
COMPONENT I.D.# 3-51A-59-42

ITEM # C05.021.090

DUKE POWER COMPANY										Exam Start: 1029		NDE-UT-3A		
ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS										Exam Finish: 1032		Revision 2		
Station: Oconee			Unit: 3		Component/Weld ID: 3-51A-59-42						Date: 1/15/2003			
Nominal Material Thickness (in): 0.552				Weld Length (in.): 9.0				Surface Temperature: 102° Deg F						
Measured Material Thickness (in): .49 - .60				Lo: 9.1.1.1				Pyrometer S/N: MCNDE 27228						
Surface Condition: GROUND				Calibration Sheet No: 0303023				Cal Due: 5/11/2003						
Examiner: James H. Resor <i>James H. Resor</i> Level: II								Configuration: CIRC. WELD						
Examiner: Marion T. Weaver <i>Marion T. Weaver</i> Level: II								S1 Flow S2						
Procedure: NDE-640 Rev: 1 FC: *								TEE to VALVE						
IND NO.	4	Ampl ≥ rem BW LOB	L1 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	L2 ≥ rem BW LOB	W1 ≥ rem BW LOB	Mp1 ≥ rem BW LOB	W2 ≥ rem BW LOB	Mp2 ≥ rem BW LOB	Exam Surf.	Damps
NRI	0°													

Remarks: *FC 95-19, 02-29		
Limitations: see NDE-UT-4 <input type="checkbox"/> None: <input checked="" type="checkbox"/>		Sheet 2 of 4
Reviewed By: <i>Gay Moss</i> Level: <i>H</i> Date: 1-16-03	Authorized Inspector: <i>[Signature]</i> Date: 1-23-03	Item No: C05.021.090

DUKE POWER COMPANY UT PROFILE/PLOT SHEET			NDE-UT-5						
			Revision 1						
<p>EXAMINATION SURFACE 1 2 JTR 4-03</p> <p>4 3 2 1</p> <p>VALVE</p>	<p>WELD</p>	<p>EXAMINATION SURFACE 2 1 JTR 4-1-03</p> <p>3 4</p> <p>TEE</p>							
.5			<p>Circ Radius = 9.02"</p> <p>.18" x .9" = .16"</p> <p>.16 x C(9.02) = 1.44 in</p> <p>C(9.02) - 3" No Scan Area For 60° L = 6.02"</p>						
1	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SCAN</th> <th>TOTAL</th> <th>% SCAN</th> </tr> </thead> <tbody> <tr> <td>AXIAL</td> <td>1.44 in</td> <td>1.44 in</td> </tr> </tbody> </table>	SCAN	TOTAL	% SCAN	AXIAL	1.44 in	1.44 in		
SCAN	TOTAL	% SCAN							
AXIAL	1.44 in	1.44 in							
1.5	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Circ 1</td> <td>1.44 in</td> <td>1.44 in</td> </tr> <tr> <td>Circ 2</td> <td>1.44 in</td> <td>1.44 in</td> </tr> </tbody> </table>	Circ 1	1.44 in	1.44 in	Circ 2	1.44 in	1.44 in		
Circ 1	1.44 in	1.44 in							
Circ 2	1.44 in	1.44 in							
2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>60° L Wave</td> <td>1.44 in</td> <td>.96 in</td> </tr> <tr> <td></td> <td>5.76 in</td> <td>5.28 in</td> </tr> </tbody> </table>	60° L Wave	1.44 in	.96 in		5.76 in	5.28 in		
60° L Wave	1.44 in	.96 in							
	5.76 in	5.28 in							
2.5	<p>5.28 in / 5.76 in = 91.6% 62.5%</p> <p>8 pm</p>								
3									
<p>Component ID/Weld No. 3-51A-59-42</p> <p>Remarks: 91.6% Coverage, SINGLE SIDE ACCESS</p> <p>62.5% 8 pm 03-02-04</p>									
<div style="display: flex; justify-content: space-between;"> <div> <p>Reviewed Initial <input type="checkbox"/> Final <input checked="" type="checkbox"/></p> <p>ANTI Date 3/4/04</p> <p>HSBCT</p> </div> <div> <p>270</p> </div> </div>									
<p>Examiner: James P. Beyer</p> <p>Reviewed By: Dan Morris</p> <p>Authorized Inspector: [Signature]</p>									
<p>Item No: C05.021.090</p> <p>Level: II Date: 4-1-03</p> <p>Level: II Date: 4-1-03</p> <p>Date: 4-22-03</p>									



DUKE POWER COMPANY ISI LIMITATION REPORT		FORM NDE-UT-4
		Revision 1
Component/Weld ID: 3-51A-59-42	Item No: C05.021.090	Remarks:
<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L _____ to L _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input checked="" type="checkbox"/> 60 <input type="checkbox"/> Other _____ </div> <div> SURFACE <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 INCHES FROM WO _____ to _____ FROM _____ DEG to _____ DEG </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw FROM _____ DEG to _____ DEG </div> </div>		No axial scan due to valve to pipe configuration on valve side surface.
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input checked="" type="checkbox"/> LIMITED SCAN FROM L <u>8.25" MTW</u> <u>75" 1-15-03</u> to L <u>0.75" MTW</u> <u>0.25" 1-15-03</u> INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input checked="" type="checkbox"/> Other <u>60°L</u> </div> <div> SURFACE <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 INCHES FROM WO _____ to _____ FROM _____ DEG to _____ DEG </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw FROM _____ DEG to _____ DEG </div> </div>		Limited scan w/60°RL on pipe side due to physical restrictions of tee configuration. > 90% acquired
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input checked="" type="checkbox"/> LIMITED SCAN FROM L <u>4.25"</u> to L <u>5.75"</u> INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input checked="" type="checkbox"/> Other <u>60°L</u> </div> <div> SURFACE <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 INCHES FROM WO _____ to _____ FROM _____ DEG to _____ DEG </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw FROM _____ DEG to _____ DEG </div> </div>		Limited scan w/60°RL on pipe side due to physical restrictions of tee configuration. > 90% acquired
<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NO SCAN <input type="checkbox"/> LIMITED SCAN FROM L _____ to L _____ INCHES FROM WO _____ to _____ ANGLE: <input type="checkbox"/> 0 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> Other _____ </div> <div> SURFACE <input type="checkbox"/> 1 <input type="checkbox"/> 2 INCHES FROM WO _____ to _____ FROM _____ DEG to _____ DEG </div> <div> BEAM DIRECTION <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> cw <input type="checkbox"/> ccw FROM _____ DEG to _____ DEG </div> </div>		
Prepared By: <u>James H. Byon</u>	Level: <u>II</u>	Date: <u>1-15-03</u>
Reviewed By: <u>Gary Morris</u>		Date: <u>1-16-03</u>
Authorized Inspector: <u>[Signature]</u>		Date: <u>1/23/03</u>
Sketch(s) attached <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		Sheet <u>4</u> of <u>4</u>