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December 23, 2011

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

Subject:

Duke Energy Carolinas, LLC

Oconee Nuclear Station Units 1 and 2

Docket No. 50-269, -270

Fourth Ten-Year Inservice Inspection Plan

Request for Relief No. 11-ON-001

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 American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components, 1998 Edition with 2000 Addenda (as modified by Code Case N-460).

The attached Request for Relief 11-ON-001 is to allow Duke Energy to take credit for the enclosed Table 1 list of limited ultrasonic examinations on welds associated with various systems and components during Unit 1 EOC25 and Unit 2 EOC24 refueling outages. The ultrasonic examination coverage of the subject Unit 1 and 2 welds did not meet the 90% examination requirements of Code Case N-460. The obtainable volume coverage for weld examination is indicated on Attachments A and B of the relief request. Achievement of greater examination coverage for these welds is impractical due to piping/valve geometry and interferences. Therefore, Duke Energy requests that the NRC grant relief as authorized under 10 CFR 50.55(g)(6)(i).

If there are any questions or further information is needed you may contact Corey Gray at (864)-873-6325.

Sincerely,

T. Preston Gillespie Jr., Site Vice President

Attachment A Attachment B

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Xc w/att:

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1.0 Scope of Relief Request

Relief is requested pursuant to 10 CFR 50.55a(g)(5)(iii) for welds listed in Table 1. These welds were required to be examined in accordance with Inservice Inspection Plans for the following Units.

Oconee Nuclear Station - Unit 1

Fourth 10-Year Inservice Inspection Interval

Interval Start Date: 01/01/2004 Oconee Nuclear Station - Unit 2

Fourth 10-Year Inservice Inspection Interval

Interval Start Date: 09/09/2004

	Table 1				
Request	Oconee Unit Number	Examination Performed (Refueling Outage)	Weld ID Number	<u>Item/Summary</u> <u>Number</u>	Examination Data
2.0	1	1EOC25	1-PZR- WP26-4	O1.B3.110.0006	See Attachment A Pages 1-8
3.0	1	1EOC25	1-PZR- WP26-5	O1.B3.110.0007	See Attachment A Pages 9-16
4.0	1	1EOC25	1-PZR- WP26-6	O1.B3.110.0008	See Attachment A Pages 17-24
5.0	1	1EOC25	1-PZR- WP26-1	O1.B3.110.0009	See Attachment A Pages 25-32
6.0	1	1EOC25	1-PZR- WP26-2	O1.B3.110.0010	See Attachment A Pages 33-40
7.0	1	1EOC25	1-51A-1- 53755-V1	O1.B3.150.0003	See Attachment A Pages 41-48
8.0	1	1EOC25	1-51A-1- 53755-V2	O1.B3.150.0004	See Attachment A Pages 49-56

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9.0	1	1EOC25	1LP-209-8L	O1.B9.11.0003	See Attachment A
					Pages 57-60
10.0	1	1EOC25	1PIA2-9	O1.B9.11.0050	See Attachment A
					Pages 61-68
11.0	1	1EOC25	1PDA2-1	O1.B9.11.0062	See Attachment A
					Pages 69-76
12.0	1	1EOC25	1-53A-02- 65L	O1.C5.11.0028	See Attachment A
					Pages 77-81
13.0	1	1EOC25	1-51A-04- 1C	O1.C5.21.0004	See Attachment A
					Pages 82-88
14.0	1	1EOC25	1HP-387- 118A	O1.C5.21.0027	See Attachment A
					Pages 89-93
15.0	1	1EOC25	1HP-193-17	O1.C5.21.0040	See Attachment A
					Pages 94-97
16.0	1	1EOC25	1-51A-02- 16BH	O1.C5.21.0051	See Attachment A
					Pages 98-102
17.0	1	1EOC25	1-HP-0187- 184	PRESERVICE	See Attachment A
					Pages 103-107
18.0	1	1EOC25	1-HP-0187- 185	PRESERVICE	See Attachment A
					Pages 108-112
19.0	2	2EOC24	2-PZR- WP34	O2.B3.110.0002	See Attachment B
					Pages 1-10
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20.0	2	2EOC24	2-PZR- WP33-3	O2.B3.110.0003	See Attachment B
I				1	Pages 11-20

21.0	2	2EOC24	2-PZR-	O2.B3.110.0005	See Attachment
21.0	-	220024	WP33-1	02.83.110.0003	В
					Pages 21-30
22.0	2	2EOC24	2-PIA1-8	O2.B9.11.0046	See Attachment B
					Pages 31-37
23.0	2	2EOC24	2-PDA2-1	O2.B9.11.0053	See Attachment B
					Pages 38-44
24.0	2	2EOC24	2-PDB2-1	O2.B9.11.0063	See Attachment B
					Pages 45-51
25.0	2	2EOC24	2LP-215-27	O2.C5.11.0038	See Attachment B
					Pages 52-55
26.0	2	2EOC24	2HP-341- V1	O2.C5.21.0035	See Attachment B
					Pages 56-58
27.0	2	2EOC24	2-51A- 0029-94	PRESERVICE	See Attachment B
					Pages 59-64
28.0	2	2EOC24	2-HP-0396- 23	PRESERVICE	See Attachment B
					Pages 65-68

2.0 Weld #1-PZR-WP26-4

2.1. ASME Code Component(s) Affected

Unit 1 Pressurizer Upper Shell to Sampling Nozzle Weld, Weld #1-PZR-WP26-4, Summary Number O1.B3.110.0006

2.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

2.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.110 Fig. IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

2.4. Impracticality of Compliance

Surface 1: Shell - Carbon steel

Surface 2: Sampling nozzle - Carbon steel

• Diameter: 5.750 in.

• Thickness: 6.187 in.

The ultrasonic examination of this weld obtained 34.7% coverage of the required examination volume. Because of the weld configuration, the requirements of ASME Section V, Article 4, T-441.1.2(a), T-441.1.3, T-441.1.4, T-441.1.5 and T-441.1.6 could not be met. The aggregate coverage was calculated from the following base and weld metal scan results:

- Weld coverage using 35°, 45°& 60° shear waves for axial scans (S1, S2), and 35° & 45° shear waves for circ. scans (CW, CCW) obtained 15.4% coverage.
- Base material coverage using 35°, 45°& 60° shear wave for axial scans (S1) and 35°& 45° shear waves for circ. scans (CW, CCW) obtained 54.8% coverage.
- 0° scan coverage obtained 33.9% coverage.
- The aggregate coverage was calculated to be (15.4% + 54.8% + 33.9%)/3 = 34.7%.

The limitation was caused by the design of the sampling nozzle not allowing for scanning from the nozzle side of the weld. In order to scan all of the required volume for this weld, the nozzle would have to be redesigned, which is impractical.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume A-B-C-D-E-F-G-H-I. The achieved coverage did not meet the acceptance criteria of this Code Case.

2.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage.

2.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

2.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B3.110.0006 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

3.0 Weld #1-PZR-WP26-5

3.1. ASME Code Component(s) Affected

Unit 1 Pressurizer Upper Shell to Sampling Nozzle Weld, Weld #1-PZR-WP26-5, Summary Number O1.B3.110.0007

3.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

3.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.110 Fig. IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

3.4. Impracticality of Compliance

Surface 1: Shell - Carbon steel

• Surface 2: Sampling nozzle - Carbon steel

Diameter: 5.750 in.

Thickness: 6.187 in.

The ultrasonic examination of this weld obtained 34.7% coverage of the required examination volume. Because of the weld configuration, the requirements of ASME Section V, Article 4, T-441.1.2(a), T-441.1.3, T-441.1.4, T-441.1.5 and T-441.1.6 could not be met. The aggregate coverage was calculated from the following base and weld metal scan results:

- Weld coverage using 35°, 45°& 60° shear waves for axial scans (S1, S2), and 35° & 45° shear waves for circ. scans (CW, CCW) obtained 15.4% coverage.
- Base material coverage using 35°, 45°& 60° shear wave for axial scans (S1) and 35°& 45° shear waves for circ. scans (CW, CCW) obtained 54.8% coverage.
- 0° scan coverage obtained 33.9% coverage.
- The aggregate coverage was calculated to be (15.4% + 54.8% + 33.9%)/3 = 34.7%.

The limitation was caused by the design of the sampling nozzle not allowing for scanning from the nozzle side of the weld. In order to scan all of the required volume for this weld, the nozzle would have to be redesigned, which is impractical.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume A-B-C-D-E-F-G-H-I. The achieved coverage did not meet the acceptance criteria of this Code Case.

3.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage.

3.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

3.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B3.110.0007 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

4.0 Weld #1-PZR-WP26-6

4.1. ASME Code Component(s) Affected

Unit 1 Pressurizer Upper Shell to Sampling Nozzle Weld, Weld #1-PZR-WP26-6, Summary Number O1.B3.110.0008

4.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

4.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.110 Fig. IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

- 4.4. Impracticality of Compliance
 - Surface 1: Shell Carbon steel
 - Surface 2: Sampling nozzle Carbon steel
 - Diameter: 5.750 in.
 - Thickness: 6.187 in.

The ultrasonic examination of this weld obtained 34.7% coverage of the required examination volume. Because of the weld configuration, the requirements of ASME Section V, Article 4, T-441.1.2(a), T-441.1.3, T-441.1.4, T-441.1.5 and T-441.1.6 could not be met. The aggregate coverage was calculated from the following base and weld metal scan results:

- Weld coverage using 35°, 45°& 60° shear waves for axial scans (S1, S2), and 35° & 45° shear waves for circ. scans (CW, CCW) obtained 15.4% coverage.
- Base material coverage using 35°, 45°& 60° shear wave for axial scans (S1) and 35°& 45° shear waves for circ. scans (CW, CCW) obtained 54.8% coverage.
- 0° scan coverage obtained 33.9% coverage.
- The aggregate coverage was calculated to be (15.4% + 54.8% + 33.9%)/3 = 34.7%.

The limitation was caused by the design of the sampling nozzle not allowing for scanning from the nozzle side of the weld. In order to scan all of the required volume for this weld, the nozzle would have to be redesigned, which is impractical.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume A-B-C-D-E-F-G-H-I. The achieved coverage did not meet the acceptance criteria of this Code Case.

4.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage.

4.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

4.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B3.110.0008 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

5.0 Weld #1-PZR-WP26-1

5.1. ASME Code Component(s) Affected

Unit 1 Pressurizer Heater Belt Shell to Sampling Nozzle Weld, Weld #1-PZR-WP26-1, Summary Number O1.B3.110.0009

5.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

5.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.110 Fig. IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

5.4. Impracticality of Compliance

Surface 1: Shell - Carbon steel

Surface 2: Sampling nozzle - Carbon steel

Diameter: 5.750 in.

Thickness: 6.187 in.

The ultrasonic examination of this weld obtained 34.7% coverage of the required examination volume. Because of the weld configuration, the requirements of ASME Section V, Article 4, T-441.1.2(a), T-441.1.3, T-441.1.4, T-441.1.5 and T-441.1.6 could not be met. The aggregate coverage was calculated from the following base and weld metal scan results:

- Weld coverage using 35°, 45°& 60° shear waves for axial scans (S1, S2), and 35° & 45° shear waves for circ. scans (CW, CCW) obtained 15.4% coverage.
- Base material coverage using 35°, 45°& 60° shear wave for axial scans (S1) and 35°& 45° shear waves for circ. scans (CW, CCW) obtained 54.8% coverage.
- 0° scan coverage obtained 33.9% coverage.
- The aggregate coverage was calculated to be (15.4% + 54.8% + 33.9%)/3 = 34.7%.

The limitation was caused by the design of the sampling nozzle not allowing for scanning from the nozzle side of the weld. In order to scan all of the required volume for this weld, the nozzle would have to be redesigned, which is impractical.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume A-B-C-D-E-F-G-H-I. The achieved coverage did not meet the acceptance criteria of this Code Case.

5.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage.

5.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

5.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B3.110.0009 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

6.0 Weld #1-PZR-WP26-2

6.1. ASME Code Component(s) Affected

Unit 1 Pressurizer Heater Belt Shell to Sampling Nozzle Weld, Weld #1-PZR-WP26-2, Summary Number O1.B3.110.0010

6.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

6.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.110 Fig. IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

- 6.4. Impracticality of Compliance
 - Surface 1: Shell Carbon steel
 - Surface 2: Sampling nozzle Carbon steel
 - Diameter: 5.750 in.
 - Thickness: 6.187 in.

The ultrasonic examination of this weld obtained 34.7% coverage of the required examination volume. Because of the weld configuration, the requirements of ASME Section V, Article 4, T-441.1.2(a), T-441.1.3, T-441.1.4, T-441.1.5 and T-441.1.6 could not be met. The aggregate coverage was calculated from the following base and weld metal scan results:

- Weld coverage using 35°, 45°& 60° shear waves for axial scans (S1, S2), and 35° & 45° shear waves for circ. scans (CW, CCW) obtained 15.4% coverage.
- Base material coverage using 35°, 45°& 60° shear wave for axial scans (S1) and 35°& 45° shear waves for circ. scans (CW, CCW) obtained 54.8% coverage.
- 0° scan coverage obtained 33.9% coverage.
- The aggregate coverage was calculated to be (15.4% + 54.8% + 33.9%)/3 = 34.7%.

The limitation was caused by the design of the sampling nozzle not allowing for scanning from the nozzle side of the weld. In order to scan all of the required volume for this weld, the nozzle would have to be redesigned, which is impractical.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume A-B-C-D-E-F-G-H-I. The achieved coverage did not meet the acceptance criteria of this Code Case.

6.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage.

6.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

6.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B3.110.00010 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

7.0 Weld #1-51A-1-53755-V1

7.1. ASME Code Component(s) Affected

Unit 1 Letdown Cooler 1B Nozzle to Channel Body Weld, Weld #1-51A-1-53755-V1, Summary Number O1.B3.150.0003

7.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

7.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.150 Figure IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

7.4. Impracticality of Compliance

The Letdown Cooler Channel Body to Nozzle material is stainless steel. This weld has a diameter of NPS 3.0 inches and a wall thickness of 0.875 inches.

The ultrasonic examination of this weld obtained 54.6% coverage of the required examination volume. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

	Letdown Cooler Noz	zle to Channel Body
	Item No. 01.B3.150.0003 / 1	Weld No. 1-51A-1-53755-V1
	Base Mater	al Coverage
Scan	Radius View	Non-Radius View
Axial	68.2%	52.7%
Circ	65.2%	54.4%
	Aggregate @ 68.2 + 52.3	7 + 65.2 + 54.4 = 240.5/4 = 60.1%
	Weld Mater	ial Coverage
Scan	Radius View	Non-Radius View
Axial-S1	45.9%	26.0%
Axial-S2	0.0%	0.0%
Circ-52	94.1%	66.3%
Circ-S2	94.1%	66.3%
	Aggregate @ 45.9 + 26.0 + 0.0 + 0.0 + 94	.1 + 66.3 + 94.1 + 66.3 = 392.7/8 = 49.1%
		+ 49.1 = 109.2/2 = 54.6%

The individual scan results are recorded on the table above. The limitation was caused by the weld taper configuration created by the attachment of the nozzle to the channel body. In order to scan all of the required volume for this weld, the nozzle to channel body 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 examination of this weld. This weld was examined using

procedures and personnel qualified in accordance with ASME Section XI, Appendix III.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume A-B-C-D-E-F-G-H-I. The achieved coverage did not meet the acceptance criteria of this Code Case.

7.5. Proposed Alternative and Basis for Use

Radiography (RT) is not a desired option because there is no access for film placement.

No other substitution alternative for this weld is available which would provide better coverage.

7.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

7.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B3.150.0003 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

8.0 Weld #1-51A-1-53755-V2

8.1. ASME Code Component(s) Affected

Unit 1 Letdown Cooler 1B Nozzle to Channel Body Weld, Weld #1-51A-1-53755-V2, Summary Number O1.B3.150.0004

8.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

8.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.150 Figure IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

8.4. Impracticality of Compliance

The Letdown Cooler Channel Body to Nozzle material is stainless steel. This weld has a diameter of NPS 3.0 inches and a wall thickness of 0.875 inches.

The ultrasonic examination of this weld obtained 54.6% coverage of the required examination volume. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

	Letdown Cooler No	zzle to Channel Body
	Item No. 01.B3.150.0004 /	Weld No. 1-51A-1-53755-V2
	Base Mater	ial Coverage
Scan	Radius View	Non-Radius View
Axial	68.2%	52.7%
Circ	55.2% 54.4%	
	Aggregate @ 68.2 + 52.	7 + 65.2 + 54.4 = 240.5/4 = 60.1%
	Weld Mater	rial Coverage
Scan	Radius View	Non-Radius View
Axial-S1	45.9%	26.0%
Axial-S2	0.0%	0.0%
Circ-S2	94.1%	66.3%
Circ-S2	94.1%	66.3%
	Aggregate @ 45.9 + 26.0 + 0.0 + 0.0 + 94	1.1 + 66.3 + 94.1 + 66.3 = 392.7/8 = 49.1%
		+ 49.1 = 109.2/2 = 54.6%

The individual scan results are recorded on the table above. The limitation was caused by the weld taper configuration created by the attachment of the nozzle to the channel body configuration. In order to scan all of the required volume for this weld, the nozzle to channel body 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 examination of this weld. This weld was

examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix III.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume A-B-C-D-E-F-G-H-I. The achieved coverage did not meet the acceptance criteria of this Code Case.

8.5. Proposed Alternative and Basis for Use

Radiography (RT) is not a desired option because there is no access for film placement.

No other substitution alternative for this weld is available which would provide better coverage.

8.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

8.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B3.150.0004 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

9.0 Weld #1LP-209-8L

9.1. ASME Code Component(s) Affected

Unit 1 Valve 1CF-13 to Elbow Piping Weld, Weld #1LP-209-8L, Summary Number O1.B9.11.0003

9.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

9.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-J, Item Number B9.11 Figure IWB-2500-8 (c), 100% Volume Coverage of Examination Volume C-D-E-F

9.4. Impracticality of Compliance

The valve material is cast stainless steel and the elbow material is stainless steel. This weld has a diameter of NPS 14.0 inches and a wall thickness of 1.25 inches.

The ultrasonic examination of this weld obtained 37.500% coverage of the required examination volume. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 45° obtained 50% coverage in one axial direction (S1 elbow)
- 45° obtained 0% coverage in one axial direction (S2 valve)
- 45° shear waves obtained 50% coverage in one circ. directions (S3 CW)
- 45° shear waves obtained 50% coverage in one circ. directions (S4 -CCW)
- The aggregate coverage was calculated to be (50% + 0% + 50% + 50%)/4 = 37.500%.

The individual scan results are recorded on the form labeled "Determination of Percent Coverage for UT Examinations – Pipe. The limitation was caused by the cast stainless material and the weld taper configuration created by the attachment of the valve to elbow configuration. In order to scan all of the required volume for this weld, the valve would have to be replaced with forged stainless steel and 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 examination of this weld. This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. The achieved coverage did not meet the acceptance criteria of this Code Case.

9.5. Proposed Alternative and Basis for Use

Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

9.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

9.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B9.11.0003 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this B9.11 item. The result from the surface examination was acceptable.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

10.0 Weld #1PIA2-9

10.1. ASME Code Component(s) Affected

Unit 1 Reactor Coolant Pump 1A2 Casing Nozzle to Safe-End Piping Weld, Weld #1PIA2-9, Summary Number O1.B9.11.0050

10.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

10.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-J, Item Number B9.11 Figure IWB-2500-8 (c), 100% Volume Coverage of Examination Volume C-D-E-F

10.4. Impracticality of Compliance

The Pump Casing Nozzle material is cast stainless steel and the pipe material is stainless steel. This weld has a diameter of 36.50 inches and a wall thickness of 2.330 inches.

The ultrasonic examination of this weld obtained 36.275% coverage of the required examination volume. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 60° shear waves obtained 0% coverage in one axial direction (S1 nozzle)
- 60° shear waves obtained 45.10% coverage in one axial direction (S2 pipe)
- 45° shear waves obtained 50% coverage in one circ. directions (S3 CW)
- 45° shear waves obtained 50% coverage in one circ. directions (S4 -CCW)
- The aggregate coverage was calculated to be (0% + 45.10% + 50%) + 50%)/4 = 36.275%.
- In addition, a best effort examination was performed in axial direction (S1) using 60° and 70° longitudinal waves to the extent possible in the upper 2/3 area of interest.

The individual scan results are recorded on the form labeled "Determination of Percent Coverage for UT Examinations – Pipe. The limitation was caused by the cast stainless material and the weld taper configuration created by the attachment of the nozzle to safe end configuration. In order to scan all of the required volume for this weld, the pump would have to be replaced with forged stainless steel and 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 examination of this weld. This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. The achieved coverage did not meet the acceptance criteria of this Code Case.

10.5. Proposed Alternative and Basis for Use

Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

10.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

10.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B9.11.0050 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

Duke performed a surface examination (code required) on this B9.11 item. The result from the surface examination was acceptable.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

11.0 Weld #1PDA2-1

11.1. ASME Code Component(s) Affected

Unit 1 Reactor Coolant Pump 1A2 Casing Nozzle to Safe-End Weld, Weld #1PDA2-1, Summary Number O1.B9.11.0062

11.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

11.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-J, Item Number B9.11 Figure IWB-2500-8 (c), 100% Volume Coverage of Examination Volume C-D-E-F

11.4. Impracticality of Compliance

The Pump Casing Nozzle material is cast stainless steel and the pipe material is stainless steel. This weld has a diameter of 33.50 inches and a wall thickness of 2.33 inches.

The ultrasonic examination of this weld obtained 37.500% coverage of the required examination volume. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 45 shear waves obtained 50% coverage in one axial direction (S1 pipe)
- 45 shear waves obtained 0% coverage in one axial direction (S2 nozzle)
- 45° shear waves obtained 50% coverage in one circ. directions (S3 CW)
- 45° shear waves obtained 50% coverage in one circ. directions (S4 CCW)
- The aggregate coverage was calculated to be (50% + 0% + 50% + 50%)/4 = 37.500%.
- In addition, a best effort examination was performed in axial direction (S1) using 60° and 70° longitudinal waves to the extent possible in the upper 2/3 area of interest.

The individual scan results are recorded on the form labeled "Determination of Percent Coverage for UT Examinations – Pipe. The limitation was caused by the cast stainless material and the weld taper configuration created by the attachment of the nozzle to safe end configuration. In order to scan all of the required volume for this weld, the pump would have to be replaced with forged stainless steel and 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 examination of this weld. This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. The achieved coverage did not meet the acceptance criteria of this Code Case.

11.5. Proposed Alternative and Basis for Use

Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

11.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

11.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.B9.11.0062 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this B9.11 item. The result from the surface examination was acceptable.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

12.0 Weld #1-53A-02-65L

12.1. ASME Code Component(s) Affected

Unit 1 Pipe to Valve 1LP-47 Weld, Weld #1-53A-02-65L, Summary Number O1.C5.11.0028

12.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

12.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.11 Figure IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

12.4. Impracticality of Compliance

The valve material is cast stainless steel and the pipe material is stainless steel. This weld has a diameter of NPS 10.0 inches and a wall thickness of 1.125 inches.

During the ultrasonic examination of this weld, 37.50% coverage of the required examination volume was obtained. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv)(A)(1). The aggregate coverage was calculated as follows:

- 45° shear waves obtained 0% coverage in one axial direction (S1 valve)
- 45° shear waves obtained 50% coverage in one axial direction (S2 pipe)
- 45° shear waves obtained 50% coverage in one circ. direction (S3 CW)
- 45° shear waves obtained 50% coverage in one circ. direction (S4 CCW)
- The aggregate coverage was calculated to be (0% + 50% +50% + 50%)/4 = 37.5%

In order to scan all of the required volume for this weld, the valve would have to be replaced with forged stainless steel, which is impractical. There were no recordable indications found during the examination of this weld.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. Therefore, the available coverage will not meet the acceptance criteria of this Code Case.

12.5. Proposed Alternative and Basis for Use

No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

12.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

12.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.C5.11.0028 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this C5.11 item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

13.0 Weld #1-51A-04-1C

13.1. ASME Code Component(s) Affected

Unit 1 Pipe to Valve 1HP-194 Weld, Weld #1-51A-04-1C, Summary Number O1.C5.21.0004

13.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

13.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Fig. IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

13.4. Impracticality of Compliance

The valve material is forged stainless steel and the pipe material is stainless steel seamless pipe. This weld has a diameter of NPS 4.0 inches and a wall thickness of .674 inches.

- 45° shear waves obtained 50% coverage in one axial direction (S1 pipe)
- 45° shear waves obtained 0% coverage in one axial direction (S2 valve)
- 38° shear waves obtained 50% coverage in one circ direction (S3 CW)
- 38° shear waves obtained 50% coverage in one circ direction (S4 CCW)
- The aggregate coverage was calculated to be (50% + 0% + 50% + 50%)/4 = 37.5%

In order to scan all of the required volume for this weld, the valve would have to be redesigned, which is impractical.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. Therefore, the available coverage will not meet the acceptance criteria of this Code Case.

13.5. Proposed Alternative and Basis for Use

No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

13.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

13.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.C5.21.0004 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this C5.21 item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

14.0 Weld #1HP-387-118A

14.1. ASME Code Component(s) Affected

Unit 1 Elbow to Valve 1HP-118 Weld, Weld #1HP-387-118A, Summary Number O1.C5.21.0027

14.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

14.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Fig. IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

14.4. Impracticality of Compliance

The valve material is forged stainless steel and the elbow material is stainless steel seamless pipe. This weld has a diameter of NPS 4.0 inches and a wall thickness of .531 inches.

During the ultrasonic examination of this weld, 75% coverage of the required examination volume was obtained. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv)(A)(1). The aggregate coverage was calculated as follows:

- 60° shear waves obtained 100% coverage in one axial direction (S1 pipe)
- 60° shear waves obtained 100% coverage in one axial direction (S2 valve)
- 45° shear waves obtained 50% coverage in one circ. direction (S3 CW)
- 45° shear waves obtained 50% coverage in one circ. direction (S4 CCW)
- The aggregate coverage was calculated to be (100% +100% +50% + 50%)/4 = 75%

In order to scan all of the required volume for this weld, the valve would have to be redesigned. There were no recordable indications found during the examination of this weld.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. Therefore, the available coverage will not meet the acceptance criteria of this Code Case.

14.5. Proposed Alternative and Basis for Use

No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

14.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

14.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.C5.21.0027 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this C5.21 item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), visual observations performed during operator rounds provide additional assurance that in the event leakage did occur through this weld, it would be detected and proper action taken.

15.0 Weld #1HP-193-17

15.1. ASME Code Component(s) AffectedUnit 1 Pipe to Tee Weld, Weld #1HP-193-17, Summary Number O1.C5.21.0040

15.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

15.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Fig. IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

15.4. Impracticality of Compliance

The pipe and tee material is stainless steel. This weld has a diameter of NPS 2.5 inches and a wall thickness of .375 inches.

During the ultrasonic examination of this weld, 37.50% coverage of the required examination volume was obtained. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv)(A)(1). The aggregate coverage was calculated as follows:

- 60° shear waves obtained 50% coverage in one axial direction (S1 pipe)
- 60° shear waves obtained 0% coverage in one axial direction (S2 tee)
- 45° shear waves obtained 50% coverage in one circ. direction (S3 CW)
- 45° shear waves obtained 50% coverage in one circ. direction (S4 CCW)
- The aggregate coverage was calculated to be (50% +0% +50% + 50%)/4 = 37.5%

In order to scan all of the required volume for this weld, the tee would have to be redesigned, which is impractical. There were no recordable indications found during the examination of this weld.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. Therefore, the available coverage will not meet the acceptance criteria of this Code Case.

15.5. Proposed Alternative and Basis for Use

No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

15.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

15.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.C5.21.0040 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this C5.21 item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), visual observations performed during operator rounds provide additional assurance that in the event leakage did occur through this weld, it would be detected and proper action taken.

16.0 Weld #1-51A-02-16BH

16.1. ASME Code Component(s) Affected

Unit 1 Pipe to Flange Weld, Weld #1-51A-02-16BH, Summary Number O1.C5.21.0051

16.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

16.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Fig. IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

16.4. Impracticality of Compliance

The pipe to flange material is stainless steel. This weld has a diameter of NPS 4.0 inches and a wall thickness of .531 inches.

- 60° shear waves obtained 0% coverage in one axial direction (S1 flange)
- 60° shear waves obtained 50% coverage in one axial direction (S2 pipe)
- 45° shear waves obtained 50% coverage in one axial direction (S3 CW)
- 45° shear waves obtained 50% coverage in one axial direction (S4 -CCW)
- The limitation was caused by the taper on the flange side of the weld.
- The aggregate coverage was calculated to be (0% + 50% + 50%) + 50%)/4 = 37.5%

In order to scan all of the required volume for this weld, the flange would have to be redesigned, which is impractical.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. Therefore, the available coverage will not meet the acceptance criteria of this Code Case.

16.5. Proposed Alternative and Basis for Use

No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

16.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

16.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O1.C5.21.0051 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this C5.21 item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), visual observations performed during operator rounds provide additional assurance that in the event leakage did occur through this weld, it would be detected and proper action taken.

17.0 Weld #1HP-0187-184

17.1. ASME Code Component(s) Affected

Unit 1 Pipe to Valve 1HP140 Weld, Weld #1HP-0187-184, Summary Number PSI

17.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

17.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Fig. IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

17.4. Impracticality of Compliance

The valve material is cast stainless steel and the pipe material is stainless steel seamless pipe. This weld has a diameter of NPS 4.0 inches and a wall thickness of .531 inches.

During the ultrasonic examination of this weld, 37.5% coverage of the required examination volume was obtained. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv)(A)(1). The aggregate coverage was calculated as follows:

- 60° shear waves obtained 50% coverage in one axial direction (S1 pipe)
- 60° shear waves obtained 0% coverage in one axial direction (S2 valve)
- 45° shear waves obtained 50% coverage in one circ. direction (S3 CW)
- 45° shear waves obtained 50% coverage in one circ. direction (S4 CCW)
- The aggregate coverage was calculated to be (50% +0% +50% + 50%)/4 = 37.5%

In order to scan all of the required volume for this weld, the valve would have to be redesigned. There were no recordable indications found during the examination of this weld.

The Oconee Inservice Inspection Plan allows the use of Code Case N-460, which requires greater than 90% volumetric coverage of examination volume C-D-E-F. Therefore, the available coverage will not meet the acceptance criteria of this Code Case.

17.5. Proposed Alternative and Basis for Use

No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

17.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

17.7. Justification for Granting Relief

Ultrasonic examination of the weld for the Pre Service Inspection was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this C5.21 item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), visual observations performed during operator rounds provide additional assurance that in the event leakage did occur through this weld, it would be detected and proper action taken.

18.0 Weld #1HP-0187-185

18.1. ASME Code Component(s) Affected

Unit 1 Pipe to Valve 1HP139 Weld, Weld #1HP-0187-185, Summary Number PSI

18.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

18.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Fig. IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

18.4. Impracticality of Compliance

The valve material is forged stainless steel and the pipe material is stainless steel seamless pipe. This weld has a diameter of NPS 4.0 inches and a wall thickness of .531 inches.

During the ultrasonic examination of this weld, 37.5% coverage of the required examination volume was obtained. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv)(A)(1). The aggregate coverage was calculated as follows:

- 60° shear waves obtained 0% coverage in one axial direction (S1 valve)
- 60° shear waves obtained 50% coverage in one axial direction (S2 pipe)
- 45° shear waves obtained 50% coverage in one circ, direction (S3 CW)
- 45° shear waves obtained 50% coverage in one circ. direction (S4 CCW)
- The aggregate coverage was calculated to be (0% +50% +50% + 50%)/4 = 37.5%

In order to scan all of the required volume for this weld, the valve would have to be redesigned. There were no recordable indications found during the examination of this weld.

18.5. Proposed Alternative and Basis for Use

No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect expected degradation mechanisms such as thermal fatigue cracking and stress corrosion crack initiating at the pipe inside surface. Additionally, radiography has not been qualified through performance demonstration.

No substitution alternative for this weld is available which would provide better coverage.

18.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014.

18.7. Justification for Granting Relief

Ultrasonic examination of the weld for the Pre Service Inspection was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this C5.21 item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), visual observations performed during operator rounds provide additional assurance that in the event leakage did occur through this weld, it would be detected and proper action taken.

19.0 Weld #2-PZR-WP34

19.1. ASME Code Component(s) Affected

Unit 2 Pressurizer Upper Head to Spray Nozzle Weld, Weld #2-PZR-WP34, Summary Number O2.B3.110.0002

19.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

19.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.110 Fig. IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

19.4. Impracticality of Compliance

Component:

- Surface 1: Upper Head Carbon steel
- Surface 2: Spray nozzle Carbon steel
- Diameter: 7.750 in.
- Thickness: 4.750 in.

Scan requirements are described in ASME Section V, Article 4, T-441.1.2(a), T-441.1.3, T-441.1.4, T-441.1.5 and T-441.1.6. The aggregate coverage was calculated from the following base and weld metal scan results:

- Base material coverage provided an aggregate coverage of 77.1%
- Weld metal coverage provided an aggregate coverage of 75.0%
- The total obtained aggregate coverage was (77.1 + 75.0 = 152.1)/2 = 76.1%

The limitation was caused by the design of the spray nozzle not allowing for scanning from the nozzle side of the weld. In order to scan all of the required volume for this weld, the spray nozzle would have to be redesigned, which is impractical.

19.5. Proposed Alternative and Basis for Use

Radiography (RT) is not a desired option because there is no access for film placement.

No other substitution alternative for this weld is available which would provide better coverage.

19.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

19.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O2.B3.110.0002 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

20.0 Weld #2-PZR-WP33-3

20.1. ASME Code Component(s) Affected

Unit 2 Pressurizer Upper Head to Relief Nozzle Weld, Weld #2-PZR-WP33-3, Summary Number O2.B3.110.0003

20.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

20.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.110 Fig. IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

20.4. Impracticality of Compliance

Component:

Surface 1: Upper Head - Carbon steel

Surface 2: Relief nozzle - Carbon steel

Diameter: 6.875 in.

Thickness: 4.750 in.

Scan requirements are described in ASME Section V, Article 4, T-441.1.2(a), T-441.1.3, T-441.1.4, T-441.1.5 and T-441.1.6. The aggregate coverage was calculated from the following base and weld metal scan results:

- Base material coverage provided an aggregate coverage of 69.3%
- Weld metal coverage provided an aggregate coverage of 73.1%
- The total obtained aggregate coverage was (69.3 + 73.1 = 142.4)/2 = 71.2%

The limitation was caused by the design of the relief nozzle not allowing for scanning from the nozzle side of the weld. In order to scan all of the required volume for this weld, the relief nozzle would have to be redesigned, which is impractical.

20.5. Proposed Alternative and Basis for Use

Radiography (RT) is not a desired option because there is no access for film placement.

No other substitution alternative for this weld is available which would provide better coverage.

20.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

20.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O2.B3.110.0003 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

21.0 Weld #2-PZR-WP33-1

21.1. ASME Code Component(s) Affected

Unit 2 Pressurizer Upper Head to Relief Nozzle Weld, Weld #2-PZR-WP33-1, Summary Number O2.B3.110.0005

21.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

21.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-D, Item Number B3.110 Fig. IWB-2500-7 (a), 100% Volume Coverage of Examination Volume A-B-C-D-E-F-G-H-I

21.4. Impracticality of Compliance

Component:

• Surface 1: Upper Head - Carbon steel

Surface 2: Relief nozzle - Carbon steel

Diameter: 6.875 in.

Thickness: 4.750 in.

Scan requirements are described in ASME Section V, Article 4, T-441.1.2(a), T-441.1.3, T-441.1.4, T-441.1.5 and T-441.1.6. The aggregate coverage was calculated from the following base and weld metal scan results:

- Base material coverage provided an aggregate coverage of 69.3%
- Weld metal coverage provided an aggregate coverage of 73.1%
- The total obtained aggregate coverage was (69.3 + 73.1 = 142.2)/2 = 71.2%

The limitation was caused by the design of the relief nozzle not allowing for scanning from the nozzle side of the weld. In order to scan all of the required volume for this weld, the relief nozzle would have to be redesigned, which is impractical.

21.5. Proposed Alternative and Basis for Use

Radiography (RT) is not a desired option because there is no access for film placement.

No other substitution alternative for this weld is available which would provide better coverage.

21.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

21.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O2.B3.110.0005 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

22.0 Weld #2-PIA1-8

22.1. ASME Code Component(s) Affected

Unit 2 Reactor Coolant Pump 2A1 Casing Nozzle to Safe-End Piping Weld, Weld #2-PIA1-8, Summary Number O2.B9.11.0046

22.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

22.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-J, Item Number B9.11 Figure IWB-2500-8 (c), 100% Volume Coverage of Examination Volume C-D-E-F

22.4. Impracticality of Compliance

Component configuration:

- Surface 1: Cast stainless steel pump casing
- Surface 2: Stainless steel safe end
- NPS: 33.50 in.Thickness: 2.330 in.

Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 60° shear waves obtained 0.0% coverage in one axial direction (S1 pump casing)
- 60° shear waves obtained 50% coverage in one axial direction (S2 safe end)
- 45° shear waves obtained 50% coverage in one circ. direction (CW).
- 45° shear waves obtained 50% coverage in one circ, direction (CCW).
- The aggregate coverage was calculated to be (0.0% + 50.0% + 50% + 50%)/4 = 37.5%.
- In addition, a best effort examination was performed using 60° and 70° longitudinal waves to the extent possible from the cast stainless side in the upper 2/3 area of interest.

The limitation was caused by the cast stainless steel pump casing material. In order to scan all of the required volume for this weld, the pump casing would have to be redesigned, which is impractical.

22.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII. No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Additionally, radiography has not been qualified through performance demonstration.

22.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

22.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O2.B9.11.0046 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

23.0 Weld #2-PDA2-1

23.1. ASME Code Component(s) Affected

Unit 2 Reactor Coolant Pump 2A2 Casing Nozzle to Safe-End Piping Weld, Weld #2-PDA2-1, Summary Number O2.B9.11.0053

23.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

23.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-J, Item Number B9.11 Figure IWB-2500-8 (c), 100% Volume Coverage of Examination Volume C-D-E-F

23.4. Impracticality of Compliance

Component configuration:

- Surface 1: Stainless steel safe end
- Surface 2: Cast stainless steel pump casing
- NPS: 33.50 in.
- Thickness: 2.330 in.

Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 60° shear waves obtained 54.8% coverage in one axial direction (S1 safe end)
- 60° shear waves obtained 0.0% coverage in one axial direction (S2 pump casing)
- 45° shear waves obtained 50% coverage in one circ. direction (CW).
- 45° shear waves obtained 50% coverage in one circ, direction (CCW).
- The aggregate coverage was calculated to be (54.8% + 0.0% + 50%) + 50%)/4 = 38.7%.
- In addition, a best effort examination was performed using 60° and 70° longitudinal waves to the extent possible from the cast stainless side in the upper 2/3 area of interest.

The limitation was caused by the pump casing material. In order to scan all of the required volume for this weld, the pump casing would have to be redesigned, which is impractical.

23.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII. No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Additionally, radiography has not been qualified through performance demonstration.

23.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

23.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O2.B9.11.0053 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

24.0 Weld #2-PDB2-1

24.1. ASME Code Component(s) Affected

Unit 2 Reactor Coolant Pump 2B2 Casing Nozzle to Safe-End Piping Weld, Weld #2-PDB2-1, Summary Number O2.B9.11.0063

24.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

24.3. Applicable Code Requirement

IWB-2500, Table IWB-2500-1, Examination Category B-J, Item Number B9.11 Figure IWB-2500-8 (c), 100% Volume Coverage of Examination Volume C-D-E-F

24.4. Impracticality of Compliance

Component configuration:

- Surface 1: Stainless steel safe end
- Surface 2: Cast stainless steel pump casing
- NPS: 33.50 in.
- Thickness: 2.330 in.

Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 60° shear waves obtained 58% coverage in one axial direction (S1 safe end)
- 60° shear waves obtained 0.0% coverage in one axial direction (S2 pump casing)
- 45° shear waves obtained 50% coverage in one circ. direction (CW).
- 45° shear waves obtained 50% coverage in one circ. direction (CCW).
- The aggregate coverage was calculated to be (58.0% + 0.0% + 50% + 50%)/4 = 39.5%.
- In addition, a best effort examination was performed using 60° and 70° longitudinal waves to the extent possible from the cast stainless side in the upper 2/3 area of interest.

The limitation was caused by the pump casing material. In order to scan all of the required volume for this weld, the pump casing would have to be redesigned, which is impractical.

24.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII. No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Additionally, radiography has not been qualified through performance demonstration.

24.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

24.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O2.B9.11.0063 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each refueling outage in accordance with Table IWB-2500-1; Examination Category B-P requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

25.0 Weld #2LP-215-27

25.1. ASME Code Component(s) Affected

Unit 2 Pipe to Valve 2LP-177 Weld, Weld #2LP-215-27, Summary Number O2.C5.11.0038

25.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

25.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.11 Figure IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

25.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged stainless steel valve
- Surface 2: Stainless steel pipe
- NPS: 10.0 in.
- Thickness: 1.0 in.

Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 60° shear waves obtained 100% coverage in one axial direction (S1 valve)
- 45° shear waves obtained 99.4% coverage in one axial direction (S2 pipe)
- 45° shear waves obtained 50% coverage in one circ. direction (CW).
- 45° shear waves obtained 50% coverage in one circ. direction (CCW).
- The aggregate coverage was calculated to be (100.0% + 99.4% + 50% + 50%)/4 = 74.9%.

The limitation was caused by the taper of the valve body, and a weld-o-let. In order to scan all of the required volume for this weld, the valve would have to be redesigned, which is impractical.

25.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII. No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Additionally, radiography has not been qualified through performance demonstration.

25.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

25.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O2.C5.11.0038 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1; Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric and pressure test), Reactor Building Normal Sump monitoring provides additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

26.0 Weld #2HP-341-V1

26.1. ASME Code Component(s) Affected

Unit 2 Pipe to Valve 2HP-120 Weld, Weld #2HP-341-V1, Summary Number O2.C5.21.0035

26.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

26.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Figure IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

26.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged stainless steel valve
- Surface 2: Stainless steel pipe
- NPS: 2.5 in.
- Thickness: 0.375 in.

Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 60° shear waves obtained 0.0% coverage in one axial direction (S1 valve)
- 60° shear waves obtained 50% coverage in one axial direction (S2 pipe)
- 45° shear waves obtained 100% coverage in one circ. direction (CW).
- 45° shear waves obtained 100% coverage in one circ, direction (CCW).
- The aggregate coverage was calculated to be (0.0% + 50% + 100% + 100%)/4 = 62.5%.

The limitation was caused by the taper of the valve body. In order to scan all of the required volume for this weld, the valve would have to be redesigned, which is impractical.

26.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII. No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Additionally, radiography has not been qualified through performance demonstration.

26.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

26.7. Justification for Granting Relief

Ultrasonic examination of the weld for the item number O2.C5.21.0035 was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), visual observations performed during operator rounds provide additional assurance that in the event leakage did occur through this weld, it would be detected and proper action taken.

27.0 Weld #2-51A-0029-94

27.1. ASME Code Component(s) Affected
Unit 2 Pipe to Valve 2HP-139 Weld, Weld #2-51A-0029-94, PSI

27.2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

27.3. Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Fig. IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

27.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged stainless steel valve
- Surface 2: Stainless steel pipe
- NPS: 4.0 in.
- Thickness: 0.531 in.

Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following data:

- 60° shear waves obtained 0.0% coverage in one axial direction (S1 valve)
- 60° shear waves obtained 50% coverage in one axial direction (S2 pipe)
- 45° shear waves obtained 50% coverage in one circ. direction (CW).
- 45° shear waves obtained 50% coverage in one circ. direction (CCW).
- The aggregate coverage was calculated to be (0.0% + 50% + 50%)/4 = 37.5%.

The limitation was caused by the taper of the valve body. In order to scan all of the required volume for this weld, the valve would have to be redesigned, which is impractical.

27.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII. No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Additionally, radiography has not been qualified through performance demonstration.

27.6. Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

27.7. Justification for Granting Relief

Ultrasonic examination of the weld for the PSI was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this PSI item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), visual observations performed during operator rounds provide additional assurance that in the event leakage did occur through this weld, it would be detected and proper action taken.

28.0 Weld #2-HP-0396-23

28.1 ASME Code Component(s) Affected

Unit 2 Pipe to Valve 2HP-140 Weld, Weld #2-HP-0396-23, PSI

28.2 Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda

28.3 Applicable Code Requirement

IWC-2500, Table IWC-2500-1, Examination Category C-F-1, Item Number C5.21 Fig. IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F

28.4 Impracticality of Compliance

Component configuration:

- Surface 1: Cast stainless steel valve
- Surface 2: Stainless steel pipe
- NPS: 4.0 in.
- Thickness: 0.531 in.

Scanning requirements are described in 10CFR.50.55a(b)(2)(xv) (A)(1). The aggregate coverage was calculated from the following:

- 60° shear waves obtained 0.0% coverage in one axial direction (S1 valve)
- 60° shear waves obtained 50% coverage in one axial direction (S2 pipe)
- 45° shear waves obtained 50% coverage in one circ. direction (CW).
- 45° shear waves obtained 50% coverage in one circ. direction (CCW).
- The aggregate coverage was calculated to be (0.0% + 50% + 50%)/4 = 37.5%.

The limitation was caused by the valve material and taper of the body. In order to scan all of the required volume for this weld, the valve would have to be redesigned, which is impractical.

28.5 Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment, and personnel qualified in accordance with ASME Section XI, Appendix VIII. No alternative examinations are planned for the weld during the current inspection interval. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Additionally, radiography has not been qualified through performance demonstration.

28.6 Duration of Proposed Alternative

This request is for the duration of the fourth inservice inspection interval, currently scheduled to end on July 15, 2014

28.7 Justification for Granting Relief

Ultrasonic examination of the weld for the PSI was conducted using personnel, equipment, and procedures qualified in accordance with ASME Section XI, 1998 Edition with the 2000 Addenda.

In addition to the volumetric examination with limited coverage, Duke performed a surface examination (code required) on this PSI item. The result from the surface examination was acceptable.

The system leakage test performed each inspection period in accordance with Table IWC-2500-1, Examination Category C-H requires a VT-2 visual examination to detect evidence of leakage. This test and VT-2 examination provides additional assurance of pressure boundary integrity.

In addition to the above Code required examinations (volumetric, surface, and pressure test), visual observations performed during operator rounds provide additional assurance that in the event leakage did occur through this weld, it would be detected and proper action taken.



UT Vessel Examination

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Code:		1998/2	000A			Cat./Iten	n: B	-D /B3.1	110	Loc	ation:						
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Examination S	urface:	Insi	ide 🔲	0	utside [Z	Surfac	e Condî	tion: GRO	UND SMOC	тн						
Lo Location:		9.	2.3		_ Wo	Location:	Centerli	ine of W	/eld	Couplant:		ULTRAGE	L II	Batch No.:		091	25
Temp. Tool Mf	g.:	F	ISHER		s	erial No.:	MCNI	DE3276	8	Surface To	emp.:	67	_ °F				
Cal. Report No	.:					c.	AL-09-411, 412	. 413 &	414			 					
Angle Used	0	45	45T	60	60T	60RL]										
Scanning dB		57.6	57.6	71.8	71.8	72	}										
Indication(s):	Yes [7 N	o ☑			-	Scan Coverag	e: Ups	stream 🔽	Downstrea	m 🗹	cw ☑	CCW	Ø			
Comments:	_						0/-//	1	_								
35° - 57.8 db;	35T° - 57	'.8 db		Add	litional E	Examiner	- Dave Griebel	, Level I	ii, 10/28/09				:				
Results:	Acce	pt 🗀	Reje	:ct ☑	In	fo 🔲	Additional	Examin	er John	C. Day, Leve	el II, 10	0/28/09					
Percent Of Cov	erage O	btained	> 90%:		No		Reviewed I	Previous	s Data:	Yes			-				
Examiner Lo Hollis, Jacob	evel (J-N	1	Jan	IP.	Signatur	e X	10/28/	- 1	Reviewer (Jan 1	M	<i>~</i>	Signat	ure		//- 9-0	Date
xaminer Le	evel II-N	1 1		11	Signelu	ė			ite Review		7.10	Z	Signat	ure		1-1-0	Date
Dean, Steven				ئر میں کا	<u>U-</u>	-	10/28/	2009 N	N/A	<i>y</i> 1							
Other Le	evel N/			, -	Signatur	е		Date A	Ntl Review		lon	eK.	Signati	ure 11/9/	 18		Date

D		:			
		UT-09-323			
Component/Weld ID: 1-PZR-WI	remarks:				
NO SCAN	SURFACE	BEAM DIRECTION		*35 & 60RL angle	es
☐ LIMITED SCAN	□ 1 □ 2	□ 1 □ 2 □ cw [⊠ ccw	nozzle configurat	ion
FROM L N/A to L N/A	INCHES	FROM W0 1" to _B	eyond		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60	other _*	FROM 0 DEG to 36	0 DEG		
☐ NO SCAN	SURFACE	BEAM DIRECTION			
☐ LIMITED SCAN	<pre>1</pre>	_ 1 _ 2 _ cw [ccw		
FROM L to L	INCHES F	ROM W0 to			
ANGLE: 0 45 60	other	FROM DEG to	DEG		
☐ NO SCAN	SURFACE	BEAM DIRECTION			
☐ LIMITED SCAN	<pre>1</pre>	☐ 1 ☐ 2 ☐ cw ☐	ccw		
FROM L to L	INCHES FI	ROM W0 to			
ANGLE: 0 0 45 0 60	other	FROM DEG to	DEG		·
☐ NO SCAN	SURFACE	BEAM DIRECTION			
☐ LIMITED SCAN	<pre>1 1 2</pre>	☐ 1 ☐ 2 ☐ cw ☐] cew		
FROM L to L	INCHES FF	ROM W0 to		Sketch(s) at	tached
ANGLE: 0 5 60	other			⊠ yes	☐ No
Prepared By: Jacob Hollis	Helli Level:	II Date: 10/28/09	Sheet	2 2	
Reviewed By: Bang M	Date: //	Authorized Inspector		into	Date: 11/5/08

PZR Sampling Nozzle to Shell % of Coverage

Item No.: <u>01.B3.110.0006</u>

Weld No. : <u>WP26-4</u>

Weld Coverage

<u>Scan</u>	<u>Angle</u>	% Coverage Obtained	
S 1	35°,45° & 60°	61.46	
S2	35°,45° & 60°	0	
CW	35° & 45°	0	
CCW	35° & 45°	<u>0</u>	
	Total	61.46	
	61.46 ÷ 4 =	<u>15.4</u>	% Coverage
Base Ma	aterial Coverage		
S1	35°,45° & 60°	67.2	
CW & C	CCW 45°&35°	<u>42.4</u>	
	Total	109.6	
	109.6 ÷ 2 =	<u>54.8</u>	% Coverage
0° Scan	Coverage =	<u>33.9</u>	% Coverage

Aggregate Coverage = Weld + Base Material + 0° ÷ 3

34.7

% Coverage

Inspector / Date: David 16. 3 10/29/09

ATTACH MENT TO READOT UT-09-323 Page of 6

ATTACHMENT A
PAGE 4 OF 1/2 Pressurizer Sampling Nozzle to Shell Item No.: 01.B3.110.0006 Weld No.: WP26-4 Inspector/Date: Steven Dean 10/28/09 Nozzle Surface 2 Total Weld Metal Examined with at least 2 angles from one direction. A combination of 35°,45°, and 60° angles were used to obtain coverage. % Examined from Surface $1 = 7.015 / 11.413 \times 100 = 61.46$ %. % Examined from Surface 2, CW, and CCW = 0%. 60°-Shell Surface 1 7.015 sq. in. ATTACHMENT TO REPORT UT-09-323

PAGE ZOF6

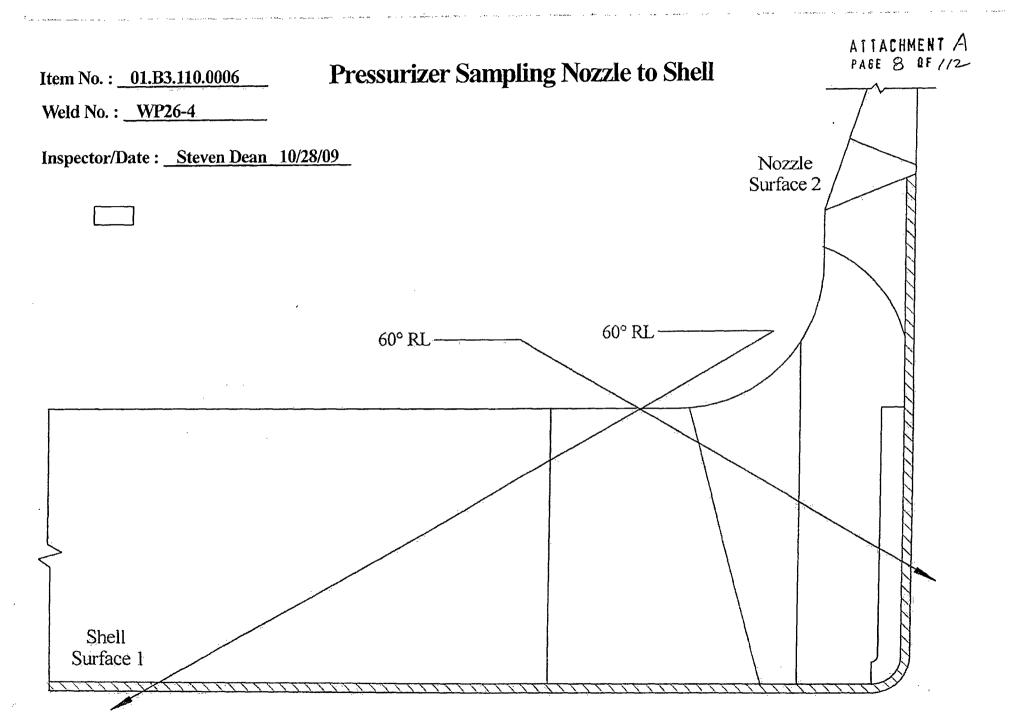
ATTACHMENT A
PAGE 5 OF//2 Pressurizer Sampling Nozzle to Shell Item No.: 01.B3.110.0006 Weld No. : WP26-4 Inspector/Date: Steven Dean 10/28/09 Nozzle Surface 2 Base Metal Examined with 35° and 45° angles. % Examined 35° and 45° = $19.03 / 44.87 \times 100 = 42.4\%$. 35° and 45° Circ. scan 19.03 sq. in. Shell Surface 1

ATTACHMENT TO REPORT UT-09-323 PAGE 30FG

ATTACHMENT TO REPORT UT- 09-323

PAKE 40FG

ATTACHMENT TO REPORT UT-09-323



Duke Energy

UT Vessel Examination

Si	te/Unit:	Oconee /	1		P	rocedure:	NDE-820)	Out	tage No.:	O1-25	
Summa	ry No.:	01.83	3.110.0007		Proced	lure Rev.:	4		Re	port No.:	UT-09-32	25
Work	scope:		ISI		Work C	Order No.:	01846474	4		Page: 1	of	2
Code:	<u> </u>	1998/2000A		Cat./item	: B-D /B:	1.110	Location:					
Drawing No.:		ISI-O	CN1-002		Description:	Nozzle to Sh	iejl					
System ID:	50				•							
Component ID:	1-PZR-	WP26-5					Size/Length:	N/A	Thickne	ss/Diameter:	6.187/5	.75/CS
Limitations:	Due to	nozzle conf	iguration-	see supplementa	l sheet		Sta	rt Time:	0835	Finish Time:	113	35
Examination S	urface:	Inside [] 0:	utside ☑	Surface Con-	dition: GROL	HTOOMS DAL					
Lo Location:		9.2.3	·	Wo Location:	Centerline of	Weld	Couplant:	ULTRAGEI	_11	Batch No.:	091	25
Temp. Tool Mf	g.:	FISHE	R	Serial No.:	MCNDE327	68	Surface Temp.:	67	_°F			
Cal. Report No).:			C.	AL-09-411, 412, 413	<u> </u>						
Angle Used	0	45 45	T 60	60T 60RL						•		
Scanning dB		57.6 57.	6 71.8	71.8 72								
Indication(s):	Yes [Scan Coverage: U	ostream 🗹	Downstream 🗹	CW 🗹	ccw 🗹			
Comments:					01.11							
35° - 57.8 db;	35T° - 5	7.8 db	Add	itional Examiner -	Dave Griebel, Leve	I II, 10/28/09						
Results:	Acce	_	Reject ☑	Info [Additional Exam			0/28/09	· ·		·	
Percent Of Cov	erage C	otained > 90	%:	<u>No</u>	Reviewed Previo	ıs Data:	Yes					
Examiner Lo Hollis, Jacob	evel II-I			Signature	Date 10/28/2009	Reviewer	un / Mo.	×J	Signature		9-09	Date
xaminer Lo Dean, Steven	evel II-I	N -	Here 2	Signature	Date 10/28/2009	Site Review N/A	V		Signature			Date
Other Li N/A	evel N/	A		Signature	Date 10/28/2009	ANII Review	Al.	A	Signature	11/8/28		Date

ATTACHMENT A

DUKE POWER COMPANY						
	ISI LIMITA	TION REP	ORT		~ .	UT-09-325
Component/Weld ID: 1-PZR-W	Remarks:					
NO SCAN	SURFACE	BEA	M DIRECTION	V	*35 & 60RL ang	les
☐ LIMITED SCAN	⊠ 1 ⊠ 2	2 1 2		⊠ ccw	nozzle configura	tion
FROM L N/A to L N/A	INCHES	FROM W0	<u>-1"</u> to	Beyond		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60	other *	FROM 0	DEG to _	360 DEG		
☐ NO SCAN	SURFACE	BEA	M DIRECTION	1		
☐ LIMITED SCAN	□ 1 □ 2	<pre>1 [</pre>	2 🗌 cw	ccw		
FROM L to L	INCHES F	ROM W0	to _			
ANGLE: 0 45 60	other	FROM	DEG to _	DEG		
☐ NO SCAN	SURFACE	BEA	M DIRECTION	l -		
LIMITED SCAN	<pre>1 1 2</pre>	_ 1 _	2	☐ ccw		
FROM L to L	INCHES F	ROM W 0	to _			
ANGLE: 0 45 60	other	FROM	DEG to	DEG		
☐ NO SCAN	SURFACE	BEAN	M DIRECTION			
☐ LIMITED SCAN	□ 1 □ 2	<pre>1 [</pre>	2 🗌 cw	□ ccw	101-10-1-10-1-10-1-10-1-10-1-10-1-10-1	
FROM L to L	INCHES F	ROM W 0	to _	<u></u>	Sketch(s) a	ittached
ANGLE: 0 5 60	other	FROM	_ DEG to	DEG	🛛 yes	☐ No:
Prepared By: Jacob Hollis On A.P.	LON Level:	II Date:	10/28/09		2	2
Reviewed By: Bany Mr.	Date: /	1-4.09	Authorized Inspec	tor:	(1)	Date:

PZR Sampling Nozzle to Shell % of Coverage

Weld No.: <u>WP26-5</u>

Weld Coverage

Scan	Angle	% Coverage Obtained	
S1	35°,45° & 60°	61.46	
S2	35°,45° & 60°	0	
CW	35° & 45°	0	
CCW	35° & 45°	<u>0</u>	
	Total	61.46	
	61.46 ÷ 4 =	<u>15.4</u>	% Coverage
Base Ma	terial Coverage		
SI	35°,45° & 60°	67.2	
CW & C	CW 45°&3'5°	<u>42.4</u>	
	Total	109.6	
	109.6 ÷ 2 =	<u>54.8</u>	% Coverage
0° Scan	Coverage =	33.9	% Coverage

Aggregate Coverage = Weld + Base Material + $0^{\circ} \div 3$

<u>34.7</u>

% Coverage

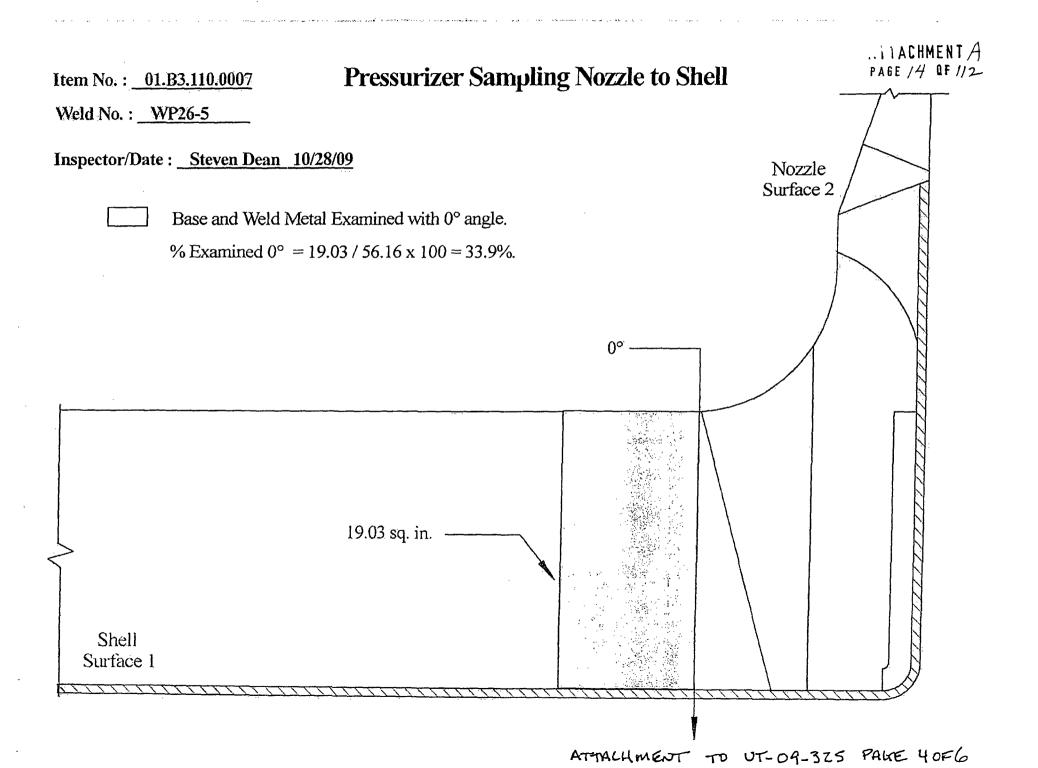
ATTACHMENT TO REPORT UT-09-325

Inspector / Date: Variable 3 10/29/09

Page <u>1</u> of <u>6</u>

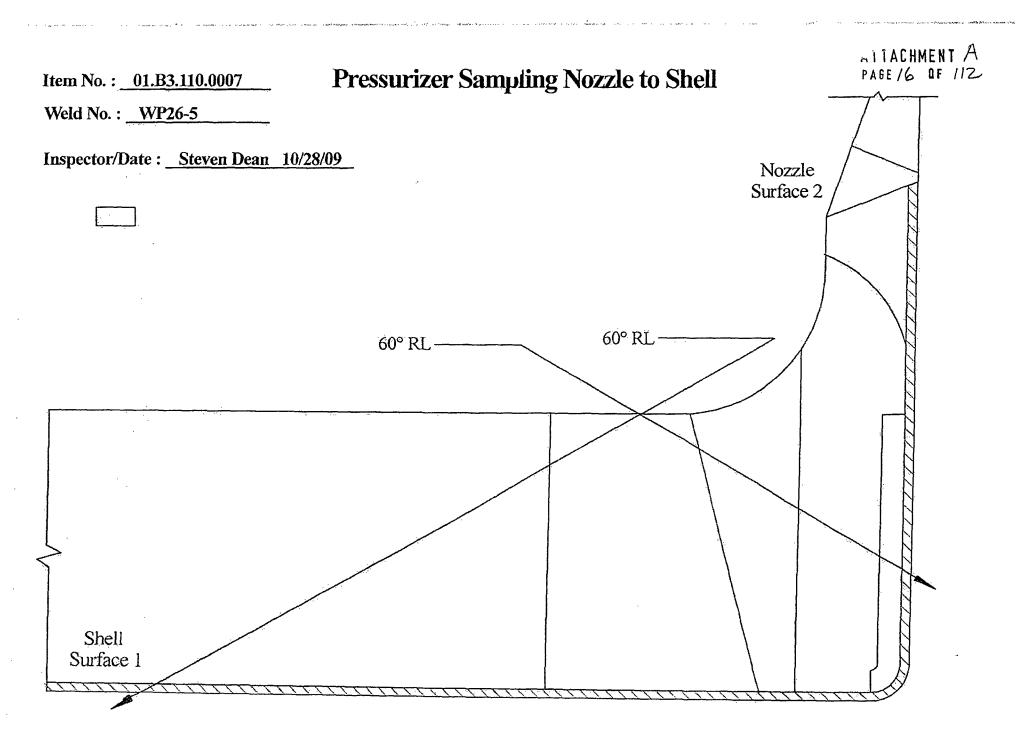
ATTACHMENT A PAGE 13 OF 1/2 **Pressurizer Sampling Nozzle to Shell** Item No.: 01.B3.110.0007 Weld No. : _ WP26-5 Inspector/Date: Steven Dean 10/28/09 Nozzle Surface 2 Base Metal Examined with 35° and 45° angles. % Examined 35° and 45° = $19.03 / 44.87 \times 100 = 42.4\%$. 35° and 45° Circ. scan 19.03 sq. in. Shell Surface 1

ATTACHMENT TO UT-09-325 PAGE 3 OF G



ATTACHMENT A Pressurizer Sampling Nozzle to Shell PAGE 15 OF 1/2 Item No.: 01.B3.110.0007 Weld No. : <u>WP26-5</u> Inspector/Date: Steven Dean 10/28/09 Nozzle Surface 2 Total Base Metal Examined with at least 2 angles from one direction. A combination of 35°,45°, and 60° angles were used to obtain coverage. % Examined = $(24.45 + 5.705) / 44.87 \times 100 = 67.2\%$. 24.45 sq. in. Shell Surface 1 5.705 sq. in-

ATTACHMENT TO UT-09-325 PAKE 5 OF 6



Duke Energy.

UT Vessel Examination

Si	ite/Unit:	Oconee /	1	_	;	Procedure:	NDE-8	820	Ou	utage No.:	O1 - 25	<u>;</u>
Summa	ary No.:	01.83.11	10.0008	_	Proce	edure Rev.:	4		Re	eport No.:	UT-09-32	26
Work	kscope:	ısı	1	-	Work	Order No.:	01846	474		Page: 1	of	2
Code:		1998/2000A		Cat./Item:	: B- D /B	33.110	Locatio	n:				
Drawing No.:		ISI-OCN	1-002		Description:	Nozzle to S	hell	•				
System ID:	50											
Component ID:	1-PZR-	-WP26-6					Size/Length	: N/A	Thickn	ess/Diameter:	6.187/5	.75/CS
Limitations:	Due to	nozzle configu	ration- see su	pplemental	sheet			Start Time:	0835	Finish Time:	113	35
Examination S	urface:	Inside []	Outside [\square	Surface Cor	ndition: GRO	UND SMOOTH					
Lo Location:		9.2.3	Wc	Location: _	Centerline of	Weld	Couplant:	ULTRAGE	LII	Batch No.:	0912	25
Temp. Tool Mfg	g.:	FISHER	{	Serial No.: _	MCNDE327	768	Surface Temp	.: 67	°F			
Cal. Report No	i.:			ĆAI	L-09-411, 412, 413	& 414						
Angle Used	0	45 45T	60 60 T	60RL		***************************************		····	- · · · · · · · · · · · · · · · · · · ·			
Scanning dB		57.6 57.5	71.8 71.8									
Indication(s):	Yes [] No ☑		<u></u>	Scan Coverage: Uj	pstream 🗹	Downstream &	Z cw ✓	ccw 🗹			
Comments:					0/-//							
35° - 57.8 db; 3	35 T° - 5 7	7.8 db	Additional	Examiner - I	Dave Griebel, Leve	ıl II, 10/28/09						
•												
Results:	Acce	pt 🗍 Reje	ct ☑ In	nfo 🗍	Additional Exam	iner - John (Day Level II,	10/28/09				
Percent Of Cov	erage Q	btained > 90%:	No		Reviewed Previous		Yes	_				
	evel H-N) Signatur	ren 11.	Date	Reviewed			Signature			Date
lollis, Jacob xaminer Le			and R. K	Holle	10/28/2009	X	ru 1 1/1.	000			-9.09	
lean, Steven	evel (I-N		Un Signatur	/e	Date 10/28/2009	Site Review N/A	YT		Signature			Date
	evel N/A	1	Signatur	re	Date	ANII Review	······································		Signature			Date
N/A					10/28/2009		Ales	all the	:	11/9/	09	

ATTACHMENT A

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Di	JKE POWE	R COMPANY			
·	ISI LIMITAT	ION REPORT			UT-09-326
Component/Weld ID: 1-PZR-WP	26-6. Ite r	m No: O1.B3.110.0008		Remarks:	
NO SCAN ■		———	1	*35 & 60RL angl	es
☐ LIMITED SCAN	□ 1	□ 1 □ 2 □ cw □	ccw	nozzle configura	tion
FROM L N/A to L N/A	INCHES F	ROM W0 1" to Bey	ond		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60			ł		
		BEAM DIRECTION			
☐ LIMITED SCAN	<pre>1</pre>	☐ 1 ☐ 2 ☐ cw ☐	cew		
FROM L to L	INCHES FR	OM W0 to			
ANGLE: 0 45 60	other	FROM DEG to	DEG		
☐ NO SCAN	SURFACE	BEAM DIRECTION			
☐ LIMITED SCAN	□ 1 □ 2	☐ 1 ☐ 2 ☐ cw ☐	ccw		
FROM L to L	INCHES FR	OM W0 to			
ANGLE: 0 45 60	other	FROM DEG to	DEG		
☐ NO SCAN	SURFACE	BEAM DIRECTION			
☐ LIMITED SCAN	☐ 1 ☐ 2	☐ 1 ☐ 2 ☐ cw ☐	ccw		
FROM L to L	INCHES FRO	OM W0 to		Sketch(s) a	attached
ANGLE: 0 5 60		FROM DEG to	DEG	yes	☐ No
Prepared By: Jacob Hollis Jane	R. Holl. Level: 11	Date: 10/28/09	Sheet	2	2
Reviewed By: Bary Mr.	Date: //	Authorized Inspector:	A	in the	Date: ///5/08

the state of the state of

PZR Sampling Nozzle to Shell % of Coverage

Item No.: 01.B3.110.0008

Weld No. : <u>WP26-6</u>

Weld Coverage

<u>Scan</u>	Angle	% Coverage Obtained	
S1	35°,45° & 60°	61.46	
S2	35°,45° & 60°	0	
CW	35° & 45°	0	
CCW	35° & 45°	<u>0</u>	
	Total	61.46	
	61.46 ÷ 4 =	<u>15.4</u>	% Coverage
Base Ma	aterial Coverage		
S1	35°,45° & 60°	67.2	
CW & C	CCW 45°&35°	<u>42.4</u>	
	Total	109.6	
	109.6 ÷ 2 =	<u>54.8</u>	% Coverage
0° Sean	Coverage =	<u>33.9</u>	% Coverage

Aggregate Coverage = Weld + Base Material + $0^{\circ} \div 3$

<u>34.7</u>

% Coverage

Inspector / Date: David K. 3 10/29/09

ATTACHMENT TO REPORT

UT-09-3ZG

Page 1 of 6

UT-09-326

ATTACHMENT TO

ATTACHMENT A PAGE 21 OF 1/2 Pressurizer Sampling Nozzle to Shell Item No.: 01.B3.110.0008 Weld No. : WP26-6 Inspector/Date: Steven Dean 10/28/09 Nozzle Surface 2 Base Metal Examined with 35° and 45° angles. % Examined 35° and $45^{\circ} = 19.03 / 44.87 \times 100 = 42.4\%$. 35° and 45° Circ. scan 19.03 sq. in. Shell Surface 1

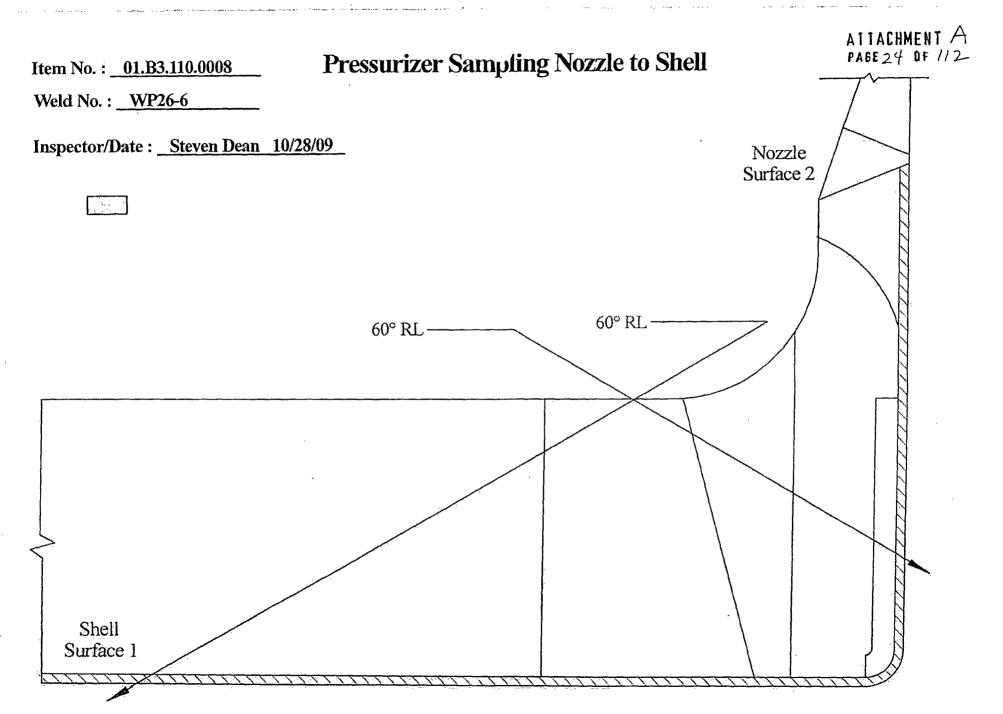
ATTACHMENT TO UT-04-376 PAGE 30EG

PAKE 4 OEL

ATTACHMENT TO UT-09-326

PAGE SUF6

APTACHMENT TO PEPORT UT-09-326



ATTACHMENT TO UT-09-376 PAGEGOCK

Duke Energy

UT Vessel Examination

	te/Unit:	Oconee	: / 1.B3.11					cedure			E-820			utage No.:		-25 9-327	
Work	scope:		ISI				Wo	rk Orde	r No.:	018	46474			1 age.	`		<u>=</u> _
Code:		1998/20	100A			Cat./item	1; <u>B-D</u>	/B3.110	<u>o</u>	Loca	ation:						
Drawing No.:		15	SI-OCN1	-002			Descriptio	n: <u>No</u> z	zzle to Sì	rell							
System ID:	50							<u> </u>									
Component ID:	1-PZR-	WP26-1						1		Size/Len	gth:	N/A	Tnicki	ness/Diameter	6.18	37/5.7	5/CS
Limitations:	Due to	nozzie d	onfigu	ration- s	ee sup	plementa	sheet				Star	t Time:	0835	Finish Time	: <u> </u>	1135	
Examination S	urface:	Insid	de 🔲	Ou	itside 🔽]	Surface 0	Conditio	n: GRO	JND SMOO	тн						
Lo Location:		9.2	2.3		_ Wo L	_ocation:	Centerline	of Wei	d	Couplant:		ULTRAGE	L II	Batch No.: _		09125	,
Temp. Tool Mf	g.:	FIS	SHER	······································	. Se	erial No.:	MCNDE:	32768		Surface Te	mp.:	67	_ °F				
Cal. Report No).:					C,	AL-09-411, 412, 4	13 & 41	4	············							
Angle Used Scanning dB	0	45 57.6	45T 57.6	60 71.8	60T 71.8	60RL 72											
Indication(s):	Yes [] No				·!	Scan Coverage:	Upstre	eam 🗹	Downstrea	m 🗹	cw 🗹	CCW 🗹	}			
Comments: 35° - 57.8 db;	35T° - 5`	7.8 db	_	Addi	tional E	xaminer ·	Dave Griebel, Lo	evel II,	10/28/09								
Results:	Acce	ept 🗌	Reje	ect 🔽	Info	• 	Additional Ex	aminer	- John C	Day, Leve	el II, 10.	/28/09				 ;	
Percent Of Cov	rerage C	btained	> 90%:		No		Reviewed Pre	evious D)ata:	Yes						······································	
Examiner Lo Hollis, Jacob	evel II-I	V	-Gh	and	Signatur		Da 10/28/20	ate Rev	viewer	m / /	No.	»	Signatur		1-9-0	 9 <i>9</i>	Date
Examiner Lo Dean, Steven	evel II-I	1	2/		ignature		Da 10/28/200		Review	- Y + + + +			Signatur		·		Date
Other Lo	evel N/	A		S	Signature	3	Da 10/28/200	ſ	II Review	A.	Esu	A	Signatur	e 1//9	1/09		Date
																	

ATTACHMENT A
PAGE 26 DE 1/2

Di	UKE POWI	ER CO	MPANY			
	ISI LIMITAT	TION RE	PORT			UT-09-327
Component/Weld ID: 1-PZR-WP	26-1 Ite	em No: 01	1.B3.110.0009		Remarks:	
NO SCAN	SURFACE	BE	EAM DIRECTION	N	*35 & 60RL angl	es
☐ LIMITED SCAN	□ 1	⊠ 1		⊠ ccw	nozzle configura	tion
FROM L N/A to L N/A	INCHES	FROM W0	<u>-1"</u> to	Beyond		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60	other *	FROM _	0 DEG to	360 DEG		
☐ NO SCAN	SURFACE	BE	AM DIRECTION	٧	,	
LIMITED SCAN	□ 1 □ 2	1	□ 2 □ cw	☐ ccŵ		
FROM L to L	INCHES F	ROM W0	to	<u> </u>	**************************************	
ANGLE: 0 45 60	other	FROM _	DEG to _	DEG		
☐ NO SCAN	SURFACE	BE	AM DIRECTION	J		
☐ LIMITED SCAN	□ 1 □ 2	<u> </u>	☐ 2 ☐ cw	☐ ccw [
FROM L to L	INCHES FF	ROM WO	to _			
ANGLE: 0 0 45 60	other	FROM	DEG to	DEG		
☐ NO SCAN	SURFACE	BEA	AM DIRECTION			·
☐ LIMITED SCAN	□ 1 □ 2	□ 1	☐ 2 ☐ cw	ccw		
FROM L to L	INCHES FR	ROM W 0	to _		Sketch(s) a	ttached
ANGLE: 0 5 60	other	FROM	DEG to	DEG	🛛 yes	☐ No
Prepared By: Yearh Wallis 7	Heli Level:	II Date:	10/28/09	Sheet	2	2
Reviewed By: Barry 111	Date:	1.4.09	Authorized Inspec	etor:	ast b	Date: 11/5/59

PZR Sampling Nozzle to Shell % of Coverage

Item No.: 01.B3.110.0009

Weld No. : <u>WP26-1</u>

Weld Coverage

<u>Scan</u>	<u>Angle</u>	% Coverage Obtained	
S 1	35°,45° & 60°	61.46	
S2	35°,45° & 60°	0	
CW	35° & 45°	0	
CCW	35° & 45°	<u>0</u>	
	Total	61.46	
	61.46 ÷ 4 =	<u>15.4</u>	% Coverage
Base Ma	terial Coverage		
S1	35°,45° & 60°	67.2	
CW & C0	CW 45°&35°	<u>42.4</u>	
	Total	109.6	
	109.6 ÷ 2 =	<u>54.8</u>	% Coverage
0° Scan	Coverage =	<u>33.9</u>	% Coverage

Aggregate Coverage = Weld + Base Material + $0^{\circ} \div 3$

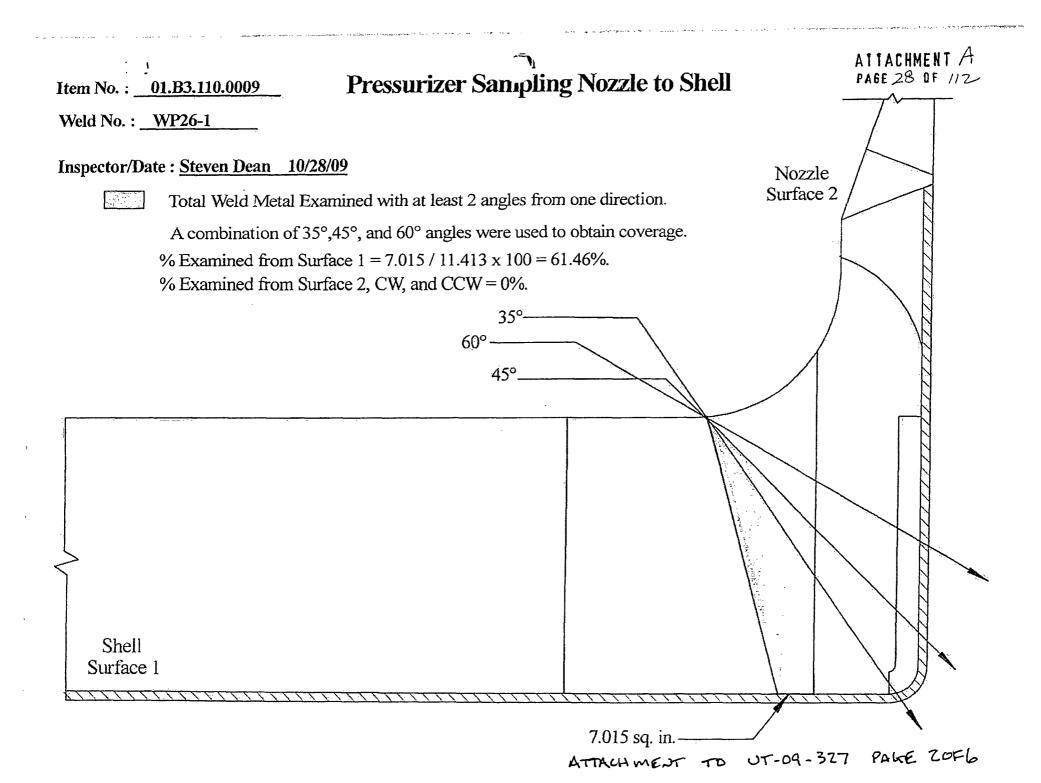
34.7

% Coverage

ATTACHMENT TO REPORT UT-09-327

Inspector / Date: David K 10/29/09

Page $\sqrt{ }$ of 6



Item No. : 01.B3.110.0009 Pressurizer Sampling Nozzle to Shell

Weld No. : WP26-1

Inspector/Date: Steven Dean 10/28/09

Base Metal Examined with 35° and 45° angles.

% Examined 35° and 45° = $19.03 / 44.87 \times 100 = 42.4\%$.

35° and 45° Circ. scan

19.03 sq. in.

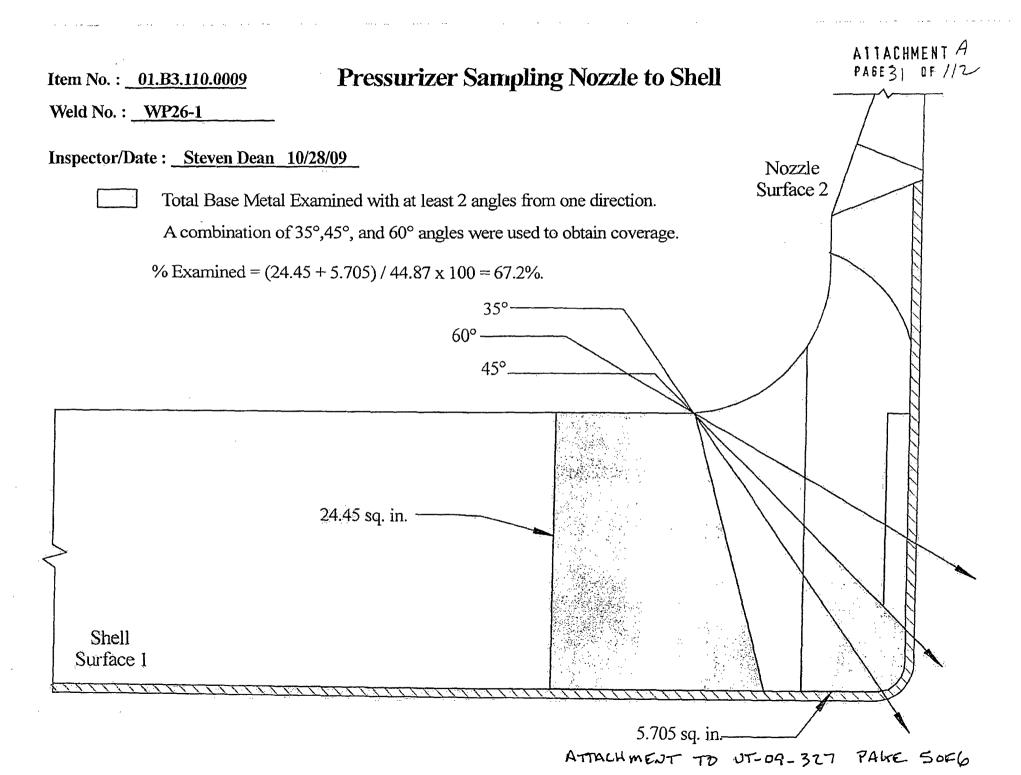
Shell Surface 1

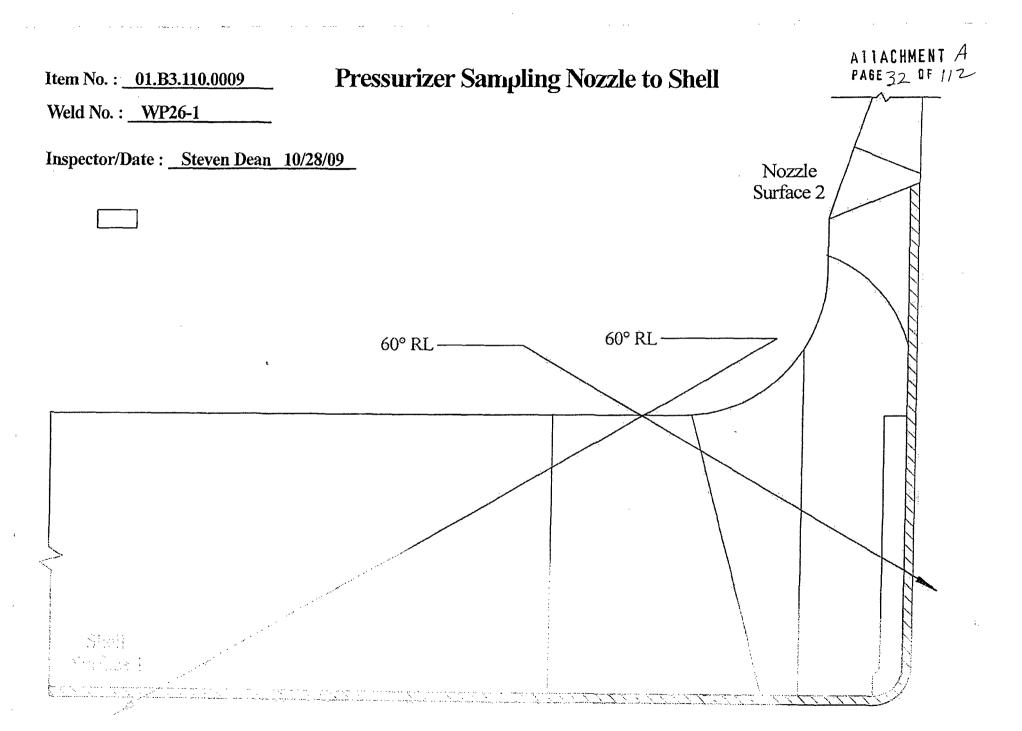
ATTACH MENT TO UT-09-327 PAGE 3066

Nozzle Surface 2

Pressurizer Sampling Nozzle to Shell Item No.: 01.B3.110.0009 Weld No. : WP26-1 Inspector/Date: Steven Dean 10/28/09 Nozzle Surface 2 Base and Weld Metal Examined with 0° angle. % Examined $0^{\circ} = 19.03 / 56.16 \times 100 = 33.9\%$. 19.03 sq. in. Shell Surface 1

ATTACHNENT TO UT-09-327 PAGE 4056





Duke Le Energy.

UT Vessel Examination

S	ite/Unit:	Ocone	e /	1.					Procedure:		IDE-82	0	(Outage No.:	01-2	.5
Summa	ary No.:		01.B3.110	0.0010				Proc	edure Rev.:		4			Report No.:	UT-09-	324
Worl	(scope:		JSI					Work	Order No.:	0	184647	4		Page: 1	of	2
Code:		1998/2	000A			Cat./Iten	n:	B-D /E	33.110	Lo	cation:					
Drawing No.:			SI-OCN1	-002				escription	Nozzle to	Shell						
System ID:	50															
Component ID:	1-PZR-	WP26-2								Size/Le	ength:	N/A	Thick	(ness/Diameter:	6.187/	5.75/CS
Limitations:	Due to	nozzie	configura	ation-	see sup	plementa	i sheet				Sta	rt Time:	0835	_ Finish Time:	15	135
Examination S	urface:	Insi	de 📋	O	utside ⋤	<u> </u>	s	Surface Co	ndition: GR	OMS DAUC	отн					
Lo Location:		9.2	2.3		_ Wol	Location:	Ce	nterline o	Weld	Couplant	:	ULTRAGE	_ 11	Batch No.:	091	125
Temp. Tool Mf	g.:	FI	SHER		_ · S	erial No.:		MCNDE32	768	Surface T	emp.:	67	_ °F			
Cal. Report No	ı.:					,C,	AL-09-411	l. 412, 413	& 414							
Angle Used	0	45	45T	60	60T	60RL	•									
Scar:ning dB		57.6	57.6	71.8	71.8	72										
Indication(s):	Yes [] No	$ \mathbf{\nabla} $				Scan Cov	/erage: L	pstream 🗹	Downstre	am 🔽	cw [√]	ccw ⊊	7		
Comments:							α	1 111	. –		_	-		•		
35° - 57.8 db;	35T° - 57	7.8 db		Addi	itional E	xaminer .	Dave Gri	iebel, Leve	el II, 10/28/09)						
									11	Ω.						
Results	Acce	pt 🔲	Reject	t 🕢	Info	o 🗆	Additi	onal Exam	iner - John	C. Bay. Lev	el II. 10	/28/09				
Percent Of Cov	erage O	btained :	> 90%:		No			wed Previo		Yes						
xaminer Le	vel II-N	<u> </u>	1		Signature)		Date	Reviewer	4.	11		Signatur	· · · · · · · · · · · · · · · · · · ·		Dist.
iollis, Jacob			Janos	21	1Mi		10	0/28/2009	77	and 1	1/6-	% 3	Signatur		9-09	Date
Dean, Steven	ivel II-N		Aller	Ž,	Signature	<u> </u>	10	Date 0/28/2009	Site Review		: X4		Signatur			Date
Other Le N/A	vel N/A	\			ignature	i			ANII Review			1	Signatur	· //-/		Date
											000			11/9/	9 J	+

ATTACHMENT PAGE 34 OF 1/2

Di	UKE POW	ER CO	MPANY			
	ISI LIMITA	TION RE	PORT			UT- 09-324
Component/Weld ID: 1-PZR-WP	26-2	em No: O	1.B3.110.0010		Remarks:	
⊠ NO SCAN	SURFACE	B	EAM DIRECTION		*35 & 60RL angl	es
☐ LIMITED SCAN	□ 1	⊠ 1		⊠ ccw	nozzle configura	tion
FROM L N/A to L N/A	INCHES	FROM WO	<u>-1"</u> to B	eyond		:
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60	other _*	FROM _	0 DEG to <u>36</u>	0 DEG		
☐ NO SCAN	SURFACE	ВЕ	AM DIRECTION			
☐ LIMITED SCAN	□ 1 □ 2	1	2 cw [ccw		
FROM L to L	INCHES F	ROM W0	to			
ANGLE: 0 45 60	other	FROM _	DEG to	DEG		
☐ NO SCAN	SURFACE	BE	AM DIRECTION			
LIMITED SCAN	☐ 1 ☐ 2	<pre>1</pre>	2 cw	ccw		
FROM L to L	INCHES F	ROM W0	to			
ANGLE: 0 0 45 0 60	other	FROM _	DEG to	DEG		
☐ NO SCAN	SURFACE	BE	AM DIRECTION			
☐ LIMITED SCAN	□ 1 □ 2	□ 1	2 cw	ccw		
FROM L to L	INCHES F	ROM WO	to		Sketch(s) a	ttached
ANGLE: 0 0 5 0 60	other	FROM	DEG to	_ DEG	🔀 yes	☐ No
Prepared By: Jacob Hollis Fand R	I M L	II Date:	10/28/09	Sheet	2	2
Reviewed By: Ba	Date: /	1.4.09	Authorized Inspector	- FIII	The state of the s	Date: 1/5/08

PZR Sampling WHY Item No.: 01.B3.110.0010

PZR Sampling Nozzle to Shell % of Coverage

Weld No. : <u>WP26-2</u>

Weld Coverage

Scan	<u>Angle</u>	% Coverage Obtained	
S1	35°,45° & 60°	61.46	
S2	35°,45° & 60°	0	
CW	35° & 45°	0	
CCW	35° & 45°	<u>0</u>	
	Total	61.46	
	61.46 ÷ 4 =	<u>15.4</u>	% Coverage
Base Mat	terial Coverage		
S1	35°,45° & 60°	67.2	
CW & CO	CW 45°&35°	<u>42.4</u>	
	Total	109.6	
	109.6 ÷ 2 =	<u>54.8</u>	% Coverage
0° Scan (Coverage =	<u>33.9</u>	% Coverage

Aggregate Coverage = Weld + Base Material + $0^{\circ} \div 3$

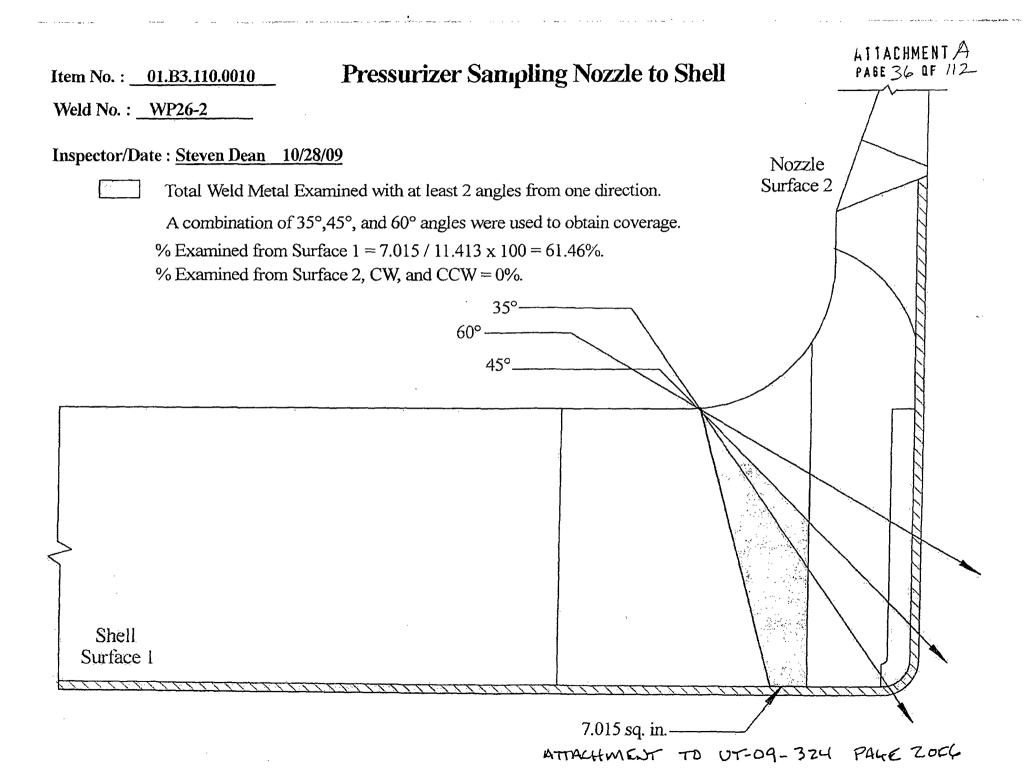
34.7

% Coverage

Inspector / Date: Javid (3) 10/29/09

ATTACHMENT TO REPORT UT-09-324

Page 1 of 6

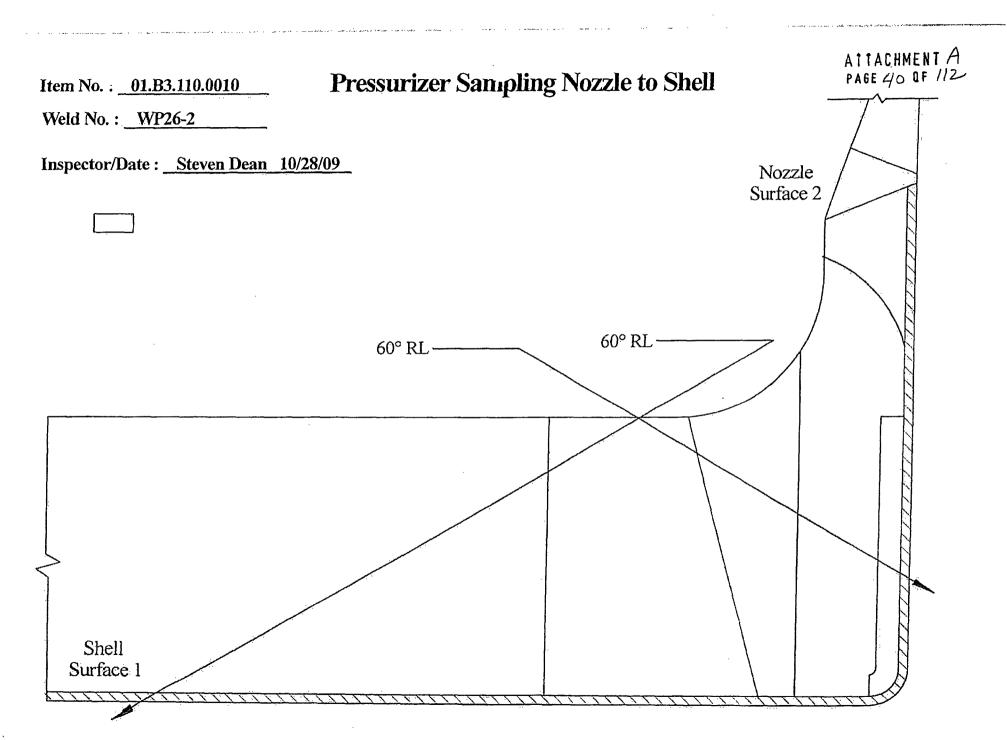


ATTACHMENT TO UT-09-324 PAKE 30FG

Pressurizer Sampling Nozzle to Shell Item No.: 01.B3.110.0010 Weld No.: WP26-2 Inspector/Date: Steven Dean 10/28/09 Nozzle Surface 2 Base and Weld Metal Examined with 0° angle. % Examined $0^{\circ} = 19.03 / 56.16 \times 100 = 33.9\%$. 19.03 sq. in. Shell Surface 1

ATTACHMENT TO REPURT UT-09-324 PALRY

A + TACHMENT TO UT-09-324



Po Energy.

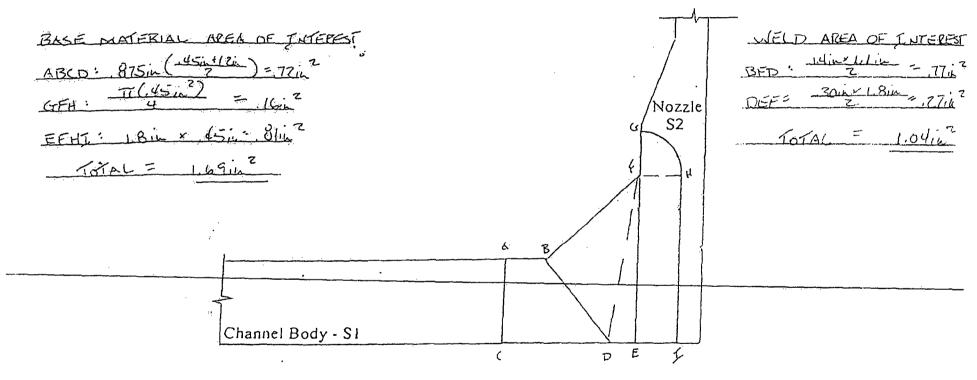
UT Vessel Examination

Si	te/Unit:	Осолев	a /	1			Pi	rocedure:	NDE-363	0		Outage No.: _	<u> 01</u>	-25	
Summa	ry No.:	. 0	1.B3.15	0.0003			Proced	ure Rev.:	1	_		Report No.:	UT-0	9-335	
Work	scope:		ISI				Work O	order No.:	0183827	2		Page:	1 0	of 8 #>	R 11-6
Code:	· ·	1998/20	000A			Cat./Item	n: B-D /B3	.150	Location:					11.2.0	<u>,</u> ዓ
Drawing No.:			1-53755	;			Description:	Nozzle to C	hannel Body						
System ID:	51A								•						
Component ID:	1-51A	1-53755	-V1						Size/Length:	N/A	Thic	:kness/Diamete	r: 0.8	75/3.0/S	5
Limitations:	Yes -	See sup	plementa	al sheet					Sta	rt Time:	1415	Finish Tim	e:	1520	
Examination S	urface:	Insi	de 🗌	Ou	tside 🔽		Surface Cond	lition: AS C	ROUND						 ,
Lo Location:		9.1	.1.1		_ Wo L	ocation:	Centerline of \	Weld	Couplant:	ULTRAGE	EL II	Batch No.:		09125	
Temp. Tool Mi	g.:	FI	SHER		Se	rial No.:	MCNDE327	70	Surface Temp.:	71	*F				
Cal. Report No	o.:				·	CAL	-09-419, 420, 421, 42	2 & 423							
Angle Used	0	45	45T	60	60T	70L]								
Scanning dB		43.0	61.7	50.2	61.0	46.0									
Indication(s):	Yes		o 🔽			*	Scan Coverage: Up	stream 🗹	Downstream 🗹	cw 🗹	ccw	abla			
Comments:															
Scanning db	lowered	from +	14db to	maintai	n 2:1 sig	nal to no	oise ratio								
											•				
Results:	Acc	ept □	Reie	ct 🔽	Info										
Percent Of Co		. —	-		No		Reviewed Previo	us Data:	Yes						
Examiner L	evel II.	N (Signature	·	Date	Reviewer			Signa	ture			Date
Griebel, David		Ν.	/ n·	<u> </u>			10/29/2009	5	any M	Left.	1		11-2	-09	
Examiner L Dean, Steven	evel II.	N	Sti	u de	Signature	•	Date 10/29/2009	Site Review	,		Signa	ture		C	ate
	evel N	/A	~ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(Signature)		ANII Review	7	-	Signa			<u>C</u>	ate
		· · · · · · · · · · · · · · · · · · ·							Sto	uff			<u> [///</u>		

Letdown Cooler Nozzle to Channel Body

Weld No.: 1-51A-1-53755-VL

Item No.: 01.B3.150.0003



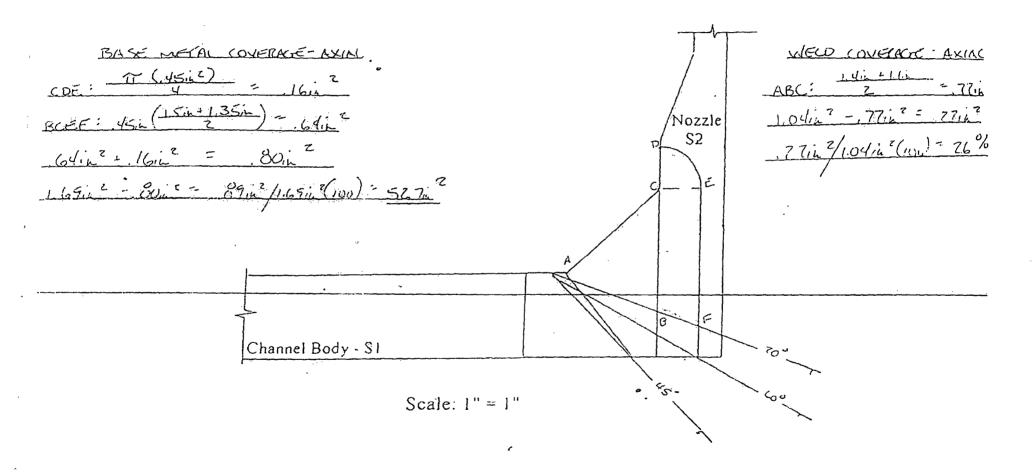
Scale: 1" = 1"

David K 3 III 10/29/09

Letdown Cooler Nozzle to Channel Body

Veld No.: 1-51A-1-53755-11

Item No.: 01.83.150.0003



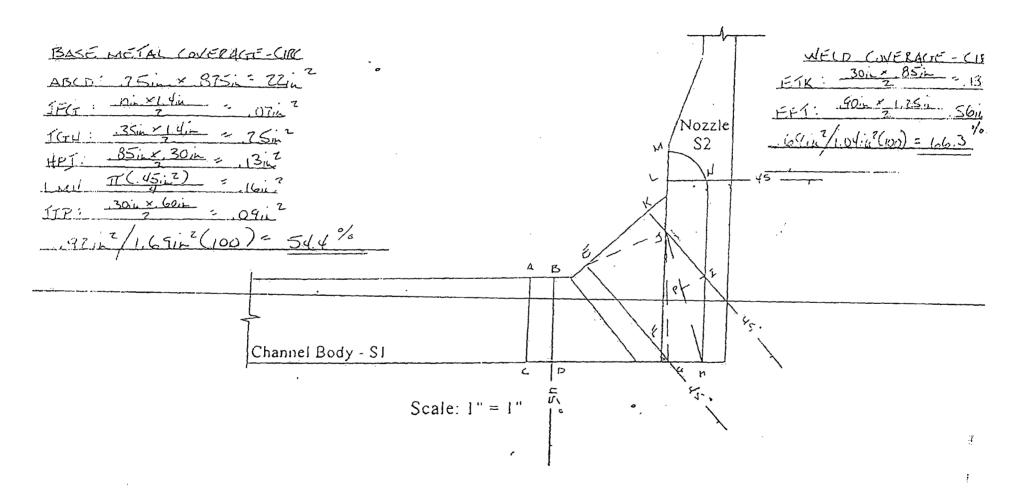
Daviel X 3- 11 10/29/08 30F8 sch 5.09

Letdown Cooler Nozzic o Channel Body

ATTACHMENT A
PAGE 44 OF 1/2

Weld No.: 1-514-1-53755-VI

Item No. 01. B3.150,0003



David K 3 II 10/29/09

Letaown Cooler Nozzle to Channel Body (Radius View) PAGE 45 OF 112

eld No.: 1-51A-1-53155-VI

Item No.: 01. B3.150.0003

ABCD: 875in - USin = .39in

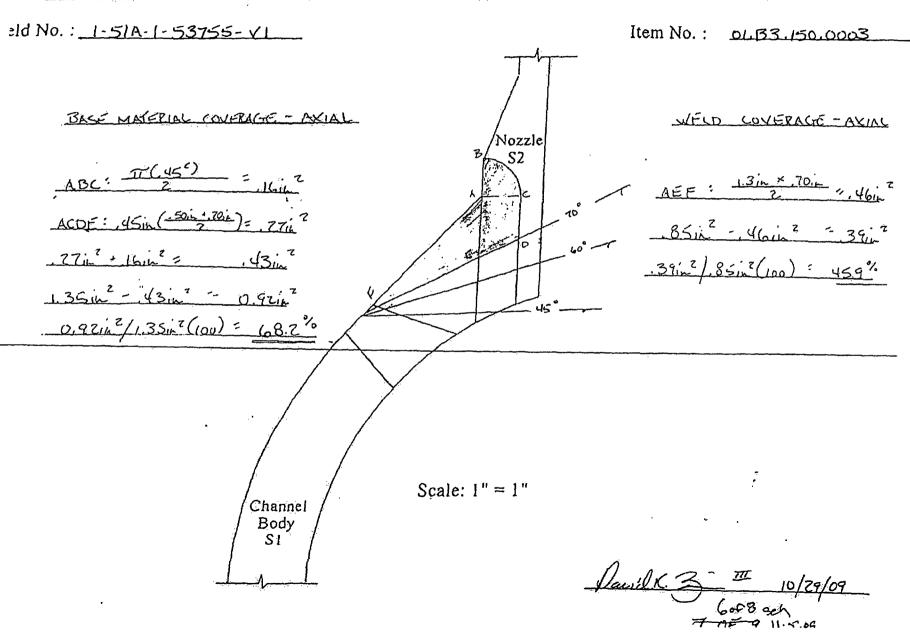
Nozzle

WELD AREA OF INTEREST

Scale: 1" = 1"

Channel Body SI

Letdown Cooler Nozzle to Channel Body (Radius View)



Ler Jwn Cooler Nozzle to Chan el Body (Radius View) ATTACHMENT A

Item No.: 01.83.150.0003 ald No.: 1-51A-1-53755-VI WELD COVERACIE - CIPC BASE METAL CONFRACT (IRC CDFF: 45in (-Laint 30k) = 29in 7 Nozzle .0512 - 0512 = 18012 CHIK: 3756 (C) 376 ,8012/85,2 (100) : qu.1% TOTAL 8516 ? _8802/13512 (100) 7 (4522) Scale: 1" = 1" Channel Body

	Letdown Cooler Noz	zie to Channel Body
	Item No. 01.83.150.0003 / V	Veld No. 1-51A-1-53755-V1
	Base Materi	al Coverage
Scan	Radius View	Non-Radius View
Axial	68.2%	52.7%
Circ	65.2%	54.4%
	Aggregate @ 68.2 + 52.7	' + 65.2 + 54.4 = 240.5/4 = 60.1%

	Weld Mater	ial Coverage
Scan	Radius View	Non-Radius View
Axial-S1	45.9%	26.0%
Axial-S2	0.0%	0.0%
Circ-S2	94.1%	66.3%
Circ-S2	94.1%	66.3%
	Aggregate @ 45.9 + 26.0 + 0.0 + 0.0 + 94	1.1 + 66.3 + 94.1 + 66.3 = 392.7/8 = 49.1%
	Total Aggregate @ 60.1	+ 49.1 = 109.2/2 = 54.6%

Level III	Pavid K. 3	
-		
	Date 10/29/09	

Energy.

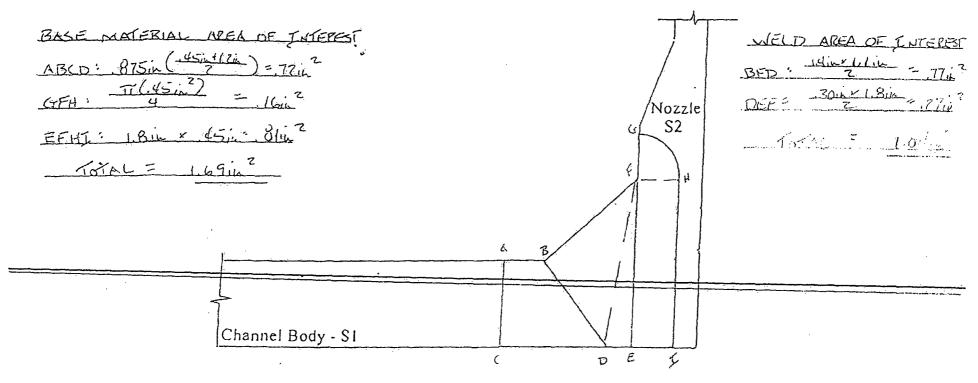
UT Vessel Examination

Site/Unit: Summary No.: Workscope:		Осолее /	1		Procedure:	NDE-3630		Outage No.:		O1-25	
		O1.B3.150.0004			Procedure Rev.:	1		Report No.:		UT-09-336	
		ISI			Work Order No.:	01838272		Page: _			
Code:		1998/2000A	Cal	t./Item:	3-D /B3.150	Location:					[1·
Drawing No.:		1-53755		Desc	ription: Nozzle to C	Channel Body					
System ID:	51A										
Component ID:	1-51A-	1-53755-V2				Size/Length:	N/A	Thickne	ss/Diameter:	0.875	/3.0/SS
Limitations:	Yes - See supplemental sheet				Sta	rt Time: 1415		Finish Time	:15	1520	
Examination S	urface:	Inside 🗌	Outside 🔽	Surfa	ce Condition: AS C	GROUND					
Lo Location:		9.1.1.1	Wo Loca	tion: Center	line of Weld	Couplant:	ULTRAGE	LII E	Batch No.:	091	25
Temp. Tool Mf	ig.:	FISHER	Serial	No.: MC	IDE32770	Surface Temp.:	71	°F			
Cal. Report No	o.:			CAL-09-419, 420,	421, 422 & 423	_					
Angle Used	0	45 45T	60 60T 7	70L							
Scanning dB		43.0 61.7	50.2 61.0 4	6.0							
Indication(s):	Yes	No ☑	<u> </u>	Scan Covera	ge: Upstream 🗹	Downstream 🔀	cw ✓	ccw [✓]			
Comments:				Oddii Oovera	ge. Opsicam (•)	Downstream (v)	CW 💇	CCM &			
		. Games and dielle Account									
Scalling ab i	owereu	110111 + 1400 to m	aintain 2:1 signal	to noise ratio							
Results:	Acce	ept 🗍 Reject	l ✓ Info]							•
Percent Of Cov	verage C	Obtained > 90%:	No	Reviewed	Previous Data:	Yes					
	evel -	N)	Signature	<i>j</i>	Date Reviewer			Signature			Date
Griebel, David M			11-1	10/29	/2009	Earn	Mux		/	1-2-0	9
Examiner Le	evel II.	N	Signature		Date Site Review	, 0		Signature			Date
	110,		(1) //	40:00	į.			_			
Dean, Steven	evel N/		W J	10/29	Date ANII Review			Signature	· · · · · · · · · · · · · · · · · · ·		Date

Letdown Cooler Nozzle to Channel Body

Weld No.: 1-51A-1-53755-V2

Item No.: 01.33,150,0004



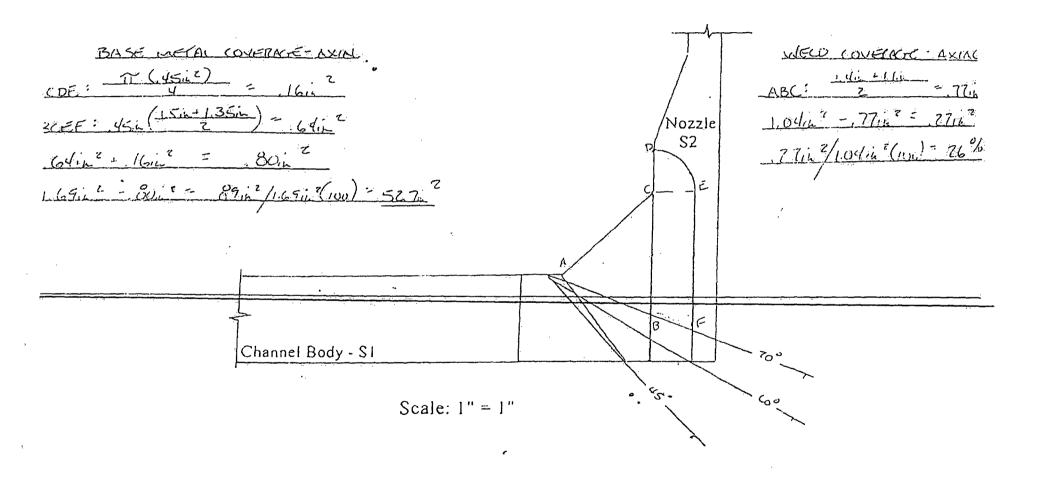
Scale: 1" = 1"

David K 3 10/29/09
2 2 20 8 214

Letdown Cooler Nozzle to Channel Body

eld No.: 1-51A-1-53755-112

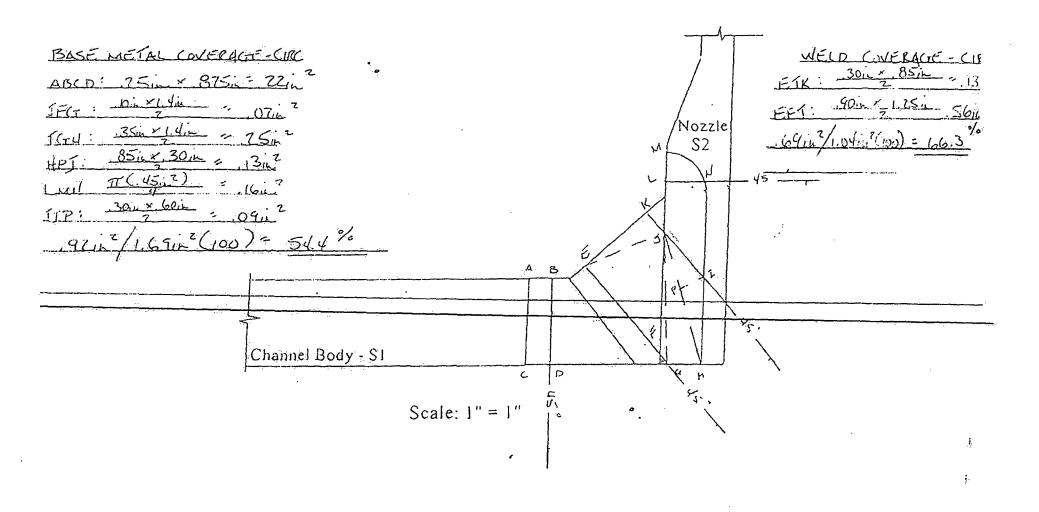
Item No.: 01.83.150.0004



Paril K. 3 10/29/09
3 NFROND

Veld No.: 11-514-1-53755-12

Item No. 01. B3.150,0004

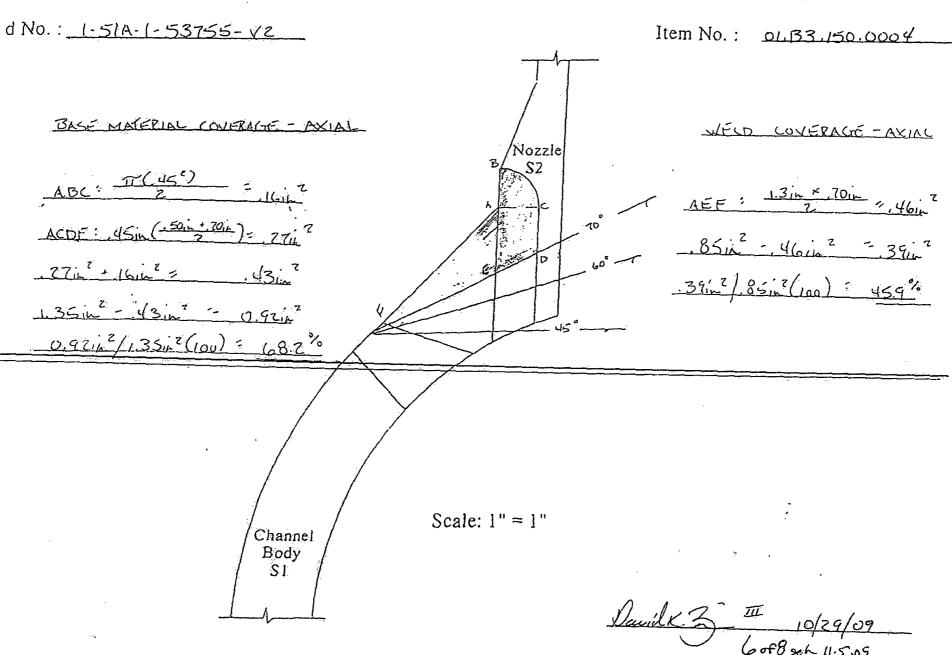


Pavil K 3 III 10/29/09 4 Horson

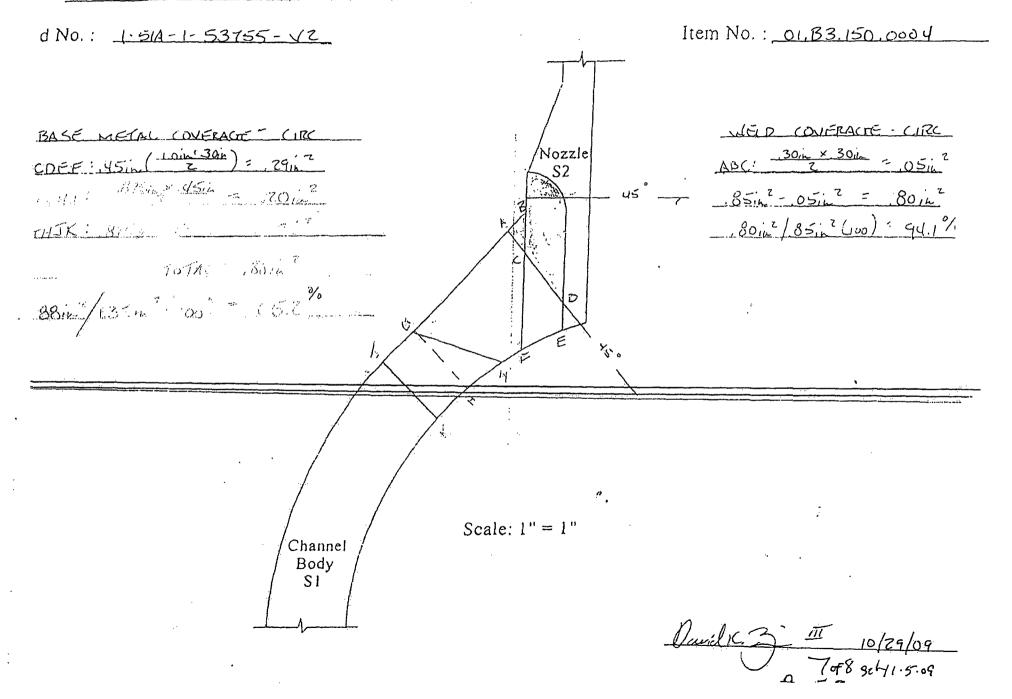
Letdown Cooler Nozzle to Channel Body (Radius View)

Id No.: 1-51A-1-53155-VZ Item No.: 01. B3. 150.0004 WELD AREA OF INTEREST /Nozzle CE, F: 651111/1875in - 28112 ABCD: 1875 in - 39in = 39in EFGH: 25in × 875in " 72in Scale: 1" = 1" Channel Body SI

Letdown Cooler Nozzle to Channel Body (Radius View)



Lewywn Cooler Nozzle to Chan Body (Radius View) PAGE 55 OF 1/12



	Letdown Cooler Noz	zle to Channel Body
	Item No. 01.B3.150.0004 / \	Weld No. 1-51A-1-53755-V2
	Base Mater	al Coverage
Scan	Radius View	Non-Radius View
Axial	68.2%	52.7%
Circ	65.2%	54.4%
	Aggregate @ 68.2 + 52.7	7 + 65.2 + 54.4 = 240.5/4 = 60.1%
		
	Weld Mate	rial Coverage
Scan	Radius View	Non-Radius View
Axial-S1	45.9%	26.0%
Axial-S2	0.0%	0.0%
Circ-S2	94.1%	66.3%
Circ-S2	94.1%	66.3%
	Aggregate @ 45.9 + 26.0 + 0.0 + 0.0 + 9	4.1 + 66.3 + 94.1 + 66.3 = 392.7/8 = 49.1%
	Total Aggregate @ 60.1	+ 49.1 = 109.2/2 = 54.6%

Date 10/29/09

8 of 8 grt 9 org 11.5.09



UT Pipe Weld Examination

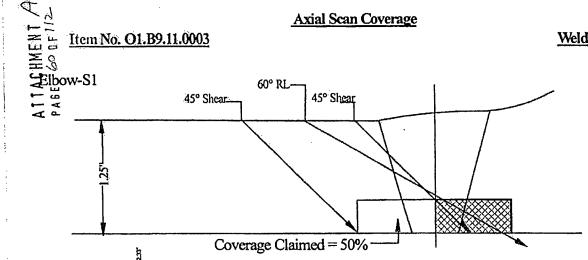
S	Site/Unit:	Oconee /	1	_		Pr	rocedure:	PDI-	-UT-2		Out	age No.:	O1-25	
Summ	ary No.:	O1.B9.1	1.0003			Procedu	ure Rev.:	•	С		Re	port No.:	UT-09-31	15
Wor	kscope:	ISI				Work O	rder No.:	0184	1875			Page: 1	of	4
Code:		1998/2000A		Cat./li	tem:	B-J /B9	9.11	Locat	ion:					
Drawing No.:		1LP-209			_	Description:	Elbow to Va	ilve 1CF-13 (Cast	SS)	·			
System ID:	53A		· ·		-									
Component ID:	1LP-20	9-8L						Size/Length	า:	N/A	Thickne	ss/Diameter:	1.25/14	1.0/SS
Limitations:	See att	ached report							Star	t Time:	1449	Finish Time:	152	27
Examination S	Surface:	Inside 🗌	Outside	· 🗸		Surface Cond	dition: AS G	ROUND						
Lo Location:		9.1.1.1	W	o Location:	<u></u>	Centerline of	Weld	Couplant:		ULTRAGEL	. 11	Batch No.: _	091	25
Temp. Tool M	fg.:	Fluke		Serial No.:		OCQUA330	90	Surfaçe Tei	mp.:	72	°F			
Cal. Report N	o.:		c	AL-09-390 &	L CAL	L-09-391			_					
Angle Used	0	45 45T	60						-					
Scanning dB	<u></u>	40.3 40.3	58.2	<u>. </u>										
Indication(s):	Yes [] No ∑]			Scar	n Coverage: Up	ostream 🗌	Downstream	n 🗹	cw 🗹	ccw 🗹			•
Comments:														
N/A														
Results: A	ccept [Reject ✓	Inf	· []										
	_									to again the "teached and the		······································		** <u></u> .
Percent Of Cov	erage O	otained > 90%:	No		R	Reviewed Previou	ıs Data:	No						
Examiner L	evel -	۷	Signa	iture		Date	Reviewer	7	7.7	41	Signature			Date
Ellis II, Kenne			met of	185	. `	10/27/2009		Barry	y	Much	N		10-2	9-09
Examiner L Day, John, C.	evel [[-]	N	Signa			Date 10/27/2009	Site Review	<u> </u>		-	Signature			Date
	evel N/	<u> </u>	Signa	y y			ANII Review				Signature			Date
N/A			J	•		- 			1	-A	2.9.10.010	0/30/	J.F	24.0
							····							

Date

F Maria	m yy.	Site/U	nit: O	onee	1	1		1	Procedu	e:	PDI	UT-2		Outage No). :	Q1-2	25
	Su	mmary N			.B9.11.0			Proce	dure Re	,.: —	·	c ·		Report No).:	UT-09-	315
		Vorksco	ов:		ısı			Work	Order No).: 	0184	1875		Pag	e:	2 of	4
Sea	rch Unit Ar	ruje.	45° & 6	0*RI			_		iping We	ilde		•				Wo CL	Wm
000.	Wo Loca								-	ssels <u>></u>	2"T						W1 V
	Lo Loca				-			00									
				··										1			
MP	Metal I	Path			W	max E	Distance	From Wo	To S.U	. At Maxi	mum Re	sponse					DA
RBR	Remail	ning Bac	Reflecti	o u	W	1 [Distance	From Wo	At	Oi	Max (Fo	orward)			, U	1	Ī
L	Distant	e From 1	Datum		W:	5	Distance	From Wo	At	Of	Max (Fo	orward)		L	-	1	
Com	ments: 1	I/A			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·									<u> </u>		Ър
•														*			W1 Wins
П	Indication	%		w	Fo	rward		kward	L1	L	L2	RBR		 	Rem	arks	
gle	No.	Of DAC	W	Max MP	W1	Of Max	W2	Of Max	Of Max	Max	O:	Amp.					
RI		DAG	1 **	I I'm		INIE	1 112	- Wir	Wax	 -	IVIBA						
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ner	Level				Closatus				44 [Bay]					Cin-			
	nneth R.	II-N	 اص	Town 1	Signature	<i>M</i> 2		ەل 10/27/20	te Revi	awer	are		1/2	Signa	ature		10-2
ner	Level	II-N			Signature	;			te Site	Review	0			Signa	ture	<u></u>	
ohn,				4.	16 8	}		10/27/20		<u>.</u>							
	Level	NIA		•	Signatur	(Da	te ANII	Review			/	Signa	iture	10/3	

ATTACHMENT A

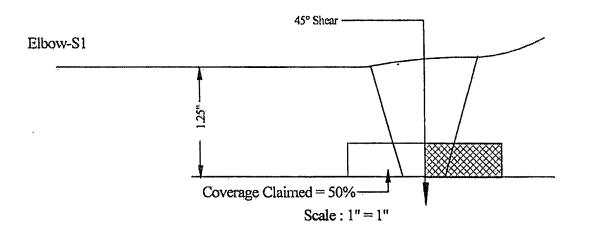
DU							
	ISI LI	MITAT	ION RE	PORT			UT-09-315
Component/Weld ID: 1LP-209-8	L	lter	m No: O	1.B9.11.0003		remarks:	
NO SCAN ■ NO SCAN NO SCAN	SUF	RFACE	BE	No coverage due to pipe			
☐ LIMITED SCAN	□ 1	⊠ 2	⊠ 1	2 c	w 🗌 ccw	configuration	
FROM L N/A to L N/A		INCHES F	ROM WO	CL to	Beyond		
ANGLE: □ 0 ⋈ 45 □ 60	other	60L	FROM _	0 DEG to	360 DEG		
☐ NO SCAN	SUR	FACE	ВЕ	AM DIRECTIO	N		
☐ LIMITED SCAN	<pre>1</pre>	□ 2	<pre>1</pre>	☐ 2 ☐ cv	v 🗌 ccw	·	
FROM L to L	IN	CHES FR	OM W0	to			
ANGLE: 0 45 60	other		FROM _	DEG to	DEG		
☐ NO SCAN	SUR	FACE	ВЕ	AM DIRECTIC	N		
☐ LIMITED SCAN	□ 1	□ 2	1	☐ 2 ☐ cv	v 🗌 ccw		
FROM L to L	IN	CHES FR	ОМ W0 _	to			
ANGLE: 0 45 60	other	·	FROM _	DEG to	DEG		
☐ NO SCAN	SUR	FACE	BE	AM DIRECTIO	N		
☐ LIMITED SCAN	□ 1	□ 2	1	2 cw	ccw	· · · · · · · · · · · · · · · · · · ·	
FROM L to L	IN	CHES FRO	о м w o	to		Sketch(s) a	ttached
ANGLE: 0 5 60	other _		FROM	DEG to	DEG	yes	☐ No
Prepared By: Kenneth Ellis	HM.	Level:	Date:	10/27/09	L	3 of _	4
Reviewed By: Bany My	<u></u>	Date:	29-09	Authorized Insp	ector:	The state of the s	Date: 10/34/8



Weld No. 1LP-209-8L

Valve-S2

Circ. Scan Coverage



Valve-S2

% Coverage Calculations

$$S1 = Elbow = 50\%$$
 (100% of the length x 50% of the volume)

$$S2 = Valve = 0\%$$
 (0% of the length x 0% of the volume)

$$S3 = CW = 50\%$$
 (100% of the length x 50% of the volume)

$$S4 = CCW = 50\%$$
 (100% of the length x 50% of the volume)

Total =
$$150/4 = 37.5\%$$
 Aggregate Coverage

Inspector / Date: Mark. 10-29-09

David 1 3 10/29/09

*UT-09-315*Page 4 of 4

Duke Energy.

UT Pipe Weld Examination

	Site/Unit:	Ocone	e /	11			F	Procedure:	PDI	-UT-2		Ot	ıtage No.:	O1-25	
Sumn	nary No.:	Ċ	01.B9.1	1.0050			Proced	dure Rev.:	,	Ç		R	eport No.:	UT-09-2	61
Wo	rkscope:		ıs	ſ			Work C	Order No.:	0184	1933			Page: 1	of	5
Code:		1998/20	00A			Cat./Item	: B-J /B	9.11	Locat	ion:					· · · · · · · · · · · · · · · · · · ·
Drawing No.:		IS	I-OCN1	-008			Description:	Safe end to	RC Pump 1/	42					
System ID:	50														
Component ID	1-PIA2-	9							Size/Length	n:	N/A	Thickn	ess/Diameter:	2.330/3	6.5/SS
Limitations:	Yes	·		".				· · · · · · · · · · · · · · · · · · ·		Start	Time:	0958	Finish Time:	10-	43
Examination	Surface:	Insid	e 🗀	Qu	tside 🗹		Surface Con	dition: AS	GROUND						
Lo Location:		RT star	mp #1		. Wo Loca	ation:	WELD CENTE	RLINE	_ Couplant:		ULTRAGE	_ [[Batch No.:	091	25
Temp. Tool M	1fg.:	FIS	SHER	<u>.</u>	Seria	l No.:	MCNDE327	768	Surface Ter	mp.:	67	_°F			
Cal. Report N	lo.:			CA	L-09-327,	CAL-09-3	28, CAL-09-329								
Angle Used	0	45	45T	60	60L	I	7			_					
Scanning dB		52.5	52.5	62.5	63.8		1								
Indication(s):	Yes] No			<u> </u>	Sca	പ an Coverage: U	netream 🔽	Downstream		cw 🗹	CCW 🔽			
Comments:	_	_	ш				ar dororago.	policelii 💽	Downsacan	ٰ ٰ ٰ	C44 (<u>v</u>)	CONE			
FC 08-01, 08	.04 09-02	,				•									
	04, 00 02	•													
Results: A	Accept _	Re	ject 🔽		Info 🗌	_									
Percent Of Co	verage Ot	otained >	90%:		No	_	Reviewed Previou	us Data:	Yes						
	evel -	۱ , ,	1	, s	ignature		Date	Reviewer				Signatur	8	·	Date
Tucker, David		_h[]	ni/	1/4	chi_	-	10/18/2009		Eary	- /	nh	1		o · 5 8	_
Hollis, Jacob	_evël -	10	M	Z	ignature Lite		Date 10/18/2009	Site Review	, <i>5</i> —			Signatur	e		Date
Other (evel N/		_	Ś	ignature			ANII Review		<u></u>	-11	Signature			Date
····											CIN_		-0/.	30/09	

D	UKE POWER CO	OMPANY	
	ISI LIMITATION R	EPORT	UT-09-261
Component/Weld ID: 1PIA2-9	Item No:	O1.B9.11.0050	remarks:
NO SCAN	SURFACE	BEAM DIRECTION	Pipe to pump configuration
☐ LIMITED SCAN		I ⊠ 2 □ cw □ ccw	
FROM L N/A to L N/A	INCHES FROM W	CL to Beyond	
ANGLE: ☐ 0 ⊠ 45 ⊠ 60	other 60L FROM	0 DEG to 360 DEG	
☐ NO SCAN	SURFACE E	BEAM DIRECTION	
☐ LIMITED SCAN		☐ 2 ☐ cw ☐ ccw	
FROM L to L	INCHES FROM W0	to	
ANGLE: 0 45 60	other FROM	DEG to DEG	
☐ NO SCAN	SURFACE E		
☐ LIMITED SCAN		☐ 2 ☐ cw ☐ ccw	
FROM L to L	INCHES FROM WO	to	
ANGLE: 0 0 45 60	other FROM	DEG to DEG	
NO SCAN	SURFACE B		
☐ LIMITED SCAN	□ 1 □ 2 □ 1	2 cw ccw	
FROM L to L	INCHES FROM W0	to	Sketch(s) attached
ANGLE: 0 5 60		DEG to DEG	⊠ yes □ No
Prepared By: David Tucker	Level: Date	e: 10/18/09 Sheet	2 of <u>5</u>
Reviewed By: Barry My	Date: 10.28.09	Authorized Inspector:	Date: 10/30/39

Duke Energy.

Determination of Percent Coverage for UT Examinations - Pipe

Y Site/Unit:	Oconee /	1	Procedur	e: PDI-UT-2	Outage N	
_ ∰ummary No.: _	O1.B9.11	.0050	Procedure Rev	/.: <u> </u>	Report N	lo.: <u>UT-09-261</u>
Workscope:	ISI		Work Order No	01841933	Pa	ge: <u>3</u> of <u>5</u>
45 dan						
<u>45 deg</u> Scan 1		% Length X		% volume of length / 100 =	_	% total for Scan 1
				_	······	
Scan 2	***************************************	% Length X _		% volume of length / 100 =	***************************************	_ % total for Scan 2
Scan 3	100.000	% Length X _	50.000	% volume of length / 100 =	= 50.000	- % total for Scan 3
Scan 4	100.000	% Length X _	50.000	% volume of length / 100 =	= 50.000	% total for Scan 4
<u>Other d</u>		- '	r supplemental s			
The data	to be listed bel	ow is for coverage	e that was not ob	tained with the 45 deg scar		% total for Scan
The data	100.000	ow is for coverage % Length X	that was not ob	tained with the 45 deg scar	0.000	% total for Scan
The data Scan	100.000 1 100.000	ow is for coverage % Length X	e that was not ob	tained with the 45 deg scar % volume of length / 10 % volume of length / 10	0 = <u>0.000</u> 0 = <u>45.100</u>	% total for Scan 2
Scan Scan Scan Scan	100.000 1 100.000 2 100.000	% Length X % Length X % Length X	e that was not ob (0.000 45.100	with the 45 deg scar % volume of length / 10 % volume of length / 10 % volume of length / 10	0 = 0.000 0 = 45.100 0 =	% total for Scan 2
The data Scan	100.000 1 100.000 2 100.000	ow is for coverage % Length X	e that was not ob (0.000 45.100	tained with the 45 deg scar % volume of length / 10 % volume of length / 10	0 = 0.000 0 = 45.100 0 =	% total for Scan 2
Scan Scan Scan Scan Scan	100.000 1 100.000 2 100.000	% Length X % Length X % Length X % Length X	e that was not ob (0.000 45.100	with the 45 deg scar % volume of length / 10 % volume of length / 10 % volume of length / 10	0 = 0.000 0 = 45.100 0 =	% total for Scan 2
Scan Scan Scan Scan Percen	1 to be listed bel 1 100.000 2 100.000 3 4 t complete cov	% Length X % Length X % Length X % Length X	0.000 45.100	tained with the 45 deg scar % volume of length / 10 % volume of length / 10 % volume of length / 10 % volume of length / 10	0 = 0.000 0 = 45.100 0 =	% total for Scan 2
Scan Scan Scan Scan Percen	1 100.000 2 100.000 3 4 t complete cov	% Length X	0.000 45.100 dide by # of scans	tained with the 45 deg scar % volume of length / 10 % volume of length / 10 % volume of length / 10 % volume of length / 10	0 = 0.000 0 = 45.100 0 =	% total for Scan 2

D e Energy.

Supplemental Report

ATTACHMENT A PAGE 64 OF 112

Report No.:

UT-09-261

Page:

of 5

Date: 10-28-09

Summary No.: 01.B9.11.0050

Examiner: Tucker, David K.

Examiner: Hollis, Jacob

Other: N/A

Level: II-N

Level:

Level:

II-N II-N

N/A

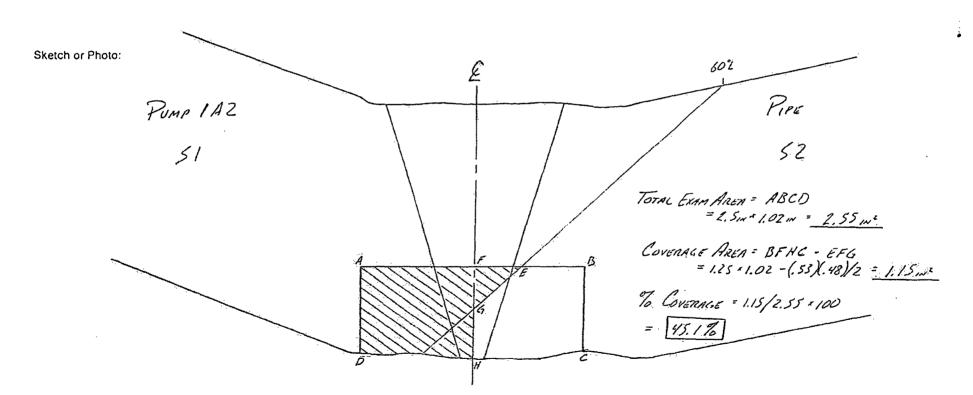
Reviewer:

Site Review: ANII Review: Date:

Date: 10/30/08

Comments: Axial exam 45° shear, 60° shear & 60°L

Dans R. All



Supplemental Report

ATTACHMENT A PAGE 65 OF 1/2

Report No.:

UT-09-261

Page:

of 5

Summary No.: 01.B9.11.0050

Examiner: Tucker, David K.

Examiner: Hollis, Jacob

Other: N/A

Level: II-N

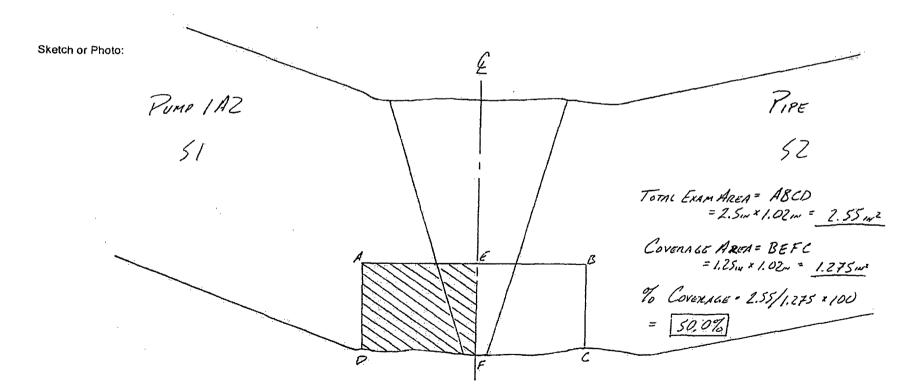
Reviewer:

Level: II-N ANII Review: Level: N/A

Site Review:

Date: 10-28-09

Comments: CW & CCW Circ 45° shear exam



D. re Energy.

UT Pipe Weid Examination

S	Site/Unit:	Осопее /	1		Procedure:	NDE-83	0	Outa	ige No.:	01-25	
Summ	ary No.:	O1.B9.1	1.0050		Procedure Rev.:	1		Rep	ort No.:	UT-09-26	30
Wor	kscope:	IS	1		Work Order No.:	0184193	3		Page:	1 of	3
Code:		1998/2000A		Cat./Item:	B-J /89.11	Location:				· · · · · · · · · · · · · · · · · · ·	
Drawing No.:		ISI-OCN1	-008		Description: Safe end t	o RC Pump 1A2					
System ID:	50	<u> </u>									
Component ID:	1-PIA2-					Size/Length:	N/A	Thicknes	s/Diameter:	330/36.5	/SS cas
Limitations:	Single s	side exam - see	attached limitation	ons sheet		Sta	rt Time:	1001	Finish Time:	102	:8
Examination S	Surface:	Inside 🗌	Outside 🗹		Surface Condition: AS	GROUND					Å
Lo Location:		N/A	Wo Loc	cation:	N/A	Couplant:	ULTRAGE	_ II В	atch No.: _	.0912	25
Temp. Tool Mi	ʻg∴	FISHER	Seria	al No.:	MCNDE32768	Surface Temp.:	67	_°F			
Cal. Report No	o.:		CAL-0	9-325 & CA	L-09-326						
Angle Used	0	45 45T	60 70	T	<u> </u>						
Scanning dB	<u> </u>		72.0 73.0								
Indication(s):	Yes [] No 🕢		Scar	i i Coverage: Upstream 🗍	Downstream 🔽	cw ☑	ccw 🗹			
	163 [_	· · · · ·		ocar	Coverage. Opstream	Downstream 🛂	C * 1 (<u>v</u>)				
Comments:											
Non-code exa	m										,
Results: A	ccept 🗍	Reject [Info 🙀								
Percent Of Cov	erage Ob	tained > 90%:	No	: R	eviewed Previous Data:	Yes					
	evel II-N	\cap \cap \wedge	Signature		Date Reviewer	-/		Signature	· · · · · · · · · · · · · · · · · · ·		Date
Griebel, David I			- / _/_		10/18/2009	Et Jousen			/0	٥٥٠٠٥٢	
Examiner Lo Leeper, Winfred	evel II-N I C.	111:1	Signature		Date Site Review 10/18/2009	y. ·	-	Signature			Date
	evel N/A	-Winger	Signature		Date ANII Review			Signature	15/22	18	Date
·u^		<u> </u>		···		(Allen)			10/20	701	<u> </u>

LITACHMENT A PAGE 67 OF 112

Supplemental Report

Report No.:

Summary No.: 01.B9.11.0050

Examiner: Griebel, David M.

Examiner: Leeper, Winfred C.

Other: N/A

Level: II-N

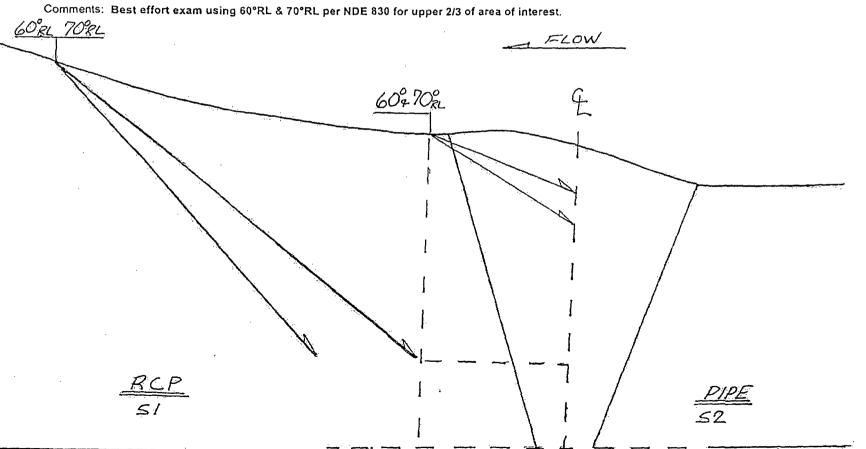
Level: N/A

Level: II-N Site Review:

Reviewer:

ANII Review:

Date: 10.20.09



ATTACHMENT A
PAGE 68 OF 1/2

D		
·	ISI LIMITATION REPORT	UT-09-360
Component/Weld ID: 1-PIA-2	Item No: 01.B9.11.0050	remarks:
⊠ NO SCAN	SURFACE BEAM DIRECTION	Procedure allows scanning
☐ LIMITED SCAN	□ 1	from cast side only
FROM L N/A to L N/A	INCHES FROM W0 CL to Beyond	
ANGLE: □ 0 □ 45 ⊠ 60	other 70 FROM 0 DEG to 360 DEG	
⊠ NO SCAN	SURFACE BEAM DIRECTION	Procedure allows scanning
☐ LIMITED SCAN	☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ cw ☐ ccw	from cast side only
FROM L N/A to L N/A	INCHES FROM W0 CL to Beyond	
ANGLE: ☐ 0 ☐ 45 ☒ 60	other 70 FROM 0 DEG to 360 DEG	
☐ NO SCAN	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN	1 2 1 2 cw ccw	
FROM L to L	INCHES FROM W0 to	
ANGLE: 0 0 45 0 60	other FROM DEG to DEG	
NO SCAN	SURFACE BEAM DIRECTION	
LIMITED SCAN	1 2 1 2 cw ccw	
FROM L to L	INCHES FROM W0 to	Sketch(s) attached
4 ANGLE: □ 0 □ 5 □ 60	other PEG to DEG	☐ yes ☐ No
Prepared By: Gayle Houser	TUDEN Level: II Date: 10/19/09 Sheet	3 of 3
Reviewed By: San Mon	Date: Authorized Inspector:	Date: 10/22/09

Duke Energy.

UT Pipe Weid Examination

\$	Site/Unit:	Oconee	/	1			F	rocedure:	PDI	-UT-2		0	utage No.:	01-25	
Summ	ary No.:	01	.B9.11.	.0062	**.		Proced	dure Rev.:		С		R	eport No.:	UT-09-3	49
Wor	kscope:		ISI				Work C	Order No.:	0184	41924			Page:1	of	5
Code:		1998/2000	A		·	Cat./Item:	B-J /B	9.11	Loca	tion:					
Drawing No.:	·	ISI-0	OCN1-0	12	· · · · · · · · · · · · · · · · · · ·		Description:	RC Pump 1	A2 to Safe e	nd					
System ID:	50				***				,						
Component ID:	1-PDA2	-1				··			Size/Lengt	h:	N/A	_ Thickn	ess/Diameter:	2.33/3	3.5/SS
Limitations:	Yes - S	ee attache	d limit:	ation !	report	·		·		Star	t Time:	1100	Finish Time:	123	30
Examination S	Surface:	Inside		OL	ıtside 🗹		Surface Con	dition: AS C	ROUND						
Lo Location:		9.1.1.	1	······································	_ Wo Loca	ation:	Centerline of	Weld	Couplant:		ULTRAGEL	. 11	Batch No.:	091	25
Temp. Tool M	fg.:	Flu	ke		_ Seria	No.:	OCQUA330	90	Surface Te	mp.:	72	. ° F			
Cal. Report No	o.:			·	CAL-	9-443, 44	4 & 445			-					
Angle Used	0	45	45T	60	60RL]								
Scanning dB		42.2	42.2	60	64										
Indication(s):	Yes [] 1/0 🔽	·]			Sca	n Coverage: U	pstream []	Downstream	n 🗹	CW ☑	ccw 🗹]		
Comments:															
N/A							*								
		·													
Results: A	ccept 🔲	Rejed	ct 🕢		Info 🗌	•									
Percent Of Cov	erage Ob	tained > 90	3% :	9-	No		Reviewed Previou	ıs Data:	Yes						
	evel II-N	1	78/	//) Signature			Reviewer			11 1	Signatui	е		Date
Koster, Rickey Examiner L	evel II-N	/	///	/-	<u> </u>		10/30/2009		ing		luh	<u> </u>	· · · · · · · · · · · · · · · · · · ·	//-3-	
Day, John, C.	esei II-M		/	21	ignature - ()	/	Date 10/30/2009	Site Review				Signatur	e _.		Date
	evel N/A			S	ignature			ANII Review	25	-		Signatur	e 11/4/6		Date
															

ATTACHMENT A

D	PAGE /O-U	
	ISI LIMITATION REPORT	UT-09-349
Component/Weld ID: 1PDA2-1	Item No: 01.B9.11.0062 rema	rks:
		component
LIMITED SCAN	☐ 1 ☐ 2 ☐ cw ☐ ccw ☐ configu	ration
FROM L N/A to L N/A	INCHES FROM W0 CI to Beyond	
1	other FROM 0 DEG to 360 DEG	
	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN	1212cwccw	
FROM L to L	INCHES FROM W0 to	
·	other FROM DEG to DEG	
	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN	1 2 1 2 cw ccw	
FROM L to L	INCHES FROM W0 to	
	other FROM DEG to DEG	
	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN	1 2 1 2 cw ccw	
FROM L to L	INCHES FROM W0 to Ske	tch(s) attached
ANGLE: 0 0 5 0 60	other FROM DEG to DEG	yes No
Prepared By: John Day	Level: II Date: 10/30/09 Sheet 2	of 45
Reviewed By:	Date: Authorized Inspector:	Date: 11/11/18

Supplemental Report

ATTACHMENT A

71 DF 112 UT-09-349

Report No .:

Page:

3 of 5

Summary No.: 01.B9.11.0062

Examiner: Koster, Rickey

Examiner: Day, John, C.

Other: N/A

Level: II-N Level: II-N

Level: N/A

Reviewer: Site Review:

ANII Review:

Date: __

Date: ////

Comments: CW & CCW circ. Exam limitation

Bally Energy.

Supplemental Report

ATTACHMENT A PAGE 72 OF 112

Report No.:

UT-09-349

Page:

60° RL

4 of 5

Summary No.: 01.B9.11.0062

Examiner: Koster, Rickey

Examiner: Day, John, C.

Other: N/A

Level: II-N

Level: N/A

Level: II-N

Reviewer:

Site Review:

Date: //-3.09

Date: 1/4/69

Comments: Axial exam limitation

RCP Sa

PIP

♥ Duke Energy.

Determination of Percent Coverage for UT Examinations - Pipe

CHME	73 0	Site/Unit:	Ocone	e /	1,	Proced	lure:	PDI-UT-2	Outage N	0.:	(01-25	
1 A C	Sum	mary No.:	ary No.: 01.B9.11.0062		Procedure F	Rev.:	С	Report No.:		UT-09-349			
1 A .	Workscope:			ISI		Work Order No.:		01841924	Page:		5	of	5
		45 deg											
		Scan	1 1	00.000	_ % Length X _	50.000	_ % \	volume of length / 100 =	50.000	_ % 1	total f	or Sca	an 1
		Scan	2 1	00.000	% Length X	0.000	% \	volume of length / 100 =	0.000	_ %	total f	for Sca	an 2
		Scan	3 1	00.000	% Length X _	50.000	% ·	volume of length / 100 =	50.000	%	total	for Sc	an 3
		Scan	41	00.000	% Length X	50.000	<u></u> %	volume of length / 100 =	50.000	%	total	for Sc	an 4
		Other The da			ow is for coverag		obtain	ed with the 45 deg scans.					
		Sca	n 1		% Length >	Χ		% volume of length / 100 =					Scan 1
		Sca	n 2	· · · · · · · · · · · · · · · · · · ·	% Length	×		% volume of length / 100 =	******		% tot	al for	Scan 2
		Sca	n 3		% Length	×		% volume of length / 100 =			% tot	al for	Scan 3
		Sca	ın 4		% Length	x		% volume of length / 100 =			% to	tal for	Scan 4
				plete cov									
					required and di		ans to	determine;					
		37.	.500 %	o lotal fo	r complete exan	Π							
		Site	Field Su	pervisor:	Rodney Sheffie	ld Rodny	Sty	This Date: /	1-3-09				

Buke Energy.

UT Pipe Werd Examination

5	Site/Unit:	Oconee /	1		Į	Procedure:	NDE-830)	Ot	ıtage No.:	O1-25	
Summary No.:		.: O1.B9.11.0062		Procedi		dure Rev.:	1	1		eport No.:	UT-09-33	37
Wor	rkscope:	: ISI			Work	Order No.:	01841924		Page:		of	3
Code:	· · · · · · · · · · · · · · · · · · ·	1998/2000A		Cat./Item:	B-J /E	39.11	Location:					
Drawing No.:		ISI-OCN1-)12		Description:	RC Pump 1	A2 to Safe end					
System ID:	50											
Component ID:	1-PDA2	-1					Size/Length:	N/A	Thickne	ess/Diameter:	2.33/33	.5/SS
Limitations:	Single s	side exam - see a	ttached limitat	ions sheet			Star	t Time:	0910	Finish Time:	094	2
Examination S	Surface:	Inside [Outside 😧		Surface Cor	idítion: AS C	ROUND					
Lo Location:		N/A	Wo Lo	cation:	N/A	·	Couplant:	ULTRAGI	LII	Batch No.:	0912	!5
Temp. Tool Mi	fg.:	FISHER	Seri	al No.:	MCNDE32	768	Surface Temp.:	77	°F			
Cal. Report No	o.:	Ok mole	S CAL	9-325 & CAL	-09-326 (AL-08-	427 + 428					
Angle Used	0	45 45T	60 70									
Scanning dB	 		72.0 73.0									
Indication(s):	Yes [] No 🗸			Coverage: 11	netenam [7]	Downstream []	cw 🔽	COW F3			
Comments:		, , , , , ,		OCBIT	Coverage. O	pstream (v)	Downstream []	CW	CCM 🗹			
Non-code exa	ım											
Non-code exa												
Results: Ad	ccept 🗀	Reject 🗌	Info 🔽								•	
Percent Of Cove	erage Obi	tained > 90%;	No	Re	viewed Previou	ıs Data:	Yes				·	
examiner Le	evel II-N		Signature		Date	Reviewer			Signature			Date
eeper, Winfred		West	L'her	<u></u>	10/31/2009		Bany	M			11-2-	
Examiner Le Foss, Steven	evel II-N	5	Signature			Site Review		· · · · · · · · · · · · · · · · · · ·	Signature	······································		Date
	evel N/A	2 lews	Signature		10/31/2009	ANIII Davi						
N/A	11/74		Signature		Date	ANII Review		As .	Signature	111	2/08	Date
							1024	11/1			10/	

ATTACHMENT A

D	UKE POWER COMPANY	PAGE 75 OF
	ISI LIMITATION REPORT	UT-09-
Component/Weld ID: 1-PIA-2	Item No: 01.B9.11.0062	remarks:
		Procedure allows scanning
☐ LIMITED SCAN	□ 1 □ 2 □ 1 □ 2 □ cw □ ccw □ 1 □ 2 □ cw □ ccw □ 1 □ 1 □ ccw □ 1	rom cast side only
FROM L N/A to L N/A	INCHES FROM W0 CL to Beyond	
ANGLE: □ 0 □ 45 ⊠ 60	other 70 FROM 0 DEG to 360 DEG	
	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN	1 2 1 2 cw ccw	
FROM L to L	INCHES FROM W0 to	
	other FROM DEG to DEG	•
	SURFACE BEAM DIRECTION	
LIMITED SCAN	1 2 1 2 cw ccw	
FROM L to L	INCHES FROM W0 to	
	other FROM DEG to DEG	
☐ NO SCAN	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN	1 2 1 2 cw ccw	
FROM L to L	INCHES FROM W0 to	Sketch(s) attached
ANGLE: 0 0 5 0 60	other FROM DEG to DEG	
Prepared By: Winfred Leeper	Date: 10/31/09 Sheet 2 Date: 11/2-29 Authorized Inspector:	of 3
Reviewed By:	Date: //- 2-13.0 Authorized Inspector:	Date: 1/2/18

Duke Energy.

Supplemental Report

ATTACHMENT A
PAGE 76 OF 1/2

Report No.:

UT-09-337

Page:

3 of 3

Summary No.: 01.B9.11.0062

Examiner: Leeper, Winfred C. L

Examiner: Foss, Steven

Other: N/A

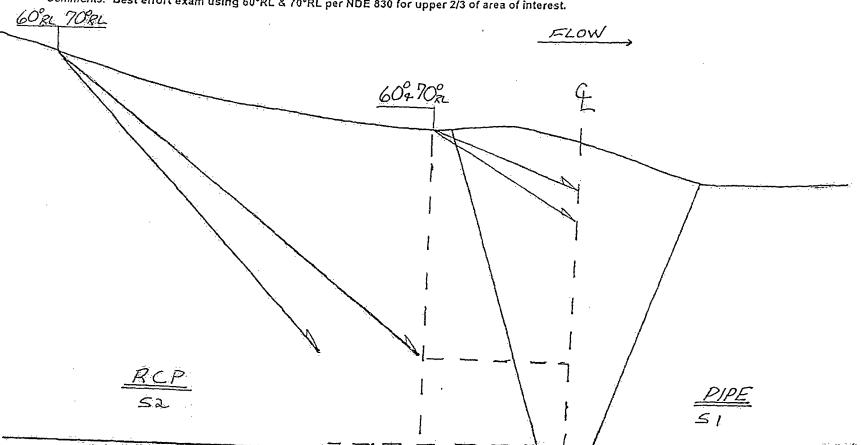
Level: II-N

Level: II-N

Level: N/A

Site Review: ANII Review:

Comments: Best effort exam using 60°RL & 70°RL per NDE 830 for upper 2/3 of area of interest.



Dune Energy,

UT Pipe Weid Examination

S	ite/Unit:	Oconee /	1	1	Procedure:	PDI-UT-2	2	Qι	itage No.:	O1-25	<u> </u>
Summa	ary No.:	.: O1.C5.11.0028 Procedure		dure Rev.:	ure Rev.: C			eport No.:	UT-09-2	67	
Work	scope:	ISI		Work	Order No.:	01845470)	Page:1		of	5
Code:		1998/2000A	Cat./l	tem: C-F-1/0	C5.11	Location:				: ::	
Drawing No.:		1-53A-02(1		Description:	Valve 1LP-4	17 (Cast SS) to Pi	pe				
System ID:	53A	. — — — — — — — — — — — — — — — — — — —									
Component ID:	1-53A-0	2-65L				Size/Length:	N/A	Thickne	ess/Diameter:	1.125/1	0.0/SS
Limitations:	Yes - Si	ngle sided exam,	see coverage sheet	 		Sta	rt Time:	1551	Finish Time:	160	7
Examination S	urface:	Inside []	Outside 🔽	Surface Cor	ndition: AS C	ROUND			·		
Lo Location:		9.1.1.1	Wo Location:	Centerline of	Weld	Couplant:	ULTRAGE	LII	Batch No.:	091	25
Temp. Tool Mfg	g.:	FISHER	Serial No.:	MCNDE32	770	Surface Temp.:	69	_ °F			
Cal. Report No.	.:		CAL-09-336	& CAL-09-337							
Angle Used	0	45 45T	60	7							
Scanning dB	1	37.8 37.8 4	8.5								
Indication(s):	Yes [No 🗸			Instream 🕡	Downstream []	cw ☑	ccw 🗹			
	, 00			ocan coverage.	patream 🚱	Downstream []	O 11 (E)	CO., (E)			
Comments:											
N/A											
Results: Ac	серt 📋	Reject 🗹	Info 🗌								
Percent Of Cove	rage Ob	tained > 90%:	No	Reviewed Previous	us Data:	Yes			-,,,		
	vel II-N		, Signature/ //		Reviewer		<i>~</i>	Signature		·: ·	Date
Hollis, Jacob		Jano	7 1000	10/20/2009	1 2	Bany /	Mike	1		2 <i>-23</i> ·	
Examiner Le Griebel, David M	vel II-N	10/-	Signature	Date 10/20/2009	Site Review	_		Signature			Date
	vel N/A		Signature		ANII Review			Signature			Date
N/A			·····		4	Alexander of the same	eft)	-	10/28/0	9	



Determination of Percent Coverage for UT Examinations - Pipe

or Trees	nerg	<u>Y</u> e		UT Exam	inations	s - Pipe			
ACHMENTE 78 OF /	te/Unit:	Oconee /	1	Procedu	ıre:	PDI-UT-2	Outage No.	:0	1-25
Summa	ary No.:	O1.C5.11.	0028	Procedure Re	ev.:	C.	Report No.	: <u>UT-(</u>	9-267
	kscope:	ISI		Work Order f	No.:	01845470	Page	: 2	of <u>5</u>
						and the second s			······································
	45 deq								
	Scan 1	100.000	% Length X _	0.000	_ % volume	of length / 100 =	0.000	% total for	r Scan 1
	Scan 2	100.000	% Length X _	50.000	_ % volume	of length / 100 =	50.000	% total fo	r Scan 2
	Scan :	3 100.000	% Length X	50.000	_ % volume	of length / 100 =	50.000	% total fo	r Scan 3
	Scan -	4 100.000	% Length X	50.000	_ % volume	of length / 100 =	50.000	% total fo	r Scan 4
		ta to be listed bel	ow is for coverag		obtained with	the 45 deg scans.			
	Scan	100.000	% Length :	X <u>0.000</u>	% volu	me of length / 100 =	0.000	% total	for Scan
	Scar	12 100.000	% Length	X <u>50.000</u>	% volu	me of length / 100 =	50.000	% total	for Scan
	Scar	13 100,000	% Length	X <u>50.000</u>	% volu	me of length / 100 =	50.000	% total	l for Scar
	Sca	n 4 100.000	% Length	X <u>50.000</u>	% volu	me of length / 100 =	50.000	% tota	l for Scar
	Perce	nt complete cov	rerage		٠				
	Add to	otals for each sca	n required and di	ivide by # of sca	ins to determ	nine;			
	37.	500 % Total fo	or complete exam		1				
And the second s	Site f	Field Supervisor:	Barrey	Mery Mery	had	Date: _/	10-23-09		

D	UKE	POWE	ER CO	MPANY				
	ISI LIMITATION REPORT							
Component/Weld ID: 1-53A-02	-65L	lte	m No: O	1.C5.11.0028	3	remarks:		
⊠ NO SCAN	SUF	RFACE	Ві	EAM DIRECT	ION	No scan due to	valve	
☐ LIMITED SCAN	⊠ 1	□ 2	1	□ 2	cw 🛭 ccw	configuration. No	landing	
FROM L 0 to L 33.75	 	INCHE	ES FROM V	VO CL	to Beyond	on value side an	d it's cast	
ANGLE: ☐ 0 ⊠ 45 ⊠ 60	other		FROM _	0 DEG to	360 DEG	material.		
☐ NO SCAN						Limited scan due	to valve	
	1		⊠ 1	□ 2 □ 0	cw 🗌 ccw	configuration		
FROM L 0 to L 33.75		INCHE	S FROM W	/0 <u>.45</u> t	O Beyond			
ANGLE: ☐ 0 🖂 45 ☐ 60								
· ·				AM DIRECTI				
☐ LIMITED SCAN	□ 1	□ 2	□ 1	□ 2 □ c	w 🗌 ccw			
FROM L to L		INCHE	S FROM W	0 to)			
ANGLE: 0 0 45 0 60 NO SCAN	SURF	ACE	BEA	M DIRECTIO	DN			
☐ LIMITED SCAN	□ 1	□ 2	<pre>1 [</pre>	2 cv	v 🗌 ccw	UT-09-266		
FROM L to L		INCHES	FROM WO	to		Sketch(s) at	tached	
ANGLE: 0 0 45 0 60	other		FROM	DEG to	DEG	yes	☐ No.	
Prepared By: Jacob R. Hollis Church	04/16	Level:	Date:					
Reviewed By: Barry Mil		Date: /O	27-09	Authorized Insp	Sheet pector:		Date: 10/21/08	

PETTET BY
The Market of the

Supplemental Report

Report No.: UT-09-267

Summary No.: 01.C5.11.0028

Examiner: Hollis, Jacob

Examiner: Griebel, David M

Other: N/A

Level: II-N

Level: N/A

Level: II-N

ANII Review:

Site Review:

Date: 10-23-09

Date:

Date: 10/25/07

Comments: Axial exam 45° shear & 60°RL

52 51 FLOW.

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to Charles . Common the entrance of the first	

Supplemental Report

ATTACHMENT A
PAGE 81 OF 112

UT	-09-26	37
	- 6	r.
	UT	UT-09-26

A CONTRACTOR OF THE PARTY OF TH	4					Page:	5	of <u>5</u>
Examiner:	Griebel, David M. 2007	CE Halli	Level: II-N Level: II-N Level: N/A	Reviewer:	Bang Mil		Date: _/ Date:	0-23-0
Comments:	CW & CCW Circ. exam 45° s	shear; Scan 1 Ax.						
Sketch or Photo: 2	Z:\UT\IDDEAL\ProfileLine2.jpg	SI VALVE		Flow	SZ PIPE			
								
			4:	S				

Parke Energy.

UT Pipe Werd Examination

Site/Unit: Summary No.: Workscope:		Oconee /	1	Procedure	: PDI-UT-	•2	Outage No.:		01-25	
		O1.C5.2	1.0004	Procedure Rev.	C-		Re	UT-09-29	JT-09-296	
		IŞ	<u> </u>	Work Order No.:	0184602	23	Page: _1		of	7
Code:	······································	1998/2000A	Cat.	/Item: C-F-1/C5.21	Location:				,	
Drawing No.:		1-51A-04	<u> </u>	Description: Pipe to	/aive 1HP-194 (Forg	ged SS)				
System ID:	1A				· · · · · · · · · · · · · · · · · · ·					
Component ID: 1	-51A-0	4-1C			Size/Length:	N/A	Thickne	ss/Diameter:	0.674/4	.0/\$5
Limitations:	es - Se	e attached Lim	itation Report		Sta	art Time:	1208	Finish Time:	124	0
Examination Su	rface:	Inside []	Outside 🔽	Surface Condition: A	S GROUND					
Lo Location:		9.1.1.1	Wo Location:	Centerline of Weld	Couplant:	ULTRAGE	ELII I	Batch No.:	0912	25
Temp. Tool Mfg.	:	FISHER	Serial No.:	MCNDE32770	Surface Temp.:	. 69	°F			
Cal. Report No.:			CAL-09-3	55, 3 <u>5</u> 6, 357						
Angle Used	0	45 45T	60 38							
Scanning dB		48.2 51.0	63.3 44							
Indication(s):	Yes 🗸	No 🗍		Scan Coverage: Upstream [Downstroam [7]	CW 🔽	ccw ☑			
Comments:		<u> </u>		oban coverage. opstream to	Downstream []	CM [V]	CCM (A)			
N/A										
Results: Acco	ept 📋	Reject 🗸	Info 🗀							
Percent Of Covera	age Obt	ained > 90%:	No	Reviewed Previous Data:	Yes	····				
Examiner Levi	el II-N	7	Stanature	Date Reviewer			0'		1	1 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Koster, Rickey		[0]			Sauces M	11/1	Signature	10	>-29-	Date
Examiner Leve	el II-N	V	Signature	Date Site Revi		1000	Signature			Date
Bowne, Lowell V. Other Leve			Menud	10/26/2009				_		
N/A	N/A		Signature	Date ANII Revi		- 1	Signature	10/3	3/2	Date
					7/0/100	2011		<u>-/ x</u>	101	

Energy.

Ultrasonic Indication Report

Site/Uni			it: Ød	: Oconee / 1				Procedure: PDI-UT-					Outage No.: 01-25
Summary No.: Workscope:				01	.C5.21.0	004		Procedure Rev.:				С	Report No.: UT-09-296
				ISI				Work Order No.:			01846023		Page: 2 of 7
Search Unit Angle: 45°s & 60°RL Wo Location: Weld Centerline Lo Location: 9.1.1.1					● Piping Welds □ Ferritic Vessels ≥ 2"T □ Other							Wo W _{max} CL W1 W2	
MP Metal Path RBR Remaining Back Reflection L Distance From Datum Comments: N/A				on	Wi W W2	1 [istance	ce From Wo To S.U. ce From Wo At ce From Wo At		U. At Maximum Response Of Max (Forward) Of Max (Forward)		orward)	DATUM Lo Li Lmax W1 Wmax W2
Angle	Indication No.	% OI DAC	1.	W Max MP	For W1	Of Max MP	1	kward Of Max MP	L1 Of Max	Max	L2 Of Max	RBR Amp.	Remarks
45°	1	125	.75	1.05	N/A	N/A	N/A	N/A	N/A	13"	N/A	N/A	Int ID Geometry - 360°
60°RL	2	125	1.2	1.50	N/A	N/A	N/A	N/A	N/A	1.50"	N/A	N/A	Int ID Geometry - 360°
xaminer oster, Ric	Level	II-N			gnature			Da	ate Revie	ewer	<u> </u>		Signature Date 10-29-09
caminer Level II-N pwne, Lowell V.			5	Signature			Da 0/26/200	ite Site F		d	<u> </u>	Signature Date	
/A	Level	N/A		s	ignature			Dа	te ANII I	Review		Sen	Signature 10/32/09 Date

TACHMENT A

DUKE POWER COMPANY	PASE 8 4 UF /			
ISI LIMITATION REPORT	UT-09-296			
Component/Weld ID: 1-51A-04-1C	remarks:			
	No scan due to valve			
☐ LIMITED SCAN ☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ cw ☐ ccw	configuration			
FROM L 0 to L 14.13 INCHES FROM WO CL to Beyond				
ANGLE: ☐ 0 ⋈ 45 ⋈ 60 other 38° FROM 0 DEG to 360 DEG				
☐ NO SCAN SURFACE BEAM DIRECTION				
LIMITED SCAN 1 2 1 2 cw ccw				
FROM L to L INCHES FROM W0 toto				
ANGLE: 0 45 60 other FROM DEG to DEG				
☐ NO SCAN SURFACE BEAM DIRECTION				
LIMITED SCAN 1 2 1 2 cw ccw				
FROM L to L INCHES FROM W0 to to				
ANGLE: 0 45 60 other FROM DEG to DEG				
☑ NO SCAN SURFACE BEAM DIRECTION				
LIMITED SCAN 1 2 1 2 cw ccw				
FROM L to L INCHES FROM W0 to	Sketch(s) attached			
ANGLE: 0 5 60 other FROM DEG to DEG	⊠ yes □ No			
Prepared By: Rickey L. Koster Level: Date: 10/26/09 Sheet	3 of 7 Date: 10/3/69			
Reviewed By: Bang Matherized Inspector: 10-29-09 Authorized Inspector:	Date: 10/3/08			

Suppleme...al Report

ATTACHMENT A PAGE 85 OF 1/2

Report No.:

UT-09-296

Page:

Summary No.: 01.C5.21.0004

Examiner: Koster, Rickey

Examiner: Bowne, Lowell V.

Other: N/A

Level: II-N Level: II-N

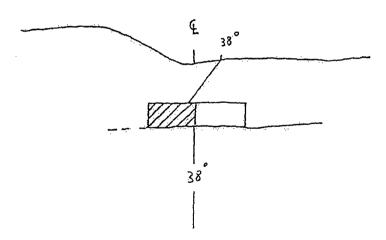
Level: N/A

Reviewer: Site Review:

ANII Review:

Comments: CW & CCW Circ. Exam limitation

Sketch or Photo:



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And the second of the second o	
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le Energy.	
C Partie Com P. A. C. B. M. A. St.	
200 Carlotter Co. Carlotter Co	

Supplemental Report

ATTACHMENT A
PAGE 86 OF 112

Report No.:

UT-09-296

Page:

5 of 7

Summary No.: 01.C5.21.0004

Examiner: Koster, Rickey

Examiner: Bowne, Lowell V

Other: N/A

Level: II-N

Level: II-N

Level: N/A

Site Review: ANII Review: Day Mil

Date: 10-29-09

Comments: Axial exam limitation

Sketch or Photo:

45°

Supplemental Report

ATTACHMENT A PAGE 87 OF 112

Report No.:

UT-09-296

Summary No.: 01.C5.21.0004

Examiner: Koster, Rickey

Examiner: Bowne, Lowell V

Other: N/A

Level:

Date:

Site Review: Level: II-N Level: N/A.

ANII Review:

Date: 10

Comments: Ind. # 1 - 45° & Ind. # 2 60°RL are geometric reflectors from weld root configuration. These reflectors are intermittent 360°. This was verified by reviewing previous data.

Sketch or Photo: Z:\UT\IDDEAL\ProfileLine2.jpg

52

51

♥ Puke Energy.

₩ Site/Unit: O								
∽		1	Procedure		Outage No.:)1-25	
Summary No.:	01.05.21.	0004	Procedure Rev.		Report No.:		UT-09-296	
Workscope:	ISI		Work Order No.	.: 01846023	Page:	:	of	7
<u>45 deg</u> /.	38 <i>de</i> 9							
Scan 1	100,000	% Length X	50.000 %	% volume of length / 100 =	50.000	% total f	or Scan	1
Scan 2	100.000	% Length X	0.000	% volume of length / 100 =	0.000	% total f	or Scan	2
Scan 3	100.000	% Length X _	50.000	% volume of length / 100 =	50.000	% total f	or Scan	3
Scan 4	100.000	% Length X	50.000	% volume of length / 100 =	50.000	% total	for Scan	4
The data		ow is for coverag % Length:		ained with the 45 deg scans. % volume of length / 100 =		% tot	al for Sc	an
							al for Sc	
Scan	2	% Length	X	% volume of length / 100 =		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Scan	3	% Length	X	% volume of length / 100 =	: 		tal for So	
Scan	4	% Length	x	% volume of length / 100 =	: 	% to	tal for So	nsc
Percer	nt complete cov	<u>rerage</u>						
Add to	tals for each sca	in required and di	ivide by # of scans	to determine;				
37.5	00 % Total fo	or complete exar	n					
Site Fi	eld Supervisor:	Rod Sty	ful!	Date:	10-28-09	_		



UT Pipe Werd Examination

S	ite/Unit:	Oconee /	1		Proc	cedure:	NDE-60	0	Ou	itage No.:	01-25	<u> </u>
Summa	ary No.:	O1.C5.21	.0027		Procedure	e Rev.:	17		Re	eport No.:	UT-09-2	34
Worl	(scope:	ISI			Work Ord	er No.:	0185093	1		Page: 1	of	-5
Code:		1998/2000A	<u> </u>	Cat./Item:	C-F-1/C5.2	<u>2</u> 1	Location:					
Drawing No.:	·····	1HP-387		· · ·	Description: Va	ilve 1HP-	118 (Forged SS) t	o Elbow				
System ID:	51A			· ; · · · · · · ·								
Component ID:	1HP-387	7-118A					Size/Length:	N/A	Thickne	ess/Diameter:	0.531 /	4.000
Limitations:	Yes, see	e attached limita	tion				Sta	rt Time:	1356	Finish Time:	140	9
Examination S	urface:	Inside []	Outside 🕢		Surface Condition	on: AS G	ROUND					
Lo Location:		9.1.1.2	Wo Loc	cation:	Centerline of We	ıld	Couplant:	ULTRAGE	LII	Batch No.:	072	25
Temp. Tool Mfg	g.:	Fluke	Seria	al No.:	OCQUA33090		Surface Temp.:	82	_ ° F			
Cal. Report No	.:		CAL-09-301,	CAL-09-30	2, CAL-09-303							
Angle Used	0	45 45T	60 60L	1]							
Scanning dB	1	40	45 60									
Indication(s):	Yes [No 🗹		Scar	i n Coverage: Upstr	eam 🗸	Downstream 🗸	cw [✓]	ccw 🔽			
Comments:								_				
FC 08-03												
Results: Ac	cep! 🙀	Reject 🗹	Info 🗀									
Percent Of Cove			No No		eviewed Previous D	Into:	37-					
					cviewed r revious D	ata.	Yes					
	vel II-N	1110	2 Signature		Date Re	viewer ()	1 1		Signature			Date
Leeper, Winfred Examiner Lev		Westerel	Legan		7/28/2009		an ////	010			10-25-	09
N/A	vel N/A		Signature		Date Site	₃ Review	VI		Signature			Date
	vel N/A		Signature	· · · · · · · · · · · · · · · · · · ·	Date AN	Review	~_/	_	Signature	<u> </u>	·····	Date
N/A							Hours	/>		10/23/0	1	:

D	UKE PO	WER CO	MPANY			
	ISI LIMIT	TATION RE	PORT			UT-09-234
Component/Weld ID: 1-51A-01	-118A	Item No: O	1.C5.21.0027		remarks:	
☐ NO SCAN	SURFAC	CE BI	EAM DIRECTION	V	Due to valve cor	ifiguration
	□ 1	2 🗍 1	☐ 2	⊠ ccw		
FROM L N/A to L N/A		NCHES FROM V	V0 CL to	Beyond		
ANGLE: ☐ 0 ⊠ 45 ☐ 60	other	FROM _	0 DEG to	360 DEG		
			AM DIRECTION		Valve configuration	ou .
☐ LIMITED SCAN	□ 1	2 🛭 1	□ 2 □ cw	☐ ccw		
FROM L N/A to L N/A		NCHES FROM W	/0 <u>CL</u> to	0.9		
ANGLE: ☐ 0 ☐ 45 ⊠ 60	other	_ FROM _	DEG to	360 DEG		
☐ NO SCAN						
☐ LIMITED SCAN	<pre>1 []</pre>	2 🗍 1	2 cw	☐ ccw		
FROM L to L	IN	CHES FROM W	0 to _			
ANGLE: 0 45 60						
☐ NO SCAN	SURFACE	E BEA	AM DIRECTION			
☐ LIMITED SCAN		2 🗌 1	2 cw	□ ccw 「		
FROM L to L	IN	CHES FROM WO) to		Sketch(s) at	tached
ANGLE: 0 0 45 0 60	other	FROM	DEG to	DEG	yes	☐ No
Prepared By: Winfred Leeper / / >	/ / Leve	ek _{II} Date:	7/28/09	Sheet	2 of <u>5</u>	
Reviewed By: Jan Mon	> Date	10-23-09	Authorized Inspect	or:	>>	Date: 10/23/01
γ						

Duce Energy.

Supplemental Report

ATTACHMENT A
PAGE 9/ OF 1/2

Report No.:	UT-09-234

Page: 3 of 5

Summary No.: 01.C5.21,0027

Examiner: Leeper, Winfred C. Wantel Legan

Examiner: N/A

Other: N/A

Level: II-N

Level: N/A

Level: N/A

Reviewer:

Site Review: ANII Review: Date: 10-23-09

Comments:

Sketch or Photo: 2:\UT\IDDEAL\ProfileLine2.jpg

Supplemental Report

ATTACHMENT A PAGE 92 OF 1/2 UT-09-234

Report No.:

Page:

Summary No.: 01.C5.21.0027

Examiner: Leeper, Winfred C.

Examiner: N/A

Other: N/A

Level: N/A

Level: N/A

Reviewer:

Site Review: ANII Review:

Date: 1/23/08

Comments: CW & CCW

Sketch or Photo: Z:\UT\IDDEAL\ProfileLine2.jpg

Duke Energy.

C Site/Unit:	Oconee /	1	Procedure	: NDE-600	Outage No	01-25
Summary No.:	01.C5.21	.0027	Procedure Rev.	: 17	Report No	D.: UT-09-234
Workscope:	ISI		Work Order No	.: 01850931	- Pag	e: <u>5</u> of <u>5</u>
					· · · · · · · · · · · · · · · · · · ·	
45 deg	GODES		·			
Scan	1 100.000	% Length X	100.000	% volume of length / 100 =	100.000	_% total for Scan 1
Scan	2 100.000	% Length X	100.000	% volume of length / 100 =	100.000	% total for Scan 2
Scan	3 100.000	% Length X	50.000	% volume of length / 100 =	50.000	_ % total for Scan
Scan	4 100.000	% Length X	50.000	% volume of length / 100 =	50,000	% total for Scan
	deg - ata to be listed be	- '	or supplemental s e that was not ob			
	ata to be listed be	— · elow is for coverag		tained with the 45 deg scans.		% total for Sca
The d	ata to be listed be	% Length	e that was not ob	tained with the 45 deg scans. % volume of length / 100 =		% total for Sca
The d	ata to be listed be	% Length	e that was not ob	tained with the 45 deg scans.		% total for Sc
The d Sca Sca	ata to be listed be	% Length	e that was not ob X X X	% volume of length / 100 =	-	% total for Sc
The d Sca Sca Sca	ata to be listed be an 1 an 2 an 3	% Length % Length % Length % Length % Length	e that was not ob X X X	% volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	-	% total for Sc
Sca Sca Sca Sca Sca	ata to be listed be an 1 an 2 an 3 an 4 cent complete co	% Length % Length % Length % Length % Length	e that was not ob X X X X	tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	-	% total for Sc
Sca Sca Sca Sca Sca Add	ata to be listed be an 1 an 2 an 3 an 4 cent complete co	% Length % Length % Length % Length % Length	e that was not ob X X X X ivide by # of scan	tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 =	-	% total for Sc

Penergy.

UT Pipe Werd Examination

	Site/Unit:	Oconee /	1		Procedure:	NDE-60	0	Oı	utage No.:	01-2	5
Sumi	mary No.:	O1.C5.	21.0040	Proce	edure Rev.:	17		R	eport No.:	UT-09-2	235
W	orkscope:	1	SI	Work	Order No.:	<u> </u>			Page:	1 of	4
Code:		1998/2000A	Cat./	tem: C-F-1/	/C5.21	Location:					
Drawing No.:		1HP-19	3	Description	: Tee to Pipe	•					
System ID:	51A	· · · · · · · · · · · · · · · · · · ·				. <u></u>					f marking
Component ID	1HP-193	J-17				Size/Length:	N/A	Thickn	ess/Diameter	0.375	/ 2.500
Limitations:	Yes					Sta	rt Time:	0916	Finish Time	: 09	27
Examination	Surface:	Inside 🗌	Outside 🔽	Surface Co	ndition: AS	GROUND					
Lo Location:		9.1.1.1	Wo Location:	Centerline o	f Weld	Couplant:	ULTRAGEL	. 11	Batch No.: _	072	225
Temp. Tool M	1fg.:	Fluke	Serial No.:	OCQUA33	8090	Surface Temp.:	90	. °F			
Cal. Report N	lo.:		CAL-09-304, CAL-0	19-305, CAL-09-306							
Angle Used	0	45 45T	60 70								
Scanning dB		47	47 47								
Indication(s):	Yes 🗌	No 🗹	·	Scan Coverage: L	Jpstream []	Downstream 🗹	CW 🗹	ccw 🗹			
Comments:											
FC 08-03											
Results: A	ccept [Reject 🕢	Info 🔲								
Percent Of Cov	rerage Obta	ained > 90%:	No	Reviewed Previou	us Data:	Yes			Manuffer Harrist and American American		
	evel II-N	<u> </u>	Signature	Date	Reviewer o	/ ^ ^		Signature	· · · · · · · · · · · · · · · · · · ·		Date
eeper, Winfred		ll	The Veen	7/22/2009		1 /\ 1//	20	o.ga.a.o		9.13	
N/A	evel N/A		Signature	Date	Site Review	71,		Signature	· · · · · · · · · · · · · · · · · · ·		Date
Other Lo	evel N/A	. —————	Signature	Date	ANII Review			Signature	10/4/6	18	Date
						Derry	<i>pv</i>	<u></u>	10/4/0	′/	

ATTACHMENT A

			PAGE 95 OF 11
DUKE POWER COMPANY			<i>(</i>) - 24
ISI LIMITATION REPORT			UT-09-235
Component/Weld ID: 1HP-193-17 Item No: C-05-021.064 9.31-	4	remarks:	
☐ NO SCAN SURFACE BEAM DIRECTION		Due to tee config	uration
☐ LIMITED SCAN ☐ 1 ☐ 2 ☐ cw [] ccw		
FROM L N/A to L N/A INCHES FROM W0 .05" to Be	eyond		
ANGLE: ☐ 0 ☐ 45 ⊠ 60 other FROM 0 DEG to 36	DEG		
☐ NO SCAN SURFACE BEAM DIRECTION			
LIMITED SCAN 1 2 1 2 cw	ccw		
FROM L to L INCHES FROM W0 to			
ANGLE: 0 45 60 other FROM DEG to	DEG		
☐ NO SCAN SURFACE BEAM DIRECTION			
☐ LIMITED SCAN ☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ cw ☐] ccw		
FROM L to L INCHES FROM W0 to			
ANGLE: 0 45 60 other FROM DEG to	DEG		
☐ NO SCAN SURFACE BEAM DIRECTION			
LIMITED SCAN 1 2 1 2 cw	ccw		
FROM L to L INCHES FROM W0 to		Sketch(s) at	tached
ANGLE: 0 5 60 other FROM DEG to	_ DEG	⊠ yes	□ No
Prepared By: Winfred Leeper / / / / / Devel: 11 Date: 07/23/2000	Chast	2 of <u>4</u>	
Reviewed By: Date: Authorized Inspector:		and h	Date:

ATTACHMENT A
PAGE 96 OF 1/2

Paris .	
LO MARTIN.	

Suppleme...al Report

Report No.: <u>U1-09-235</u>
Page: 3 of 4

Summary No.: 01.C5.21.0040

Examiner: Leeper, Winfred C. Westell Hege

Examiner: N/A

Other: N/A

Lével: II-N

Level: N/A

Level: N/A

Reviewer: Site Review:

ANII Review:

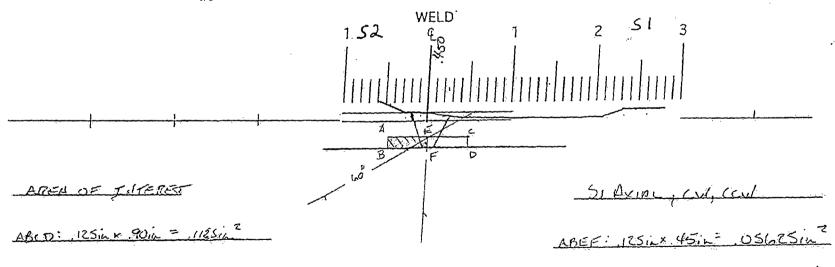
Date: 9-23.09

Date:

Date: 10/4/0

Comments:

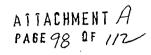
Sketch or Photo: Z:\UT\IDDEAL\ProfileLine2.jpg



05625in \$/.1125in (100) = 50 %



Site/Unit: Occ	nee. /	1	Procedure	: NDE-600	Outage No.:	O1-25
Summary No.:	O1.C5.21.0	040	Procedure Rev.	: 17	Report No.:	UT-09-235
Workscope:	ISI		Work Order No	.: 01850941	Page:	4 of 4:
· · · · · · · · · · · · · · · · · · ·				1		
45 deg						
Scan 1		% Length X _		% volume of length / 100 =		% total for Scan 1
Scan 2		% Length X		% volume of length / 100 =		% total for Scan 2
Scan 3	50.000	_% Length X _	100.000	% volume of length / 100 =	50.000	% total for Scan 3
Scan 4	50.000	_% Length X _	100.000	% volume of length / 100 =	50.000	% total for Scan 4
Other deg The data to	- 60 be listed below	(to be used for w is for coverage	r supplemental so that was not obl	ained with the 45 deg scans.		N/ total for Copy 1
Scan 1	50.000		100.000	% volume of length / 100 =		% total for Scan 1
Scan 2	0.000		100.000	% volume of length / 100 =		% total for Scan 2
Scan 3		% Length >	<	% volume of length / 100 =		% total for Scan 3
Scan 4		% Length >	κ	% volume of length / 100 =	-	% total for Scan
Add totals 37.500			vide by # of scans	1. 1)	9-22-09	?



Duke Energy

UT Pipe Werd Examination

১	ite/Unit: Ucone	e /	<u> </u>		7	rocedure:	PDI-01	<u>-7</u>	Out	age No	- 01-23	
Summary No.: 01.C5.2		O1.C5.21.0051 Procedure Rev.		lure Rev.:	С		Report No.:		UT-09-3	22		
Worl	kscope:	ISI	·		Work (Order No.:	018483	78		Page:	1 of	5
Code:	1998/20	00A		Cat./Item:	C-F-1/C	5.21	Location					
Drawing No.:	•	1-51A-02	 	-	Description:	Pipe to Flan	ge					
System ID:	51A	· · · · · · · · · · · · · · · · · · ·									·	
Component ID:	1-51A-02-16BH						Size/Length:	N/A	Thickne	ss/Diameter	: 0.531/4	1.0/SS
Limitations:	Yes - See attac	hed limitation	report				St	art Time:	0955	Finish Time	: 102	28
Examination S	urface: Insid	le 🗍 (Dutside 🕢		Surface Con	dition: AS G	ROUND					
Lo Location:	9.1.	1.1	Wo Locat	ion:	Centerline of	Weld	Couplant:	ULTRAGE	ELII I	Batch No.: _	091	25
Temp. Tool Mf	g.: <u>FI</u> S	SHER	Serial I	No.:	MCNDE327	70	Surface Temp.	:72	°F			
Cal. Report No	ut)-400, 401 d								
Angle Used	0 45	45T 60		1			· · · · · · · · · · · · · · · · · · ·					
Scanning dB	26.7	26.7 54.5	70L									
_	<u></u>		36.7				_					
Indication(s):	Yes 🗍 No	$ \mathbf{Z} $		Scan	Coverage: U	ostream 🛂	Downstream [CW ☑	ccw 🗹			
Comments:												
N/A												
Results: Ac	cept 🗍 Re	ject 🗸	Info [7]									
			Info 📋								<u></u>	
Percent Of Cove	erage Obtained >	90%:	No	Re	viewed Previou	ıs Data:	Yes	-				
xaminer Le	evel II-N	1	Signal	2//	// Date	Reviewer			Signature			Date
lendrickson, M					10/29/2009		ann	Mh			1-2-09	
	vel II-N		Signaloge			Site Review			Signature			Date
Day, John, C. Other Le	vel N/A	- 2	JAM XX	 	10/29/2009	AND Davis			C:- :- 1			Dati-
N/A	VS NIA	-	Signature		Date	ANII Review	Al.		Signature	11/3)	65	Date
										.,,,,,		

ATTACHMENT A

		PAGE 99 DE
DUKE P	OWER COMPANY	
ISI LIM	IITATION REPORT	UT-09-32Z
Component/Weld ID: 1-51A-02-16BH	Item No: 01.C5.21.0051	remarks:
⊠ NO SCAN SURF	ACE BEAM DIRECTION	Due to flange
☐ LIMITED SCAN ☐ 1	☐ 2 ☐ 1 ☒ 2 ☒ cw ☒ ccw	configuration
FROM L N/A to L N/A IN	ICHES FROM W0 CL to Beyond	
ANGLE: ☐ 0 ☒ 45 ☒ 60 other _7	OL FROM 0 DEG to 360 DEG	G
☐ NO SCAN SURF	ACE BEAM DIRECTION	
☐ LIMITED SCAN ☐ 1	2 1 2 cw ccw	
FROM L to L INC	HES FROM W0 to	
ANGLE: 0 45 60 other	·	1
	ACE BEAM DIRECTION	
☐ LIMITED SCAN ☐ 1	☐ 2 ☐ 1 ☐ 2 ☐ cw ☐ ccw	
FROM L to L INCI	HES FROM W0 to	
ANGLE: 0 45 60 other		
	ACE BEAM DIRECTION	
☐ LIMITED SCAN ☐ 1 [
FROM L to L INCH	HES FROM W0 to	Sketch(s) attached
4 ANGLE: 0 5 60 other	FROM DEG to DEG	
Prepared By: John Day	evel: II Date: 10/29/09 Shee	et 2 of 5
Reviewed By: Bank Mind	Pate: //- Z - 09 Authorized Inspector:	Date: /3 bp

PETETGY	
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Suppleme...al Report

ATTACHMENT A
PAGE 100 OF 112

104 /- 41.	•			
Report No.:		-09-32	-	
	7 444 77			•
Page:	3	of	5	

Summary No.:	:: O1.C5.21.0051	
Examiner:	r: Hendrickson, Matthew Level: II-N Reviewer: Barry	Mah Date: //- 2 - 09
Examiner:	r: Day, John, C. Level: II-N Site Review:	Date:
Other:	: N/A Level: N/A ANII Review: Allow	Date: 11/3/07

Comments: CW & CCW Circ. exam limitation

Sketch or Photo:

52

PIPE

51

Flange

NAME OF THE PARTY OF THE PARTY

45°

Ę.

Energy,

Suppleme. .al Report

Site Review:

ANII Review:

Level: II-N

Level: N/A

ATTACHMENT A
PAGE 101 OF 112

-		Report No.:	UT	-09-3	22	
		Page:	4	of _	5	
Reviewer:	Barry Mhh		Date:	//-	2-0;	9
~·· - ·						

Date: 1/5/6)

Comments: Axial exam limitation

Examiner: Hendrickson, Matthew

Summary No.: 01.C5.21.0051

Examiner: Day, John, C.

Other: N/A

Sketch or Photo:

52

PIPE

.a (a0 Flange

51



\leftarrow	7	Site/Unit:	Oco	nee /	i	Proced	dure:	PDI-UT-2	Outage N	lo ·		D1 -2 5	
EN1	- 150	mmary No.:	000	01.C5.21.	 0051	Procedure F			Report N			-09-32	
至	70	- Workscope:		ISI		Work Order				ge:	5	of	5
1 A C						,			· · · · · · · · · · · · · · · · · · ·	-			
Af	PA												
		<u>45 deg</u>											
		Scan 1	1		_ % Length X		%	volume of length / 100 =		%	total I	for Sca	an 1
		Scan 2	2		% Length X		%	% volume of length / 100 =		%	total	for Sca	an 2
		Scan	3	100.000	% Length X	50.000	%	% volume of length / 100 =	50.000	%	total	for Sc	an 3
		Scan	4	100.000	% Length X	50.000	%	% volume of length / 100 =	50.000	%	total	for Sc	an 4
						•							
			A	dd totals and	divide by # sc	ans = 50.00	00	% total for 45 deg					
										-			
		Other (deg -	60	_ (to be used fo	or supplement	al sca	ans)					
		The da	ata to	be listed belo	ow is for coverag	e that was not	t obta	ained with the 45 deg scans.					
		Scar	n 1 _	100.000	% Length	X 0.000		% volume of length / 100 =	0.000	~	% tol	al for	Scan 1
		Scar	n 2 _	100.000	% Length	X 50.000).	_ % volume of length / 100 =	50.000)	% to	tal for	Scan 2
		Scar	n 3 _	<u> </u>	% Length	x		% volume of length / 100 =	<u></u>	**************************************	_% to	tal for	Scan 3
:		Sca	n 4		% Length	x	· · · · · · · · · · · · · · · · · · ·	_ % volume of length / 100 =		· · · · ·	_% to	tal for	Scan 4
									• •				
		Perce	ent co	omplete cove	erage								
:		Add to	otals	for each scal	n required and di	vide by # of so	cans	to determine;					
:		37.	500	% Total fo	r complete exar	n							
1							A						
:		Site f	Field	Supervisor:	Podnik	Duffuld		Date: //	-3-09				
,					43-X12-16-2	//							

Energy.

UT Pipe Weld Examination

\$	Site/Unit:	Oconee /	1			Procedure:	NDE-6	000	C	outage No.:	N/A	
Summ	ary No.:	1-HP-01	87-184		Proce	dure Rev.:	17		F	Report No.:	BOP-UT-0	9-082
Wor	kscope:	ВС	<u> </u>		Work	Order No.:	018595	555		Page:	1 of	5
Code:		N/A		Cat./Item:	N/	A	Location	າ:	•	N/A		
Drawing No.:		N	/A		Description:	N/A						
System ID:	N/A											
Component ID:	N/A						Size/Length:	N/A	Thick	ness/Diamete	er: .531'	'/4.0"
Limitations:	Yes	<u> </u>					s	tart Time:	1314	Finish Tim	e: 13	28
Examination S	Surface:	Inside 🗔	Outside 🔽		Surface Cor	ndition: AS	GROUND					
Lo Location:		9.1.1.1	Wo Loc	ation:	Centerline of	Weld	Couplant:	ULTRAGE	LII	Batch No.:	091	25
Temp. Tool Mf	fg.:	FISHER	Seria	il No.:	MCNDE32	770	Surface Temp	.: 72	°F			
Cal. Report No	o.:		CAL-09-331,	CAL-09-33	2, CAL-09-333							
Angle Used	0	45 45T	60 60L]							
Scanning dB		49	49 57	 								
Indication(s):	Yes [No ☑	<u> </u>	Scar	l Covernes II	lastroom [7]	Downstream 🗹	3 OW [3	00111	9		
Comments:		🖭		oca,	r coverage. O	psileaili []	Downstream 6	g cw ☑	CCM 🖸	3		
FC 08-03												
PC 00-03												
Results: Ad	ccept 🔽	Reject 🗌	Info 🗌	In	itial PSI Exam							
Percent Of Cove	erage Obt	ained > 90%:	<u>No</u>		eviewed Previo	us Data:	No			`		
Examiner Le	evel II-N		Signature	Control of the Contro				-				na na programa.
Leeper, Winfred		War	Signature		10/19/2009	Reviewer	>. 	211	Signatur		10.22	Date
xaminer Le N/A	vel N/A		Signature			Site Review	my //	ab)	Signatur			Date
Other Le N/A	vel N/A		Signature	····	Date	ANII Review			Signature		2 1 -	Date
:	·				 		Som			101	/23/09	



۱ ــ		Site/Unit:	Oco	nee /	1	Procedure	e: <u> </u>	DE-600	Outage No.:		N/A	
7.7		ımmary No.:	ary No.: 1-HP-0187-184		-184	Procedure Rev	/::	17	Report No.:	вор	UT-09-	082
EN L	Workscope:			вор		Work Order No	o.: 01	01859555		2	of	5
ATTACHMENT	<u>э</u>					<u> </u>						
A	PAE	45 deg										
		Scan			% Length X		% volume of le	ength / 100 =		% total	or Scar	า 1
		Scan	2		% Length X		% volume of l	ength / 100 =		% total	for Sca	n 2
		Scan	3	100.000	% Length X	50.000	% volume of I	ength / 100 =	50.000	% total	for Sca	n 3
		Scan	4	100.000	% Length X	50.000	% volume of I	ength / 100 =	50.000	% total	for Sca	n 4
		<u>Other</u> The d			_ (to be used for	r supplemental s that was not ob		e 45 deg scans.				
		Sca	ın 1	100.000	% Length X	50,000	% volume	of length / 100 =	50.000	% to	al for S	can
		Sca	ın 2	100.000	% Length X	0.000	% volume	of length / 100 =	0.000	% to	al for S	can
		Sca	an 3		% Length >	<u> </u>	% volume	of length / 100 =		% to	tal for S	can
		Sca	an 4		% Length >	(<u></u>	% volume	of length / 100 =		% to	tal for S	can
***************************************		Perc	ent c	omplete cove	erage							
		Add	totals	for each scar	n required and div	ride by # of scan	s to determine	;				
		37.	.500	% Total for	r complete exam	ı						
		Site	Field	Supervisor:	Rod A	Wife to	, in the state of the state of	Date:	10-28-0	?		

I					
	ISI LIMITAT	ION REPORT			
Component/Weld ID: 1/40/04	372184 ++n	m No: NIA		ramarke.	
│ │ │ NO SCAN	SURFACE	BEAM DIRECTION	N	Due to valve confic	guration
☐ LIMITED SCAN	1	□ 1	v 🛭 ccw		
FROM L N/A to L N/A	10/27/01 INCHE	ES FROM W0 _4" to	Beyond		
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60	other	FROM N/A DEG to	N/A DEG		
☐ NO SCAN				Section of the sectio	····
:LIMITED SCAN	<pre>1 2</pre>	☐ 1 ☐ 2 ☐ cw	/ 🗌 ccw		· · · · · · · · · · · · · · · · · · ·
FROM L to L	INCHE	S FROM W0 to			
ANGLE: 0 45 60					
☐ NO SCAN	SURFACE	BEAM DIRECTIO	N		
☐ LIMITED SCAN					
FROM L to L	INCHE	S.F.ROM W0 to			,
ANGLE: 0 0 45 0 60					
☐ NO SCAN	SURFACE	BEAM DIRECTION	1		<u> </u>
LIMITED SCAN	<pre>1</pre>	☐ 1 ☐ 2 ☐ cw	☐ ccw	EOP-UT-09-082	
FROM Lto L			ì		ched
ANGLE: . 0 0 45 0 60	other	FROM DEG to	DEG	🛛 yes	☐ No
Prepared By: Winfred Leeper Winfred Reviewed By:	Level: 11	Date: 10/19/09	Sheet	3 of A	5 242
Reviewed By:	Date: /o:	Authorized Inspe	ctor:)ate: / / / / /

Suppleme, al Report

ATTACHMENT A
PAGE 106 OF 112

Report No.: BOP-UT-09-082

Summary No.: 1-HP-0187-184

Examiner: Leeper, Winfred C.

Examiner: N/A

Other: N/A

Level: II-N Level:

Level: N/A

N/A

Site Review:

ANII Review:

Date: 19/23/09

Comments: Area of Interest and Axial Coverage

Sketch or Photo: Z:\UT\IDDEAL\ProfileLine2.jpg

Supplem, al Report

ATTACHMENT A
PAGE 107 OF 1/2

Report No.: BOP-UT-09-082

Page:

Summary No.: 1-HP-0187-184

Examiner: Leeper, Winfred C.

Examiner: N/A

Other: N/A

Level: II-N

Level: N/A

Level: N/A

Site Review:

ANII Review:

Date: 10-22.09

Date:

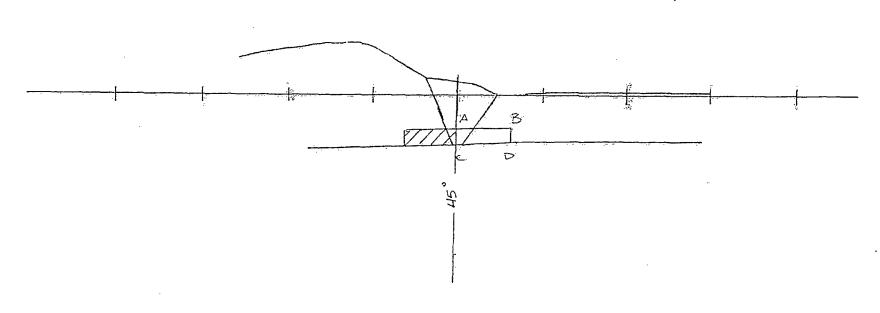
Date: 10/25/67

Comments: Circ. Coverage

Sketch or Photo: Z:\UT\IDDEAL\ProfileLine2.jpg

UPI COVEZACE

Min / 72in 2 (100) = 50%





PEnergy.

UT Pipe We.J Examination

Sit	e/Unil:	Oconee	/	1		F	Procedure:	NDE	-600		O	utage No.:		I/A
Summar	y No.:	1-H	P-0187-	1,85		Proced	dure Rev.:	1	7		R	eport No.:	BOP-U	r-09-089
Winks	(ຂາກອ:	and the second second				Work C	Didde No	0,183	9553			/Page:	4 :	of 5
Code: Section	- ایجت	ASME 3 N	حمد	10-29-09	Cat./Iter	n: N//	\	Locall	lon:			N/A		
Drawing No.:			N/A			Description:	Pipë to valv	o'			, .			
System ID:	HP			*										
Component ID: 1	1-HP-0	187-185						Size/Length	: !	N/A	Thickn	ess/Diamete	er: .5	31/4"/SS
Limitations:	Yes							·	Start Tim	ne:	1351	Finish Tim	ie:	1507
Examination Su	rface:	Inside		Outside 🕢		Surface Con	dition: AS G	ROUND						
Lo Location:		RT - 0		Wo L	ocation:	Centerline of	Weld	Couplant:	UL.	TRAGEL	11	Batch No.:		09125
Temp. Tool Mig	.:	FISH	ER	Se	rial No.:	MCNDE 27	228	Surface Ten	np.:	72	° F			
Cal. Report No.:	:			CA	L-09-376, 3	377 & 378								
Angle Used	0	45	15T	60 60L										
Scanning dB			42	52		_								
Indication(s):	Yes [] No 🔀	}		Sc	 can Coverage; U	ostream 🕢	Downstream		w 🗹	ccw 🖓			
Comments:				•										
FC 08-03														
Results: Acc	cept [] Rejec	:1 🗹	Info [)	Initial PSI Exam								
Percent Of Cover	rage Ot	otained > 90)%: =	No	, , , , , , , , , , , , , , , , , , , 	Reviewed Previou	ıs Data:	No j						
	vel 11-1	1		Signature	1 11	Date	Reviewer	15/1			Signalure	3	.,	Date
Jolly, B. Dale				Male G	fally	10/27/2009	X	18 X /a	المعالمة				10	29.09
Examiner Lev	rei N//	4		Signature		Date	Site Raview		•		Signature	•		Date
	el N/A	4		Signature	·····	Date	ANII Review		····	····	Signature	10/	10	Date
N/A								A Char	72/5			10/3	10)	



αğ	Site/Unit:	Oconee /	1	Procedure:	NDE-600	Outage No.:	N/A
= \	Summary No.:	1-HP-01	87-185	Procedure Rev.:	17	Report No.:	BOP-UT-09-089
CHME		P:	SI	Work Order No.:	01859555	Page:	2 of 5
∀		· · · · · · · · · · · · · · · · · · ·			arana da arang	······································	
_	<u>45 deg</u>						
	Scan	1	% Length X	%	volume of length / 100 =		% total for Scan 1
	Scan :	2	% Length X _	%	volume of length / 100 =		% total for Scan 2
	Scan	3 100.000	% Length X	50.000 %	volume of length / 100 =	50.000	% total for Scan 3
	Scan	4 100.000	% Length X	50.000 %	volume of length / 100 = _	50.000	% total for Scan 4
die kommen er der der	<u>Other o</u> The da		·	or supplemental sca e that was not obtai	ns) ned with the 45 deg scans.		
	Scan	1 100.00	0 % Length >	0.000	% volume of length / 100 =	0.000	% total for Scan
23	Scan	2 100.00	0 % Length >	50.000	% volume of length / 100 =	50.000	% total for Scan
3	Scar	13	% Length >	×	% volume of length / 100 =		% total for Scan
an and a second	Scar	14	% Length	×	% valume of length / 100 =	·	% total for Scan
experience as the second of th				vide by # of scans to	o determine;		
		***	-				
	Site F	ield Supervisor:	Rodney Sheffield	region	Date:	10/29/2009	

ATTACHMENT A
PAGE 1/0 OF 1/2

D	UKE POWER COMPANY							
ISI LIMITATION REPORT								
Component/Weld ID: 1-HP-018	7-185 Item No: N/A	remarks:						
⊠ NO SCAN	SURFACE BEAM DIRECTION	Valve configuration						
☐ LIMITED SCAN	□ 1 □ 2 □ 1 □ 2 □ cw □ ccw							
FROM L N/A to L N/A	INCHES FROM WO N/A to N/A							
ANGLE: ☐ 0 ☐ 45 🗵 60	other FROM 0 DEG to 360 DEG							
⊠ NO SCAN	SURFACE BEAM DIRECTION	Valve configuration						
☐ LIMITED SCAN	□ 1 □ 2							
FROM L N/A to L N/A	INCHES FROM W0 CL to Beyond							
ANGLE: ☐ 0 ⊠ 45 ☐ 60	other FROM 0 DEG to 360 DEG							
☐ NO SCAN	SURFACE BEAM DIRECTION							
☐ LIMITED SCAN	☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ cw ☐ ccw							
FROM L to L	INCHES FROM W0 to							
ANGLE: 0 45 60	other FROM DEG to DEG							
	SURFACE BEAM DIRECTION							
☐ LIMITED SCAN	1212cwccw							
FROM L to L	INCHES FROM W0 to	Sketch(s) attached						
4 ANGLE: □ 0 □ 5 □ 60	other FROM DEG to DEG	⊠ yes □ No						
Prepared By: B. Dale Jølly B. C.	L Jelly Level: 11 Date: 10/27/09 Sheet	3 of 5						
Reviewed By:	Date: 10-29-09 Authorized Inspector:	Date:						

Energy.
the same of the sa

Suppleme...al Report

Report No.:	BOP-U	T-09	-089
_		- 6	-

Summary No.: 1-HP-0187-185

Examiner: Jolly, B. Dale B. Isla Jolly

Examiner: N/A

Other: N/A

Level: II-N Reviewer:

Level: N/A Site Review:

Level: N/A ANII Review:

Ik Jousen

Date: 10,19.09

Date:

Date: 10/30/01

Comments: CW & CCW Circ. Exam limitation

Sketch or Photo:

51

Valve

52

D. D. C	iv.	Supplemei.	اد. Report	Report No.:	BOP-UT-09-089
the Hiller	Må			Page:	5 of5
Summary No.:	1-HP-0187-185		anc /	·	
Examiner:	Jolly, B. Dale B. Lale Polley	Level: II-N	Reviewer: LE House		Date: 10-19.09
Examiner:	N/A	Level: N/A	Site Review:		Date:
Other:	N/A	Level: N/A	ANII Review:		Date: 19/32/05

Comments: Axial exam limitation

Sketch or Photo:

51

52

Valve

600

UT Vessel Enumination



Sit	e/Unit:	Oconee /	2		P	Procedure:	NDE-640		Outage No.:	O2-24
Summa	ry No.:	O2.B3	3.110.0002		Proced	lure Rev.:	5		Report No.:	UT-10-444
Work	scope:		ISI		Work C	Order No.:	01869776	5	Page:	1 of 1
Code:		1998/2000A		Cat./Item:	B-D /B:	3.110	Location:			
Drawing No.:		151-0	CN2-002		Description:	Nozzie to He	ad			
System ID:	50				_					
Component ID:	2-PZR	-WP34					Size/Length:	N/A	Thickness/Diame	eter: 4.750/7.750/CS
Limitations:	Yes -	See Attached	UT Report U	T-10-452			Sta	rt Time: 10)29 Finish T	ime: 1051
Examination S	urface:	Inside [Outs	ide 🔽	Surface Con	dition: AS G	ROUND			
Lo Location:		9.2.3		Wo Location:	Centerline of	Weld	Couplant:	ULTRAGEL II	Batch No	.: 09125
Temp. Tool Mi	ʻg.:	Lutro	<u>n</u>	Serial No.: _	MCNDE328	804	Surface Temp.:	73	°F	
Cal. Report No	».:				CAL-10-550					
Angle Used	0	45 45	T 60	601						
Scanning dB	42.7									
Indication(s):	Yes	□ No ☑		s	can Coverage: U	Jpstream 🗌	Downstream 🗹	cw ☑	ccw ☑	
Comments:										
N/A										
Results:	Acc	ept 🗌	Reject ✓	Info 🗌	Winston Buli Le	evel II <i>5/3/</i> 10	11	115	480	
Percent Of Co	verage	Obtained > 9	0%:	No	Reviewed Previ	ous Data:	Yes			,
Examiner L	evel	-N) / Sj	gnatuce	Date	Réviewer	1		Signature	Date
Griebel, David			1/1/	<i>f</i>	5/3/2010		DE Louis	en		5-15-10
Examiner L Tucker, David	.evel ji K		11/1	gnaturo	Date		13.		Signature	Date
<u> </u>	evel [-N		gpeture	5/3/2010 Date		,	, ,	Signature	Date
Mauldin, Larry		Lan	11-9	noulder		L		and a	Cignature	5/17/10 Date
			Q							<u></u>

UT Vessel Examination



Sit	e/Unit:	Oconee	1	2			Pr	ocedure:	NDE-820			Outage No.:		02-24	
Summai	ry No.:	0:	2.B3.11	0.0002			Procedu	re Rev.:	ev.: 5		1	Report No.:	רט	-10-45	2
Works	scope:		ISI				Work O	der No.:	01869776	3		Page:	1	of _	9
Code:		1998/20	00A			Cat./Item	i: B-D /B3	110	Location:						
Drawing No.:		IS	SI-OCN2	-002			Description:	Nozzie to H	ead						
System ID:	50														
Component ID:	2-PZR	-WP34							Size/Length:	N/A	Thick	kness/Diame	ter: 4.	750/7.7	/50/CS
Limitations:	Yes - S	See Attac	hed Lir	nitation	Sheet				Sta	rt Time:	1052	Finish Ti	ne: _	123	13
Examination S	urface:	Insid	de 🗌	Ou	tside 🔽)	Surface Cond	ition: AS G	ROUND						
Lo Location:		9.2	2.3		_ Wo L	ocation:	Centerline of	<u>Veld</u>	Couplant:	ULTRAGE	ELU	Batch No.	:	091	25
Temp. Tool Mf	g.:	L	utron		_ Se	rial No.:	MCNDE328	04	Surface Temp.:	73	°F				
Cal. Report No	o.:						CAL-10-547, 548, 54	19							
Angle Used	0	45	45T	60	60T	•	1								
Scanning dB		63.0	63.0	70.0	70.0	71.7	1					•			
Indication(s):	Yes	No	∑				Scan Coverage: U	ostream 🔲	Downstream 🗹	cw ☑	ccw	$ \mathbf{Z} $			
Comments:															
*60° near sur	face ex	aminatio	n												
Results:	Acc	ept 🗍	Reje	ect 🗹	Inf	· 🗆	Winston Bull Le	vel II <i>5/</i> 3/10	W		£ 5		$ \geq $	<u></u>	
Percent Of Co	verage.	Obtained	> 90%:		No		Reviewed Previo	uş Data:	Yes						
			1-					i							
Examiner L Griebel, David	.evel (i	.N	//-	-/-	Signatur	e e	5/3/2010	Reviewer			Signa	ature.		5-1	510
	evel j	-N	7		Signatur	·e	Date	Site Review	ex Jours	2(Signa	ature			Dat
Tucker, David	K	Kla		Tues			5/3/2010								
	evel [[-N		00	Signatur	e	Date	ANII Revie	N	/	/ Signa	ature		101	Dat
Mauldin, Larry	Е.	na	M	Li-f	1/0	ulder	5/3/2010	<u> </u>	Con Contract of the Contract o	sell?			5/	14/18	<u>, </u>

DUKE POWER COMPANY								
ı	ISI LIMITATION REPORT							
Component/Weld ID: 2-PRZ-WP3	4 Ite	em No: <u>O2,B3.110.0002</u>		remarks:				
⊠ NO SCAN	SURFACE	BEAM DIRECTION	N	Limitation due to nozzle				
☐ LIMITED SCAN	□ 1 図 2	□ 2	w 🛭 ccw	configuration,				
FROM L N/A to L N/A	INCH	ES FROM W0 1.75" to	Beyond					
ANGLE: ⊠ 0 ⊠ 45 ⊠ 60	other	FROM 0 DEG to	360 DEG					
☐ NO SCAN	SURFACE	BEAM DIRECTION	ON					
☐ LIMITED SCAN	□ 1 □ 2	☐ 1 ☐ 2 ☐ column	w 🗌 ccw					
FROM L to L	INCH	ES FROM W0 to						
ANGLE: 0 45 60	other	FROM DEG to	DEG					
☐ NO SCAN	SURFACE	BEAM DIRECTION	Ν̈́					
☐ LIMITED SCAN	□ 1 □ 2	1 1 2 C	w 🔲 ccw					
FROM L to L	INCH	ES FROM W0 to						
ANGLE: 0 0 45 60	other	FROM DEG to	DEG					
☐ NO SCAN	SURFACE	BEAM DIRECTIO	N					
☐ LIMITED SCAN	□ 1 □ 2	1 2 C	w 🗌 ccw					
FROM L to L	INCH	ES FROM W0 to	·	Sketch(s) attached				
ANGLE: 0 0 45 60	other	FROM DEG to	DEG	⊠ yes □ No				
Prepared By: David Griebel	/ kevel:	II Date: 05/03/10	Shee	t 2 of 9				
Reviewed By: NEX HUDEN	Date:	5-15.10 Authorized Ins	pector:	Date: 5/19/15				



Supplemental Report

ATTACHMENT B PAGE 4 OF 69

Report No.:	UT	-10-4	52	
Page:	3	of	49	
		•	er.	

Summary No.: **Q2.B3.110.0002**

Examiner: Griebel, David M.

Examiner: Tucker, David K. Apart Hucker

Comments: See attachments 1-5 for graphic plotting of coverage.

Level: II-N

Level: II-N

Site Review: ANII Review:

Reviewer:

Mark

oate: 5/3/10

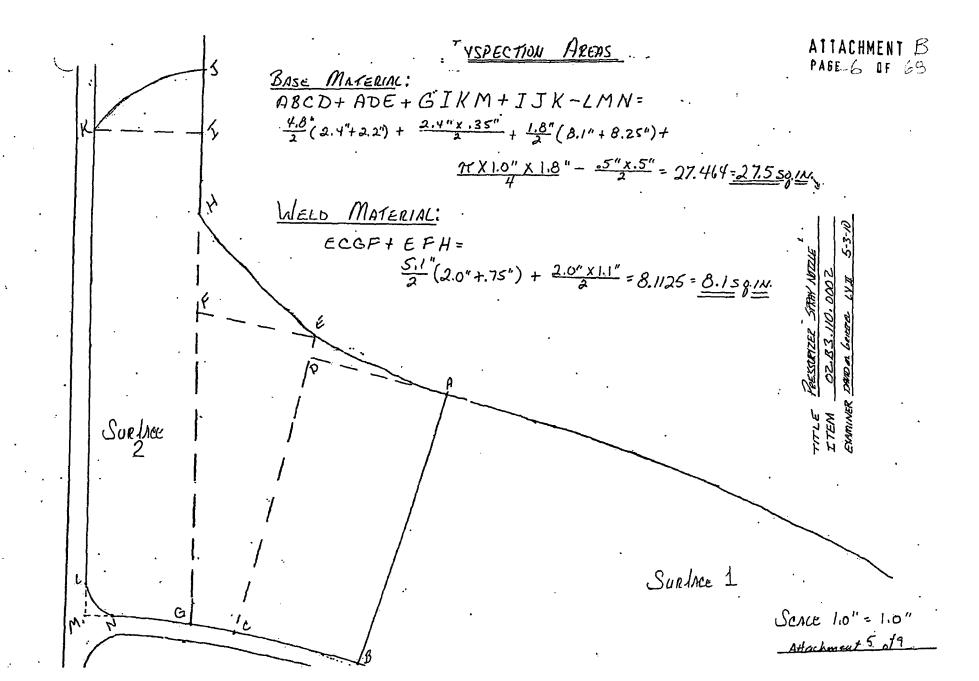
Date: 5/19/

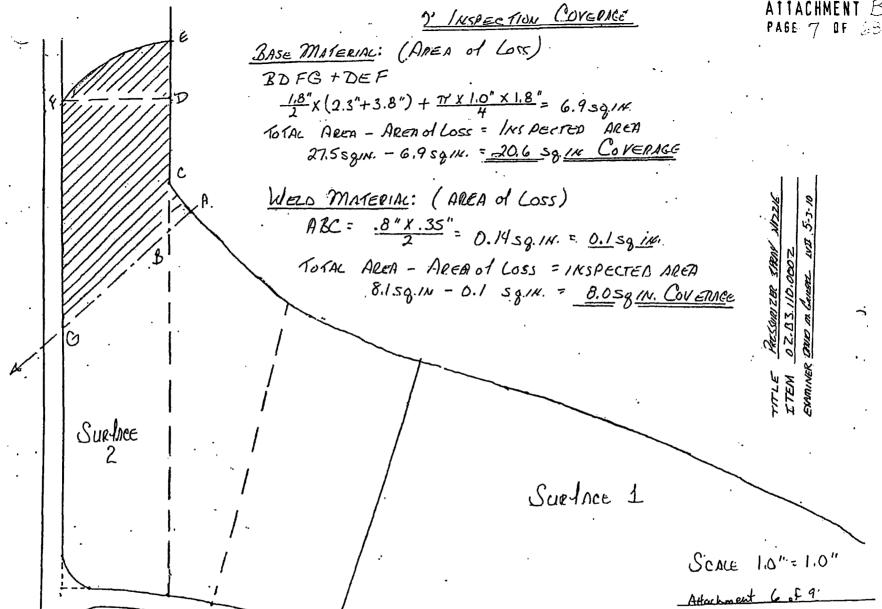
Other: Mauldin, Larry E

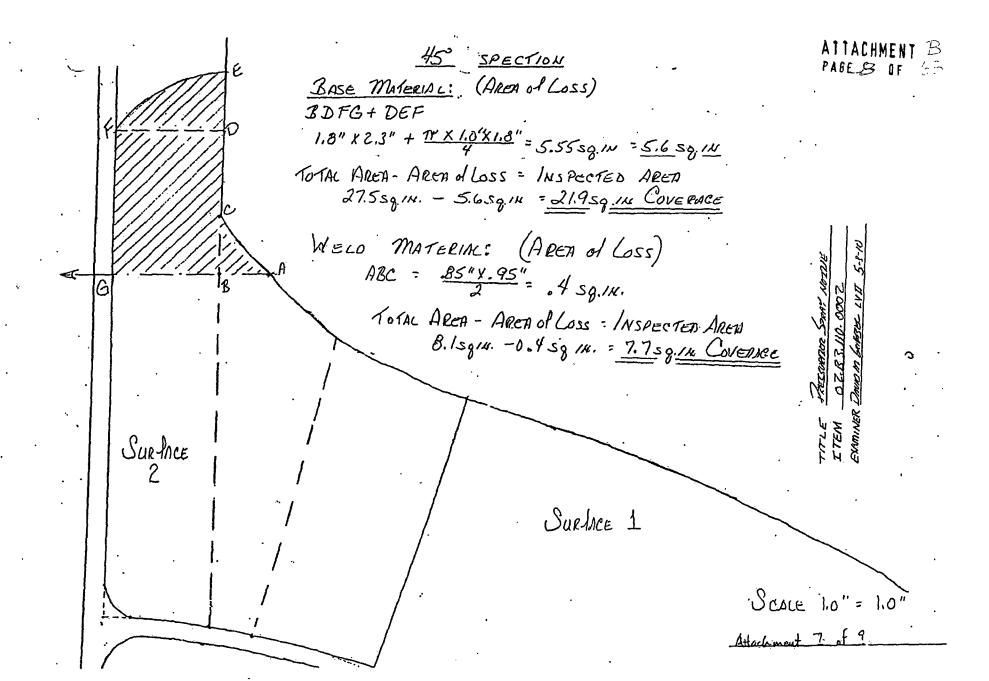
Sketch or Photo:

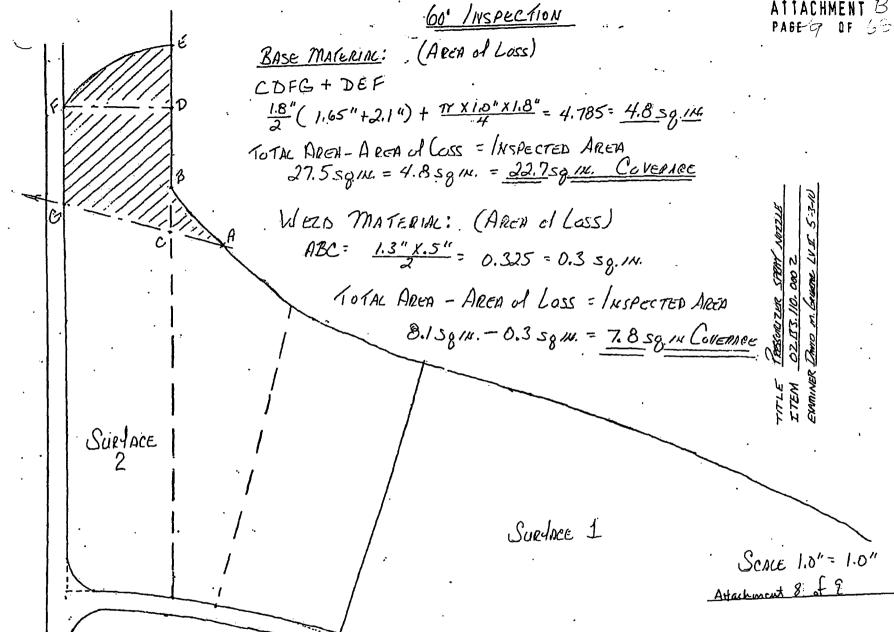
	Pressurizer Spray Nozzle
	Item No. 02.B3.110.0002 / Weld No. 2-PZR-WP34
	Base Material Coverage
Scan	Coverage
0°	74.9%
45° Axial	79.6% ·
60° Axial	82.5%
45° CW/CCW	74.2%
60° CW/CCW	74.2%
	Aggregate @ 74.9 + 79.6 + 82.5 + 74.2 + 74.2% = 385.4/5 = 77.1%
	Weld Material Coverage
Scan	Coverage
0°	98.7%
45° S1 Axial	95.1%
45° S2 Axial	0.0%
45° CW	96.3%
45° CCW	96.3%
60° S1 Axial	96.3%
60° S2 Axial	0.0%
60° CW	96.3%
60° CCW	96.3%
Aggregate	@ 98.7+ 95.1+ 0.0 + 96.3+ 96.3+ 96.3+ 0.0 + 96.3 + 96.3 = 675.3/9 = 75.0%
	Total Aggregate @ 77.1 + 75.0 = 152.1/2 = 76.1%

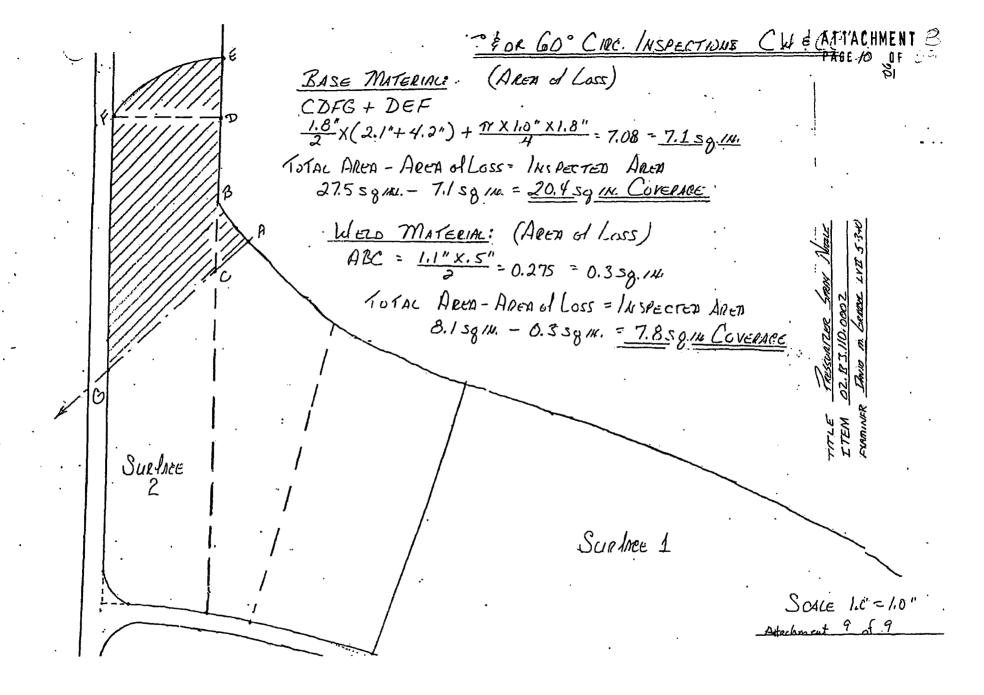
Page 4 of 4 9 Geh 5-15-10











UT Vessel L. amination

Site/Unit:		Осопев	1	2			Pro	cedure:	NDE-64	0	C	Outage No.:	02-24	
Summa	ry No.:	O2	.B3.110.	0003			Procedur	e Rev.:	5		1	Report No.:	UT-10-446	6
Work	scope: ISI Work Order No.: 01869776								Page: 1	of	1			
Code:		1998/20	00A		Cat.	/Item:	B-D /B3.1	110	Location					·
Drawing No.:		IS	I-OCN2-0	02			Description: N	lozzie to He	ad					
System ID:	. 50						_							
Component ID:	2-PZR	-WP33-3				 		· · · · · · · · · · · · · · · · · · ·	Size/Length:	N/A	Thic	kness/Diameter:	4.750/6.8	375/CS
Limitations:	Yes -	See Attac	hed UT F	Report U	JT-10-447				S	tart Time:	1029	Finish Time		
Examination S	Surface:	Insid	le 🗌	Outs	ide 🗹		Surface Condi	tion: AS G	ROUND					
Lo Location:		9.2	.3		Wo Local	ion: _	Centerline of W	/eld	Couplant:	ULTRAGE	LII	Batch No.: _	0912	25
Temp. Tool M	fg.:	L	utron		Serial	No.: _	MCNDE3280	4	Surface Temp.	: <u>73</u>	°F			
Cal. Report N	o.:						CAL-10-550							
Angle Used	0	45	45T	60	60T									
_	42.7	+				\dashv			•					
Scanning dB	<u> </u>							. –	<u> </u>	3 OM (2)	0014	ت		
Indication(s):	Yes	☐ No	\mathbf{Z}			S	can Coverage: Up:	stream [_]	Downstream 5	g cw Ø	ccw	V I		
Comments:														
N/A														
										<u> </u>				
Results:	Acc	ept 🗌	Rejec	t 🔽	Info [3	Winston Bull Lev	el II 5/3/10	L		>- L	25		
Percent Of Co	overage	Obtained	> 90%:		No		Reviewed Previou	us Data:	Yes					
Examiner	Level j		7)	/s	ignature _		Date	Reviewer			Signa	ature		Date
Griebel, David				/			5/3/2010	Y) c	Houses				5-15	-10
*	Level	I-N	11	S	ignature		•	Site Review	J(Signa	ature		Date
Tucker, David		_//		- luci			5/3/2010	AND Day's			<u> </u>			Dete
1	Level (··	,,,,	ی م	ignature Nau	11.		ANII Review		with	Signa	ature S	/19/10	Date
Mauldin, Larry	, E.		M,		((CL)	war	. 0,0,20,10					7	11/10	·

Energy.

UT Vessel Examination

Site/Unit:		Oconee		2				Procedure: _	NDE-82	0		Outage No.:	nge No.: 02-24				
Summa	ry No.:	02	2.B3.110	.0003			Proc	edure Rev.:	5			Report No.:	UT-1	0-447			
Work	scope:		ISI				Work	Order No.:	0186977	76		Page:		of <u>9</u>	<u> </u>		
Code:		1998/20	00A			Cat./item	:B-D /	B3.110	Location								
Drawing No.:		IS	I-OCN2	-002			Description	: Nozzle to h	lead	<u></u>	-						
System ID:	50																
Component ID:	2-PZR	-WP33-3			······································				Size/Length:	N/A	Thic	ckness/Diame	eter: 4.75	0/6.875	5/CS		
Limitations:	Yes -	See Attac	hed Lin	nitation	Sheet				Si	art Time:	1052	Finish T	ime:	1233			
Examination S	Surface:	Insid	le 🗌	Ou	tside 🔽]	Surface Co	ondition: AS	GROUND								
Lo Location:		9.2	3		WoL	ocation:	Centerline	of Weld	Couplant:	ULTRAG	EL II	_ Batch No	».:	09125			
Temp. Tool M	fg.:	Ľ	itron		Se	erial No.:	MCNDE3	2804	Surface Temp.	:73	°F						
Cal. Report No	o.:						CAL-10-547, 548	, 549			 						
Angle Used	0	45	45T	60	60T	•]										
Scanning dB		63.0	63.0	70.0	70.0	71.7											
Indication(s):	Yes	☐ No	· 🗹		•	·*····································	Scan Coverage:	Upstream [Downstream 🔽	g cw ⊊	CCW	/ ②					
Comments:			1														
* 60° near sui	rface ex		on. Si														
Results:	Acc	cept 🗌	Reje	ect 🗹	Inf	· 🗆	Winston Bull	Level II 5/3/1	0 <i>by</i>		13		<u> </u>				
Percent Of Co	verage	Obtained	> 90%:	,	No		Reviewed Pre	evious Data:	Yes				=				
Examiner l Griebel, David	_evel M.	I-N)	/, ,		Signatur	é	Da 5/3/20	ate Reviewer	/VI>//	es	Sign	ature	5-1	5-10	Date		
1	_evel [i-N //	1 1		Signatur	е		ate Site Revie	W		Sign	ature			Date		
Tucker, David		hla	y!/C	1 week	Signatur	<u></u>	5/3/20	10 ate ANII Revie	3144		C:AA	ature			Date		
Mauldin, Larry	.evel j	I-N Ca	 کا مرا	<i>~ ` ^</i>	Clu	- 4	5/3/20	1	:W	-10	Sign	iatule	5/17/	p	Date		
<u> </u>		- 600	~//~			<u> </u>	· · · · · · · · · · · · · · · · · · ·			7-			7				

DUKE POWER COMPANY												
** ISI LIN	MITATION REPORT											
Component/Weld ID: 2PZR-WP-33-3	Item No: <u>O2.B3.110.0003</u>	remarks:										
⋈ NO SCAN SUR	FACE BEAM DIRECTION	Due to nozzle configuration										
☐ LIMITED SCAN ☐ 1												
FROM L N/A to L N/A	INCHES FROM W0 1.75" to Beyond											
ANGLE: 🛛 0 🖾 45, 🖂 60 other	FROM <u>0</u> DEG to <u>360</u> DEG											
☐ NO SCAN SUR	FACE BEAM DIRECTION											
☐ LIMITED SCAN ☐ 1	2 1 2 cw ccw											
FROM L to L	INCHES FROM W0 to											
ANGLE: 0 45 60 other	FROM DEG to DEG											
☐ NO SCAN SUR	FACE BEAM DIRECTION	·										
☐ LIMITED SCAN ☐ 1	2 1 2 cw ccw											
FROM L to L	INCHES FROM W0 to											
ANGLE: 0 0 45 60 other	FROM DEG to DEG											
☐ NO SCAN SUR	FACE BEAM DIRECTION											
☐ LIMITED SCAN ☐ 1	2 1 2 cw ccw											
FROM Lto'L	INCHES FROM W0 to	Sketch(s) attached										
	FROM DEG to DEG											
Prepared By: David Griebel	Level: II Date: 05/03/10 Shee	t 2 of 9										
Reviewed By: A Tousen	Date: 5.15.10 Authorized Inspector:	Date: \$17/10										

Summary No.: 02.B3.110.0003

Examiner: Griebel, David M.

Examiner: Tucker, David K.

Other: Mauldin, Larry E.

Supplemental Report

Level: II-N

Level: II-N

II-N

Level:

Reviewer:

Site Review:

ANII Review:

ATTACHMENT B PAGE # OF #

Report No	01-10-447
Page:	3 of #9
	Get 5-15-10
 IT	Date: 5/13/10
	Date:

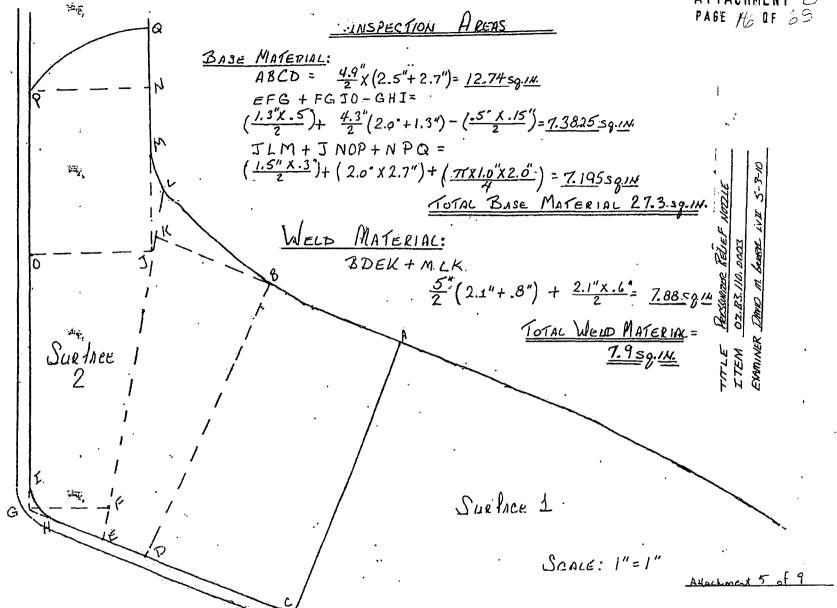
Date: 5/19/1

Comments: See attachments 1-5 for graphic plotting of coverage.

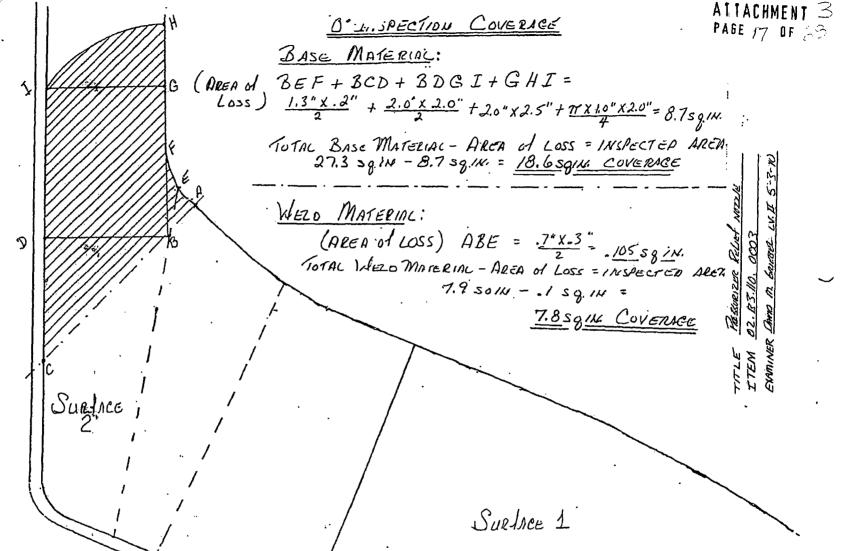
Sketch or Photo:

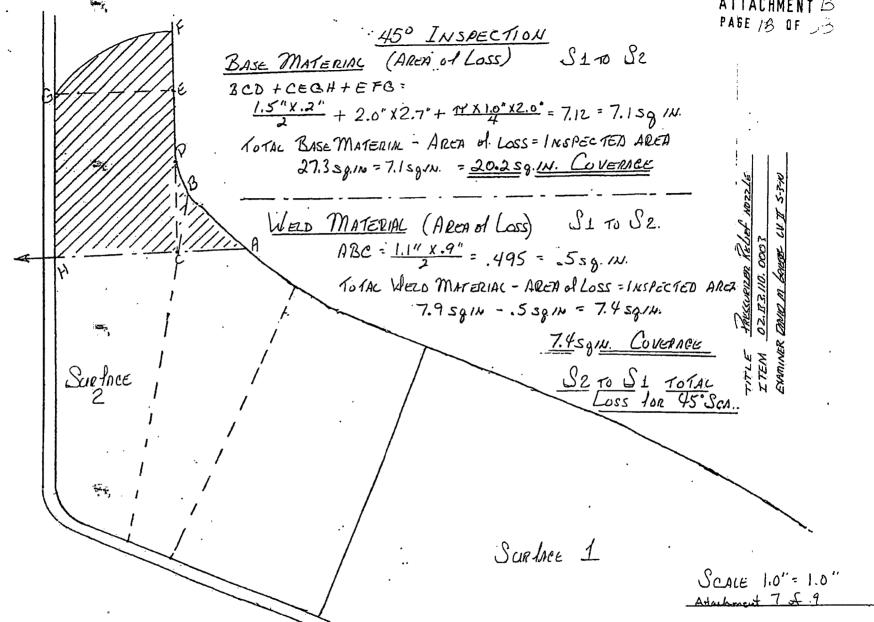
	Pressurizer Relief Nozzle
	Item No. 02.B3.110.0003 / Weld No. 2-PZR-WP33-3
	Base Material Coverage
Scan	Coverage
0°	68.1%
45° Axial	74.0%
60° Axial	78.4%
45° CW/CCW	63.0%
60° CW/CCW	63.0%
	Aggregate @ 68.1 + 74.0 + 78.4 + 63.0 + 63.0% = 346.5/5 = 69.3%
	Weld Material Coverage
Scan	Coverage
0°	98.7%
45° S1 Axial	93.7%
45° S2 Axial	0.0%
45° CW	92.4%
45° CCW	92.4%
60° S1 Axial	96.2%
60° S2 Axial	0.0%
60° CW	92.4%
60° CCW	92.4%
Aggregate	@ 98.7+ 93.7+ 0.0 + 92.4+ 92.4+ 96.2+ 0.0 + 92.4+ 92.4= 658.2/9 = 73.1%
1	Total Aggregate @ 69.3 + 73.1 = 142.4/2 = 71.2%

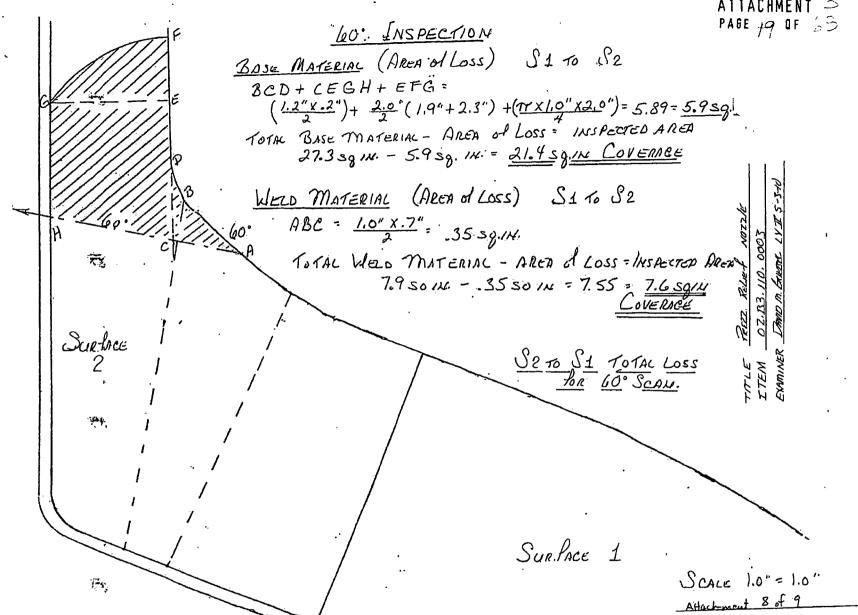
Date 5/13/10



SCALE 1.0"= 1.0"







Scale 1.0"=1.0"

Attachment 9 of 9

UT Vessel Examination



Site/Unit:		Ocones /	2		Proc	cedure:	NDE-640		Outage No.: O2-24				
Summai	y No.:	Ó2.B3.110	0.0005		Procedure	e Rev.:	5		Report N	o.: U	T-10-45	0	
Works	scope:	ISI			Work Ord	er No.:	01869776		Pa	ge: 1	of _	1	
Code:		1998/2000A		Cat./Item:	B-D /B3,1	10	Location:						
Drawing No.:		ISI-OCN2	-002		Description: N	ozzie to He	ad						
System ID:	50 *	19 日本											
Component ID:	2-PZR	-WP33-1					Size/Length:	N/A	Thickness/Di	ameter:	4.750/6.8	375/CS	
Limitations:	Yes -	See Attached UT	Report U1	-10-451			Sta	t Time: 1	029 Finis	h Time:	105	i1	
Examination S	urface:	Inside [Outsid	Je √	Surface Condit	ion: AS G	ROUND						
Lo Location:		9.2.3		Wo Location:	Centerline of W	eld	Couplant:	ULTRAGEL I	I Batch	No.:	0912	25	
Temp. Tool Mf		Lutron		Serial No.:	MCNDE32804	<u> </u>	Surface Temp.:	73	°F				
Cal. Report No).; <u> </u>				CAL-10-550								
Angle Used Scanning dB Indication(s): Comments:	0 42.7 Yes		60 6	0T	Scan Coverage: Ups	itream []	Downstream ☑	cw ☑	ccw 🗹				
N/A Results:		-	ect ☑	Info 🗀	Winston Bull Leve		ask						
Percent Of Co	verage	Obtained > 90%:		No	Reviewed Previou	s Data:	Yes						
Examiner L Griebel, David	evel (I-N D	Sig	nature	Date 1 5/3/2010	Reviewer	Extruses	1	Signature	5.	-15-1	Date	
Examiner L Tucker, David	.evel l K.	I-N.	Sig	nature	Date 5/3/2010	Site Review	,		Signature			Date	
Other L Mauldin, Larry	evel (I-N FOLLY		nature Nocular		ANII Reviev	(Min	w -	Signature	0/19	10	Date	

Denergy.

UT Vessel Examination

Sit	e/Unit: Ocohee 75	2	Procedure:	NDE-820	Outage No.: 02-24		
Summa	ry No.: 02.B3.110	.0005	Procedure Rev.:	5	Report No	.: UT-10-451	
Works	scoper 😉 🔐 📆 ISI		Work Order No.:	01869776	Pag	e: 1 of 9	
Code:	1998/2000A	Cat./Item	: B-D /B3.110	Location:			
Drawing No.:	ISI-OCN2-	002	Description: Nozzle to I	Head			
System ID:	50	_					
Component ID:	2-PZR-WP33-1			Size/Length: N/A	Thickness/Dia	meter: 4.750/6.875/CS	
Limitations:	Yes See Attaglied Lim	itation Sheet		Start Time:	1052 Finish	Time: 1233	
Examination S	y —	Outside 🗸	Surface Condition: AS	GROUND			
Lo Location:	9.2.3	Wo Location:	Centerline of Weld	Couplant: ULTRA	GEL II Batch I	No.: <u>09125</u>	
Temp. Tool Ma	g.: <u>Lutron</u>	Serial No.:	MCNDE32804	Surface Temp.: 73	*F		
Cal. Report No	o.:		CAL-10-547, 548, 549				
Angle Used	0 45 45T	60 60T ·	1				
Scanning dB	63.47 783.0	70,0 70,0 71,7					
Indication(s):	Yes No 🗸		J Scan Coverage: Upstream ☐	Downstream ✓ CW	☑ ccw ☑		
Comments:			Scan Goverage. Opsileani	DOWNStream & OW	6 0011 6		
	face examination						
	1	•					
Results:	Accept 🗍 Reje	ct 📝 💮 Info 🗀	Winston Bull Level II 5/3/1	· M	137	<u> </u>	
Percent Of Co	verage Obtained > 90%:	No	Reviewed Previous Data:	Yes			
Examiner L	evel II-N	Signature	Date Reviewer	ns 11	Signature	Date	
Griebel, David	// //	1	5/3/2010	H A tripes		5-15-10	
	evel II-N	Signature	Date Site Revie	ew	Signature	Date	
Tucker, David Other	evel II-N	Signature	5/3/2010 Date ANII Revi	ew -	Signature	Date	
Mauldin, Larry	The second secon		5/3/2010		J. Oignature	5/19/10	
							

DUKE POWER COMPANY										
.,,	ISI LIMITATION REPORT									
Component/Weld ID: 2RZR-WP-	33-1 Item No: O2.B3.110.0005	remarks:								
⊠ NO SCAN	SURFACE BEAM DIRECTION	Due to nozzle configuration								
LIMITED SCAN AND	☐ 1									
FROM L N/A TOPE N/A	INCHES FROM W0 .5" to Beyond									
ANGLE: 図 0 図 45 図 60	other FROM 0 DEG to 360 DEG									
☐ NO SCAN	SURFACE BEAM DIRECTION									
☐ LIMITED SCAN	SURFACE BEAM DIRECTION 1 2 1 2 cw ccw									
FROM L	INCHES FROM W0 to									
ANGLE: 0 45 0 60	other FROM DEG to DEG									
☐ NO SCAN	SURFACE BEAM DIRECTION									
☐ LIMITED SCAN : #	1 2 1 2 cw ccw									
FROM L TO TO LET	INCHES FROM W0 to									
	other FROM DEG to DEG									
☐ NO SCAN	SURFACE BEAM DIRECTION									
LIMITED SCAN	1 2 1 2 cw ccw									
FROM Lto L	to to	Sketch(s) attached								
ANGLE: 0 0 45 1 60										
Prepared By: David Griebiel	Level: II Date: 05/03/10 Sheet	2 of 9								
Reviewed By:	Date: 5-15-10 Authorized Inspector.	Date: 5/19/10								

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Supplemental Report

Level: II-N

ATTACHMENT B

Report No.: UT-10-451

Page: 3 of A9

11

Summary No.:	O2,B3.140.0005			1
Examiner:	Griebel, David M.	Level: II-N	Reviewer:	Marid X 3
· Examiner:	Tucker, David K.	Level: II-N	Site Review	

Site Review:

Date: 4/9/10

Comments: See attachments 1-5 for graphic plotting of coverage.

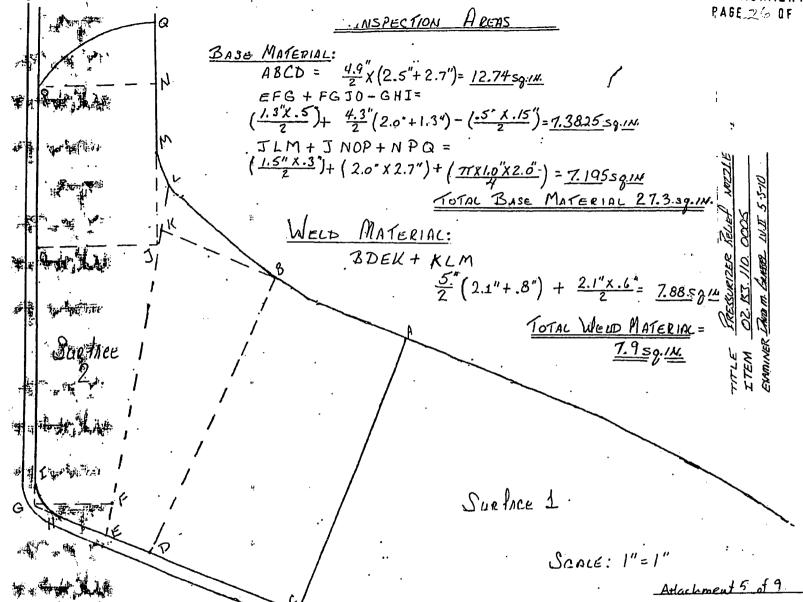
Sketch or Photo:

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To the second

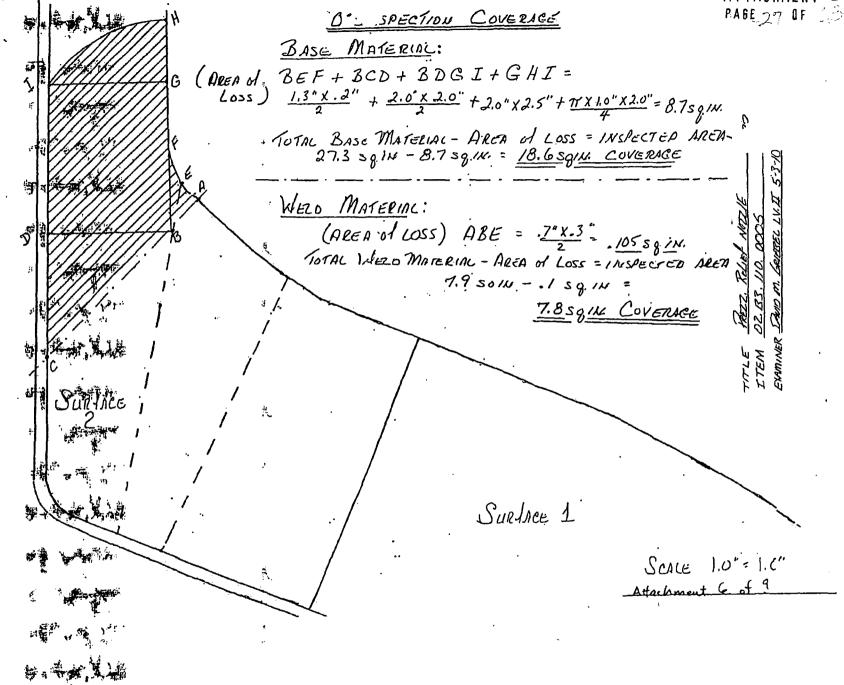
	Pressurizer Relief Nozzle							
	Item No. 02.B3.110.0005 / Weld No. 2-PZR-WP33-1							
	Base Material Coverage							
Scan	Coverage							
0°	68.1%							
45° Axial	74.0%							
60° Axial	78.4%							
45° CW/CCW	63.0%							
60° CW/CCW	63.0%							
	Aggregate @ 68.1 + 74.0 + 78.4 + 63.0 + 63.0% = 346.5/5 = 69.3%							
	Weld Material Coverage							
Scan	Coverage							
0°	98.7%							
45° S1 Axial	93.7%							
45° S2 Axial	0.0%							
45° CW	92.4%							
45° CCW	92.4%							
60° S1 Axial	96.2%							
60° S2 Axial	0.0%							
60° CW	92.4%							
60° CCW	92.4%							
Aggregate	@ 98.7+ 93.7+ 0.0 + 92.4+ 92.4+ 96.2+.0.0 + 92.4+ 92.4= 658.2/9 = 73.1%							
	Total Aggregate @ 69.3 + 73.1 = 142.4/2 = 71.2%							

evel III David K. 3 TII



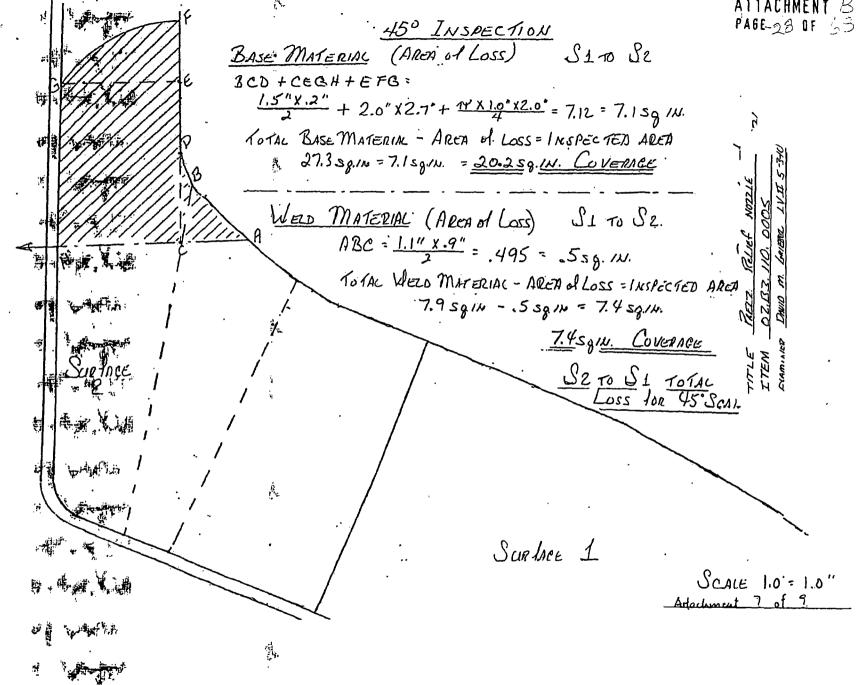
ķ. .

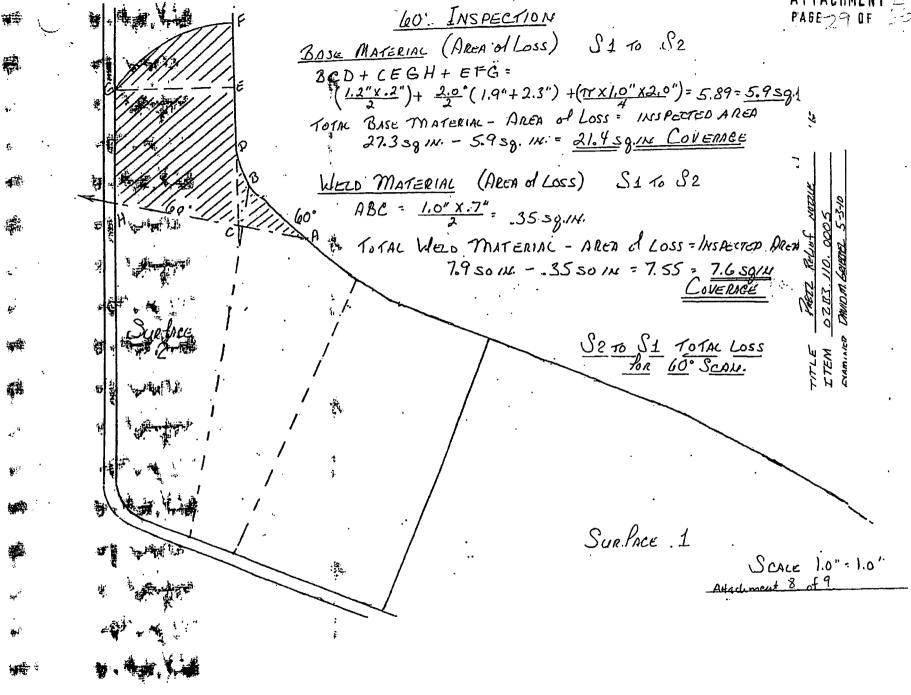
₩.

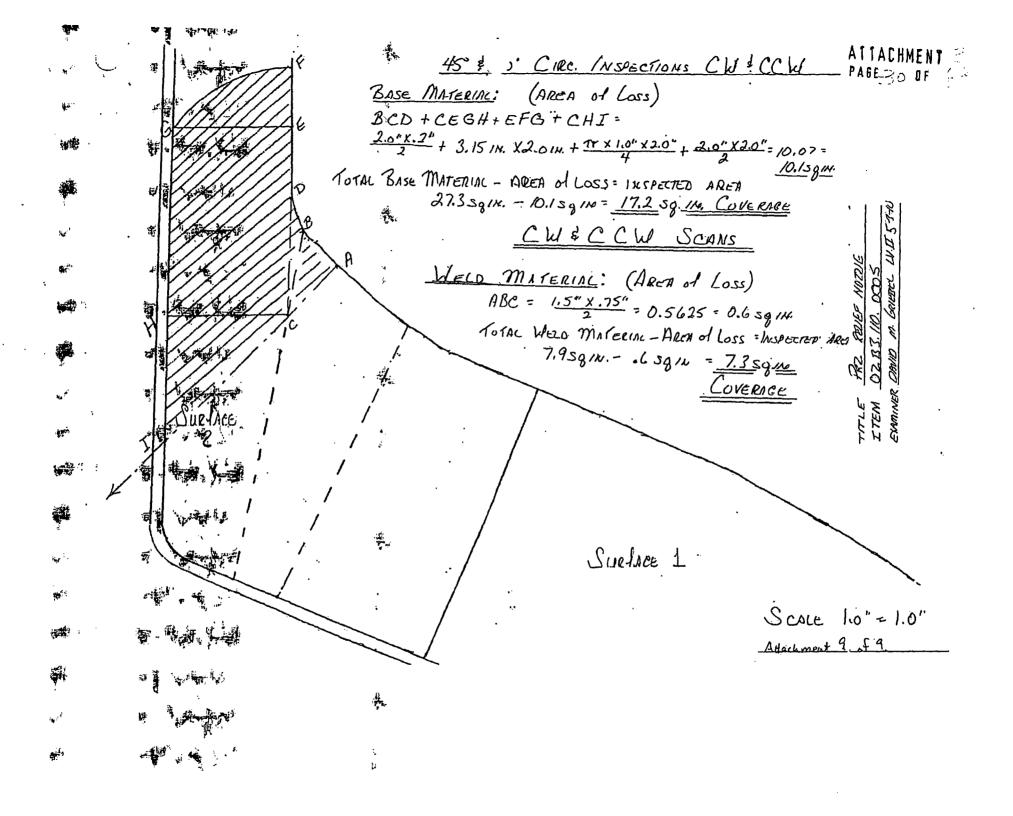


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(4)

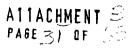








UT Pipe Wend Examination



Site/Unit:		Oconee	1				Pro	cedure:	PDI-U	JT-2		Out	age No.: _		2-24	
Summa	ary No.:		02.B9.11	.0046			Procedur	e Rev.:	С	;		Re	port No.:	UT-	10-499	
Wor	kscope:		ISI			Work Order No.:		01869982			Page:		1	of _	<u>+</u>	
Code:		1998			(Cat./Item:	tem: B-J /B9.11		Location	on:						
Drawing No.:		IS	I-OCN2-	007			Description: C	asing to Sa	fe End							
System ID:	50															
Component ID:	2-PIA1-	-8							Size/Length	n:	N/A	Thickn	ess/Diamet	er: 2.	33/33.5()/SS
Limitations:	See lim	itation r	eport							Start Ti	me:	1105	Finish Tir	ne:	1145	
Examination S	Surface:	Insid	ie 🗌	Out	tside 🔽		Surface Cond	ition: AS G	ROUND							
Lo Location:	-	9.1.	1.2		Wo Loca	tion:	Centerline of V	Veld	Couplant:	U	LTRAGEL	. U	Batch No.	:	09125	<u>. </u>
Temp. Tool M	lfg.:	L	utron		Serial	No.:	MCNDE3280)4	Surface Ter	mp.:	74	° F				
Cal. Report N	o.:				CAL-	10-617, 61	8, 619			_						
Angle Used	0	45	45T	60	60L]									
Scanning dB		44.7	44.7	62.9	95.0											
Indication(s):	Yes [∀			Sca	n Coverage: Up	stream 🗹	Downstream	n 🗌	cw ☑	ccw 🔽	2			
Comments:																
FC 08-04, 09-	-02, 09-0	8, 10-09														
Results:	Accept [⊓ R	eject 🔽		Info 🗌	j	nitial Section XI	Exam								
Percent Of Co		_	_		No	-	Reviewed Previou		No						-	
						_										
i .	Level II	-N	1	1	Signature			Reviewer	10	<u> </u>		Signati	ure			Date
Tucker, David		_K[]	and !	Suc	Signature		5/16/2010 Date	Site Review		100	<u> </u>	Signate	ITO .		5-18-1	Date
Examiner Hollis, Jacob	Level []		of 12	_ //			5/16/2010	OILE LICAIEM	, , (Olgitali	JI G			Date
<u> </u>	Level N	K.			Signature			ANII Reviev	ν			Signate	ıre		, .	Date
N/A										Elen.	<u></u>			5//	2/10	

ATTACHMENT B

Di	JKE POWER COMPANY	
· · · · · · · · · · · · · · · · · · ·	ISI LIMITATION REPORT	
Component/Weld ID: 2PIA1-8	Item No: <u>O2.B9.11.0046</u>	remarks:
⊠ NO SCAN	SURFACE TELL BEAM DIRECTION	Single sided pipe to pump
☐ LIMITED SCAN	⊠ 1 □ 2 図 1 図 2 図 cw 図 ccw	casing configuration.
FROM L NA to L NA	INCHES FROM WO CL to Beyond	
ANGLE: 0 8 45 8 60	other FROM 0 DEG to 380 DEG	
☐ NO SCAN	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN	1 2 1 2 cw ccw	
FROM L COL	INCHES FROM W0to	
	other PEG to DEG	
□ NO SCAN	SURFACE BEAM DIRECTION	
LIMITED SCAN	1 1 2 1 1 2 cw ccw	
FROM Lto L	INCHES FROM W0 to	
	other DEG to DEG	;
☐ NO SCAN	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN	1 2 1 2 cw ccw	UT-10-481
FROM Lto L	INCHES FROM WO	Sketch(s) attached
ANGLE: 0 0 45 0 60	other FROM DEG to DEG	⊠ yes ☐ No
Prepared By: David Tucker	Level: Date: 05/18/10 Shee	t 2 of 4
Reviewed By: Parial 3	Date: Authorized Inspector:	Date:



Suppleme....al Report

ATTACHMENT PAGE 33 OF

UT-10-499 Report No.:

> 3 of 4 Page:

Summary No.: **Q2.B9.11.0046**

Examiner: Tucker, David K.

Examiner: Hollis, Jacob

Other: N/A

Level: II-N

Level: N/A

Level: II-N

Reviewer:

Site Review: ANII Review:

Date:

Date: 5/18/10

Comments:

Sketch or Photo:

AREA OF INTEREST

ABCD: 3.7in x . 93in = 3.4in

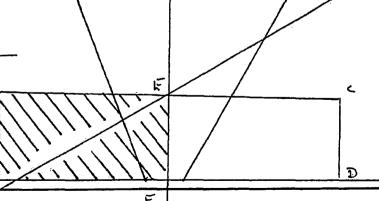
COVERACTE (52, Cul, CCM)

EFCD: 1.85in x .93in = 1.7in 7

1.7in/3.4in (100) = 50%

A

31-CASING
B



PIPE - 52

SCHE: FULL



Determination of Percent Coverage for UT Examinations - Pipe

	conee /			ure:	PDI-UT-2	Outage N	
ummary No.:	O2.B9.1	1.0046	Procedure R	ev.:	C	_ Report N	io.: UT-10-49
Workscope:	IS		Work Order I	No.:	01869982	Pa	ge: 4 of .
45 deg							
Scan 1	····	% Length X		% volume o	of length / 100 =		% total for Sca
Scan 2		% Length X		% volume o	of length / 100 =		% total for Sca
Scan 3	100.000	% Length X	50.000	% volume o	f length / 100 =	50.000	— _ % total for Sca
Scan 4	100.000	% Length X	50.000	% volume o	 f length / 100 =	50.000	 % total for Scar
Other deg -		(to be used for a		•	e 45 deg scans.		
The data to I	be listed below	v is for coverage t	hat was not obt	ained with th	-		
Other deg -		·	hat was not obt	ained with th	e 45 deg scans. of length / 100 =	0.000	% total for Sc
Other deg - The data to I	be listed below	v is for coverage t	hat was not obt	ained with th	-	0.000 50.000	% total for Sc% total for Sc.
Other deg - The data to I	be listed below	v is for coverage t	hat was not obt	ained with th _ % volume _ % volume	of length / 100 =	· · · · · · · · · · · · · · · · · · ·	
Other deg - The data to I Scan 1 Scan 2	be listed below	w is for coverage t % Length X % Length X	hat was not obt	ained with th % volume % volume % volume	of length / 100 = of length / 100 =	· · · · · · · · · · · · · · · · · · ·	% total for Sc
Scan 1 Scan 2 Scan 3 Scan 4 Percent com	100.000 100.000	% Length X % Length X % Length X % Length X % Length X	0.000 50.000	ained with th % volume % volume % volume % volume	of length / 100 = of length / 100 = of length / 100 = of length / 100 =	· · · · · · · · · · · · · · · · · · ·	% total for Sc



UT Pipe Weiu Examination



S	ite/Unit:	Ocone) /	2			Pro	cedure:	NDE-830		Outa	ige No.:	02-24	
Summ	ary No.:)2.B9.11	.0046			Procedu	re Rev.:	1		Rep	ort No.:	UT-10-49	98
Wor	kscope:		ISI				Work Or	der No.:	01869982			Page: <u>1</u>	of	3
Code:		1998				Cat./Item:	B-J /B9.	11	Location:					
Drawing No.:		IS	I-OCN2-	007			Description: C	Casing to Sat	fe End					
System ID:	50													
Component ID:	2-PIA1-	·8							Size/Length:	N/A	Thickne	ss/Diameter:	2.33/33	3.50/SS
Limitations:	Yes - S	ingle sid	led exan	n. See li	mitation s	heet.			Sta	rt Time:	1310	Finish Time:	13	35
Examination 5	Surface:	Insid	ie 🗌	Out	side 🗹		Surface Cond	ition: AS GF	ROUND					
Lo Location:		9.1.	1.1		Wo Loca	tion:	- Centerline of V	Veld	Couplant:	ULTRAGEI	_ !!	Batch No.: _	09	125
Temp. Tool M	lfg.:	<u> </u>	utron		Serial	No.:	MCNDE3280)4	Surface Temp.:	66	_°F			
Cal. Report N	o.:	•			CAI	10-615 8	616							
Angle Used	0	45	45T	60	60T	70]							
Scanning dB				57.6	61.9	73.0	1			•				
Indication(s):	Yes [7 No			<u> </u>	Sca	n Coverage: Up	stream 🔲	Downstream ✓	cw ☑	ccw 🗹			
Comments:		_	_											
Non- code ex Scanned at r		70°T=73. e level di	-	nal noi:	se ratio.									
Results:	Accept [] R	eject 🗀		Info 🛂	11	nitial Section XI	Exam						
Percent Of Co	verage C	Obtained	> 90%:		No	_	Reviewed Previou	ıs Data:	No	•				
Examiner Griebel, David	Level II	-N	1)		Signature)		Reviewer	Q 9	W. Call	Signatu	·e	ن د	Date
	Level II.		<u> </u>	10	Blodainte's	7 11/1	5/15/2010	Site Review	7 40 100	n. ged	Signatu	'A		77-70 Date
Hendrickson,						1	\$/15/2010	Cho I CHICH	V	`	O.G.I.a.C.	•		5410
Other	Level N		Jeff or	190	Signature	(ANII Review			Signatur			Date
N/A								<u> </u>	-	Engl	<u> </u>		<u> 5/17</u>	10

DU	DUKE POWER COMPANY									
]	ISI LIMITA	ATION REI	PORT							
Component/Weld ID: 2-PIA1-8		Item No: O2	.B9.11.0046		remarks:					
⊠ NO SCAN	⋈ NO SCAN SURFACE BEAM DIRECTION									
☐ LIMITED SCAN	□ 1 ∅	2 🛭 1	☐ 2 ☐ cv	v 🗌 ccw	cast side only.					
FROM L N/A to L N/A	INC	CHES FROM W	0 <u>CL</u> to	Beyond						
ANGLE: □ 0 □ 45 ⊠ 60	other 70°	FROM _C	DEG to	360 DEG						
⊠ NO SCAN	SURFACE	BE	AM DIRECTIC)N	Procedure allows sca	anning from				
☐ LIMITED SCAN	□ 1 ∅	2 🗌 1	☐ 2 ☐ cv	v 🛭 ccw	cast side only.	:				
FROM L N/A to L N/A	INC	CHES FROM W	O CL to	Beyond						
ANGLE: □ 0 □ 45 ⊠ 60	other 70°	FROM _C	DEG to	360 DEG						
☐ NO SCAN	SURFACE	BE	AM DIRECTIC)N						
☐ LIMITED SCAN	□ 1 □	2 🗌 1	☐ 2 ☐ cv	v 🗌 ccw						
FROM L to L	INC	CHES FROM W	0 to							
ANGLE: 0 45 60	other	FROM _	DEG to	DEG						
☐ NO SCAN										
☐ LIMITED SCAN	□ 1 □	2 🗌 1	☐ 2 ☐ cv	v 🗌 ccw						
FROM L to L	INC	CHES FROM W	0 to		Sketch(s) atta	ched				
ANGLE: 0 45 60	other	FROM _	DEG to	DEG	⊠ yes	☐ No				
Prepared By: David Griebel	Leve	l: II Date:	05/15+/10	Shee	t <u>2</u> of <u>3</u>					
Reviewed By: ans. M. Oul	Date	: 5-17-10	Authorized Insp	pector:	forett [Date: 5/17/16				



Supplemental Report

PAGE 37 OF 60

Report No.:

Page: 3 of 3

Summary No.: 02.B9.11.0046

Other: N/A

Examiner: Griebel, David M. Examiner: Hendrickson, Matthew

Level: II-N II-N Level:

Level: N/A

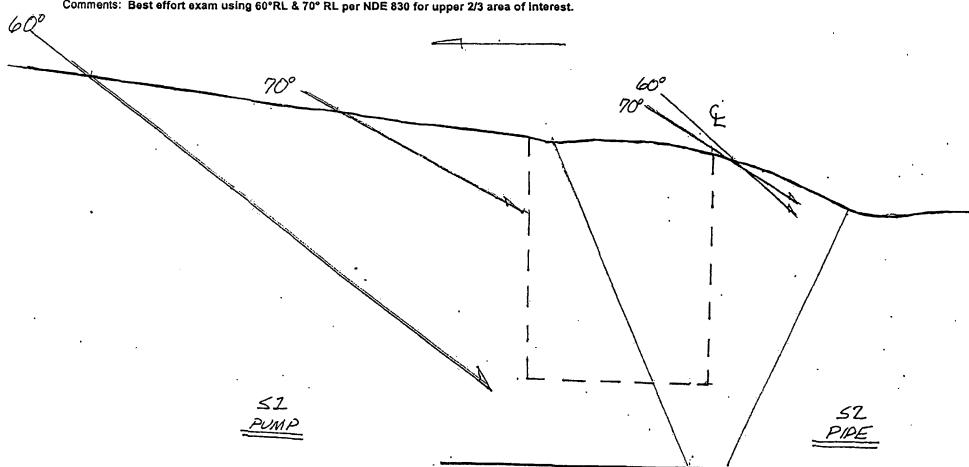
Reviewer: Site Review: ANII Review:

Date: 517-10

Date:

Date: 5/17/10

Comments: Best effort exam using 60°RL & 70° RL per NDE 830 for upper 2/3 area of interest.



UT Pipe Werd Examination



S	ite/Unit:	Ocone	e /	2			· Pro	cedure:	re: NDE-600		0	utage No.:	02-24	
Summa	ary No.:		02.B9.11	.0053			Procedu	re Rev.:	18		R	eport No.:	UT-10-480	
Worl	(scope:		ISI				Work Or	der No.:	01870	445		Page: 1	of <u>4</u>	_
Code:		199	3			at./Item:	B-J /B9.	11	Locatio	on:				
Drawing No.:		15	SI-OCN2	012			Description: (asing to Sa	afe End					
System ID:	50						_							
Component ID:	2-PDA2	<u></u>							Size/Length:	N/A	Thick	ness/Diameter:	2.33/33.5/	SS
Limitations:	Yes - S	ee attac	hed rep	ort						Start Time:	1247	Finish Time:	1308	
Examination S	urface:	Insi	de 🗌	Qu	side 🗹		Surface Cond	ition: AS G	ROUND					
Lo Location:		9.1	.1.1		Wo Locat	ión:	Centerline of V	Veld	Couplant:	ULTRAGE		Batch No.: _	09125	
Temp. Tool M	fg.:	L	utron		Serial	No.:	MCNDE3280)4	Surface Tem	np.: <u>66.2</u>	°F			
Cal. Report No	o.:				CAL-1	0-606, 607	& 608							
Angle Used	0	45	45T	60							}			
Scanning dB		60.7	72.2	67.8										
Indication(s):	Yes []. N	o 🛂			Sca	n Coverage: Up	stream 🔲	Downstream	CW ☑	ccw	☑		
Comments:														
N/A														
Results: A	ccept [) R	leject 🔽		Info 🔲	11	nitial Section XI	Exam						
Percent Of Co	verage C	btained	> 90%:		No	1	Reviewed Previou	ıs Data:	No					
Examiner (evel ().	N	Du	190	Signature Aduld	Les .	Date 5/13/2010	Reviewed	Jan 10	los	Signa	ture	5/18/10	Date
	_evel [].	-N	wing.		Signature	111		Site Review	V V		Signa	ture	2/00/10	Date
Hendrickson, I						VAT C	5/13/2010		· · · · · · · · · · · · · · · · · · ·					
Other I	evel N	/A		10	Signature		Date	ANII Revie		Swift	Signa	ture	5/18/10	Date

DU											
	ISI LIMITATION REPORT										
Component/Weld ID: 2-PDA2-1	Component/Weld ID: 2-PDA2-1 Item No: O2.B9.11.0053										
⊠ NO SCAN	SURFACE	BEA	AM DIRECTION		Limitation due to casing						
☐ LIMITED SCAN	□ 1 □ 2	⊠ 1 [. 2 🛭 cw [⊠ ccw	configuration.						
FROM L N/A to L N/A	INCH	IES FROM WO	CL to B	eyond							
ANGLE: □ 0 ⊠ 45 ⊠ 60	other 60L	FROM 0	DEG to36	0 DEG							
☐ NO SCAN	SURFACE	BEA	AM DIRECTION								
☐ LIMITED SCAN	□ 1 □ 2	□ 1 [2 cw [ccw							
FROM L to L	INCH	IES FROM WO	0 to								
ANGLE: 0 45 60	other	FROM	DEG to	DEG							
☐ NO SCAN	SURFACE	BEA	M DIRECTION								
☐ LIMITED SCAN	□ 1 □ 2	1 [2 cw [ccw							
FROM L to L	INCH	IES FROM WO) to								
ANGLE: 0 0 45 0 60	other	FROM	DEG to	DEG							
☐ NO SCAN	SURFACE	BEA	AM DIRECTION								
☐ LIMITED SCAN	<pre>1 1 2</pre>	1 [2 cw [ccw	UT-10-480						
FROM L to L	INCH	IES FROM WO) to		Sketch(s) attached						
ANGLE: 0 0 45 0 60	other	FROM	DEG to	DEG	⊠ yes ☐ No						
Prepared By: Larry Mauldin Court	Mendu Level:	Date:	05/40/40	Chas	t 2 of 4						
Reviewed By:	Date:	5/13/10	Authorized Inspecto	or:	Date: 4/1/10						

	0 -	Ö
1		JOY.

Supplemental Report

ATTACHMENT B PAGE 40 OF 59

Report No.:

UT-10-480

Page:

Summary No.: 02.B9.11.0053

Examiner: Mauldin, Larry E.

Examiner: Hendrickson, Matthew

Other: N/A

Q

Level:

Level:

N/A Level:

Reviewer: Site Review:

ANII Review:

Comments:

Sketch or Photo:

Surlace 2

600

TOTAL AREA ABCD-(CEFG+FGH) .9 x4.0-(2.0 x.2 + .2 x.6) = 3.6 - .46 = 3.14 = 3.17

EXAM COVERAGE ABCI - FGH $AX2.0 - \frac{.6 \times .2}{2} = 1.74 = 1.7^{2} IN.$

1.7 + 3.1 × 100 = 54.8 %

SURFACE

SCALE: FULL



Determination of Percent Coverage for UT Examinations - Pipe

Site/Unit:		2	Proced		NDE-600	Outage N	e	24
ummary No.:	O2.B9.1	1.0053	Procedure F	?ev.:	18	Report N	lo.: <u>UT-10</u>	-4 8
Workscope:	IS	<u> </u>	Work Order	No.:	01870445	Pa	ge: _4_ o	· -
<u>45 deg</u>								
Scan 1		% Length X		_ % volume	of length / 100 =		% total for S	car
Scan 2		% Length X		_ % volume	of length / 100 =	A	% total for S	car
Scan 3	100.000	% Length X	50.000	_ % volume	of length / 100 =	50.000	% total for S	caı
Scan 4	100.000	% Length X	50.000	_ % volume	of length / 100 =	50.000	% total for S	cai
			<u></u>					
Other de	<u>:q -</u> 60	(to be used for	supplemental s	scans)				
		_ (to be used for s	• •	*	he 45 deg scans.			
		- •	hat was not ob	otained with t	he 45 deg scans. e of length / 100 =	54.800	% total for	Sc
The data	to be listed belo	w is for coverage t	54,800	otained with the	-	54.800 0.000	% total for % total for	
The data	to be listed belo	w is for coverage t	54,800	otained with the state of the s	e of length / 100 =	·		Sc
The data Scan 1 Scan 2	to be listed belo	w is for coverage t % Length X % Length X	54.800 0.000	% volume % volume % volume	e of length / 100 =e of length / 100 =	·	% total for	Sc Sc

P Program

UT Pipe Werd Examination

S	ite/Unit:	Oconee /	2		Pro	cedure: _	NDE-830)	Outage	No.:	02-24	
Summ	ary No.:	O2.B9.1	1.0053	•	Procedur	e Rev.:	1		Report	No.:	JT-10-487	7
Wor	kscope:	IS	<u> </u>		Work Ord	der No.:	01870445	5	Page: <u>1</u>		of <u>3</u>	
Code:		1998		Cat./Item:	B-J /B9.	11	Location:					
Drawing No.:		ISI-OCN2-	012		Description: 0	asing to S	afe End					
System ID:	50											
Component ID:	2-PDA2	2-1					Size/Length:	N/A	Thickness/E	Diameter:	2.33/33	.5/SS
Limitations:	Yes-Si	ngle sided exam	. See limitatio	on sheet.			Sta	art Time: 1	241 Fin	ish Time:	131	5
Examination (Surface:	Inside [Outside	☑	Surface Condi	ition: AS G	ROUND					
Lo Location:		9.1.1.1	Wo	Location:	Centerline of V	Veld	Couplant:	ULTRAGEL	II Bate	ch No.: _	091	25
Temp. Tool M	lfg.:	Lutron		Serial No.:	MCNDE3280	4	Surface Temp.:	66	°F			
Cal. Report N	o.:			CAL-10-603 8	§ 604							
Angle Used	0	45 45T	60 60	T 70								
Scanning dB			57.6 61	.9 73.0								
Indication(s):	Yes [] No ☑		Sca	- ın Coverage: Up	stream 🔲	Downstream 🔽	cw 🗹	ccw 🗹			
Comments:												
Non- code ex Scanned at r		70°T=73.0 DB e level due to siç	gnal noise rat	io.								
Results:	Accept [☐ Reject 🔽	Info		nitial Section XI I	Exam						
Percent Of Co	verage C	Obtained > 90%:	No		Reviewed Previou	s Data:	No No					
Examiner Griebel, David	Level II.	-N / /n -	Signal	dre.	Date 5/13/2010	Reviewer	12 Jour	er	Signature	5	-15-1	O Date
Examiner N/A	Level N	I/A	Signat	ure	Date	Site Review			Signature			Date
	Level N	IA	Signat	ure	Date	ANII Revie	w A	and	Signature	4/1	7/10	Date
					·						,	

DU			
l I			
Component/Weld ID: 2-PDA2-1	Item No: O	2.B9.11.0053	remarks:
NO SCAN	SURFACE BI	EAM DIRECTION	Procedure allows scanning from
☐ LIMITED SCAN	□ 1 □ 2 □ 1		cast side only.
FROM L N/A to L N/A	INCHES FROM \	N0 CL to Beyond	
ANGLE: □ 0 □ 45 ⊠ 60	other 70° FROM	0 DEG to 360 DEG	
⊠ NO SCAN	SURFACE BI	EAM DIRECTION	Procedure allows scanning from
☐ LIMITED SCAN	□ 2 □ 1	☐ 2	cast side only.
FROM L N/A to L N/A	INCHES FROM \	V0 CL to Beyond	
ANGLE: □ 0 □ 45 ⊠ 60			
☐ NO SCAN	SURFACE B	EAM DIRECTION	
☐ LIMITED SCAN	□ 1 □ 2 □ 1	2 cw ccw	
FROM L to L	INCHES FROM \	V0 to	
ANGLE: 0 0 45 60	other FROM	DEG to DEG	
☐ NO SCAN	SURFACE B	EAM DIRECTION	
☐ LIMITED SCAN	□ 1 □ 2 □ 1	2 cw ccw	
FROM L to L	INCHES FROM V	W0 to	Sketch(s) attached
ANGLE: 0 0 45 0 60	other FROM	DEG to DEG	⊠ yes □ No
Prepared By: David Griebel	Xevel: Date		et 2 of 3
Reviewed By:	Date: 5 - 15 - 10	Authorized Inspector:	Sauch Date: \$17/p



Other: N/A

Supplemental Report

PASE 44 0F 45

Report No.: U' 487

Page: 3 of 3

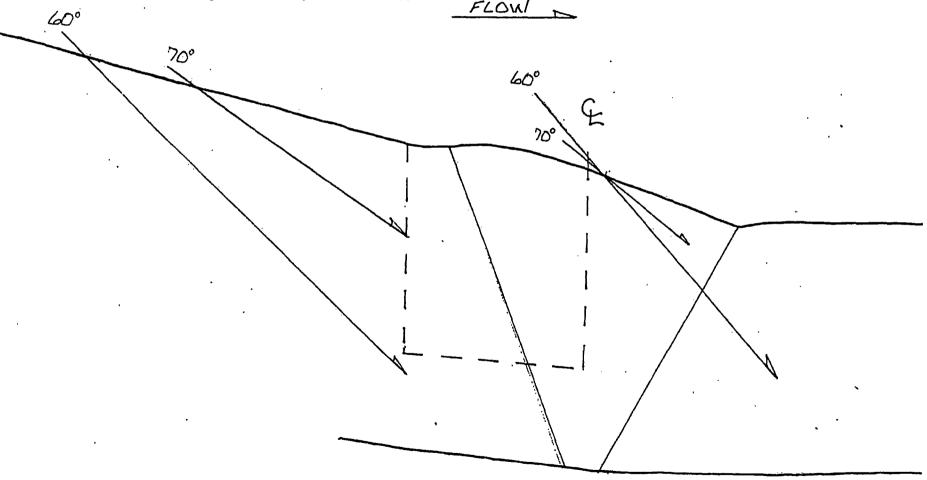
Summary No.:	O2.B9.11.0053	
Examiner:	Griebel, David M.	10/1//
Examiner:	N/A	

Level: II-N Reviewer:
Level: N/A Site Review:

Date: 5-15-10

. Level: N/A ANII Review: Date: \$/17/10

Comments: Best effort exam using 60°RL & 70°RL per NDE 830 for upper 2/3 area of interest.



<u>RLP</u> 52 PIPE S1





UT Pipe We.⊶ Examination



Mauldin, Larry E. Examiner Level II-N Hendrickson, Matthew Other Level N/A Signature Date Site Review Signature Date Site Review Signature Date ANII Review Signature Date ANII Review	S	ite/Unit:	Ocor	nee /	2	···		P	rocedure:	NDE-600		Ou	itage No.:	02-24	
Code:	Summ	ary No.:		O2.B9.1	1.0063			Proced	lure Rev.:	18		Re	eport No.:	UT-10-48	1
Drawing No.: ISI-OCN2-014 Description: Casing to Pipe Safe End System ID: 50 Component ID: 2-PDB2-1 Size/Length: N/A Thickness/Diameter: 2,33/33,50/SS Limitations: Yes - See attached sheet. Surface Condition: AS GROUND Lexamination Surface: Inside □ Outside ☑ Surface Condition: AS GROUND Lo Location: 9.1,1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: 09125 Temp. Tool Mfg.: Lutron Serial No.: MCNDE32804 Surface Temp.: 66.2 *F Cal. Report No.: CAL-10-506, 607 & 608 Surface Temp.: 66.2 *F Cal. Report No.: CAL-10-506, 607 & 608 Surface Temp.: 66.2 *F Cal. Report No.: CAL-10-506, 607 & 608 Surface Temp.: 66.2 *F Comments: No Scan Coverage: Upstream □ Downstream ☑ CW ☑ CCW ☑ Comments: N/A Initial Section XI Exam No Signature Signatur	Wor	kscope:	~~~~~~	18	1			Work C	Order No.:	0187055	2		Page:1	of _	4
System ID: 50	Code:		19	984, ,			Cat./Item:	B-J /B	9.11	Location:					
Component D: 2-PDB2-1	Drawing No.:			ISI-OCN2	-014			Description:	Casing to P	ipe Safe End					
Examination Surface: Inside	System ID:	50								-					
Examination Surface: Inside Outside Surface Condition: AS GROUND Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: 09125 Temp. Tool Mfg.: Lutron Serial No.: MCNDE32804 Surface Temp.: 66.2 *F Cal. Report No.:	Component ID:	2-PDB	2-1							Size/Length:	N/A	Thickn	ess/Diameter:	2.33/33.	50/SS
Lo Location: 9.1.1.1	Limitations:	Yes - S	ee att	ached she	et.					Sta	art Time:	1321	Finish Time:	134	2
Temp. Tool Mfg.: Lutron	Examination	Surface:	lr	nside 📋	Qu	tside 🗹		Surface Cor	ndition: AS C	ROUND					
Temp. Tool Mfg: Lutron Serial No.: MCNDE32804 Surface Temp.: 66.2 *F Cal. Report No.: CAL-10-606, 607 & 608 Angle Used 0 45 45T 60 60L Scanning dB 66.7 72.2 67.8 Colspan="2">Scan Coverage: Upstream □ Downstream ☑ CW ☑ CCW ☑ Comments: N/A Info □ Initial Section XI Exam Results: Accept □ Reject ☑ Info □ Initial Section XI Exam Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: No Examiner Level II-N Mauldin, Larry E. Augustus Signature Date Site Review Signature Signature Examiner Level II-N Hendrickson, Matthew Signature Date Site Review Signature Date Site Review Other Level N/A Signature Date ANII Review Signature Date Date ANII Review	Lo Location:		9			_ Wo Loca	ition:	Centerline of	f Weld	Couplant:	ULTRAGE	EL II	Batch No.: _	091	25
Angle Used	Temp. Tool M	lfg.:				Serial	No.:	MCNDE32	804	Surface Temp.:	66.2	°F			
Scanning dB 60.7 72.2 67.8 Indication(s): Yes No V Scan Coverage: Upstream Downstream V CW CCW V Comments: N/A Results: Accept Reject Info Initial Section XI Exam Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: No Examiner Level II-N Signature Date Reviewer Signature Date Site Review Signature Date	Cal. Report N	lo.:				CAL-1	0-606, 60	7 & 608							
Indication(s): Yes No No Scan Coverage: Upstream Downstream CW CCW CCW CCM Comments: N/A Results: Accept Reject Info Initial Section XI Exam Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: No Examiner Level II-N Signature Date Reviewer Signature Date Site Review Signature Date ANII Review Signature Date Signature Da	Angle Used	0	4	5 45T	60	60L]							
Comments: N/A Results: Accept □ Reject ☑ Info □ Initial Section XI Exam Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: No Examiner Level II-N Signature Date Reviewer Signature Date Reviewer Signature Date Hendrickson, Matthew Other Level N/A Signature Date ANII Review Signature Date Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Signature Date Signature Date Signature Date ANII Review Signature Date Sig	Scanning dB			60.7	72.2	67.8									
Results: Accept Reject Info Initial Section XI Exam Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: No Examiner Level II-N Signature Date Mauldin, Larry E. Examiner Level II-N Date Signature Date Site Review Signature Date Hendrickson, Matthew Signature Date ANII Review Signature Date Signature Date Signature Date ANII Review Signature Date Signature Date Signature Date Signature Date Signature Date ANII Review Signature Date Signatur	Indication(s):	Yes		No 🗸			Sca	n Coverage:	Jpstream 🗌	Downstream 🗸	cw 🗹	ccw [2		
Results: Accept Reject Info Initial Section XI Exam Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: No Examiner Level II-N Signature Date Reviewer Signature Date Remarks Signature Date Signature Date Reviewer Signature Date Signature Date Reviewer Signature Date Signature D	Comments:														
Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: No Examiner Level II-N Signature Date Signature Date Signature Date Hendrickson, Matthew Other Level N/A Signature Date ANII Review Signature Date ANII Review Signature Date Signa	N/A			F-% :											
Examiner Level II-N Signature Date Signature Date Mauldin, Larry E. Examiner Level II-N Signature Date Site Review Signature Date Site Review Signature Date Signature Date Site Review Signature Date ANII Review Signature Date Sign	Results:	Accept [Reject]	Info 🗀	i	nitial Section X	(I Exam						
Mauldin, Larry E. Examiner Level II-N Hendrickson, Matthew Other Level N/A Signature Date Site Review Signature Date Site Review Signature Date ANII Review Signature Date ANII Review	Percent Of Co	verage (Obtaine	ed > 90%:		No		Reviewed Previ	ous Data:	No					
Examiner Level II-N Signature Date Site Review Signature Site Review			-N	La			muld			N // //	Tons	Signat	ure	5/18/	, Date
Other Level N/A Signature Date ANII Review Signature Da	Examiner	Level I				Signature	11/	Date	e Site Revie		`	Signat	ure	-/-1	Date
				Ma	7/2	11/1		2		· · · · · · · · · · · · · · · · · · ·					
N/A 5/18/10	Other N/A	Level N	I/A			Signature		Date	e ANII Revie		with	Signat	ure 57	18/10	Date

DU	JKE POWE	ER COMPANY	
	ISI LIMITAT	TION REPORT	
Component/Weld ID: 2PDB2-1	lte	em No: <u>O2.B9.11.0063</u>	remarks:
	SURFACE	BEAM DIRECTION	Limitation due to casing
☐ LIMITED SCAN	□ 1	□ 1 □ 2 ☑ cw ☑ cc	w configuration.
FROM L N/A to L N/A	INCH	ES FROM W0 CL to Beyond	
ANGLE: □ 0 ⊠ 145 - ⊠ 60	other 60L	FROM 0 DEG to 360 D	EG
☐ NO SCAN	SURFACE	BEAM DIRECTION	
LIMITED SCAN	<pre>1</pre>	_ 1 _ 2 _ cw _ cc	w
FROM L to L	INCH	ES FROM W0 to	
ANGLE: □ 0 □ 45 □ 60	other	FROM DEG to DI	EG
☐ NO SCAN	SURFACE	BEAM DIRECTION	
LIMITED SCAN	□ 1 □ 2	☐ 1 ☐ 2 ☐ cw ☐ cc	w
FROM L to L	INCHI	ES FROM W0 to	
ANGLE: 0 45 60	other	FROM DEG to DI	EG
☐ NO SCAN	SURFACE	BEAM DIRECTION	
☐ LIMITED SCAN	<pre>1</pre>	1 2 cw cc	W UT-10-481
FROM Lto L	INCH	ES FROM W0 to	Sketch(s) attached
ANGLE: 0 0 45 0	other	FROM DEG to DI	
Prepared By: Larry Mauldin Aug.	Maudy Level:	II Date: 05/13/10	Sheet 2 of 4
Reviewed By: Jany Mon	Date:	S/18/10 Authorized Inspector:	Date: 5/18/10

4 8, 5

Supplemental Report

ATTACHMENT S PAGE 47 OF 33

Report No	.:	UT-10-48

Summary No.: O2.B9.11.0063

Examiner: Mauldin, Larry E.

Examiner: Hendrickson, Matthew

1 1

Other: N/A

ا :evėl: II-N

Zevel: II-N

Reviewer: Site Review:

ANII Review:

45°

Comments:

Sketch or Photo:

60°

1. TAL AREA ABCD-(CKJH+GHJ) .9 X4.0-(1.7 X.15+ .75x.25) = 3.08 = 3.17 N.

EXAM COVERAGE

ADEF-FGI

19 X 2.0 - 15 = 1.76 = 1.87 N.

1.8 = 3.1 x/00 = 58%

Surface 1

Surfice 2

SCALE: FULL



45 deg Scan 1 % Length X % volume of length / 100 = % total for S Scan 2 % Length X % volume of length / 100 = % total for S Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S	•	O2.B9.11		Procedur	e: NDE-600	_ Outage No	.: 02-24
45 deg Scan 1 % Length X % volume of length / 100 = % total for S Scan 2 % Length X % volume of length / 100 = % total for S Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S	kscope:		.0063	Procedure Rev	v.: <u>18</u>	Report No	.: <u>UT-10-481</u>
Scan 1 % Length X % volume of length / 100 = % total for S Scan 2 % Length X % volume of length / 100 = % total for S Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S		ISI		Work Order No	o.: 01870552	Page	e: _4 of _
Scan 1 % Length X % volume of length / 100 = % total for S Scan 2 % Length X % volume of length / 100 = % total for S Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S							
Scan 2 % Length X % volume of length / 100 = % total for S Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S	45 deg						
Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S	Scan 1		_ % Length X _		% volume of length / 100 =		% total for Scan
Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for S	Scan 2	<u> </u>	_ % Length X _		% volume of length / 100 =		% total for Scan
	Scan 3	100.000	_ % Length X _	50.000	% volume of length / 100 =	50.000	% total for Scan
Add totals and divide by # scans =50.000 % total for 45 deg	Scan 4	100.000	% Length X	50.000	% volume of length / 100 =	50.000	% total for Scan
The data to be listed below is for coverage that was not obtained with the 45 deg scans.	ine data	, to de iis ted bel ov	v is for coverage	tnat was not obta			
Scan 1 100.000 % Length X 58.000 % volume of length / 100 = 58.000 % total for	Scan 1	100.000	% Length X	58,000	% volume of length / 100 =	58.000	_ % total for Sca
Consider the second of the sec	Scan 2	100.000	% Length X	0,000	% volume of length / 100 =	0.000	_ % total for Sca
Scan 2 100.000 % Length X 0,000 % volume of length / 100 = 0.000 % total for	Scan 3		% Length X		% volume of length / 100 =		% total for Sca
	Scan 4	ļ	% Length X		% volume of length / 100 =		% total for Sca



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UT Pipe Wend Examination



8	Site/Únit:	Ocone)	2			Pro	ocedure: _	NDE-	-830		C	outage No.:		02-24	<u> </u>
	ary No.:	(02.B9.11	.0063			Procedu	re Rev.:	1			1	Report No.:		UT-10-4	86
Wor	kscope:		ISI	·			Work Or	der No.:	01870	0552			Page	_1	_ of	3
Code:		1998	3			Cat./Item:	B-J /B9.	.11	Location	on:						
Drawing No.:		is	r-ocn2-	014			Description:	Casing to Pi	pe Safe End							
System ID:	50															
Component ID:	2-PDB	2-1							Size/Length	:	N/A	Thick	(ness/Diam	eter:	2.33/3	3.50/SS
Limitations:	Yes-Si	ngle side	ed exam	. See lir	nitation sh	eet.			 .	Start 7	Γime:	1320	_ Finish	îme:	13	350
Examination	Surface:	Insid	de 🗌	Οψ	tside 🔽		Surface Cond	ition: AS G	ROUND							
Lo Location:		9.1.	1.1		Wo Loca	ation:	Centerline of V	Weld	Couplant:	-	ULTRAGE	LII	Batch N	o.: _	09	125
Temp. Tool M	lfg.;	-iL	utron		Seria	No.:	MCNDE3280	04	Surface Ter	np.: _	66	_ °F				
Cal. Report N	o.:				CA	L-10-603 &	604			_						
Angle Used	0	45	45T	60	60T	70										
Scanning dB				57.6	61.9	73.0										
Indication(s):	Yes [∀			Scar	r Coverage: Up	stream 🗌	Downstream	n 🔽	cw 🗹	ccw	$ \checkmark $			
Comments:																
Non- code ex Scanned at r		70°T≂73. e level du		nal noi:	se ratio.											
Results:	Accept [R	eject 🔽		Info 🗀	lr	itial Section XI	Exam								
Percent Of Co	verage C	obtained:	> 90%:		No	- -	Reviewed Previou	ıs Data:	No /							
Examiner Griebel, David	Level _{II} . I M.	N A)	1	Signature	<i></i>	Date 5/13/2010	Reviewer	12/Ja	100		Signa	ature	5	 5-75	Date 5-10
Examiner N/A	Level N	/A		7	Signature		Date	Site Review		THE R	*{	Signa	ature			Date
Other N/A	Level N	/A 🦹	î j		Signature		Date	ANII Review	v	3-	M	Signa	ature	5/	17/	Date

DU									
Yes IS	SI LIMITATION REPORT								
Component/Weld ID: 2-PDB2-1	Item No:	remarks:							
⊠ NO SCAN	SURFACE BEAM DIRECTION	Procedure allows scanning from							
☐ LIMITED SCAN	□ 1 □ 2 □ cw □ ccw □	cast side only.							
FROM L N/A to L N/A	N/A to L N/A INCHES FROM W0 CL to Beyond								
ANGLE: ☐ 0 ☐ 45	other 70° FROM 0 DEG to 360 DEG								
⊠ NO SCAN	SURFACE BEAM DIRECTION	Procedure allows scanning from							
☐ LIMITED SCAN	□ 1 □ 2	cast side only.							
FROM L N/A to L N/A	INCHES FROM WO CL to Beyond								
ANGLE: ☐ 0 ☐ 45 ⊠ 60	other 70° FROM 0 DEG to 360 DEG	•							
☐ NO SCAN	SURFACE BEAM DIRECTION								
☐ LIMITED SCAN E #	1 2 1 2 cw ccw								
FROM L to L	INCHES FROM W0 to								
ANGLE: 0 0 45 0 60	other PROM DEG to DEG	·							
☐ NO SCAN	SURFACE BEAM DIRECTION								
☐ LIMITED SCAN	1212cwccw								
FROM L1tô L	INCHES FROM WO to	Sketch(s) attached							
ANGLE: 0 0 45 0 60		⊠ yes ☐ No							
Prepared By: David Griebel		of _3							
Reviewed By: WE Journey	Date: 5-15-10 Authorized Inspector:	Date: 5/11/10							

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Supplemer 'al Report

ATTACHMENT =

Report No.: PASE 51 486 69

3 of 3 Page:

Summary No.: 02.B9.11.0063

Examiner: Grlebel, David M.

* **

Examiner: N/A

Other: N/A

Level: II-N

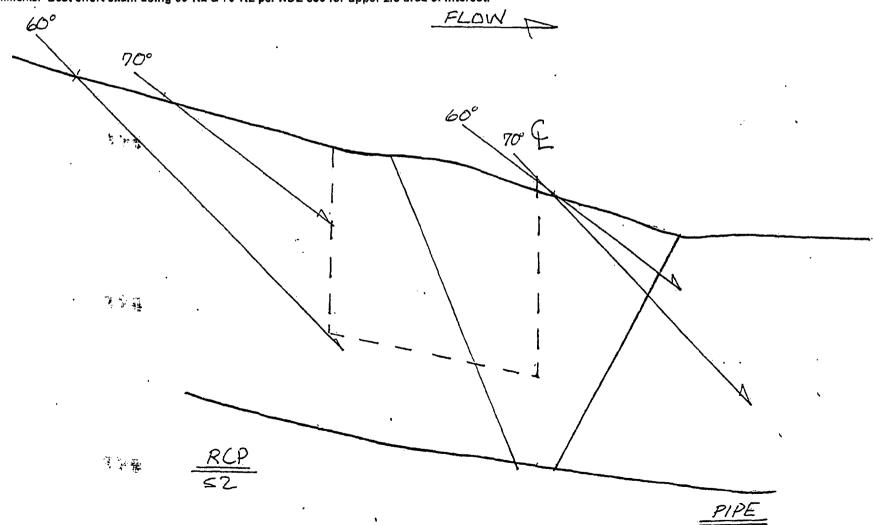
N/A Level:

Level: N/A

Reviewer:

Site Review: ANII Review: Date: 5-15-10

Comments: Best effort exam using 60°RL & 70°RL per NDE 830 for upper 2/3 area of interest.

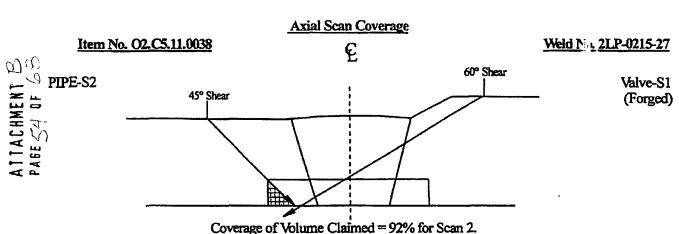


UT Pipe W₅.J Examination

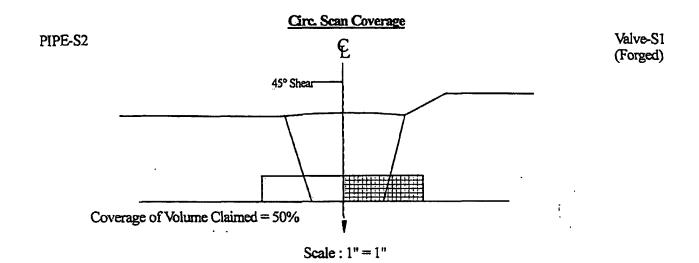


8	Site/Unit:	Uconee	<u> </u>	2			Pro	cedure:	PDI-U	T-2		C	Outage No.:	(02-24	*******
Summ	ary No.:	C	2.C5.11	.0038			Procedur	re Rev.:	С			F	Report No.:	UT	-10-466	
Wor	rkscope:		ISI				Work Ord	der No.:	01870	261			Page:	1	of _	4
Code:		1998				Cat./Item:	C-F-1/C5.	.11	Locatio	on:						
Drawing No.:		2	LP-215				Description: P	ipe to Valve	⊋ 2LP-177							
System ID:	53A															
Component ID:	2LP-215	5-27							Size/Length:	:	N/A	Thick	kness/Diame	ter:	1.0/10.0	/55
Limitations:	Yes - Se	e attacl	ned limi	tation s	heet		•			Start T	ime:	1030	Finish Tir	me:	1111	5
Examination	Surface:	Insid	le 🗀	Out	side 🗹		Surface Cond	ition: AS G	ROUND							
Lo Location:		9.1.	1.1		Wo Loca	ation:	Centerline of V	Veld	Couplant:	u	LTRAGEL	. 11	_ Batch No.	.:	0912	5
Temp. Tool M	Mfg.:	Lı	utron	······································	Seria	No.:	MCNDE3282	24	Surface Ten	np.:	69	_°F				
Cal. Report N	lo.:			-	CAL-10-	541, 563,	564 & 528			•						
Angle Used	0	45	45T	60]									
Scanning dB		22.5	22.5	33.9]									
Indication(s):	Yes [7 No	$ \mathbf{\nabla} $	·		Sca	n Coverage: Up	stream 🔽	Downstream		cw 🗹	ccw	$\overline{\mathbf{v}}$			
Comments:	_	•	٣								_					
N/A																
NIA																
Results:	Accept [] Re	eject 🔽	•	Info 🗀	ı	C 08-04, 09-02, 0	9-08, 10-09								
Percent Of Co					No	-	Reviewed Previou		Yes.						- <u> </u>	
1 5155111 51 55		-				 										
1	Level II-		///	<i>[]</i>	Signatore			Reviewer	K= //			Signa	ature		/	Date
Hendrickson,			Tal	12	Like		5/9/2010	X,		Den.				<u>5.</u>	15-	
Examiner Hollis, Jacob	Level II-	N			Signature		Date 5/9/2010	Site Review	·	•		Sign	ature			Date
	Level N		ust.	<u> </u>	Signature			ANII Reviev	v			Signa	ature			Date
N/A		•							æ	Ze.	with			5//	7/10	
											-			•		

DU	ER COMPANY												
	ISI LIMITATION REPORT												
Component/Weld ID: 2LP-0215-	27 Ite	em No: <u>02.C5.11.0038</u>	remarks:										
☐ NO SCAN	SURFACE	BEAM DIRECTION	Weld-o-let										
	□ 1	□ 1 □ 2 □ cw □ ccw											
FROM L 7.5 to L 10.0	INCHI	ES FROM W0 1.7 to Beyond											
ANGLE: □ 0 ⊠ 45 □ 60	other	FROM N/A DEG to N/A DEG											
⊠ NO SCAN	SURFACE	BEAM DIRECTION	No scan due to pipe to valve										
☐ LIMITED SCAN	□ 2	☐ 1 ☐ 2 ☑ cw ☑ ccw	configuration										
FROM L 0 to L 360	INCHI	ES FROM W0 CL to Beyond											
•		FROM N/A DEG to N/A DEG											
☐ NO SCAN	SURFACE	BEAM DIRECTION											
☐ LIMITED SCAN	<pre>1</pre>	1 2 cw ccw											
FROM L to L	INCH	ES FROM W0 to											
1		FROM DEG to DEG											
☐ NO SCAN													
☐ LIMITED SCAN	<pre>1</pre>	☐ 1 ☐ 2 ☐ cw ☐ ccw											
FROM L to L	INCHI	ES FROM W 0 to	Sketch(s) attached										
ANGLE: 0 0 45 0 60		FROM DEG to DEG	⊠ yes □ No										
Prepared By: Matthew Hendrickson	Pevel:	II Date: 05/09/10 She	et 2 of 24 Dx2										
Reviewed By:	Date:	Authorized Inspector:	Date: 5/17/6										



(Limitation shown due to weld-o-let representing 2.5" of total weld length.)



		% C	overage Calculati	ons
Total Weld	Length = (10.7	5in. dia.)π = 33.8ii	1.	
Total Area	of Examination	= 1.95 in. x 0.33 i	n. = 0.64 in.(sq.)	
Total Volum	ne of Examinat	ion = 33.8 in. x 0.	64 in.(sq.) = 21.63	in.(cu.)
Scan	Length	Area	Volume	Percent Obtained -
	Scanned -	Obtained -	Obtained -	Volume Obtained/Total Volume(100)
	in.	in.(sq.)	in.(cu.)	
S1 - Valve	33.8 in.	0.64 in.(sq.)	21.63 in.(cu.)	21.63/21.63(100) = 100%
S2 - Pipe	2.5 in.	0.59 in.(sq.)	1.48 in.(cu.)	1.48/ 21.63(100) = 6.8%
S2 - Pipe	31.3 in.	0.64 in.(sq.)	20.03 in.(cu.)	20.03/21.63(100) = 92.6%
S3 - CW	33.8 in.	0.32 in.(sq.)	10.82 in.(cu.)	10.82/21.63(100) = 50%
S4 - CCW	33.8 in.	0.32 in.(sq.)	10.82 in.(cu.)	10.82/21.63(100) = 50%
Total Aggre	egate = (S1 + S2	2 + S3 + S4) = 1009	6 + 99.4%(6.8% +	92.6%) + 50% + 50% = 299.4%/4 = 74.9 %

Inspector/Date David K 3 5/13/10



	•		2	Proced	ure: Pi	DI-UT-2	Outage N	0.:	02-24	
45 deg Scan 1 % Length X % volume of length / 100 = % total for So Scan 2 99.400 % Length X 100.000 % volume of length / 100 = 99.400 % total for So Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for So Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for So	orkscope:	O2.C5.1	1.0038	Procedure R	lev.:	С	Report N	o.: UT	-10-46	5
Scan 1 % Length X % volume of length / 100 = % total for So Scan 2 99.400 % Length X 100.000 % volume of length / 100 = 99.400 % total for So Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for So Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for So		IS	<u> </u>	Work Order	No.: <u>01</u>	870261	- Pag	je: <u>4</u>	of _	4
Scan 1 % Length X % volume of length / 100 = % total for So Scan 2 99.400 % Length X 100.000 % volume of length / 100 = 99.400 % total for So Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for So Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for So			*		•					
Scan 2 99.400 % Length X 100.000 % volume of length / 100 = 99.400 % total for Some Scan 3 Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for Som Scan 4 Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for Som Som Scan 4	<u>45 deg</u>									
Scan 3 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for So.000 Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for So.000	Scan	·	% Length X		% volume of le	ngth / 100 =		- % total f	or Scan	1
Scan 4 100.000 % Length X 50.000 % volume of length / 100 = 50.000 % total for Sc	Scan	99.400	% Length X _	100.000	_ % volume of le	ngth / 100 =	99.400	_ % total f	or Scan	2
	Scan :	100.000	% Length X	50.000	% volume of le	ngth / 100 =	50.000	_ % total f	or Scan	3
Add totals and divide by # scans = 66.467 % total for 45 deg	Scan 4	100.000	% Length X	50.000	% volume of le	ngth / 100 =	50.000	% total f	or Scan	4
The data to be listed below is for coverage that was not obtained with the 45 deg scans.	The date	to be listed belo	w is for coverage	that was not ob		-				
Scan 1 100.000 % Length X 100.000 % volume of length / 100 = 100.000 % total for	Scan 1	100.000	% Length X	100.000	_ % volume of	length / 100 = _	100.000	% total	for Sca	an 1
Scan 2 % Length X % volume of length / 100 = % total for	Scan 2		% Length X		% volume of	length / 100 = _		% total	for Sca	
	Scan 3		% Length X		% volume of	length / 100 =				
Scan 3						-		% total	l for Sca	an 2



UT Pipe We ู่ Examination



S	ite/Unit:	Oconee /	2			Pro	ocedure:	PDI-	UT-2		Qu	tage No.:	02-24	
Summa	ary No.:	O2.C5.2	21.0035			Procedu	re Rev.:		=		Re	port No.:	UT-09-3	62
Worl	kscope:	1	31			Work Or	der No.:	0187	4477			Page: 1	of	3
Code:		1998		(Cat./Item:	C-F-1/C5	.21	Locat	ion:					
Drawing No.:		2HP-34	1			Description:	Valve 2HP-1	20 to Pipe						
System ID:	51A					_								
Component ID:	2HP-34	1-V1						Size/Length	າ:	N/A	Thickn	ess/Diameter:	0.375	2.5/SS
Limitations:	See att	sched limitatio	n sheet			···			Start	Time:	1214	Finish Time:	13	304
Examination S	urface:	Inside []	Outs	side 🗹		Surface Cond	lition: AS G	ROUND						
Lo Location:		9.1.1.5		Wo Loca	tion:	Centerline of \	Veld	Couplant:		ULTRAGEL	. 11	Batch No.:	08	125
Temp. Tool Mi	ʻg.:	Fluke		Serial	No.:	OCQUA3309	90	Surface Te	mp.:	82	• F			
Cal. Report No	o.:			CAL-	9-472, 47	3, 474			_					
Angle Used	0	45 45T	60	70								•		
Scanning dB		34.0 34.0	52.5	59.3										
Indication(s):	Yes [] No 🕢			Scar	i n Coverage: Up	stream 🔽	Downstrear	n \Box	cw ₽	ccw <u></u>	·		
Comments:	(دی ۱۰۰۰										•		
N/A														
NA														
Results: A	ccept [] Reject ⋤	ন ব	info 🗀	F	C 08-01, 08-04, (9-02, 09-08							
Percent Of Cov	_	_	_	No	_	Reviewed Previou		Yes			2			
Franka I						Date	Reviewe				Signatu			Date
Examiner L Ellis II, Kennet	evel jj. h R.			ignature	Z	- 2/2/2010	Keviewei	ugh M	دره	,	Signatu		3-10	Date
	evel 11-		~\s\	ignature		Date 2/2/2010	Site Review	11			Signatu			Date
	evel N/	A		ignature			ANII Review	,			Signatu	re		Date
N/A								Certi		ut th			1//0	T

DUKI	E POWER COMPANY	
ISI		
Component/Weld ID: 2HP-341-V1	Item No: 02.C5.21.0035	remarks:
⊠ NO SCAN	SURFACE BEAM DIRECTION	Due to valve configuration
☐ LIMITED SCAN 🖾	1	
FROM L N/A to L N/A	INCHES FROM W0 CL to Beyond	
ANGLE: □ 0 🛭 45 🖾 60 ot	her FROM 0 DEG to 360 DE	G
☐ NO SCAN	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN ☐	1	
FROM L to L	INCHES FROM W0 to	
ANGLE: 0 45 60 otl	her PEG to DEG	3
☐ NO SCAN	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN ☐	1	
FROM L to L	INCHES FROM W0 to	
ANGLE: 0 0 45 60 oth	her FROM DEG to DE	3
☐ NO SCAN	SURFACE BEAM DIRECTION	
☐ LIMITED SCAN ☐	1 2 1 2 cw ccw	
FROM L to L	INCHES FROM W0 to	Sketch(s) attached
ANGLE: 0 0 45 60 oth	ner FROM DEG to DEG	S ⊠ yes □ No
Prepared By: Kenneth Ellis	. Level: II Date: 02/02/2010 St	eet 2 of 3
Reviewed By: Jany Mos	Date: Authorized Inspector:	South Date: 2/4/10

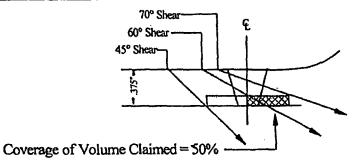


Item No. O2.C5,21,0035

Axial Scan Coverage

Weld No. 2HP-341-V1

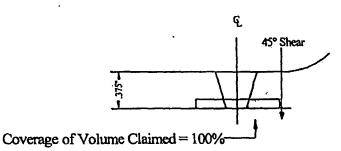
Valve-S1 (Forged)



Circ. Scan Coverage

PIPE-S2

)



Valve-S1 (Forged)

Scale: 1" = 1"

% Coverage Calculations

S1 = Pipe = 0% (0% of the length x 0% of the volume)

S2 = Valve = 50% (100% of the length x 50% of the volume)

S3 = CW = 100% (100% of the length x 50% of the volume)

S4 = CCW = 100% (100% of the length x 50% of the volume)

Total = 250/4 = 62.5% Aggregate Coverage

Inspector / Date: Roll Sheffeld 12-3-10

Page <u>3</u> of <u>3</u>



UT Pipe Wะ.J Examination



Workscope: PSI Work Order No.; 01895070 Page:	3OP-UT-10-149 1 of 4
	1 of <u>4</u>
Code: N/A Cat./Item: N/A Location: N/A	
Drawing No.: N/A Description: Pipe to valve	
System ID: HP	
Component ID: 2-51A-0029-94 Size/Length: N/A Thickness/Diameter	er: .531/4.0/SS
Limitations: See limitation report Start Time: 1038 Finish Tim	ne: 1052
Examination Surface: Inside Outside Surface Condition: AS GROUND	
Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.:	09125
Temp. Tool Mfg.: Fluke Serial No.: MCNDE40127 Surface Temp.: 73 °F	
Cal. Report No.: CAL-10-586, 587, 588	
Angle Used 0 45 45T 60 60L	
Scanning dB 36.3 36.3 52.8 86.0	
Indication(s): Yes ☐ No ☑ Scan Coverage: Upstream ☑ Downstream ☐ CW ☑ CCW ☑	
Comments:	
FC 08-04, 09-02, 09-08, 10-09	
Results: Accept ☐ Reject ☑ Info ☐ PSI Exam	
Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: No	
Examiner Level II-N Signature Date Reviewer Signature Tucker, David K. Signature 5/11/2010	Date 5-15-10
Examiner Level II-N Signature Date Site Review Signature	Date
Foss, Steven Olympia France 5/11/2010	
Other Level N/A Signature Date ANII Review Signature N/A	Date Date

DU	JKE POW	ER COMPANY			_
	ISI LIMITA	TION REPORT			
Component/Weld ID: 251A-0029)-94I	tem No: 01895070		remarks:	
⊠ NO SCAN	SURFACE	BEAM DIRECTION	N	Single sided pipe	e to valve
☐ LIMITED SCAN	⊠ 1 □ 2	2 🗌 1 🛭 2 🖾 cw	⊠ ccw	configuration.	
FROM L N/A to L N/A	INC	HES FROM WO _CL to	Beyond		
ANGLE: □ 0 ⋈ 45 ⋈ 60	other	FROM 0 DEG to	360 DEG		
☐ NO SCAN	SURFACE	BEAM DIRECTION	N		
☐ LIMITED SCAN		2	ccw		
FROM L to L	INC	HES FROM W0 to			
ANGLE: 0 45 60	other	FROM DEG to	DEG		
☐ NO SCAN	SURFACE	BEAM DIRECTION	À		
☐ LIMITED SCAN		2	_ ccw		
FROM L to L	INC	HES FROM W0 to			
ANGLE: 0 0 45 0 60					
☐ NO SCAN	SURFACE	BEAM DIRECTION	V		
☐ LIMITED SCAN		2	_ ccw		
FROM L to L	INC	HES FROM W0 to		Sketch(s)	attached
ANGLE: 0 0 45 0 60		FROM DEG to		⊠ yes	☐ No
Prepared By: David Tucker	Level:	II Date: 05/11/10	Shee	et <u>2</u> of	
Reviewed By: Davidx. 3	Date:	5/14/10 Authorized Inspir	ector:	-	Date: 5/17/10

Supplemental Report

ATTACHMENT B PAGE 61 OF 53

Report No.: BOP-UT-10-149

Page: 3 of 4

Summary No.: 2-51A-0029-94

Examiner: Tucker, David K. Al mill Gual

Examiner: Foss, Steven Steven Town

Other: N/A

Level: II-N

Level: II-N Level: N/A Reviewer:

Site Review: ANII Review: Mariol K. 3 II

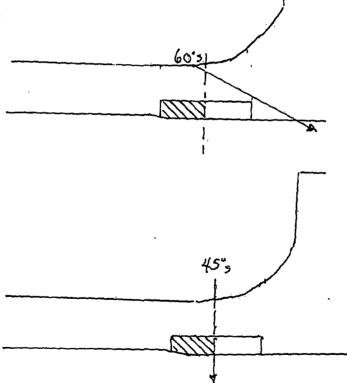
Date: 5/14/10

Date:

Date: 3/17/10

Comments:

Sketch or Photo:



TOTAL EXAM AREA

AXIAL COVERACE .55 IN. X. 214.= .11°14. ÷. 22°14. X100 = 50%

CIRC. COVERAGE

.55, M X.2 IN. = . 112, M. = . 222 IN X100 = 50%



Site/Unit:	Oconee /	2	Procedure	: PDI-UT-2	Outage No	.: N/A
mary No.:	2-51A-00	29-94	Procedure Rev.	: <u> </u>	Report No	BOP-UT-10-149
orkscope:	PS	<u> </u>	Work Order No.	01895070	. Page	e: <u>4</u> of <u>4</u>
45 deg						
Scan '	1	% Length X _		6 volume of length / 100 =		% total for Scan 1
Scan :	2	% Length X _	<u> </u>	% volume of length / 100 =		% total for Scan 2
Scan	3 100.000	% Length X _	50.000 %	% volume of length / 100 =	50.000	% total for Scan 3
Scan 4	100.000	% Length X	50.000 %	% volume of length / 100 =	50.000	% total for Scan 4
	Add totals an	d divide by # sca	ns = 50.000	% total for 45 deg		
						•
Other d	eg -	_ (to be used fo	r supplemental sca	ans)		
The dat	a to be listed belo	ow is for coverage	that was not obta	ined with the 45 deg scans.		
Scan	1 100.000	% Length X	0.000	% volume of length / 100 =	0.000	% total for Scan
Scan	2 100.000	% Length X	50.000	% volume of length / 100 =	50.000	% total for Scan
Scan	3	% Length X	,			
		/o Lengui /	`	% volume of length / 100 =		% total for Scan
Scan			` <u> </u>	% volume of length / 100 = % volume of length / 100 =		
	4	% Length X	•	_		
		% Length X	•	_		
Percer	4	% Length >	•	% volume of length / 100 =		
Percer	at complete cover	% Length >	ide by # of scans t	% volume of length / 100 =		
Percer Add to	at complete cover	% Length > erage n required and div	ide by # of scans t	% volume of length / 100 =		% total for Scan % total for Scan
Percen Add tot	at complete cover	% Length > erage n required and div	ide by # of scans t	% volume of length / 100 =	5/14/10	



N/A

UT Calibration Report

	Site: Ocean	Procedure		PDI-01-		Rev.:		C		Ca	I. Report No.:	CAL	10-586	
Instrument;		Transducer:				Cou	plant:				Calibration B	lock:		
	CRAUTKRAMER	Manufacturer:		GE		_ Туре	: :		ULTR	AGEL II	Serial No.:	PDI-U	T-2A-0	1
Model:	USN-60	Serial No.:		SB02		_ Batc	h No.:		09	125	Thickness:	.25-	1.25"	
Serial No.:	011MBT	Size:2		_ Freq.: .		- Sea	rch Unit	t Cable	a:		Calibration Ble	ock Temp.:	73	°F
Linearity Report No.:	L-10-091		np - G		Round	1	le Type:			RG-174	Reference/SI	mulator Bio	ock:	
Temp. Tool: Manufacturer:	••	# of Elements: Wedge Index to		ie Mode	: Shear .35	_1	le Lengt	,		6'	Serial No.:			
Serial No.:	Lutron MCNDE32828	Nom. Angle:		Meas An	.35 igle: 45 °	- I	Connec	•			Туре:		MPAS	-
						# 01	Connec			<u> </u>				
	trument Setting	gs		Axial	Orientate	Sear	——————————————————————————————————————			Circumf	erential Orie	ntated Sea	irch U	nit
S.U. Orientation	Axial/Circ			bration	Signal	Swe	· .	Sound I	Path	Calibration	Signal	Sweep	Sour	nd Path
Gain	30.3		Re	flector	Amplitude %	Divis	ion			Reflector	Amplitude %	Division		
Range	2.0		.75	D Notch	80	5.	3	1.00	4	See Axial				
Delay/Offset	4.3725			<u> </u>										-
Velocity/Mat. Cal.	.1241		-	<u>_</u>	······									
Frequency	2.25 MHz													
Rep. Rate	Autohigh				Referen	ce/Sim	nulator	Block	k			Date	Time	Initials
Pulser	High		Gain		Sig		Screen	1 -	ound	Reference/	Int. Cal.	5/11/2010	0805	1/11
Filter	Fixed		dB	Reflect	or Ampliti	106 %	Sweep Divisio	, I	Path	Simulator Block	Cal. Ver.	5/11/2010	1017	DET
Damping.	1K		25.4	1" Radi	us 8	,	5.0		1.00	97-5590	Cal. Ver.			<i>1017</i>
Display/Video/Rectif.	Full							$\neg \vdash$			Cal. Ver.	5/11/2010	1038	1111
Reject	Off										Final Cal.	5/11/2010	1455	DET
Voltage	Fixed			L				Com	ments:	EC 08-04 09	-02, 09-08, 10	-09	<u> </u>	221-1
1 Screen Divis Summary No.(s): 2-H		in. of Sound Path A-0029-94						20.77			,, 10	•		
Examiner Level Tucker, David K.	II-N Sail	Signature		5/1	Date Re	viewer					Signature			Date
Examiner Level Foss, Steven		Signature				Revie	W				Signature			Date
Other Level	N/A	Signature			Date AN	II Revie	W				Signature			Date



UT Calibration Report



	Site:	Осолее	Procedure	»:	PDI-U1	Г-2	Rev.	:		С	Ca	I. Report No.:	CAI	L-10-587	,
Model: Serial No.: Linearity Report No.: Temp. Tool: Manufacturer: Serial No.:	(RAUTKRA USN-60 011MB1	-091 828	Transducer: Manufacturer: Serial No.: Size:	mp-G Sing	Shap lie Mod Meas. A	482 2.25 MH e: Roun	iz Sid C:	puplant ope: atch No. earch U able Typ able Ler	i nit Ca ne: ngth:	ULTR 01	AGEL II 9125 RG-174 6' 0	Calibration B Serial No.: Thickness: Calibration Ble Reference/Si Serial No.: Type:	PDI-U .25 ock Temp.: mulator Bio 97-	JT-2A-C -1.25" 73 ock: -5590 MPAS	3_ °F
S.U. Orientation	Axial				ibration	Signal		weep	Sour	nd Path	Calibration	Signal	Sweep	1	nd Path
Gain	46.8			Re	eflector	Amplitude	% Di	vision			Reflector	Amplitude %	Division		
Range	2.5	<u>.</u>		.75	5 ID Tip	80		5.3	1	.333	N/A				
Delay/Offset	5.4994						_		<u> </u>						
Velocity/Mat. Cal.	.1241			 		<u> </u>			 		=				
Frequency	2.25 MHz														
Rep. Rate	Autohigh					Refer	ence/S	imulat	or Bio	ock			Date	Time	Initials
Pulser	High			Gain			Signal	Scre	- 1	Sound	Reference/	Int. Cal.	5/11/2010	0810	IN
Filter	Fixed			dB	Reflec	ctor Am	olitude %	6 Swe	. ' 1	Path	Simulator Block	Cal. Ver.	5/11/2010	1023	Dri
Damping	1K			26.8	1" Rac	dius	80	-		.997	97-5590	Cal. Ver.		-	W.
Display/Video/Rectif.	Full				1							Cal. Ver.	5/11/2010	1044	DIT
Reject	Off			<u> </u>								Final Cal.	5/11/2010	1458	100
Voltage	Fixed				1				C	omments	: FC 08-04, 09	3-02, 09-08, 10	-09	<u></u>	WPI
1 Screen Divis Summary No.(s): 2-H			Sound Path				· · · · · · · · · · · · · · · · · · ·								
Examiner Level		1 1	Signature			i	Reviewe	r				Signature			Date
Tucker, David K.		IK.			5.	/11/2010	Cita Da					Cionatura			Data
Examiner Level Foss, Steven	II-N	T	Signature		5.	Date 1 /11/2010	Site Rev	iew				Signature			Date
Other Level	N/A	TA	Signature				ANII Re	view				Signature			Date



UT Pipe W₅⊷ Examination



S	ite/Un	it: _C	Oconee	1	2	···		Pro	cedure: _	NDE-	-600	··	C	Outage No.:		N/A	
Summ	ary No	·.: _	2	-HP-03	96-23			Procedu	re Rev.:	18	8		1	Report No.:	BOF	-UT-09	-125
Wor	kscop	e:		PS	<u> </u>			Work Or	der No.:	0189	5070			Page:	_1	of	4
Code:			N/A				Cat./Item:	N/A		Locati	ion:			N/A		-	
Drawing No.:				2HP-(396			Description: F	Pipe to Valv	e							
System ID:	HP																
Component ID:	2-HP	-039	6-23							Size/Length	າ:	N/A	Thic	kness/Diam	eter:	.531/-	4"/SS
Limitations:	See	Limi	tation F	Report							Start 7	Time:	0940	_ Finish T	ime:	10	25
Examination 5	Surfac	e:	Insid	e 🗀	Ou	tside 🗹		Surface Cond	lition: AS G	ROUND							
Lo Location:			9.1.	1.1		Wo Loc	ation:	Centerline of V	<u>Veld</u>	Couplant:		ULTRAGE	LII	_ Batch No	o.:	09	125
Temp. Tool M	lfg.: _		Lu	itròn		Seria	l No.:	MCNDE3282	28	Surface Ter	mp.: _	76	_°F				
Cal. Report N	o.: _	<u>.</u>			**	CAL-	10-485, 486	8 & 487			_						
Angle Used		0	45	45T	60	60L]									
Scanning dB				51.0	50.0	55.0		ļ									
Indication(s):	Ye	s 🗌	No	\checkmark			Scar	n Coverage: Up	stream 🗹	Downstream	m 🔲	CM 🗹	ccw	✓			
Comments:																	
N/A																	
Results:	Accept	: 🗆	Re	eject 🗹		info 📋	l:	nitial PSI Exam									
Percent Of Co	verag	e Ob	tained >	90%:		No		Reviewed Previou	us Data:	N/A							
	·········																
Examiner Leeper, Winfre	Level ed C.	II-N	ſ	41		Signature	,	Date 4/28/2010	Reviewer	Stow	2001		Sign	ature		5-	Dat 13—10
	Level	11-N		1 1	مامور المار	Signature	7		Site Review				Sign	ature		<u> </u>	Dat
Tucker, David			hla	in/ 1	Luci	<u></u>	-	4/28/2010			·····						
Other N/A	Level	N/A	4	-		Signature		Date	ANII Revie	w			Sign	ature		13/	Dat
11/4									<u> </u>		Mar					19/	<u> </u>

DU	IKE POWE	ER COMPANY		
]	ISI LIMITAT	ION REPORT		
Component/Weld ID: 2-HP-0396	-23 Ite	m No: 01895070		remarks:
NO SCAN	SURFACE	BEAM DIRECT	ION	Single sided pipe to valve
☐ LIMITED SCAN	□ 2	☐ 1	cw 🛭 ccw	configuration. No scan from
FROM L N/A to L N/A	INCHES I	FROM W0 _CL1	to Beyond	surface 1 due to SA 351
ANGLE: □ 0 ⊠ 45 ⊠ 60				(cast) material.
☐ NO SCAN	SURFACE	BEAM DIRECT	ION	
☐ LIMITED SCAN	□ 1 □ 2	<pre>1 1 2 0</pre>	cw 🗌 ccw	
FROM L to L	INCHES FF	ROM W0 1	to	
ANGLE: 0 45 60	other	FROM DEG to	DEG	
☐ NO SCAN	SURFACE	BEAM DIRECT	ION	
☐ LIMITED SCAN	□ 1 □ 2	<pre>1 1 2 0</pre>	cw 🗌 ccw	
FROM L to L	INCHES FF	ROM W0 1		<u> </u>
ANGLE: 0 0 45 0 60	other	FROM DEG to	DEG	
☐ NO SCAN	SURFACE	BEAM DIRECT	ION	
☐ LIMITED SCAN	□ 1 □ 2	<pre>1 1 2 0</pre>	cw 🗌 ccw	
FROM L to L	INCHES FF	ROM W0 1	.0	Sketch(s) attached
ANGLE: 0 5 60	other	FROM DEG to	DEG	⊠ yes □ No
Prepared By: David Tucker	Level:			et 2 of 4
Reviewed By: Paril 18	TIL Date:	S/12/11) Authorized In	spector:	Date: 5/3/0



Suppleme._al Report

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Report No.: BOP-UT-09-125

Page: 3

Summary No.: 2-HP-0396-23

Other: N/A

Examiner: Leeper, Winfred C. Examiner: Tucker, David K.

VALYE -51

Level:

Level: II-N

Level: N/A

II-N

455

Reviewer: Site Review:

ANII Review:

605

Date:

Date: 2

Comments:

Sketch or Photo:

TOTAL EXAM AREN:

1.25 in x . 17 in= 2125 in2

AXIAL COVERAGE:

VALVE SIDE = 0%.

(.625 m × .17m) 100 = 50%

CIRCUMPERENTIAL COYG:

TOTAL EXAM COVE:

0+50+50+50 - 37.5%



rkscope:	2-HP-0 P	396-23	Procedure F	Rev.: 18	Report No.:	BOP-UT-09-1
	P	C1				
45 deg	· · · · · · · · · · · · · · · · · · ·	51	Work Order	No.: 01895070	Page:	of
<u>45 deg</u>						
Scan 1		% Length X		% volume of length / 100 =	0	% total for Scan
Scan 2		% Length X		_ % volume of length / 100 =		6 total for Scan
Scan 3	50.000	% Length X	100.000	% volume of length / 100 =		% total for Scan 3
Scan 4	50.000		100.000	- % volume of length / 100 =		% total for Scan
	dd totals ar	nd divide by # sca	ns =	% total for 45 deg		
		·				
Other deg -	:	(to be used for	supplemental s			
	:	(to be used for	supplemental s	scans)	0.000	. % total for Scar
The data to t	be listed be	(to be used for low is for coverage	supplemental s	scans) otained with the 45 deg scans.		.% total for Scar .% total for Scar
The data to t	be listed be	(to be used for ow is for coverage % Length X	supplemental s that was not of 100.000	scans) otained with the 45 deg scans % volume of length / 100 =	50.000	•