

January 31, 2013

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

Subject:

Duke Energy Carolinas, LLC Oconee Nuclear Station Unit 1 Docket No. 50-269 Fourth Ten-Year Inservice Inspection Plan Request for Relief No. 12-ON-001 *T. PRESTON GILLESPIE, JR. Vice President Oconee Nuclear Station*

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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 12-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 EOC26 refueling outage. The ultrasonic examination coverage of the subject Unit 1 welds did not meet the 90% examination requirements of Code Case N-460. The obtainable volume coverage for weld examination is indicated on Attachment A 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).

This submittal document contains no regulatory commitments.

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

Sincerely,

TP کانندتھ ک T. Preston Gillespie Jr., Site Vice President

Enclosure: Oconee Nuclear Station - Unit 1 Relief Request 12-ON-001

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U. S. Nuclear Regulatory Commission January 31, 2013 Page 2

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NRC Senior Resident Inspector Oconee Nuclear Station

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Enclosure

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Oconee Nuclear Station - Unit 1 Relief Request 12-ON-001

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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: January 01, 2004

| Table 1 | | | | | | | | |
|--|---------------------------------|---|---------------------------------|--------------------------------------|---------------------------------|--|--|--|
| <u>Relief</u> <u>Request</u> <u>Section</u> <u>Number</u> | <u>Oconee</u> Unit Number | Examinati on Performed (Refueling Outage) | <u>Weld ID</u> <u>Number</u> | <u>Item/Summary</u> <u>Number</u> | Examination Data | | | |
| 2.0 | 1 | 1EOC26 | 1-PZR-WP26-3 | O1.B3.110.0011 | See Attachment A Pages 1-10 | | | |
| 3.0 | 1 | 1EOC26 | 1-PZR-WP26-7 | O1.B3.110.0012 | See Attachment A Pages 11-20 | | | |
| 4.0 | 1 | 1EOC26 | 1-PIB1-9 | O1.B9.11.0029 | See Attachment A Pages 21-32 | | | |
| 5.0 | 1 | 1EOC26 | 1-PDB1-1 | O1.B9.11.0072 | See Attachment A Pages 33-44 | | | |
| 6.0 | 1 | 1EOC26 | 1LP-128-80 | O1.C5.11.0029 | See Attachment A Pages 45-51 | | | |
| 7.0 | 1 | 1EOC26 | 1LP-209-17 | O1.C5.11.008 <u>4</u> | See Attachment A Pages 52-57 | | | |
| 8.0 | 1 | 1EOC26 | 1LP-209-18 | O1.C5.11.0085 | See Attachment A Pages 58-63 | | | |
| 9.0 | 1 | 1EOC26 | 1HP-192-15 | O1.C5.21.0006 | See Attachment A Pages 64-72 | | | |
| 10.0 | 1 | 1EOC26 | 1-51A-01-91A | O1.C5.21.0024 | See Attachment A Pages 73-78 | | | |

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| 11.0 | 1 | 1EOC26 | 1HP-324-118B | O1.C5.21.0041 | See Attachment A Pages 79-84 |
|------|---|--------|---------------|---------------|---------------------------------------|
| 12.0 | 1 | 1EOC26 | 1-51A-02-34B | O1.C5.21.0053 | See Attachment A Pages 85-91 |
| 13.0 | 1 | 1EOC26 | 1HP-193-12 | O1.C5.21.0057 | See Attachment A Pages 92-98 |
| 14.0 | 1 | 1EOC26 | 1-51A-01-103A | O1.C5.21.0066 | See Attachment A Pages 99-106 |
| 15.0 | 1 | 1EOC26 | 1LPS-563-14 | O1.C5.51.0050 | See Attachment A Pages 107- 115 |
| 16.0 | 1 | 1EOC26 | 1LPS-702-50 | O1.C5.51.0053 | See Attachment A Pages 116- 124 |
| 17.0 | 1 | 1EOC26 | WJ-32 | PSI | See Attachment A Pages 125- 133 |
| 18.0 | 1 | 1EOC26 | WJ-33 | PSI | See Attachment A Pages 134- 144 |
| 19.0 | 1 | 1EOC26 | WJ-35 | PSI | See Attachment A Pages 145- 153 |
| 20.0 | 1 | 1EOC26 | WJ-36 | PSI | See Attachment A Pages 154- 162 |

Duke Energy procedures require ASME Code, Section XI examinations that do not meet the requirements of Code Case N-460 to be marked "reject" for tracking purposes, regardless of whether indications were noted. Therefore, the limited exams in 12-ON-001 without indications were marked "reject".

2.0 Weld #1-PZR-WP26-3

2.1. ASME Code Component(s) Affected

Unit 1 Pressurizer Heater Belt Shell to Sampling Nozzle Weld #1-PZR-WP26-3, Summary Number O1.B3.110.0011 and ASME Code Class 1.

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

Component configuration:

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

This component was scanned manually with conventional methods. Scanning 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. These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- Weld coverage using 45°& 60° shear waves for axial scans (S1, S2), and 45° & 60° shear waves for circumferential scans (CW, CCW) obtained 15.4% coverage.
- Base material coverage using 45°& 60° shear wave for axial scans (S1) and 45°& 60° shear waves for circumferential scans (CW, CCW) obtained 54.8% coverage.
- 0° scan coverage obtained 33.8% coverage.
- The aggregate coverage was calculated to be (15.4% + 54.8% + 33.8%)/3 = 34.7%.

The impracticality was caused by the weld taper configuration of the sampling nozzle to the shell that does not allow meaningful interrogation from Surface 2, the sampling nozzle side. In order to scan all of the required volume for this weld, the shell to sampling nozzle weld would have to be redesigned or replaced to allow scanning from both sides of the weld, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on the UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

2.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Use of other manual or automated UT techniques, whether conventional or phased array, were considered, but would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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.B3.110.0011 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

2.8. References

Duke Energy Relief Request 04-ON-005 was approved by the NRC during the last inspection interval. The previous approved SE is documented in Accession Number ML050340377, TAC No.MC4527 dated March 8, 2005.

- 3.0 Weld #1-PZR-WP26-7
 - 3.1. ASME Code Component(s) Affected

Unit 1 Pressurizer Heater Belt Shell to Sampling Nozzle Weld #1-PZR-WP26-7, Summary Number O1.B3.110.0012, and ASME Code Class 1.

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

Component configuration:

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

This component was scanned manually with conventional methods. Scanning 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. These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- Weld coverage using 45°& 60° shear waves for axial scans (S1, S2), and 45° & 60° shear waves for circumferential scans (CW, CCW) obtained 15.4% coverage.
- Base material coverage using 45°& 60° shear wave for axial scans (S1) and 45°& 60° shear waves for circumferential scans (CW, CCW) obtained 54.8% coverage.
- 0° scan coverage obtained 33.8% coverage.
- The aggregate coverage was calculated to be (15.4% + 54.8% + 33.8%)/3 = 34.7%.

The impracticality was caused by the weld taper configuration of the sampling nozzle to the shell that does not allow meaningful interrogation from Surface 2, the sampling nozzle side. In order to scan all of the required volume for this weld, the shell to sampling nozzle weld would have to be redesigned or replaced to allow scanning from both sides of the weld, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on the UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

3.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Use of other manual or automated UT techniques, whether conventional or phased array, were considered, but would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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.B3.110.00012 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

3.8. References

Duke Energy Relief Request 04-ON-005 was approved by the NRC during the last inspection interval. The previous approved SE is documented in Accession Number ML050340377, TAC No.MC4527 dated March 8, 2005.

4.0 Weld #1-PIB1-9

4.1. ASME Code Component(s) Affected

Unit 1 Reactor Coolant Pump 1B1 Casing Nozzle to Safe-End Piping Weld, Weld #1-PIB1-9, Summary Number O1.B9.11.0029 and ASME Code Class 1.

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

4.4. Impracticality of Compliance

Component configuration:

- Surface 1: Cast Stainless Steel Nozzle
- Surface 2: Forged Stainless Steel Safe End
- NPS: 36.5 in.
- Thickness: 2.330 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 0% coverage in one axial direction (S1 nozzle)
- 60° shear waves obtained 50% coverage in one axial direction (S2 safe end)
- 45° shear waves obtained 50% coverage in one circumferential direction (CW).
- 45° shear waves obtained 50% coverage in one circumferential direction (CCW).
- The aggregate coverage was calculated to be (0% + 50% + 50% + 50%)/4 = 37.5%.

In addition, best effort supplemental scanning was performed using 60° and 70° refracted longitudinal waves from the S2 pump casing side for interrogation of the upper 2/3 area within the cast material.

Best effort supplemental scanning was also performed using 60° refracted longitudinal waves for interrogation of the lower 1/3 nozzle far side of the weld from the S1 safe-end side, but is not qualified to be calculated into the above claimed coverage. The supplemental refracted longitudinal scan was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction.

The impracticality was caused by the nozzle taper configuration and cast stainless steel material which cannot be effectively interrogated by ultrasound. There are currently no examination techniques that have been qualified for cast stainless steel through Appendix VIII for cast stainless steel. Therefore, coverage could not be obtained by scanning from the nozzle side. In order to scan all of the required volume for this weld, the nozzle would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

4.5 Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the cast stainless material. The use of any other UT technique available would incur the same physical scanning limitations.

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.B9.11.0029 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

4.8 References

None

5.0 Weld #1-PDB1-1

5.1. ASME Code Component(s) Affected

Unit 1 Reactor Coolant Pump 1B1 Casing Nozzle to Safe-End Weld, Weld #1-PDB1-1, Summary Number O1.B9.11.0072 and ASME Code Class 1.

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

5.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged Stainless Steel Safe End
- Surface 2: Cast Stainless Steel Nozzle
- NPS: 33.5 in.
- Thickness: 2.330 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 50% coverage in one axial direction (S1 – safe end)
- 60° shear waves obtained 0% coverage in one axial direction (S2 – nozzle)
- 45° shear waves obtained 50% coverage in one circumferential direction (CW).
- 45° shear waves obtained 50% coverage in one circumferential direction (CCW).
- The aggregate coverage was calculated to be (50% + 0% + 50% + 50%)/4 = 37.5%.

In addition, best effort supplemental scanning was performed using 60° and 70° refracted longitudinal waves from the S2 pump casing side for interrogation of the upper 2/3 area within the cast material.

Best effort supplemental scanning was also performed using 60° refracted longitudinal waves for interrogation of the lower 1/3 nozzle on the far side of the weld from the S1 safe-end side, but is not qualified to be calculated into the above claimed coverage. The supplemental refracted longitudinal scan was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction.

The impracticality was caused by the nozzle taper configuration due to cast stainless steel material which cannot be effectively interrogated by ultrasound. There are currently no examination techniques that have been qualified through Appendix VIII for cast stainless steels. Therefore, coverage could not be obtained by scanning from the nozzle side. In order to scan all of the required volume for this weld, the nozzle would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

5.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the cast stainless material. The use of any other UT technique available would incur the same physical scanning limitations.

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.B9.11.0072 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

5.8 References None

- 6.0 Weld #1LP-128-80
 - 6.1. ASME Code Component(s) Affected

Unit 1 Reducer to Valve 1LP-18 Weld, Weld #1LP-128-80, Summary Number O1.C5.11.0029 and ASME Code Class 2.

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

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.

6.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged Stainless Steel Reducer
- Surface 2: Cast Stainless Steel Valve
- Diameter: 12.0 in.
- Thickness: 1.168 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 50% coverage in one axial direction (S1 reducer)
- 60° shear waves obtained 0% coverage in one axial direction (S2 valve)
- 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 aggregate coverage was calculated to be (50% + 0 + 50% + 50%)/4 = 37.5%.

Best effort supplemental scanning was also performed using 60° refracted longitudinal waves for interrogation of the lower 1/3 valve far side of the weld from the S1 reducer side, but is not qualified to be calculated into the above claimed coverage. The supplemental refracted longitudinal scan was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction.

The impracticality was caused by the cast stainless steel material which cannot be effectively interrogated by ultrasound. There are currently no examination techniques that have been qualified through Appendix VIII for cast stainless steels. Therefore, coverage could not be obtained by scanning from the valve side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

6.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the cast stainless material. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.11.0029 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), 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable

results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the continuing periodic leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

6.8 References

None

7.0 Weld #1LP-209-17

7.1. ASME Code Component(s) Affected

Unit 1 Pipe to Flow Restrictor Weld, Weld #1LP-209-17, Summary Number O1.C5.11.0084 and ASME Code Class 2.

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

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.

7.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged Stainless Pipe
- Surface 2: Cast Stainless Flow Restrictor
- Diameter: 10.0 in.
- Thickness: 1.0 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 50% coverage in one axial direction (S1 pipe)
- 60° shear waves obtained 0% coverage in one axial direction (S2 – flow restrictor)
- 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 aggregate coverage was calculated to be (50% + 0 + 50% + 50%)/4 = 37.5%.

Best effort supplemental scanning was also performed using 60° refracted longitudinal waves for interrogation of the lower 1/3 flow restrictor far side of the weld from the S1 pipe side, but is not qualified to be calculated into the above claimed coverage. The supplemental refracted longitudinal scan was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction.

The impracticality was caused by the cast stainless steel material which cannot be effectively interrogated by ultrasound. There are currently no examination techniques that have been qualified through Appendix VIII for cast stainless steel. Therefore, coverage could not be obtained by scanning from the flow restrictor side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

7.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the cast stainless material. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.11.0084 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable

results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

7.8 References

None

8.0 Weld #1LP-209-18

8.1. ASME Code Component(s) Affected

Unit 1 Pipe to Flow Restrictor Piping Weld, Weld #1LP-209-18, Summary Number O1.C5.11.0085 and ASME Code Class 2.

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

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.

8.4. Impracticality of Compliance

Component configuration:

- Surface 1: Cast Stainless Flow Restrictor
- Surface 2: Forged Stainless Pipe
- Diameter: 10.0 in.
- Thickness: 1.0 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 0% coverage in one axial direction (S1 – flow restrictor)
- 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 aggregate coverage was calculated to be (0% + 50 + 50% + 50%)/4 = 37.5%.

Best effort supplemental scanning was also performed using 60° refracted longitudinal waves for interrogation of the lower 1/3 flow restrictor far side of the weld from the S1 pipe side, but is not qualified to be calculated into the above claimed coverage. The supplemental refracted longitudinal scan was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction.

The impracticality was caused by the cast stainless steel material which cannot be effectively interrogated by ultrasound. There are currently no examination techniques that have been qualified through Appendix VIII for cast stainless steel. Therefore, coverage could not be obtained by scanning from the flow restrictor side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

8.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the cast stainless material. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.11.0085 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure

testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

8.8 References None

9.0 Weld #1HP-192-15

9.1. ASME Code Component(s) Affected

Unit 1 Flange Orifice to Pipe Weld, Weld #1HP-192-15, Summary Number O1.C5.21.0006 and ASME Code Class 2.

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

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.

9.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged Stainless Steel Flange
- Surface 2: Forged Stainless Steel Pipe
- Diameter: 4.0 in.
- Thickness: 0.531 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 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 aggregate coverage was calculated to be (0% + 50 + 50% + 50%)/4 = 37.5%.

Best effort supplemental scanning was also performed using 70° refracted longitudinal waves for interrogation of the lower 1/3 flange far side of the weld from the S1 pipe side, but is not qualified to be calculated into the above claimed coverage. The supplemental refracted longitudinal scan was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction.

The impracticality was caused by the tapered configuration of the flange, which did not allow access to the full volume of the weld. Therefore coverage could not be obtained by scanning from the flange side. In order to scan all of the required volume for this weld, the flange would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

The indication detected during the examination was the result of component geometry and was not associated with flaws in the component weld. The indication was acceptable without further evaluation. The indication was dispositioned using procedure guidance on probe skewing, use of higher angles and indication plotting. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

9.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.21.0006 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 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), 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the continuing periodic leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

9.8. References

Duke Energy Relief Requests 02-ON-005 and 02-ON-004 were approved by the NRC during the last inspection interval. The previous approved SE's are documented in Accession Number ML32721404, TAC No.MB5815 and MC5830 dated September 29, 2003.

10.0 Weld #1-51A-01-91A

10.1. ASME Code Component(s) Affected

Unit 1 Pipe to Valve 1HP-128 Weld, Weld #1-51A-01-91A, Summary Number O1.C5.21.0024 and ASME Code Class 2.

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

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.

10.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged Stainless Steel Pipe
- Surface 2: Forged Stainless Steel Valve
- Diameter: 4.0 in.
- Thickness: 0.531 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 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 axial direction (S3 CW)
- 45° shear waves obtained 50% coverage in one axial direction (S4 - CCW)
- The aggregate coverage was calculated to be
 - (100% + 100 + 50% + 50%)/4 = 75.0%.

Best effort supplemental scanning was not applied since the requirements of the ASME Code, Section XI, Supplement 2 pertaining to refracted longitudinal wave or 70 degree shear wave methods are to be applied during single sided exams when axial scanning can only be performed from one side of the weld. 100% coverage was obtained in each axial scan direction.

The impracticality was caused by the tapered configuration of the valve, which did not allow access to the full volume of the weld in the circumferential direction. Therefore coverage could not be obtained by scanning from the valve side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

10.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.21.0024 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), 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure

testing (VT-2) examinations required by Section XI, and the continuing periodic leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

10.8. References

Duke Energy Relief Requests 02-ON-005 and 02-ON-004 were approved by the NRC during the last inspection interval. The previous approved SE's are documented in Accession Number ML32721404, TAC No.MB5815 and MC5830 dated September 29, 2003.

11.0 Weld #1HP-324-118B

11.1. ASME Code Component(s) Affected

Unit 1 Tee to Valve 1HP-119 Weld, Weld #1HP-324-118B, Summary Number O1.C5.21.0041 and ASME Code Class 2.

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

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.

11.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged Stainless Steel Valve
- Surface 2: Forged Stainless Steel Tee
- Diameter: 2.5 in.
- Thickness: 0.375 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 77.850% coverage in one axial direction (S1 - valve)
- 60° shear waves obtained 88.925% coverage in one axial direction (S2 - tee)
- 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 aggregate coverage was calculated to be (77.850% + 88.925 + 50% + 50%)/4 = 66.694%.

Best effort supplemental scanning was performed using 70° shear waves for interrogation of the lower 1/3 valve far side of the weld from the S2 tee side, but is not qualified to be calculated into the above claimed coverage. The supplemental shear was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction. The 70° shear wave was selected to supplement the 60° shear waves as the component is less than 0.500" in thickness.

The impracticality was caused by the tapered configuration of the valve, which did not allow access to the full volume of the weld in the circumferential direction. Welded attachments prevented complete scanning from the valve side in the axial direction. Therefore coverage could not be obtained by scanning from the valve side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

11.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.21.0041 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), 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable

results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the continuing periodic leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

11.8. References

Duke Energy Relief Requests 02-ON-005 and 02-ON-004 were approved by the NRC during the last inspection interval. The previous approved SE's are documented in Accession Number ML32721404, TAC No.MB5815 and MC5830 dated September 29, 2003.

12.0 Weld #1-51A-02-34B

12.1. ASME Code Component(s) Affected

Unit 1 Elbow to Valve 1HP-134, Weld #1-51A-02-34B, Summary Number O1.C5.21.0053 and ASME Code Class 2.

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

12.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged Stainless Steel Elbow
- Surface 2: Forged Stainless Steel Valve
- Diameter: 4.0 in.
- Thickness: 0.531 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 100% coverage in one axial direction (S1 – elbow)
- 45° shear waves obtained 46.1% coverage in one axial direction (S2 - valve)
- 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 aggregate coverage was calculated to be (100% + 46.1 + 50% + 50%)/4 = 61.525%.

Best effort supplemental scanning was also performed using 60° refracted longitudinal waves for interrogation of the lower 1/3 valve far side of the weld from the S1 elbow side, but is not qualified to be calculated into the above claimed coverage. The supplemental refracted longitudinal scan was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction. The impracticality was caused by the tapered configuration of the valve, which did not allow access to the full volume of the weld. Therefore coverage could not be obtained by scanning from the valve side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

12.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.21.0053 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 Energy 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the acceptable results of the surface examinations performed during this outage, the pressure testing (VT-2) examinations required by Section XI, and the continuing periodic leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

12.8. References

Duke Energy Relief Requests 02-ON-005 and 02-ON-004 were approved by the NRC during the last inspection interval. The previous approved SE's are documented in Accession Number ML32721404, TAC No.MB5815 and MC5830 dated September 29, 2003.

- **13.0** Weld #1HP-193-12
 - 13.1. ASME Code Component(s) Affected

Unit 1 Tee to Valve 1HP-26 Weld, Weld #1HP-193-12, Summary Number O1.C5.21.0057 and ASME Code Class 2.

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 Figure IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F.

13.4. Impracticality of Compliance

Component configuration:

- Surface 1: Cast Stainless Steel Valve
- Surface 2: Forged Stainless Steel Tee
- Diameter: 4.0 in.
- Thickness: 0.531 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR 50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 0% coverage in one axial direction (S1 valve)
- 60° shear waves obtained 50% coverage in one axial direction (S2 tee)
- 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 aggregate coverage was calculated to be (0% + 50% + 50% + 50%)/4 = 37.5%.

Best effort supplemental scanning was also performed using 70° refracted longitudinal waves for interrogation of the lower 1/3 valve far side of the weld from the S1 tee side, but is not qualified to be calculated into the above claimed coverage. The supplemental refracted longitudinal scan was only used for interrogation in the axial direction per procedural direction. Supplemental scanning is not performed in the circumferential direction.

The impracticality was caused by the cast stainless steel material which cannot be effectively interrogated by ultrasound. There are currently no examination techniques that have been qualified through Appendix VIII for cast stainless steel. Therefore, coverage could not be obtained by scanning from the valve side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

13.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the cast stainless material. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.21.0057 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), 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the continuing periodic

leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

13.8. References

Duke Energy Relief Requests 02-ON-005 and 02-ON-004 were approved by the NRC during the last inspection interval. The previous approved SE's are documented in Accession Number ML32721404, TAC No.MB5815 and MC5830 dated September 29, 2003.

14.0 Weld #1-51A-01-103A

14.1. ASME Code Component(s) Affected

Unit 1 Pipe to Valve 1HP-109 Weld, Weld #1-51A-01-103A, Summary Number O1.C5.21.0066 and ASME Code Class 2.

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 Figure IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F.

14.4. Impracticality of Compliance

Component configuration:

- Surface 1: Forged Stainless Steel Valve
- Surface 2: Forged Stainless Steel Pipe
- Diameter: 3.0 in.
- Thickness: 0.438 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10 CFR.50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

- 60° shear waves obtained 100% coverage in one axial direction (S1 - valve)
- 60° shear waves obtained 100% 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 aggregate coverage was calculated to be (100% + 100% + 50% + 50%)/4 = 75.0%.

Best effort supplemental scanning was not applied since the requirements of the ASME Code, Section XI, Supplement 2 pertaining to refracted longitudinal wave or 70 degree shear wave methods are to be applied during single sided exams when axial scanning can only be performed from one side of the weld. 100% coverage was obtained in each axial scan direction.

The impracticality was caused by the tapered configuration of the valve, which did not allow access to the full volume of the weld in the circumferential direction. Therefore coverage could not be obtained by scanning from the valve side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

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

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

14.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.21.0066 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), 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure

testing (VT-2) examinations required by Section XI, and the continuing periodic leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

14.8. References

Duke Energy Relief Requests 02-ON-005 and 02-ON-004 were approved by the NRC during the last inspection interval. The previous approved SE's are documented in Accession Number ML32721404, TAC No.MB5815 and MC5830 dated September 29, 2003.

15.0 Weld #1LPS-563-14

15.1. ASME Code Component(s) Affected

Unit 1 Valve 1LPS-022 to Pipe Weld, Weld #1LPS-563-14, Summary Number 01.C5.51.0050, Low Pressure Service Water System, and ASME Code Class 2.

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-2, Item Number C5.51 Figure IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F.

15.4. Impracticality of Compliance

Component configuration:

- Surface 1: Carbon Steel Pipe
- Surface 2: Cast Stainless Steel Valve
- Diameter: 8.0 in.
- Thickness: 0.50 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

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

The impracticality was caused by the cast stainless steel material which cannot be effectively interrogated by ultrasound. There are currently no examination techniques that have been qualified through Appendix VIII for cast stainless steel. Therefore, coverage could not be obtained by scanning from the valve side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

15.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the cast stainless material. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.51.0050 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), 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the continuing periodic leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

15.8 References

None

16.0 Weld #1LPS-702-50

16.1. ASME Code Component(s) Affected

Unit 1 Valve 1LPSW-016 to Pipe Weld, Weld #1LPS-702-50, Summary Number 01.C5.51.0053, Low Pressure Service Water System, and ASME Code Class 2.

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-2, Item Number C5.51 Figure IWC-2500-7(a), 100% Volume Coverage of Examination Volume C-D-E-F.

16.4. Impracticality of Compliance

Component configuration:

- Surface 1: Carbon Steel Pipe
- Surface 2: Cast Stainless Steel Valve
- Diameter: 8.0 in.
- Thickness: 0.50 in.

This component was scanned manually with conventional methods. Scanning requirements are described in 10CFR.50.55a(b)(2)(xv)(A)(1). These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following:

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

The impracticality was caused by the cast stainless steel material which cannot be effectively interrogated by ultrasound. There are currently no examination techniques that have been qualified through Appendix VIII for cast stainless steel. Therefore, coverage could not be obtained by scanning from the valve side. In order to scan all of the required volume for this weld, the valve would have to be redesigned and replaced, which is impractical.

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were recorded during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

16.5. Proposed Alternative and Basis for Use

This weld was examined using procedures, equipment and personnel qualified in accordance with ASME Section XI, Appendix VIII. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws and has not been qualified through performance demonstration. Use of other manual or automated UT techniques, whether conventional or phased array, qualified under ASME Section XI, Appendix VIII would not increase coverage due to the limitation created by the cast stainless material. The use of any other UT technique available would incur the same physical scanning limitations.

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.C5.51.0053 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 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), 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.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the continuing periodic leakage inspections, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

16.8 References

None

17.0 Weld WJ32 (Serial #N-32389-1)

17.1. ASME Code Component(s) Affected

Unit 1 Letdown Cooler SN# N-32389-1 Inlet Channel Body to Chemical Connector Weld # WJ32, Summary Number PSI and ASME Code Class 1.

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

IWB-2500, Table IWB-2500-1, Examination Category B-B, Item Number B2.51 Figure IWB-2500-1, 100% Volume Coverage of Examination Volume A-B-C-D.

17.4. Impracticality of Compliance

Component configuration:

- Surface 1: Stainless Steel Inlet Channel Body
- Surface 2: Stainless Steel Chemical Connector
- Diameter: 8.620 in.
- Thickness: 0.875 in.

This component was scanned manually using conventional methods. Scanning requirements are described in ASME Section XI, Appendix III, III-4420 and III-4430. These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following.

- Axial scan coverage: 45° shear waves and 45°, 60° and 70° longitudinal waves in the S1 and S2 direction obtained an aggregate coverage of 97.2%
- Circumferential scan coverage: 45° shear waves obtained an aggregate coverage of 78.1%
- The total aggregate coverage was calculated to be (97.2% + 78.1%)/2 = 87.7%
- In addition, a best effort examination was performed using 60° and 70° longitudinal waves to the extent possible in the upper 2/3 area of interest.

The impracticality was caused by the taper configuration of the chemical connector and the proximity of a nozzle within the scan area from the inlet channel body. In order to scan all of the volume for this weld, the chemical connector and location of the adjacent nozzle would have to be redesigned and replaced, which is impractical.

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

Four indications were detected during the examinations that were determined to be all from component geometry. The indications were not associated with flaws in the component weld. The indications were acceptable without further evaluation. The dispositions for the indications were by procedure guidance on the use of probe skewing, use of higher angles and indication plotting. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

17.5. Proposed Alternative and Basis for Use

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No substitution alternative for this weld is available which would provide better coverage. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Use of other manual or automated UT techniques, whether conventional or phased array, were considered, but would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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 item number PSI 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

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17.8 References

None

18.0 Weld WJ33 (Serial #N-32389-1)

18.1. ASME Code Component(s) Affected

Unit 1 Letdown Cooler SN# N-32389-1 Inlet Nozzle to Channel Body Weld WJ33, Summary Number PSI and ASME Code Class 1.

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

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.

18.4. Impracticality of Compliance

Component configuration:

- Surface 1: Stainless Steel Channel Body
- Surface 2: Stainless Steel Inlet Nozzle
- Diameter: 3.0 in.
- Thickness: 0.875 in.

This component was scanned manually using conventional methods. Scanning requirements are described in ASME Section XI, Appendix III, III-4420 and III-4430. These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following.

- Base metal coverage using circumferential and axial scan coverage: 45° shear waves and 45°, 60° and 70° longitudinal waves in the S1 and S2 direction obtained an aggregate coverage of 60.1%
- Weld Material coverage using axial and circumferential scan coverage: 45° shear waves obtained an aggregate coverage of 49.1%
- The total aggregate coverage was calculated to be (60.1% + 49.1%)/2 = 54.6%
- In addition, a best effort examination was performed using 60° and 70° longitudinal waves to the extent possible in the upper 2/3 area of interest.

The impracticality was caused by the weld taper configuration of the inlet nozzle to channel body that does not allow meaningful interrogation from Surface 2 the inlet nozzle side. In order to scan the required volume for this weld, the channel body to inlet nozzle weld would have to be redesigned and replaced, which is impractical.

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were detected during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

18.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Use of other manual or automated UT techniques, whether conventional or phased array, were considered, but would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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 item number PSI 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

18.8 References

None

19.0 Weld WJ35 (Serial #N-32389-1)

19.1. ASME Code Component(s) Affected

Unit 1 Letdown Cooler SN# N-32389-1 Outlet Channel Body to Chemical Connector Weld # WJ35, Summary Number PSI and ASME Code Class 1.

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-B, Item Number B2.51 Figure IWB-2500-1, 100% Volume Coverage of Examination Volume A-B-C-D.

19.4. Impracticality of Compliance

Component configuration:

- Surface 1: Stainless Steel Outlet Channel Body
- Surface 2: Stainless Steel Chemical Connector
- Diameter: 8.620 in.
- Thickness: 0.875 in.

This component was scanned manually using conventional methods. Scanning requirements are described in ASME Section XI, Appendix III, III-4420 and III-4430. These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following.

- Axial scan coverage: 45° shear waves and 45°, 60° and 70° longitudinal waves in the S1 and S2 direction obtained an aggregate coverage of 97.2%
- Circumferential scan coverage: 45° shear waves obtained an aggregate coverage of 78.1%
- The total aggregate coverage was calculated to be (97.2% + 78.1%)/2 = 87.7%
- In addition, a best effort examination was performed using 60° and 70° longitudinal waves to the extent possible in the upper 2/3 area of interest.

The impracticality was caused by the taper configuration of the chemical connector and the proximity of a nozzle within the scan area from the outlet channel body. In order to scan all of the volume for this weld, the chemical connector and location of the adjacent nozzle would have to be redesigned and replaced, which is impractical.

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

Three indications were detected during the examinations that were determined to be all from component geometry. The indications were not associated with flaws in the component weld. All were acceptable without further evaluation. The dispositions of all indications were by procedure guidance on the use of probe skewing, use of higher angles and indication plotting. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

19.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Use of other manual or automated UT techniques, whether conventional or phased array, were considered, but would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations,

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 PSI 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

19.8 References

None

Page 53 of 55

- **20.0** Weld WJ36 (Serial #N-32389-1)
 - 20.1. ASME Code Component(s) Affected

Unit 1 Letdown Cooler SN# N-32389-1 Outlet Nozzle to Channel Body Weld #WJ36, Summary Number PSI and ASME Code Class 1.

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 B3.150 Figure 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 configuration:

- Surface 1: Stainless Steel Channel Body
- Surface 2: Stainless Steel Outlet Nozzle
- Diameter: 3.0 in.
- Thickness: 0.875 in.

This component was scanned manually using conventional methods. Scanning requirements are described in ASME Section XI, Appendix III, III-4420 and III-4430. These requirements describe and are specific to scanning components in two axial and two circumferential directions. This component was scanned to the extent possible to meet these requirements. The aggregate coverage that was obtained is described and calculated from the following.

- Base metal coverage using circumferential and axial scan coverage: 45° shear waves and 45°, 60° and 70° longitudinal waves in the S1 and S2 direction obtained an aggregate coverage of 60.1%
- Weld Material coverage using axial and circumferential scan coverage: 45° shear waves obtained an aggregate coverage of 49.1%
- The total aggregate coverage was calculated to be (49.1% + 60.1%)/2 = 54.6%
- In addition, a best effort examination was performed using 60° and 70° longitudinal waves to the extent possible in the upper 2/3 area of interest.

The impracticality was caused by the weld taper configuration of the outlet nozzle to channel body that does not allow meaningful interrogation from Surface 2, the outlet nozzle side. In order to scan the required volume for this weld, the channel body to outlet nozzle weld would have to be redesigned and replaced, which is impractical.

This relief request is specific to examination volume coverage limitations only. All other Code requirements were satisfied.

No indications were detected during this examination. The reject box on each UT Calibration/Examination sheet is marked for internal tracking of the coverage limitation only.

20.5. Proposed Alternative and Basis for Use

No substitution alternative for this weld is available which would provide better coverage. Radiography (RT) is not a desired option because RT is limited in the ability to detect service induced flaws. Use of other manual or automated UT techniques, whether conventional or phased array, were considered, but would not increase coverage due to the limitation created by the component configuration. The use of any other UT technique available would incur the same physical scanning limitations.

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 PSI 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 and other leakage detection systems provide additional assurance that, in the event that leakage did occur through this weld, it would be detected and proper action taken.

Duke Energy has examined the weld to the maximum extent possible utilizing approved examination techniques and equipment. Based on the acceptable results for the coverage completed by the volumetric examination, the pressure testing (VT-2) examinations required by Section XI, and the leakage monitoring, it is Duke Energy's position that the combination of examinations provides a reasonable assurance of quality and safety.

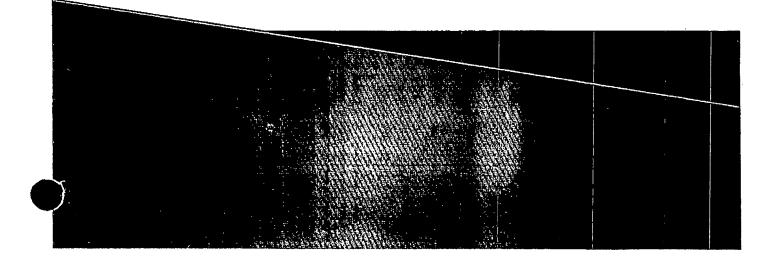
20.8 References

None

Attachment A

to Relief Request 12-ON-001

UT Detail Data sheets from 1EOC-26 Limited Exam Coverage



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| Thickness | 6.187 Di 71 Temp. To | Charles Street | برالناء كابرك نعده وكشدان وا | Exam Si | | | | Serial No.: | شده بد | 6-6522 | dB | Reflecte | | 6 Division | Sound Path |
| | 78 Tomp. To | the second s | CNDE40127 | | | As Gr | | Туре: | RON | IPAS | 14.9 | BW. | 80 | 10 | 1.0 |
| | | منصيبة والأبسانية | | | | | | 1 | | | ļ | <u> </u> | | | |
| Recordable ind | •• | Yes [] | | • • | II. AUNONIO | Ultrasonio Indi | Caucil Report |) | <u> </u> | mments: | | L | | <u> </u> | j |
| | Accept | Reject | | Info 📋 | | | | | | annetio: t iti | • | | | | |
| Percent Of Cove | erege Obtained > | 90%: | No | and the second s | od Provious | | Yes. | | | | | | | | |
| Examiner | Level IL-N | ¥ | | Signature | . 11 | | Date Review | the second | $I \Lambda$ | Ŋ. | | 81gru | duro | N. | Data |
| Mauldin, Larry | | AL | | | way | | | Jan / | 11 | los | | | | 7. | 20-11 |
| Examiner | Level ILN | 0 | | Signature | Ì | | Date Site R | eview V | 1.1 | | | Signa | iture | | Date |
| Mulrhead, Berr | | par | 1 | <u>u</u> | 1 | 4/18/2 | | | 6 | A | Â | Öleine | | , | |
| Olher N/A | Lovel N/A | | | Signature | | | Date ANIT R | ALL A | 2/12 | to St. | , H | Signa | ^{wre} 4/ | 20/17 | Date |
| | | | ~ <u></u> | ÷ | فسيرد برسواليورشو | | 10.101 | mg L P | vu | <u>no</u> m | ZNU | | .1.76 | | |
| , | • | | | | • | | | - | | | | | | ATTER | UMTAT A |
| • | | | | | | | | | | | | | | Dice - | HMENT A |
| | | | | | | | | | • | | | | | PAGE 1 | ₿.F., . |

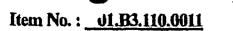
| | | Site/Unit: | 0 | U A | r Calib | \sim 1 | Inatic | n | | | | O | | · |
|--------------------|--|-------------------|-------------------------------|------------------------|---|---------------------------------|---------------|---------------------|--|--|-----------------|-------------------------|-------------------|--------------|
| | | nary No.: | Ocones Ot P | 3.510.0011 | | Procedu | xcedure: | | NDE-820 | | | Outage i Report i | | 01-26 |
| | | nkscope: | | 181 | | Work Or | | | 01897577 | , | | • | 199: 1 | of 9 |
| | | | | | | | | ç. | | | | | | |
| | | 1998/2 | | | Cat/Item: | B-D /B3 | | | Location: | · | | | | |
| awing No.: | ······ | 181-0 |)CN1-002 | | Desc | ription: Nozzle L | shell | | | برالنف مصر است | | | | |
| stem ID; | 60 | | | | | | | | ····· | <u>.</u> | | | | |
| mponent ID: | 1-PZR-WP | | | | | | | Size/1 | ength: | N/A | | Thicknose/Di | unioter: <u>C</u> | 8/6.187/5.75 |
| nitationa: | Yes - 800 a | ttached sh | eeta | | | | · · · · · · · | | Start | Time; | 1216 | Finis | n Time: | 1222 |
| | Instrume | nt Settings | | | Search Ur | dt | Cel. | Time | Date | [| Axia | i Orlenfated 8 | earch Unit | |
| rial No.: | | TXLTOD | | Serial No.: | Gt | 4818 | Checks | | | Callb | neßen | Signal | Sweep | Sound Patt |
| nufacturer: | | KRAUTKRA | اخرجي الالي اعدالاخد سارا كيد | Manufacturer: | | КВА | - Initial Cal | <u>1065</u> 1216 | 4/18/2011 4/18/2011 | Ret | octor | Amplitude % | Division | |
| dot: | 44.94 | USN-6 | 15.0 | Stze: .6x1 | | | Inter. Cal. | 1410 | -110/2011 | the second s | | 80 | 1.4 | 2.24 |
| lay: i Cal/Vel: | <u>11.31</u> .1268 | Range: Pulser: | High | Freq.: 2.25 | in the second | fo: Gainina f Fiomenia: Sine | - Union Cal | 1230 | 4/18/2011 | | <u>/8</u> /8 | 35 20/40 | <u> </u> | 4.70 6.99 |
| mping: | 1K | Reject: | 0% | Exem Angle: _ Mode: | ¥0 8hi | f Elemenia: Sing | Final Cal | 1300 | 4/18/2011 | No | | 35 | 6.6 | 9.81 |
| | Autohigh | Freq.: | 2.26 MHz | Measured Angle | | 45 | - | Couplar | rt , | | 18 | 15 | 8.1 | 12.19 |
| 9/: | Fixed | Mode: | PE | Wedge Style: | | 5W8 | Cal. Batch | : (| 09325 | | Circumfe | rential Oriente | ted Search | Unit |
| tage: - | Fixed | Other: | Futherve | - | | | | ULTRA | gel II | Catth | | Signel | Sweep | Sound Pat |
| | 44:1/52.1 | Circ. Gain (| | | earch Unit C | | Mig.: | 80N0 | TECH | Resid | | Amplitude % | Division | |
| Screen Dh | v. = <u>1.5</u> | in. of | Sound Path | Тура; | RG - | ومواكب بالبين أخذبكف يوي فتهي | _ Exam Bata | h | 09325 | <u> </u> | <u>~</u> | - | · | |
| earity Report | No.: | L11. | 138 | _ Length:6* | No. Co | | _ Тура: | ULTRA | ······································ | | | | | |
| | Calibrati | on Block | | | Scan Covera | | Mfg.; | 80N0 | TECH | | | | | |
| . Block No. 🚬 | مىلىرىنى بىرىنىيى مەركە مىلىكى بىرىنىيى مەركە بىرىكى مەركە بىرىكى مەركە بىرىكى مەركە بىرىكى مەركە بىرىكى بىرىكى | 40338 | | - | | Scan dB: 58.1 | - 404 | rence E | llock | | Ref | erence/Simut | | |
| cknese | 7 | Ola.: | 6.760 | CW 🛃 | ccw 🖥 | Scan dB: 58.1 | - Serial No,: | | 0-6522 | Gein dB | Reflecto | Signal r Amplitude 9 | Sweep Division | Sound Patr |
| , Bik. Temp. | | | ACNDE40127 | Exam Surface; | | OD | _ Тура: | ROM | PAS | 32.2 | 2" Radiu | | 1.3 | 2.0 |
| • • • | 78 Temp. | | CNDE40126 | Surface Conditio | burness and | La Ground | | | | | | · . | 1. | · · · · · |
| ordable Indi | ication(s): | Yes [|] № 2 2 | (if Yes, Ref. Attac | hed Ultrason | c indication Repo | rt.) | | | | | |] | · · · |
| nullat / | Accept | Reject | Tr 🖌 | lo Cl | | | | Co | nments. | • | | | | |
| cent Of Cover | nage Obteine | d > 90%: | No | Reviewed Previ | ous Data: | Yes | • | | | | | | | |
| miner | Lovel p | | 1 · 8 | Innetime | | Date Rev | owe().4 | A | 22 | | Signa | ture | | Date |
| uldin, Larry & | | | and a | May | Alex | 4/18/2011 | Day | ΛI | los | | | | 4.2 | ه.ا |
| miner | Lovel II | | | kinatura | | | Review / | -fe | | | Signa | ture | l. | Date |
| trheed, Barry | | B | non 1 | ale | 1 | 416/2011 | NA | • | | | | | | |
| 187 | Lovel N | A | 0 3 | Igneture | | | Review | $n \hat{n}$ | the | a | Signa | ture il | | Date |
| A . | | | | | | /V | my | <u>المجارة</u> | une 2 | sur | pin | 4/2 | 0/1(| |
| | | | | | | | U, | - | | | | _ | | IMENT / |
| | | | | | | | | | | | | | N I I N U | QF 16 |

| Burnunsty No.: O1.83.118.0011 Procedure Rev.: 6 Report No.: U145771 Workscope: 183 Work Order No.: 01987877 Page: 2 of 6 Code: 168/2000A Cet/Item: B-0 / 88.119 Location: 9 | | | Sile/Unit | Ocones | 4 | • | | Dma | adum. | | | • | | Chatana - | ~~ Na • | |
|---|-----------------|--|--|--|------------|---------------|---|----------------------------------|-------------------------|-----------------------|---|----------|---|---------------|-------------|--------------|
| WorkCorper 101 Work Order No.: 0197077 Fage: Z of 6 Code 1982/2080.A Casi/liam: 9-0 /83.118 Locador: Code 1 6 | • | | | | | • | - | | | | NDE-820 | · | | - | | 01-26 |
| Code 1994/2000A Cat./term: B-0 / 83.119 Losator: Dawing No.: ISLOCHI-002 Description: Nazzie to Shall Description: Numerical and the state of Shall System ID: 80 State/Logit: Numerical and the state of Shall Shall-angit: Numerical and the state of Shall Shall-angit: Numerical State of Shall Shall Changet: Numerical State of Shall Shall Changet: Total changet: </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>ii</th> <th></th> <th>-</th> <th></th> <th></th> <th>•</th> <th></th> <th></th> | | | | | | | | | ii | | - | | | • | | |
| Dawley No.: IB-DCH-1-G2 Description: Nextle to Binal System ID: 80 Component D: 1-2-2-AVP2-AVP2-5-3 Instrument Bettings Search Unit Seriel No.: 01217 Seriel No.: 01217 Dankedurer: KRAUTROLAMER Manufacturer: KRAUTROLAMER< | Code: | | | 0004 | | Cat / | ie Item - | | | | | | _ | | | |
| Systam ID: 60 Component ID: 1422R-WP28-3 Standungth: The Park Time: Instrument 20: 1422R-WP28-3 Instrument 20: 0071XT Serial No.: 0071XT Serial No.: 0171XT Serial No.: 0171XT Mandacturer KRAUTRAMEER Model 1422 1422 Audel Orlandiate Supplement Mandacturer KRAUTRAMEER Mandacturer KRAUTRAMEER Mandacturer Saratin No.: Oblight Freq.: 2.28 Mitz Mandacturer Baser Saratin No.: Call Park Baser Saratin No.: Call Park Baser Baser Saratin No.: Saratin No.: Saratin Sa | | | | | | | 'analasia | | | | Location: | | | | | |
| Component ID: 1+221-WP26-3 Stant Angel: NA Thidkness/Diameter: CBR4.57/6.70 Serial NO:: //serial Search Unit Search Unit Search Unit Stant The:: 1120 Friesh Time:: 1120 Friesh Time:: 1122 Instrument Bettings Search Unit Search Unit Cast. Time: Data Cast. Time: 1122 Adual Orientated Search Unit 1122 | | 50 | | | | | waser has | | | | | | | | | |
| Linkitions: Yes - See attacted sheets Search Unit Search Unit Search Unit Classing Time: 1120 Fried Time: 1121 Sarial Mo.: 00T.DXT Search Unit Search Unit Classing Time: 1120 Ackel Oriented Search Unit Attal Oriented Search Unit Attal Oriented Search Unit Classing Time: 1120 Attal Oriented Search Unit Classing Time: 1120 Attal Oriented Search Unit Classing Time: 1120 Attal Oriented Search Unit Classing Time: 120 Attal Oriented Search Unit Classing Time: 120 Attal Oriented Search Unit Classing Time: 120 Attal Oriented Search Unit Sea | • | | 6-3 | | | | | • • • • • • | | Streff | easth: | N/A | <u></u> | Thickness/III | ameter C | |
| Instrument Settings Serial No.: Of 4819 Cat. Astal Orientated Search Unit Sarial No.: OFTLXT Sarial No.: Of 4819 Cat. Time Data Model: USN-60 State X | 4 | ÷ | | eeta | | | | <u> </u> | | which and the | - | | -1120 | | | |
| Sarial No.: OT LYT Serial No.: Of 4819 Calls Calls Adal Offentated Bearch Unit Manufacturur: KRAA Istell Call Calls Callsock Signal < | | | | | | | ereb Unit | | · | | | | | | | |
| Manufacturer: KRAUTRCAAMER Manufacturer: KRA Inter. Cal. 1120 41912011 Reference Reference <threference< th=""> Reference <threference< th=""></threference<></threference<> | Serial No.: | | - | r | Sertal No. | | |) | | Time . | Date | <u> </u> | | | | |
| Detry: 14.0744 Rarge: 8.0" Freq.1 2.80 MHz Style: GAMMAA Inter. Cal. 1100 2.00 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 4.0 1.0 7.0 1.0 | Manufacturer: | | RAUTICRA | MER | | | and the second se | وسيج عبيرا ستكافئ الكرامة فيدأنه | | | | | | | | Sound Pat |
| MY Cal/vel: 1528 Puter: High Exam Argie: 0 vite: 0 vite: 0 vite: 100 <th100< th=""> 100 100<td>-</td><td></td><td></td><td></td><td> Size:</td><td>.5x1.0</td><td>Shape:</td><td>Rect.</td><td></td><td>1120</td><td>4/18/2011</td><td></td><td><u></u></td><td>80 /</td><td>2.0</td><td>1.0</td></th100<> | - | | | | Size: | .5x1.0 | Shape: | Rect. | | 1120 | 4/18/2011 | | <u></u> | 80 / | 2.0 | 1.0 |
| Dempiritie Ittal Reference Block Deaministie Evaluation dealer Rep, Rate: Autohigh Freq.: 2.28 MHz Measured Angle: 60 Couplant Rep, Rate: Autohigh Freq.: 2.28 MHz Measured Angle: 60 Couplant Rillor: Plzad Mode: Plz Wedge Style: Style: Couplant Couplant Vollage: Fhead Cline: Cline: Cline: Couplant Couplant 1 Screen Div. = -5 h. of Sound Path Type: ULTRAGEL II 1 Screen Div. = -5 h. of Sound Path Type: Ro - 174 Linearity Report No: L-11-133 Length: 6' No. Com:: 0 Calibration Block Geal Downstream [S Scan dB: 6A.1 Serial No.: Sound Path Calibration Block Uperstream [S Scan dB: 6A.1 Serial No.: 80-6522 Calibration Block Couplant CW [S COW [S Con dB: 6A.1 Serial No.: 80-6522 Calibration Block Couplant Mig:: Sound Path Serial No.: 80-6522 Calibration Block Couplant Mig:: Sound Path Serial No.: 80-6522 Calibration Block | · • | | Range: | | Freq.: | 2.25 MHz | Style: | GAMMA | | | - | . 1. | 0 * | 70 | 4.0 | 2.0 |
| Computer Construction Construction Construction Construction Rep. Rate: Autohligh Fillar: Pillar Pillar 20 20 20 2.0 Fillar: Pillar Pillar Pillar Search Unit Signati Signati <t< td=""><td></td><td></td><td></td><td>a second seco</td><td>Exam Ang</td><td>ie:60</td><td>s of Ele</td><td>ments: Single</td><td></td><td>and the second second</td><td></td><td></td><td></td><td>68</td><td>6.0</td><td>3.0</td></t<> | | | | a second seco | Exam Ang | ie: 60 | s of Ele | ments: Single | | and the second second | | | | 68 | 6.0 | 3.0 |
| Filtar: PE Wedge Style: SW8 Cal. Batch: 09325 Circumferential Orientated Search Unit Vollage: Fiscal Other: Puttwave Search Unit Cable Type: ULTRAGEL II Cal. Batch: 09325 Ax. Gain (GB): 44.1 Circ. Gain (GB): 88.1 Search Unit Cable Mig.: SOUND FECH Reference Spinil | | | The second s | | | | and the second se | | transfer and the second | | : الموجود في محمد معالم | _ | The second se | | | |
| Voltage: Fbrad Other: Pullwave Type: ULTRAGEL II Calibration Storal Storal Sound Path 1 Screen Div. # 5 h. of Bound Path Type: Ref. 174 Exam Batch D0225 N/A N/A Interfit Report No.: L-11-133 Length: 6" No. Conn.: 0 Type: ULTRAGEL II N/A N/A Interfit Reformed Standards % D/Asion Sound Path Linearity Report No.: L-11-133 Length: 6" No. Conn.: 0 Type: ULTRAGEL II N/A N/A Calibration Block Galibration Block Basen Goverage Mig.: SONOTECH N/A N/A Interfit Reference/Simulator Block Calibration Block 40335 Upstraam Ø Downstream Ø Scand B: 68.1 Sental No.: 66-6522 dB Reference/Simulator Block Sental No.: 66-6522 dB Reference/Simulator Block Sental No.: 66-6522 dB Reference/Simulator Block Sental No.: 60-6522 dB Reference/Simulator Block Sental No.: 60-6522 dB Reference/Simulator Block Sental No.: | | and the second s | · · · · · · | and the second | | | _ | | | | | | | | | |
| Ax. Gain (dB): 44.1 Circ. Gain (dB): 88.1 Search Unit Cable Mfg:: GONOTECH Reflector Amplifude % Division Sound Path 1 Screen Div. = .5 in. of Sound Path Type: Rd - 174 Exam Batch 03225 NA MA Image: Callboration Block NA Image: Callboration Block NA Image: Callboration Block Sear Coverage Mfg:: SONOTECH NA Image: Callboration Block Reference Block Reference/Staulator Block Reference/Staulator Block Secan dB: 68.1 Reference/Staulator Block Reference/Staulator Block Secan dB: 68.1 Reference/Staulator Block Reference/Staulator Block Secan dB: 68.1 Secan dB: 68.1 Reference/Staulator Block Reference/Staulator Block Secan dB: 68.1 Secan dB: 68. | | | | | • Wedge St | yie: | 5W8 | 5 · | | | | J | | | | : Unit T. |
| 1 Screen DN. = -5 h. of Sound Path Type: R8 - 174 Exam Batch 08228 Linearity Report No.: L-11-133 Lergth: 6 No. Corm.: 0 Type: ULTRAGEL II Callbration Block Gallbration Block Upstream Ø Downstream Ø Scan dB: 66.1 Reference Block Reference/Simulator Block Call Bick No. 40336 Upstream Ø Downstream Ø Scan dB: 68.1 Reference/Simulator Block Call Bick No. 40336 Upstream Ø Downstream Ø Scan dB: 68.1 Reference/Simulator Block Call Bick Tomp. 71 Temp. Tool: MCNDE40127 Exam Surfsce: 0.5 Type: Call Bick Tomp. 78 Temp. Tool: MCNDE40127 Exam Surfsce: 0.5 Type: Call Bick Tomp. 78 Temp. Tool: MCNDE40128 Surfsce Condition: As Ground Starseits: Accept Ø No Ø (If Yes, Ref. Attached Ultresonic Indication Report.) 38.6 2 Baddue 60 6.0 Starstim Largth: Oregan for Occurration Accept Ø Info Comments: Comments: Percent Of Coverage Obtained > 80%: No Reviewed Previous Date: Yes Examiner Level ILM Signature Date Signature Date < | | | | | ÷ | Search | Link Cable | | | _ | | | | | | Sound Path |
| Linearity Report No.: L-11-138 Length: @ No. Corm.: 0 Type: ULTRAGEL, II Callbration Block CallBration | | | | | Type: | | | | - | | ····· | | | | | 1 |
| Callbration Block Scan Coverage Mig.: SONOTECH Mig.: A0338 Upstream [] Downstream [] Scan dB; 68.1 Reference Block Callbration Block Upstream [] Downstream [] Scan dB; 68.1 Reference Block Chickness 7 Dia:: | | | | | | e : | | | | 1 Concernant | | | - | | | |
| Call Block No | and report | | | | | | • | | | | | <u> </u> | · · · | | | · |
| Intervenes 7 Dia.: Plat CW (2) CCW (2) Scan dB: Bal Serial No.: Gain Reflector Signal Sourd Path Cal. Bit. Temp. 7:1 Temp. Tool: MCNDE40127 Exam Surface: O.D. Type: Rohe PAS Serial No.: 68-6522 Gain Reflector Amplitude % Ohvision Sound Path Comp. Temp. 7:8 Temp. Tool: MCNDE40128 Surface Condition: As Ground Type: Rohe PAS Se.8.8 2" Eaclus 80 8.0 2.0 Comp. Temp. 7:8 Temp. Tool: MCNDE40128 Surface Condition: As Ground Type: Rohe PAS Se.8.8 2" Eaclus 80 8.0 2.0 Comp. Temp. 7:8 Temp. Tool: MCNDE40128 Surface Condition: As Ground Type: Rohe PAS Se.8.8 2" Eaclus 80 8.0 2.0 Sesuits: Accordation(a): Yes Comments: Comments: Secondation Signature Date Asternature Date Signature Date Asternature Date Asternature Date Aliszoni | el Block No | | | • | Upstream (| - | - | an dB; 55,1 | - | | | | | | ates Binet: | J |
| Cal. Blk. Temp. 71 Temp. Tool: MCNDE40127 Exam Surface: O.D. Type: ROMPAS So.6 2" Radius 50 8.0 2.0 Comp. Temp. 78 Temp. Tool: MCNDE40128 Surface Condition: As Ground So.6 2" Radius 50 8.0 2.0 Comp. Temp. 78 Temp. Tool: MCNDE40128 Surface Condition: As Ground So.6 2" Radius 50 8.0 2.0 Comp. Temp. 78 Temp. Tool: MCNDE40128 Surface Condition: As Ground So.6 2" Radius 50 8.0 2.0 Comp. Temp. 78 Temp. Tool: MCNDE40128 Surface Condition: As Ground Store | _ | | | | - | 2 | | an dB: 68.1 | Refs | rence B | | Gain | 167 | | | 0 |
| Comp. Temp. 78 Temp. Tool: MCNDE40128 Surface Condition: As Ground 170 State | | | | | - | 509: | <u>a</u> | | | | | dB | | r Amplitude 1 | 6 Division | <u></u> |
| Recordable Indication(s): Yes No (If Yes, Ref. Attached Ultrasonic Indication Report.) Results: Accord (Image: Second (Image: Second Seco | | | | اشتهارا والمتحدث والتكاريف المكافعات | | | | | туре: | ROM | PAS | 38.8 | 2" Badlı | te 60 | 8.0 | 2.0 |
| Results: Accept [] Reject [] Info [] Comments: Percent Of Coverage Obtained > 90%: No Reviewed Previous Data; Yes Examiner Level II-N Signature Date Reviewed Signature Date Mauidin, Larry E. Mauidin, Larry E. Mauidin, Larry E. Date Mauidin, Larry E. Signature Date Examiner Level II-N Signature Date Site Review Signature Date Multihead, Barry A Barry A Barry Mathematication Mathematication Date N/A Bignature Date Date All (Review) Signature Date N/A Bignature Date All (Review) Signature Date N/A Bignature Date All (Review) Signature Date N/A All (All (All (All (All (All (All (All | | | | | | | | |) | | 7 | | | | | ļ |
| Percent Of Coverage Obtained > 90%: No Reviewed Previous Data: Yes Examineer Level IL-N Signature Data Reviewed Mauldin, Larry E. Examineer Level II-N Signature Data Site Reviewed Mauldin, Larry E. Examineer Level II-N Signature Data Site Review Manual Mana 4/18/2011 Data Site Review Data Mauldin, Larry A. Examineer Level N/A Signature Data Data ANII Review Data N/A. At 1 AC HME N T | | | - | | | | • | • | - | Cer | , nmeois: | | . | | | L |
| Examiner Level II-N Signature Date Reviewed Signature Date Mauldin, Larry E. Date Mauldin, Larry E. Date Mailed 4/18/2011 Jan Mars 4/-20-11 Examiner Level II-N Signature Date Site Review Signature Date Aver Signature Date Aver 4/18/2011 DA Signature Date Multiteed, Barry A Barry A Bignature Date Aver 4/18/2011 DA Signature Date NIA Signature Date Aver 4/18/2011 DA Aver 4/18/2011 Date Aver 4/18/2011 Date Aver 4/18/2011 Date Aver 4/18/2011 DA Aver 4/18/2011 Date Aver 4/18/2011 DA Aver 4/18/2011 Date Aver 4/18/2011 DA Aver 4/18/2011 Date Aver 4/18/2011 Date Aver 4/18/2011 DA Aver 4/18/2011 Date 4/18/2011 Date Aver 4/18/2011 Date 4/1 | | | | • | | | | | | | τ or i 8 ψτ γ γημβ 4 | | | | | |
| AttachMENT | ercent Of Cover | | | | | | | | | | | | | | | |
| AttachMENT | • | ~ | N Z | | matin | mili | lan in | Date Review | vel. | A 1 | M | | Signa | ture | | 1 |
| AttachMENT | | | | an C | | und | 42 418 | Data Olto D | <u>Lann</u> | \mathcal{A} | 1000 | | <u>Olass</u> | | | |
| Dither Level N/A Signature Date ANII Review Date ANII Review Althe Standard H20/11 Date | | | R | | | 1 | | Care Core Lo | | r (| | | - ସାହିମ୍ବର | with . | | Vate |
| NA Noney Chithe Shighter 4/20/11 ATTACHHENT | | | in | 8 | lonature | <u></u> | | | | i | | | A Slang | ture | | Data |
| ATTACHMENT | | | • | | | | | NI | new | 07 | tti S | hun | the | | 20/17 | |
| ATTACHMENT | | | | | | | | | 0 | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | <u> </u> | | | 1-1 | |
| | | | | | | | | | | | | | | | ATTAC | HMENT |

| Alter | | UT Ci | alibration | Inatio | n, | | | | | ~ | |
|-------------------------------|---|---|--|--|---|--|--|---|--|--|---|
| Site/Un | R: Oconee | <u> </u> | Proc | edure: | | NDE-820 | | _ | Outage | No.: | 01-26 |
| Summary No | .: <u>01</u> J | B3.110.0011 | Procedure | Rev.: | | Ċ, | - | | Report | Na.:U | T-11-771 |
| Workscop | | 181 | Work Ord | sr No.: | | 01897577 | <u> </u> | | P | age: 3 | of 9 |
| 19 | 98/2009A | Cat/it | em: 8-D /83.1 | 10 | | Location: | | | | | |
| | 181-OCN1-002 | • | Description: Nozzle to | Shell | - | | | · | , , , , , , , , , , , , , , , , , , , | | |
| 50 | | | | | | | | | | | |
| 1-PZR-WP28-3 | | · · · · · · · · · · · · · · · · · · · | ······································ | | Size/ | Longth: | N/A | | Thickness/Di | ameter: C | 8/8.187/5.78 |
| Yes - See attache | d sheets | | | | | Start | Time: | 1231 | Finis | h Time: 🔤 | 1238 |
| 'Instrument Sett | ings | | | | | | | A vi | a) Orientated S | | |
| 00 | TJXT | Serial No.: | G14819 | Checks | Time | Cata | Callb | | | | |
| | | Manufacturer: | KBA | Initial Cel | 1100 | 4/18/2011 | | | Amplitude % | Division | Sound Pal |
| | | Size:5x1.0 | Shape: Rect. | | 1231 | 4/16/2011 | 1 | 18 | ··· 80 | 1.1 | 3.43 |
| | | | Style: GAMMA | | 1245 | 4/18/2011 | i promo a series de la companya de l | | | | 6.54 |
| | and the second secon | | | Final Cal | | | | | | | 9.96 |
| | and the second secon | and a second | | | Coupla | | | | 15 | 6.9 | 16.62 |
| | | Wedge Style: | SWG | | - | 1 | | Chroumf | rential Orlente | ted Search | Unit |
| Fixed Other | Fullwaye | | | Туре: | ULTR/ | GEL II | | | Signal | Sweep | Sound Pa |
| | | | Unit Cable | Mfg.: | SONO | TECH | ····· | | Amplitude % | Division | |
| $r = \frac{2.5}{10.05}$ in of | Sound Path | Type: | RG - 174 | Exam Batc | h | 09325 | N | <u>A</u> | | | ╉╼╼╼╼╸ |
| No.: | L-11-138 | | | Type: | ULTR/ | VOEL II | | | | | 1 |
| Celibration Bio | ck | | - | Mfg.: | \$ONO | TECH | | | | | |
| 4 | 338 | | | Refe | rence E | Hock | | Re | | ntor Block | |
| | 5.76 | CW 🖸 (| XCW 2 8cen dB: 76.6 | Serial No.: | . 9 | 6-6522 | Gain dB | Reflect | Signal or Amplitude | 6 Sweep 6 Division | Sound Pa |
| | ي يونين المحكمة | Exam Surface: | O.D. | Туре: | RON | IPAS | 38.8 | | | .7 | 2.0 |
| | فتبغير البختا أب سالعتير الدسيرة ترغا داعير | | | | | | | | | | |
| •• | | • | vasonic incication Report. |) | | I | | | | | l; |
| coopt 📋 🛛 R | oject 🖌 i | info 📋 | | | Ca | mments: | | | | | • |
| age Obtained > 90' | 6: <u>No</u> | Reviewed Previous D | ata: Yes | | | <u> </u> | · | | | | |
| Lovel IL-N | 0 | Slaneture | Date Review | 100 | Ā | NA. | | Sign | sture | | Date |
| / | | | 4/18/2011 | Mar | 14 | 11/00 | 2 | | <u>.</u> | | 4-20-11 |
| Lovel ILN | | Signature | | Now NI | YT | | | Sign | aturo | | Date |
| | | | a second s | | <u> </u> | <u> </u> | | 0-2 | <u></u> | | Date |
| LUVBI N/A | 2 | Signature | | nen | D | 1.1.0 | <u>G</u> h | Ĩ | tu Z | 42.11 | Data |
| | | | | - J | -161 | | 0 | ð | 1 | <u>, , , , , , , , , , , , , , , , , , , </u> | UNENT |
| | | | | | | | | | | AIIAL | 18370 |
| | Summary No Workscope 19 50 1-PZR-WP26-3 Yes - See attache Instrument Satt 00 KRAUT UE 14.0744 Range -1268 Puise 14.0744 Range -1268 Puise 14.0744 Range -1268 Puise 14.0744 Range -1268 Circ. C utahigh Freq.: Fixed Other 66.6/62.8 Circ. C (, = 2.5 in. of 66.6/62.8 Circ. C (, = 2.5 in. of 10.: Calibration Bio 40 7 Dis.: 71 Temp. Tool: 78 Temp. Tool: 78 Temp. Tool: 2ation(s): Ye coopt [] Re age Obtained > 809 Lavel II-N | Summery No.: O1. Workscope: 1998/2000A 181-OCN1-002 50 1-PZR-WP26-3 1998/2000A 1-PZR-WP26-3 007.JXT KRAUTKRAMER 007.JXT KRAUTKRAMER USN-60 14.0744 Range: 25.0. 14.0744 Range: 25.0. 14.0744 Range: 25.0. 11K Reject: 0% 11K Reject: 78.6 7 Dia.: 6.76 7 Dia.: 6.76 7 Dia.: 6.76 7 Dia.: 6.76 <td>Sita/Unit: Ocones I Summary No.: 01.83.110.0011 Workscope: 181 1998/2000A Cat/At 14.0744 Range: 14.0744 Range: 25.0. Freq.: 1248 Pulser: 144.0744 Range: 144.0744 Range: 144.0744 Range: 144.0744 Range: 144.0744 Range: 1458 Pulser: 1459 Exam Angle: 1459 Pulser: <!--</td--><td>Sile/Unit: Ocones I Proc Summary No:: 01.B3.110.0011 Procedure Workscope: IBI Work Order 1998/2000A Cal.Altern: B-D /B3.1 IBI-OCN1-002 Description: Norzie to 1 50 ISI-OCN1-002 Description: Norzie to 1 50 Instrument Settinge Seriet Nor.: Norzie to 1 1-P2R-WP28-3 Seriet Settinge Search Unit Statinge 1-P2R-WP28-3 Seriet Settinge Seriet Nor.: REA 1-Strument Settinge Seriet Nor.: REA Statinge USN-60 Size: Strinter KBA USN-60 Size: Strinter KBA 14.0744 Range: 25.0. Freq.: 2.35 MHz 14.0744 Range: 25.0. Freq.: 2.35 MHz 14.0744 Range: 25.0. Freq.: 2.40 Made: Get Adatinge 14.0744 Range: 25.0. Freq.: 2.35 MHz State Condition: State Condition: .14.0744 Range: 2.5.0. <t< td=""><td>Sila/Unit: Oconee I Procedure: Summary No:: 01.B3.110.0011 Procedure Rev.: Workscope: 181 Work Order No:: 1989/2000A Cat./item: B-D /B3.110 1990 Stac: Cat./item: 1001.001 Dorsorption: Nozzie to Shall 11.57 Serial No.: O14219 11.65.001 Manufacturer: KDA 11.65.001 Manufacturer: KDA 11.65.001 Bost Stac: Cat./iter: Cat</td><td>Site/Unit: Ocones I Procedure: Summary No:: 01.83.110.0011 Procedure Rev.: Workscope: 161 Work Onjer No.: 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Description: Nozzie to Shell 50 </td><td>Silakunit: Oconse I Procedure: NDE-920 Summary No.: O1.B3.110.0011 Procedure Rev.: 6 Workscope: IBI Mork Order No.: 01897577 1998/2000A Cal.fitem: B-D /B3.110 Location: 1997.05 Safa Safa Safa 1997.05 Safa Safa Safa 1051.07 Safa No.: G14919 Cal.fitem: 1051.07 Safa No.: G14919 Cal.fitem: Cal.fite: 1288 Pdoor: High Exam Aragie: G2 GAMMA 1288 Pdoor: High Exam Aragie: 60 Couleant 1288</td><td>SlaUnit: Ocones I Procedure: NDE-820 Summary No: 01.B3.110.0011 Procedure: III IIII Procedure: IIIII Workscope: IIII Nork Order No: 01897577 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII</td><td>SilaUnit: Occure I Procedure: NDE-520 Summary No:: 01.83.110.0011 Procedure Ray:: 4 Workscepe: 161 Work Order No:: 01497577 19982/2000A Cat.Altern: 8-0 / 183.110 Location: 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 10000-W12702-0 Stord.angth: N/A 10100-W12702-0 Stord.angth: N/A 11021-0 Manufacturer: REA 111021-0 Manufacturer: REA 11284 Paserri Stord.angth: Stord.angth: 11284 Paserri Stord.angth: Stord.angth: 11284 Paserit</td><td>Site/Unit Contes I Procedure NDE-820 Outage Summary No: 01.83.110.0011 Procedure Rav: 6 Report Workscope: IB Work Ordar No: 01.83.117 Procedure Rav: 6 Report 184-0004 Cat/Item: B-0 /B3.110 Location: 01.83.117 Procedure Rav: 7 Procedure 14 Procedure Rav: 6 Report 1484704 Procedure Rav: 6 Procedure 14 Procedure 1484704 148971 Procedure 1484704 148971 Procedure 1484704 148971 Procedure 148471 Procedure 148714 148724</td><td>Sital/Uni: Oconee I Procedure: NDE-520 Outloge No:: Summary No:: 01.83.118.0011 Procedure Rav:: 6 Report No:: U Workcope: 181 North Cotest 01.87.577 Page: 1 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Stantanet Stantanet</td></t<></td></td> | Sita/Unit: Ocones I Summary No.: 01.83.110.0011 Workscope: 181 1998/2000A Cat/At 14.0744 Range: 14.0744 Range: 25.0. Freq.: 1248 Pulser: 144.0744 Range: 144.0744 Range: 144.0744 Range: 144.0744 Range: 144.0744 Range: 1458 Pulser: 1459 Exam Angle: 1459 Pulser: </td <td>Sile/Unit: Ocones I Proc Summary No:: 01.B3.110.0011 Procedure Workscope: IBI Work Order 1998/2000A Cal.Altern: B-D /B3.1 IBI-OCN1-002 Description: Norzie to 1 50 ISI-OCN1-002 Description: Norzie to 1 50 Instrument Settinge Seriet Nor.: Norzie to 1 1-P2R-WP28-3 Seriet Settinge Search Unit Statinge 1-P2R-WP28-3 Seriet Settinge Seriet Nor.: REA 1-Strument Settinge Seriet Nor.: REA Statinge USN-60 Size: Strinter KBA USN-60 Size: Strinter KBA 14.0744 Range: 25.0. Freq.: 2.35 MHz 14.0744 Range: 25.0. Freq.: 2.35 MHz 14.0744 Range: 25.0. Freq.: 2.40 Made: Get Adatinge 14.0744 Range: 25.0. Freq.: 2.35 MHz State Condition: State Condition: .14.0744 Range: 2.5.0. <t< td=""><td>Sila/Unit: Oconee I Procedure: Summary No:: 01.B3.110.0011 Procedure Rev.: Workscope: 181 Work Order No:: 1989/2000A Cat./item: B-D /B3.110 1990 Stac: Cat./item: 1001.001 Dorsorption: Nozzie to Shall 11.57 Serial No.: O14219 11.65.001 Manufacturer: KDA 11.65.001 Manufacturer: KDA 11.65.001 Bost Stac: Cat./iter: Cat</td><td>Site/Unit: Ocones I Procedure: Summary No:: 01.83.110.0011 Procedure Rev.: Workscope: 161 Work Onjer No.: 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Description: Nozzie to Shell 50 </td><td>Silakunit: Oconse I Procedure: NDE-920 Summary No.: O1.B3.110.0011 Procedure Rev.: 6 Workscope: IBI Mork Order No.: 01897577 1998/2000A Cal.fitem: B-D /B3.110 Location: 1997.05 Safa Safa Safa 1997.05 Safa Safa Safa 1051.07 Safa No.: G14919 Cal.fitem: 1051.07 Safa No.: G14919 Cal.fitem: Cal.fite: 1288 Pdoor: High Exam Aragie: G2 GAMMA 1288 Pdoor: High Exam Aragie: 60 Couleant 1288</td><td>SlaUnit: Ocones I Procedure: NDE-820 Summary No: 01.B3.110.0011 Procedure: III IIII Procedure: IIIII Workscope: IIII Nork Order No: 01897577 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII</td><td>SilaUnit: Occure I Procedure: NDE-520 Summary No:: 01.83.110.0011 Procedure Ray:: 4 Workscepe: 161 Work Order No:: 01497577 19982/2000A Cat.Altern: 8-0 / 183.110 Location: 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 10000-W12702-0 Stord.angth: N/A 10100-W12702-0 Stord.angth: N/A 11021-0 Manufacturer: REA 111021-0 Manufacturer: REA 11284 Paserri Stord.angth: Stord.angth: 11284 Paserri Stord.angth: Stord.angth: 11284 Paserit</td><td>Site/Unit Contes I Procedure NDE-820 Outage Summary No: 01.83.110.0011 Procedure Rav: 6 Report Workscope: IB Work Ordar No: 01.83.117 Procedure Rav: 6 Report 184-0004 Cat/Item: B-0 /B3.110 Location: 01.83.117 Procedure Rav: 7 Procedure 14 Procedure Rav: 6 Report 1484704 Procedure Rav: 6 Procedure 14 Procedure 1484704 148971 Procedure 1484704 148971 Procedure 1484704 148971 Procedure 148471 Procedure 148714 148724</td><td>Sital/Uni: Oconee I Procedure: NDE-520 Outloge No:: Summary No:: 01.83.118.0011 Procedure Rav:: 6 Report No:: U Workcope: 181 North Cotest 01.87.577 Page: 1 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Stantanet Stantanet</td></t<></td> | Sile/Unit: Ocones I Proc Summary No:: 01.B3.110.0011 Procedure Workscope: IBI Work Order 1998/2000A Cal.Altern: B-D /B3.1 IBI-OCN1-002 Description: Norzie to 1 50 ISI-OCN1-002 Description: Norzie to 1 50 Instrument Settinge Seriet Nor.: Norzie to 1 1-P2R-WP28-3 Seriet Settinge Search Unit Statinge 1-P2R-WP28-3 Seriet Settinge Seriet Nor.: REA 1-Strument Settinge Seriet Nor.: REA Statinge USN-60 Size: Strinter KBA USN-60 Size: Strinter KBA 14.0744 Range: 25.0. Freq.: 2.35 MHz 14.0744 Range: 25.0. Freq.: 2.35 MHz 14.0744 Range: 25.0. Freq.: 2.40 Made: Get Adatinge 14.0744 Range: 25.0. Freq.: 2.35 MHz State Condition: State Condition: .14.0744 Range: 2.5.0. <t< td=""><td>Sila/Unit: Oconee I Procedure: Summary No:: 01.B3.110.0011 Procedure Rev.: Workscope: 181 Work Order No:: 1989/2000A Cat./item: B-D /B3.110 1990 Stac: Cat./item: 1001.001 Dorsorption: Nozzie to Shall 11.57 Serial No.: O14219 11.65.001 Manufacturer: KDA 11.65.001 Manufacturer: KDA 11.65.001 Bost Stac: Cat./iter: Cat</td><td>Site/Unit: Ocones I Procedure: Summary No:: 01.83.110.0011 Procedure Rev.: Workscope: 161 Work Onjer No.: 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Description: Nozzie to Shell 50 </td><td>Silakunit: Oconse I Procedure: NDE-920 Summary No.: O1.B3.110.0011 Procedure Rev.: 6 Workscope: IBI Mork Order No.: 01897577 1998/2000A Cal.fitem: B-D /B3.110 Location: 1997.05 Safa Safa Safa 1997.05 Safa Safa Safa 1051.07 Safa No.: G14919 Cal.fitem: 1051.07 Safa No.: G14919 Cal.fitem: Cal.fite: 1288 Pdoor: High Exam Aragie: G2 GAMMA 1288 Pdoor: High Exam Aragie: 60 Couleant 1288</td><td>SlaUnit: Ocones I Procedure: NDE-820 Summary No: 01.B3.110.0011 Procedure: III IIII Procedure: IIIII Workscope: IIII Nork Order No: 01897577 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII</td><td>SilaUnit: Occure I Procedure: NDE-520 Summary No:: 01.83.110.0011 Procedure Ray:: 4 Workscepe: 161 Work Order No:: 01497577 19982/2000A Cat.Altern: 8-0 / 183.110 Location: 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 10000-W12702-0 Stord.angth: N/A 10100-W12702-0 Stord.angth: N/A 11021-0 Manufacturer: REA 111021-0 Manufacturer: REA 11284 Paserri Stord.angth: Stord.angth: 11284 Paserri Stord.angth: Stord.angth: 11284 Paserit</td><td>Site/Unit Contes I Procedure NDE-820 Outage Summary No: 01.83.110.0011 Procedure Rav: 6 Report Workscope: IB Work Ordar No: 01.83.117 Procedure Rav: 6 Report 184-0004 Cat/Item: B-0 /B3.110 Location: 01.83.117 Procedure Rav: 7 Procedure 14 Procedure Rav: 6 Report 1484704 Procedure Rav: 6 Procedure 14 Procedure 1484704 148971 Procedure 1484704 148971 Procedure 1484704 148971 Procedure 148471 Procedure 148714 148724</td><td>Sital/Uni: Oconee I Procedure: NDE-520 Outloge No:: Summary No:: 01.83.118.0011 Procedure Rav:: 6 Report No:: U Workcope: 181 North Cotest 01.87.577 Page: 1 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Stantanet Stantanet</td></t<> | Sila/Unit: Oconee I Procedure: Summary No:: 01.B3.110.0011 Procedure Rev.: Workscope: 181 Work Order No:: 1989/2000A Cat./item: B-D /B3.110 1990 Stac: Cat./item: 1001.001 Dorsorption: Nozzie to Shall 11.57 Serial No.: O14219 11.65.001 Manufacturer: KDA 11.65.001 Manufacturer: KDA 11.65.001 Bost Stac: Cat./iter: Cat | Site/Unit: Ocones I Procedure: Summary No:: 01.83.110.0011 Procedure Rev.: Workscope: 161 Work Onjer No.: 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Cat.Atem: B-D /83.110 1980/2000A Description: Nozzie to Shell 50 | Silakunit: Oconse I Procedure: NDE-920 Summary No.: O1.B3.110.0011 Procedure Rev.: 6 Workscope: IBI Mork Order No.: 01897577 1998/2000A Cal.fitem: B-D /B3.110 Location: 1997.05 Safa Safa Safa 1997.05 Safa Safa Safa 1051.07 Safa No.: G14919 Cal.fitem: 1051.07 Safa No.: G14919 Cal.fitem: Cal.fite: 1288 Pdoor: High Exam Aragie: G2 GAMMA 1288 Pdoor: High Exam Aragie: 60 Couleant 1288 | SlaUnit: Ocones I Procedure: NDE-820 Summary No: 01.B3.110.0011 Procedure: III IIII Procedure: IIIII Workscope: IIII Nork Order No: 01897577 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII | SilaUnit: Occure I Procedure: NDE-520 Summary No:: 01.83.110.0011 Procedure Ray:: 4 Workscepe: 161 Work Order No:: 01497577 19982/2000A Cat.Altern: 8-0 / 183.110 Location: 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 19972-W126-3 Stord.angth: N/A 10000-W12702-0 Stord.angth: N/A 10100-W12702-0 Stord.angth: N/A 11021-0 Manufacturer: REA 111021-0 Manufacturer: REA 11284 Paserri Stord.angth: Stord.angth: 11284 Paserri Stord.angth: Stord.angth: 11284 Paserit | Site/Unit Contes I Procedure NDE-820 Outage Summary No: 01.83.110.0011 Procedure Rav: 6 Report Workscope: IB Work Ordar No: 01.83.117 Procedure Rav: 6 Report 184-0004 Cat/Item: B-0 /B3.110 Location: 01.83.117 Procedure Rav: 7 Procedure 14 Procedure Rav: 6 Report 1484704 Procedure Rav: 6 Procedure 14 Procedure 1484704 148971 Procedure 1484704 148971 Procedure 1484704 148971 Procedure 148471 Procedure 148714 148724 | Sital/Uni: Oconee I Procedure: NDE-520 Outloge No:: Summary No:: 01.83.118.0011 Procedure Rav:: 6 Report No:: U Workcope: 181 North Cotest 01.87.577 Page: 1 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Outloge No:: V 1984/2000A Cel./Item: B-0 /83.110 Lossion: Stantanet Stantanet |

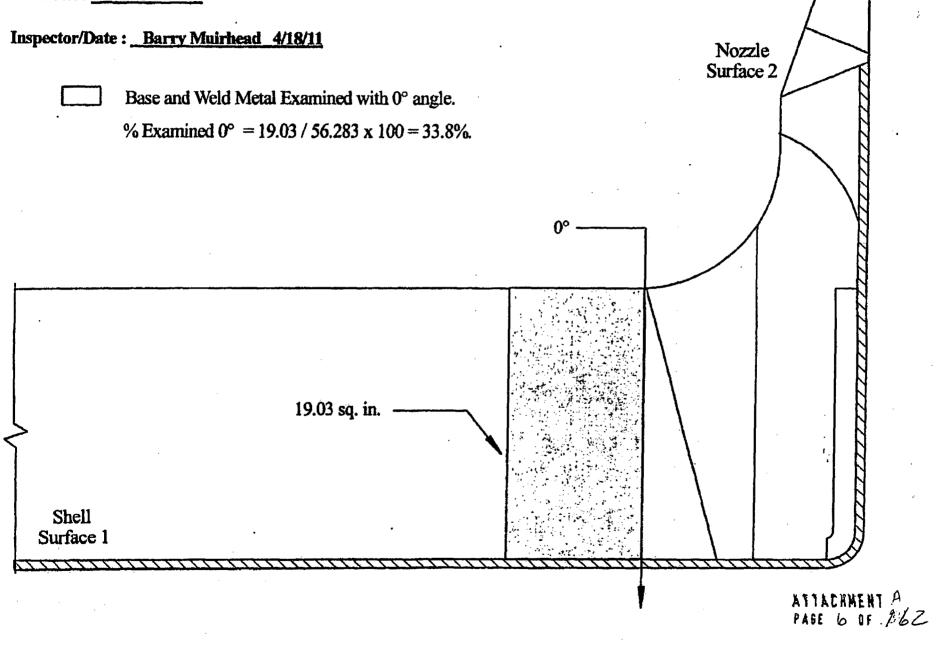
| DI | JKE POWER CO | DMPANY | |
|-------------------------------------|------------------|-------------------------------|---------------------------------------|
| | ISI LIMITATION R | EPORT | |
| Component/Weld ID: 1-PZR-WI | 26-3 Item No: | 01.B3.110.0011 | remarks: |
| NO SCAN | SURFACE | BEAM DIRECTION | Due to nozzie Configuration. |
| LIMITED SCAN | | 1 🛛 2 🖾 cw 🖾 ccw | • |
| | INCHES FROM W | 0 1.0" to Beyond | · · · · · · · · · · · · · · · · · · · |
| ANGLE: 🛛 0 🖾 45 🖾 60 | other FROM | 0DEG to360DEG | |
| NO SCAN | SURFACE | BEAM DIRECTION | · |
| LIMITED SCAN | | 1 🗌 2 🗌 cw 🗌 ccw | |
| FROM L to L | INCHES FROM WO | to; | |
| ANGLE: 0 0 45 60. | other FROM | DEG to DEG | |
| | SURFACE | | |
| LIMITED SCAN | | 1 🗌 2 🗌 cw 🗌 ccw | |
| FROM L to L | INCHES FROM WO | to | |
| ANGLE: 0 0 45 0 60 | other FROM | DEG to DEG | |
| | | | |
| LIMITED SCAN | | 1 🗌 2 🗌 cw 🗍 ccw | UT-11-771 |
| FROM L to L | INCHES FROM WO | to | Sketch(s) attached |
| ANGLE: $\Box 0 \Box 5 \Box \beta 0$ | other FROM | DEG to DEG | 🛛 yes 🗌 No |
| Prepared By: Larry Mauldin aug | Aante | ^{ate:} 04/18/11 Shee | |
| Reviewed By: | Com Date: H-20- | Authorized Inspector: | Date: |

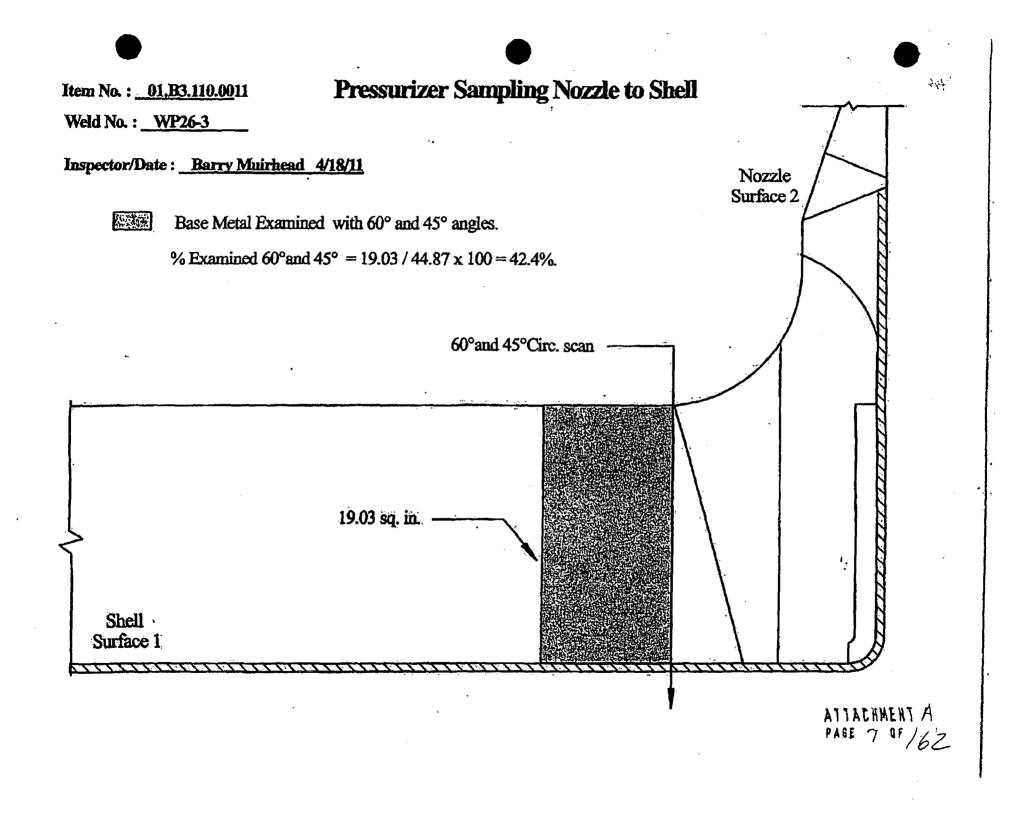
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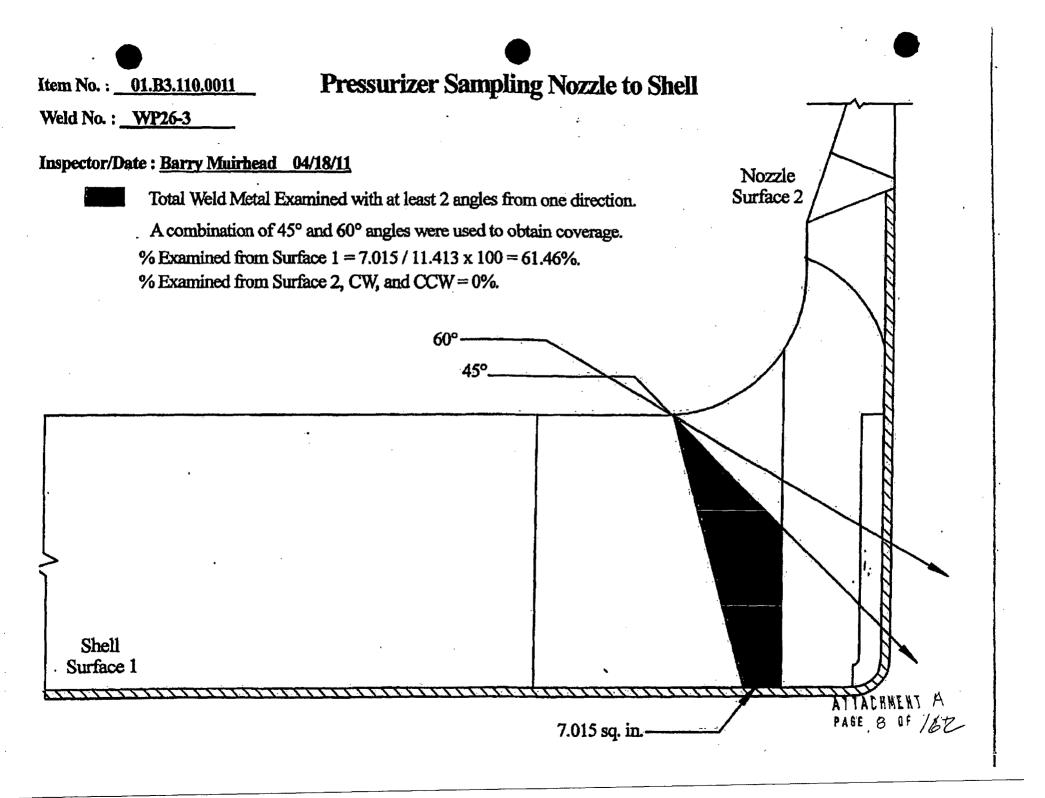


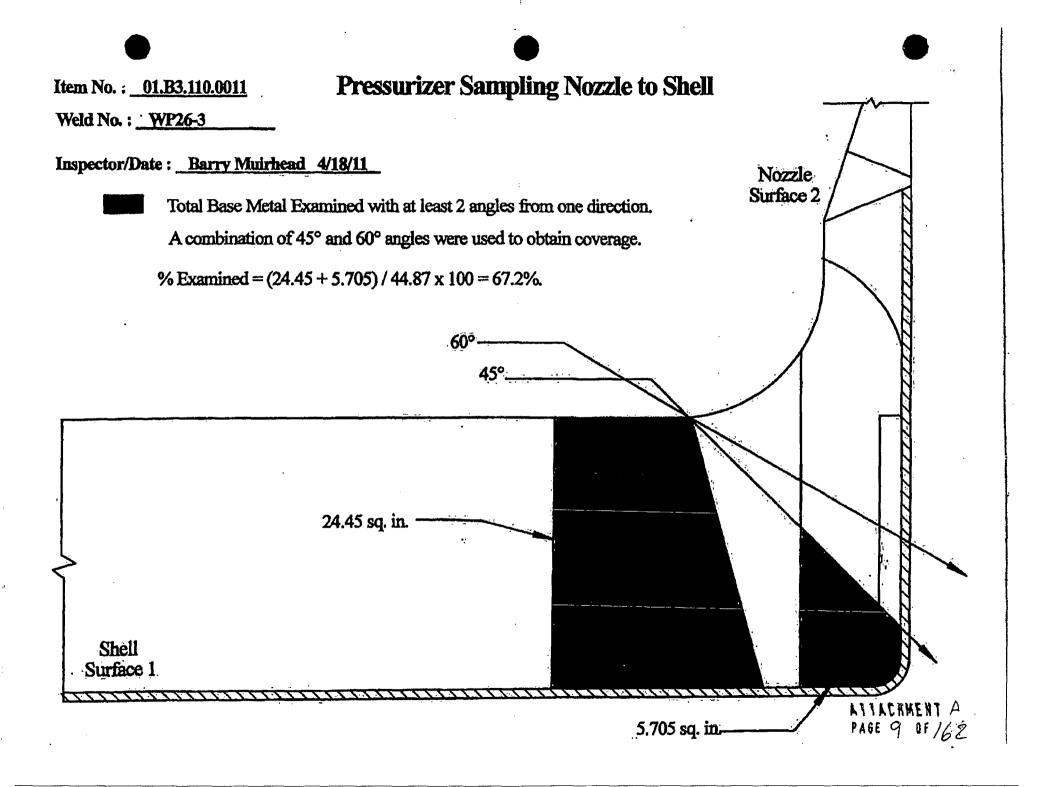


Weld No. : WP26-3









PZR Sampling Nozzle to Shell % of Coverage

Item No. : __01.B3.110.0011

Weld No. : WP26-3

Weld Coverage

| <u>Scan</u> | Angle | <u>% Coverage Obtained</u> | |
|-------------|---------------|---------------------------------------|------------|
| S 1 | 45° & 60° | 61.46 | |
| S2 | 45° & 60° | • • • • • • • • • • • • • • • • • • • | |
| CW | 45° & 60° | 0 | |
| CCW | 45° & 60° | <u>0</u> | |
| | Total | 61.46 | |
| 6 | 1.46 +4= | <u>15.4</u> | % Coverage |
| Base Mater | rial Coverage | | |
| S1 | 45° & 60° | . 67.2 | |
| CW & CCV | V 45° & 60° | <u>42.4</u> | |
| | Total | 109.6 | |

| 109.6 + 2 = | | <u>54.8</u> | % Coverage |
|-------------------------|------------|-------------|------------|
| <u>0° Scan Coverage</u> | 4 . | <u>33.8</u> | % Coverage |

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

<u>34.7</u> % Coverage

Inspector / Date : David K. 3 TH 4/20/11

Page <u>9</u> of <u>9</u>

| | 7 |
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| | - A. |
| <i>.</i> | |

UT Calibration

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| Workscope: ISI Work Order No.: D1897877 Page: 1. of Codd: 19882200A Cet.Allem: B-D. //83,110 Location: Location: Description: Naccional Sciences/Dismoster: Cet.Allem: B-D. //83,110 Location: Description: Naccional Sciences/Dismoster: Cet.Allem: B-D. //83,110 Location: Description: Naccional Sciences/Dismoster: Cet.Allem: B-D. //83,110 Location: Description: NAC Thickness/Dismoster: Cet.Allem: Ecol.Allem: Ecol.All | | | Site/Unit: | Oconee | / 1 | | | Proc | edure: | | NDE-640 | | | Outage | No.: | 01-26 |
|--|----------------|--------------|-------------|---------------|--------------------|------------|----------------|--|--|-------------------------|--|----------|---------------|-----------------------|------------------|-------------|
| odds: 1998/2000A Cet/Rem: B-D /F3.110 Location: marking No.j ISI-OC/H1-002 Description: Nexcle to Shall Location: galam ID: 60 Omorphoment ID: 14/22-AVMP28-7 Stao/Length: M/A Thicknees/Diameter: Calls. Start Time: 1208 Fraidubarter: Calls. Start Time: 1208 Fraidubarter: Calls. Time 1208 Fraidubarter: Calls. Time: 1208 Fraidubarter: Calls. Time: 1208 Astel Orientities Bearch Unit Calls. Time: 1208 Astel Orientities Bearch Unit Calls. Time: 1208 Astel Orientities Gearch Unit Calls. Time: 1208 Astel Orientities Gearch Unit Calls. Time: 1208 4/482011 208 4/482011 208 4/32011 148 4/482011 208 1.6 <t< th=""><th></th><th>Sumr</th><th>nary No.:</th><th>• 01.</th><th>B3.110.0012</th><th></th><th></th><th>Procedure</th><th>Rev.:</th><th></th><th>5</th><th></th><th>.</th><th>Report</th><th>No.: L</th><th>T-11-772</th></t<> | | Sumr | nary No.: | • 01. | B3.110.0012 | | | Procedure | Rev.: | | 5 | | . | Report | No.: L | T-11-772 |
| Rawling No.: ISLOCN1-002 Description: Naccle to Shell present ID: 60 amporent ID: 1422R/WP26-7 inlations: Star/Length:: N/A Thickness/Diameter: Color prist Star/Length:: N/A Instrument Bettings Search Unit ordel: UBI-40 Star/Length:: undedcurer: KBA Instrument Bettings Star/Length:: odd: UBI-40 Star/Length:: Star/Length:: Attal Orientstate Bearenb Unit odd: UBI-40 Star/Length:: Star/Length:: Attal Orientstate Bearenb Unit odd: UBI-40 Star/Length:: star/Line: Cheis, Itim Data Instrument Bettings Barnets: Star/Length:: star/Line: Cheis, Itim Data Instrument Bettings Star/Length:: Manufacturer: star/Line: Cheis, Itim Ceal, Star/Length:: Ceal, Star/Length:: star/Line: Cheis, Itim Ceal, | | We | orkscope: | | 181 | | | Work Orde | n No.: | | 01897577 | | | P | sge: 1 | of 1 |
| Star IID: Star Langth: N/A Thickness/Diameter: COR. 457 millatom: See T0 report Star Time: 1203 Prink Time: 121 Instrument Bettings Serial No:: C120043P C120043P C120043P Axtal Orfentated Search Unit 121 Instrument Bettings Serial No:: C120043P Cnecke Time Date Axtal Orfentated Search Unit 121 Instrument Bettings Serial No:: C120043P Cnecke Time Date Axtal Orfentated Search Unit 120 Articl Orfentated Search Unit 120 Marcubacturer: K204 Cnecke Cnecke C1200 4182011 Time Ceil 1200 4182011 100 70 3.5 3.5 Cnecke Cnecke 1.0 Star Time: | odó: | · · · · · | 1998/2 | 2000A | · · · · · · | Cat/Ite | m: . | B-D /B3.1 | 10 | | Location: | : | | | | |
| Amponent ID: 1-PZR-WP26-7 Starl.ength: N/A Thickmeest/Diameter: C664.62 Instrument Settings Search Unit Starl Time: 1208 Findsh Time: 1208 Findsh Time: 121 Instrument Settings Search Unit Citizo04SP Cheasis Time: Data Addal Orientated Search Unit Citizo04SP Initial Call 1000 Addal Orientated Search Unit Citizo1 Citizo1 Search Unit Citizo1 Citizo1 Citizo1 Addal Orientated Search Unit Citizo1 Citizo1 Addal Orientated Search Unit Citizo1 Citizo1 Addal Orientated Search Unit Citizo1 Citizo | ewing No.: | | 181- | OCN1-002 | | | Description: | Nozzle to t | Bhell | | . == | | | • • | | |
| Bast Torse Start Tone: 1208 Finds Tome: 121 Instrument Settings OUTXT Setal No.: Claudes Tome Outs Actal Orientated Search Unit 121 Indidaction: OUTXT Setal No.: Claudes Tome Outs Actal Orientated Search Unit Call Tome Outs Call Call Tome Call Call <td>/stem ID:</td> <td>50</td> <td></td> | /stem ID: | 50 | | | | | | | | | | | | | | |
| Instrument Settings Search Unit Call Axtal Orientated Search Unit (ral No.: 007LXT Serial No.: C12004SP Interaction Call The Dete Callentian Callentian Callentian Serial No.: C12004SP (ral No.: CRALTTRCRAKER Manufacturer: KDA Hote: 1080 Axtal Orientated Search Unit (ral Vel: USIMed State: 1.0 Freq.: 2.26 MHz Style: Gamme Hote: Call Artigizet / Style: Call Artigizet / Style: <td>mponent ID:</td> <td>1-PZR-WP</td> <td>26-7</td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Size/</td> <td>Length:</td> <td>N/A</td> <td></td> <td>Thickness/Dia</td> <td>smotor: C</td> <td>8/6.187/5.7</td> | mponent ID: | 1-PZR-WP | 26-7 | • | | | | | | Size/ | Length: | N/A | | Thickness/Dia | smotor: C | 8/6.187/5.7 |
| Instrument Settings Search Unit Cal. Thme Date Actal Orientated Search Unit rial No.: OUT_XTT Gott No.: C12045P Cal. Thme Date Actal Orientated Search Unit riad No.: UBH-60 Stag: 1.0 Shape: Round Inter. Cal. 1200 4/16/2011 Stage: Stage: 1.0.5 Stage: 1.0.5 Stage: 1.0.5 Stage: 1.0.5 Stage: 1.0.6 Stage: Stage: 1.0.6 Stage:< | nitations: | See TD rep | ort | | | | | | | | Start | Time: | 1208 | Finial | h Time: | 1215 |
| List No.: OFT_XT Serial No.: C12004SP Checks Checks Inter Callbration Signal Sweep Source undiscurer: KRAUTKRAMER Manufacturer: KBA Initial Call 1020 4/18/2011 Reference Amplitude % Division Signal Sweep Source aly: 1.0359 Range: 10.0 Freq.: 2.25 MHz Style: Gamma Inter. Call 1208 4/18/2011 148 80 1.55 .1 Ary: 1.0359 Range: 10.0 Freq.: 2.25 MHz Style: Gamma Inter. Call 1216 4/18/2011 18 6.0 1.5 1.1 1.8 1.9 1.8 6.0 1.5 1.4 1.5 1.4 1.5 1.6 1.5 1.6 1.5 1.6 1.5 1.6 1.5 1.6 1.5 1.6 1.5 1.6 1.5 1.6 1.5 1.6 1.6 1.6 1.6 1.6 1.6 | | Instrume | nt Settings | | | Sear | ch Unit | | 5 | | | | Av | al Orientstad S | earch Unit | |
| IUIB/CERT KRAUTRKAMER Manufecturer: KBA IUIB/CERT 1005 Antificators | lai No.: | | XLT00 | π | Serial No.: | | C12004SP | · · · · | | 1 1 1 1 1 1 1 | Uate | Callb | · | _ | | |
| Ay: 1.0369 Range: 10.0 Freq: 2.85 MHz Nikitz | nufacturer: | | KRAUTKR | AMER | Manufacturer | | KBA | | | | the second s | | | | | Sound Pat |
| Cal/Vel: 233 Putsor High Exam Angle: 0 6.7 Califination Inter. Cal. 1216 4/18/2011 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.8 05 5.0 5.0 nping: 1K Reject 0% Mode: Lor Elements: Single Integral Cal. 1216 4/18/2011 3.8 05 5.0 | dei: | | USN-6 | 0 | Size: | 1.0 | Shape: I | tound " | and the second sec | 1200 | .4/18/2011 | 1 | 18 | 80 | 1.55 | 1.54 |
| Construction Construction Construction Construction Construction State State< | ау: | 1.0359 | Range: | 10.0 | Freq.; 2.2 | 5 MHz | Style: 0 | amma | | | | 2 | /8 | 70 | 3,3 | 3.3 |
| Autohigh Frequ: 0.% Measured Angle: NA Couplant Autohigh Freq: 2.26 MHz Measured Angle: NA Call Batch: 09825 Ctroumferential Orientated Search Unit spp: Fixed Mode: PE Wedge Style: Integral Call Batch: 09825 Ctroumferential Orientated Search Unit Spp: Fixed Other: Fullwave Yee: ULTRAGEL II Callbration Signal Syveop Bourn Screen Div. = 1.0 h. of Sound Path Type: RG - 174 Exam Batch 09325 N/A Signal Syveop Downstream O Gain (dB): 31.3 Circ Gain (dB): N/A Search Unit Cable Mg:: SONOTECH N/A N/A artiy Report No.: L-11-138 Length: Go on Coverage Mg:: SONOTECH N/A Reference Block Block No. 40338 Upstream [2] Downstream [2] Sound B: N/A Seriel No:: Seriel No: Seri | · • | | | | Exam Angle: | 0 | _ # of Elemen | nts: Single | | | | | 78 | 65 | 5.0 | 5.08 |
| Pic. Piced Mode: PE Wedge Style: Integral Call Batch: 09325 Chroumferential Orientisted Search Unit sge: Fixed Othor: Fixilwave Search Unit Cable Mrg.: SONOTECH Callbration Signal Sweep Down Gain (dB): 31.3 Circ. Gain (dB): N/A Search Unit Cable Mrg.: SONOTECH Reflector Amplitude % Division Source Screen Div. = 1.0 in. of Sound Path Type: RG -174 Exam Batch 09325 N/A Screen Div. = 1.0 in. of Sound Path Type: RG -174 Exam Batch 09325 N/A Callbration Block Length: 6' No. Conn.: 0 Type: ULTRAGEL B Block No. 40335 Upstream Ø Downatream Ø Scan dB: 37.3 Reference/Block Reference/Block Block Tamp. 70 Temp. Tool: MCNDE40127 Exam Strateci Col Type: RomPAS 1.0 1.0 p. Temp. 70 Temp. Tool: MCNDE40127 Surface Condilion: As Ground | nping: | <u>sk</u> | Reject: | | Mode: | • | Long, | | | | | | | | | |
| age: Flored Other: Fullwave Gain (dB): A/A Search Unit Cable Mfg.: SONOTECH Gain (dB): A/A Search Unit Cable Mfg.: SONOTECH Reflector Amplitude % DM/sion Bourn and path Type: RG - 174 Exam Batch 09325 M/A Gain (dB): A/A Search Unit Cable Mfg.: SONOTECH M/A DM/sion Bourn and path Type: RG - 174 Exam Batch 09325 M/A Gain GB: SONOTECH M/A Gain GB: Gain GB: SONOTECH M/A GAING GAIN GAIN GAIN GAIN GAIN GAIN GA | . Rate: | | Freq.: | | Measured An | gle: | N/A | | (| Couplar | ut j | Ë | | | | <u> </u> |
| Gain (dB): 31.3 Circ. Gain (dB): NIA Search Unit Cable Mfg.: SONOTECH Reflector Amplitude % DMiston Sourn Screen Div, = 1.0 in. of Sound Path Type: RG - 174 Exam Batch 09325 N/A N/A Implitude % DMiston Sourn 0 arity Report No.: L11-138 Length: 6' No. Conn.: 0 Type: ULTRAGEL II N/A Implitude % DMiston Sourn Catibration Block Scan Coverage Mfg.: SONOTECH Reference/Simulator Block Reference/Simulator Block Block No. 40335 Upstream Ø Downstream Ø Scan dB: 37.3 Reference/Simulator Block Reference/Simulator Block Block No. 40335 Upstream Ø Downstream Ø Scan dB: N/A Seriel No.: 98-6522 Gain Reference/Simulator Block Sourn p. Temp. 7B Temp. Tool: MCNDE40127 Exam Surface: OO Type: ROMPAB 14.9 BW 60 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 | | | - | | Wedge Style: | | Integral | ·` | | - | | ļ | Ctroumf | erential Orlents | ted Search | Unit |
| Screen Div. = Diversity Diversity </td <td>-</td> <td></td> <td>. Sama</td> <td></td> <td></td> <td></td> <td> =</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Sweep Obdelog</td> <td>Sound Pat</td> | - | | . Sama | | | | = | | | | | | | | Sweep Obdelog | Sound Pat |
| Science CV, S. | | | | | | Search L | | | Mig.: | SONO | TECH | | | | LANGOUT | |
| Calify report No Contraction Block Scan Coverage Mfg.: SONOTECH Block No. 40338 Upstream Ø Downstream Ø Scan dB: 37.3 Reference Block Reference/Stmulstor Block Block No. 40338 Upstream Ø Downstream Ø Scan dB: 37.3 Reference Block Signal Signal Block No. 40338 Upstream Ø Downstream Ø Scan dB: 37.3 Reference Block Signal | | | b. of | Sound Paul | | | | | Exam Batc | h | 09325 | <u> </u> | <u> </u> | | | |
| Cutor and on block Upstream Downstream Scan dB: 37.3 Reference Block Block No. 40338 Upstream Downstream Scan dB: N/A Reference Block Signal Sweep kmeas 6.187 Dia:: 5.750 CW CCW Scan dB: N/A Serial No.: 98-8522 Gain Aginal Sweep Source Block Temp. 71 Temp. Tool: MCNDE40127 Exam Surface: OD Type: ROMPA3 H4.9 BW 50 1. | arity Report | No.: | <u>L-11</u> | -138 | | | | <u>U</u> . | | ULTRA | GEL II | } | <u> </u> | | | 1 |
| kmeas 6.187 Dia.: 5.750 CW CCW Scan dB: N/A Serial No.: 98-6522 Gain Gain Sterial Steria Sterial Sterial | | Calibrati | an Block | | | | - | | Mfg.: | SONO | TECH | | | | ······· | |
| Bik. Tamp. 71 Temp. Tool: MCNDE40127 Exam Surface: OD Type: ROMPA3 dB Reflector Amplitude % Division Source on a ground or dable Indication(a): Yes No (If Yes, Ref. Attached Ultrasonic Indication Report.) (If Yes, Ref. Attached Vitrasonic Indication Report.) (If Y | Block No. | | 40338 | | | | | the second s | Refe | rence B | llock | | Re | ference/Simula | tor Block | |
| Bik. Tamp. 71 Temp. 1001: MCNDE40127 Exam Surrace: 00 Type: ROMPAS np. 79 Temp. 79 Temp. Top: MCNDE40128 Surface Condition: As Ground ordable Indication(s): Yes No Vitres, Ref. Attached Ultrasonic Indication Report.) Id.9 BW 80 1.0 1.0 uits: Accept Reject Info Comments: N/A miner Level ILN Stignature Date Reviewed nither Level ILN Signature Date Attached miner Level ILN Signature Date Signature rhead, Barry A Burg MCA Signature Date ANII Fleview | kness | 6.187 | Dia,: | 5.750 | cw 🖸 | C | CW 🔲 Scan | 19: <u>N/A</u> | Serial No.: | | 6-6522 | | Defort | Signal Amolibule S | Sweep | Sound Pat |
| np. Temp. 78 Temp. Tool: MCNDE40128 Surface Condition: As Ground ordable Indication(s): Yes No (H Yes, Ref. Attached Ultrasonic Indication Report.) utis: Accept Reject Info control Coverage Obtained > 90%: No Reviewed Previous Data: Yes miner Level IL-N Signature Octo nither Level IL-N Signature Data nither Level IL-N Signature Data nither Level IL-N Signature Data No Signature Data Site Review No Signature Data nither Level IL-N Signature Data Site Review A Signature Data | Bik. Temp. | | | MCNDE40127 | Exam Surface | · | 00 | | | " Balantine Contraction | | | _ | | | 1.0 |
| utts: Accept [] Reject [] Info [] Comments: N/A vent Of Coverage Obtained > 90%: No Reviewed Previous Data: Yes miner Level (I+N) Bignature Data Yes ridin, Larry E: August Mark Alterophysical Alterophysi | p. Temp. | 78 Temp. | | MCNDE40128 | | · · | | | | | ., | | | | | |
| cent Of Coverege Obtained > 90%: No Reviewed Previous Data: Yes miner Level II-N Signature Data Reviewer Af18/2011 Site Reviewer Af18/2011 Af18/20 | ordable Indi | ication(s): | Yes [| <u>N₀ [2]</u> | (if Yes, Ref. Atta | iched Ultr | asonic indicat | on Report.) | Ĵ | • | · . | | | | | |
| miner Level II-N Bignature Date Date Reviewer AMM Signature 4/18/2011 Date Market A/18/2011 A/18/2011 A/18/2011 A/18/2011 A/18/2011 Signature A/200-1 miner Level II-N Signature Date Site Review Signature A/200-1 Signature A/18/2011 A/18 | ults: 4 | Accept 📋 | Reject | 2 · I | nfo 🔲 | | | | | Cor | mments: N/A | | | · · , · · <u>-</u> , | (₂ | · · · · |
| uldin, Larry E. <u>All Mandula</u> 4/18/2011 Den / / (cro unther Lavel II-N Signature Data Site Review Signature Signature trhead, Barry A <u>Barry Mandula</u> Signature Data ANII Review O to C Signature er Lavel MA Signature Data ANII Review | cent Of Cover | rege Obtaine | d > 90%: | No | Reviewed Pre | vious Dat | a: <u>'Ye</u> | S | <i></i> | | | | | | | |
| miner Lovel ILN Signature Date Site Review Signature Signature Atta/2011 Date Avid Site Review Signature | miner | Lovel n. | N X | | Bignatura | | Da | e Raview | ren | 7 | NA. | | Sign | sture | <u>.</u> | Date |
| ar Love M/A Signature Dato ANII Review O | ildin, Larry E | 8. | AQ | UL OT | Martill | 61 | 4/18/201 | | <u>/Ja/</u> | $\sqrt{1}$ | 110 | \sim | | • | 4- | 20-11 |
| t Love MA Signature Dato ANII Review O : 1 0 Signature | | | Bar | m the | Signature | | | e Site Re | A C | V | | | Signi | ature. | | Date |
| |)r | Lovel N/ | Α | 0 | Signature | <u></u> | Dat | | | - 0 | id-1 | 9 | Sign | ture | 1. | Data |
| Ning C Kithy Stoupter 4/20/11 | ı | | | | | | | N | my (| CK | they 2 | sun | Nta | 7 9 | 120/1 | 1 |

| | | Site/Unit: | 0 | , | | | | am | di mat | | | | :: | D utri | N- 4 | - |
|------------------------|---|-----------------|---|---|----------------|------------------|----------|----------------------|-------------|------------|---|---------------|--|----------------|------------|---------------|
| | | nary No.: | Oconee 01 | | 1 | | 04 | Proces rocedura F | | | NDE-820 | | | Outaga | - | 01-28 |
| • | | rksoopa; | | 151 | · | | | ork Order | | | 01897577 | | - | Report | | JT-11-773 |
| | | | | | | | | | | | | | | ۲ | age: 1 | |
| Code: | *····· | 1996/2 | | | . Cat | L/Item: | | D_/B3.11 | <u> </u> | ~ | Location: | - <u></u> | | | | |
| Drawing No.: | | 181-4 | DCN1-002 | | | Descrip | lion: No | zzle to Si | hell | | | | | | | |
| System ID: | 50 | _ | | | | | | | | | | | | | | |
| Component (D: | 1-PZR-WP | 26-7 | | | | | _ | · | - | Size/I | Longth: | N/A | | Thickness/Di | ameter: _C | :8/6.187/5.7 |
| Limitations: | Yes - See a | tuched an | esto | | | | | | | | Start | Time: | 1223 | Finis | th Time: | 1230 |
| | instrume | nt Settings | | | 8 | earch Unit | | | Cal. | Time | Dete | | Axi | I Orientated t | | |
| Sertal No.: | | DOT DO | <u>r</u> | Serial N | o.: | <u>G148</u> | 18 | | Checks | TAUR | | Callb | | Signal | Sweep | |
| Vanufacturer: | | KRAUTKRA | | Manufac | turier: | K | BA | | Initial Cal | 1055 | 4/18/2011 | Refle | | Amplitude % | Division | Sound Pa |
| Model: | | USN-0 | | Size: | | Shape: | Re | ot. | Inter. Cal. | 1216 | .4/18/2011 | 1 | 8 | 80 ' | 1.4 | 2.24 |
| Delay: | 11.31 | Range: | 15.0 | | 2.25 MHz | | | | Inter, Cal. | 1230 | 4/18/2011 | 2 | | 35 | 3.0 | 4.70 |
| A'll Cal/Vel: | .1268 | Pulser: | High | Exam Ar | ngla: | | lements: | Single | Final Cal | 1300 | | 3 | | 20/40 | 4.8 | 8.99 |
| Damping: Rep. Rate: | 1K Autoblah | Reject: | 0% 2.25 MHz | Modé: | | Sheer | | | | Couplar | المعددي فجالب تتبغير ومعمل | No | | 35 | 8.6 8.1 | 9.81 |
| lister: | Autohigh Fixed | Freq.: Mode: | PE | Wedge S | d Angle: | SM | 45 | | Cal. Batch: | • | 09325 | | - | rential Orlent | | منحند نسبياهم |
| /ollage: | Fixed | Other: | Fullwave | | 31, 918 | 51 | | | Type: | ULTRA | and the second se | Calibr | | Signal | Sweep | - <u> </u> |
| x. Gain (dB): | | | (dB): N/A | | Sean | ch Unit Cab | le | | Mfg.: | SONO | | Refit | | Amplitude % | Division | Sound Pa |
| 1 Screen Dh | | tn. of | Sound Path | Тура: | | RO - 17 | 4 | , | Exam Batch | h. | 09325 | . N | A | | | |
| Inearity Report | | L-11- | 438 | Longih: | 6' | No. Conn. | | A | Type: | ULTRA | | ļ | · | | ļ | |
| | الترانيد بإراميها الأ | | | | Sca | : In Coverage | | • | Mfg.: | BOND | | ├ ──── | | | <u>├</u> | -{ |
| al. Block No. | Calibrati | | • | Upstream | Down | nstream 🕎 | Scan dB | | | | ····· | | الــــــــــــــــــــــــــــــــــــ | ference/8imul | L | |
| hickness | 7 | Dia.: | | | | ccw 🕅 | | | Refe | rence E | | Gain | | Signal | Sweep | 1. |
| al. Bik. Temp. | and the second se | | | | inface: | | . 00 | | | - | 8-8522 | dB | | ebuildent to | 5 Division | Sound Pa |
| comp. Temp. | | | MCNDE40128 | | Condition: | | Ground | | Гуре: | ROW | IPAS | 32.2 | 2" Radi | us <u>80</u> | - 1.3 | 2.0 |
| acordable Indi | | Ýes [| and the second secon | and the second se | | Ultrasonic I | | | | ٠ | | | | | 4 | |
| | •• | | | • | | | | | | Č ~ | mments: | | · | | | , |
| lasults: | Accept | Reject | M | Info | | | | | | 00 | tititari t a. | | | | . ' | • |
| ercent Of Cover | rage Obtaine | d > 90%: | No | . Reviewa | d Previous | Data: | Yes | | _ | | | · · · · · · | | | | |
| xaminer | Level II. | N J | 1 | Signature | | | Date | Review | ¥ / | Y | 1 | | Sign | turo - | | Dst |
| lauidin, Lany E | | da | W & | Thank | 110 | 4/1 | 8/2011 | | <u>m/</u> | 1 | Los | | | | 4 | 20-11 |
| Examiner | Level II. | N | 5 | Signature | • | | Date | Sile Rey | S9W / | | | | Sign | iture | | Dat |
| luirhead, Barry | | Da | y Ill | | | 4/1 | 8/2011 | | | <u>.</u> | | 5-0 | 70 | - | <u> </u> | Past. |
| Other | Leivel N | A ` | - | Signature | | | Date | ANIIRO | | 1- | the S | P | Sign | - 41 | sola | Det |

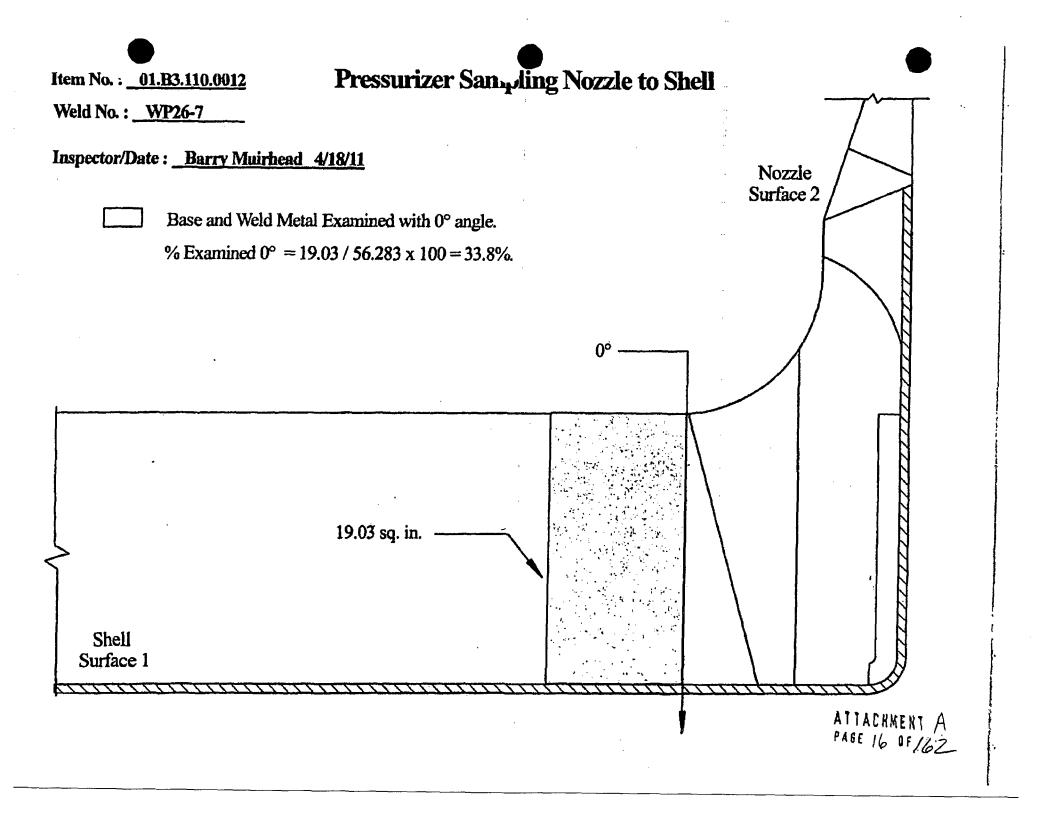
UT Calibration - amination

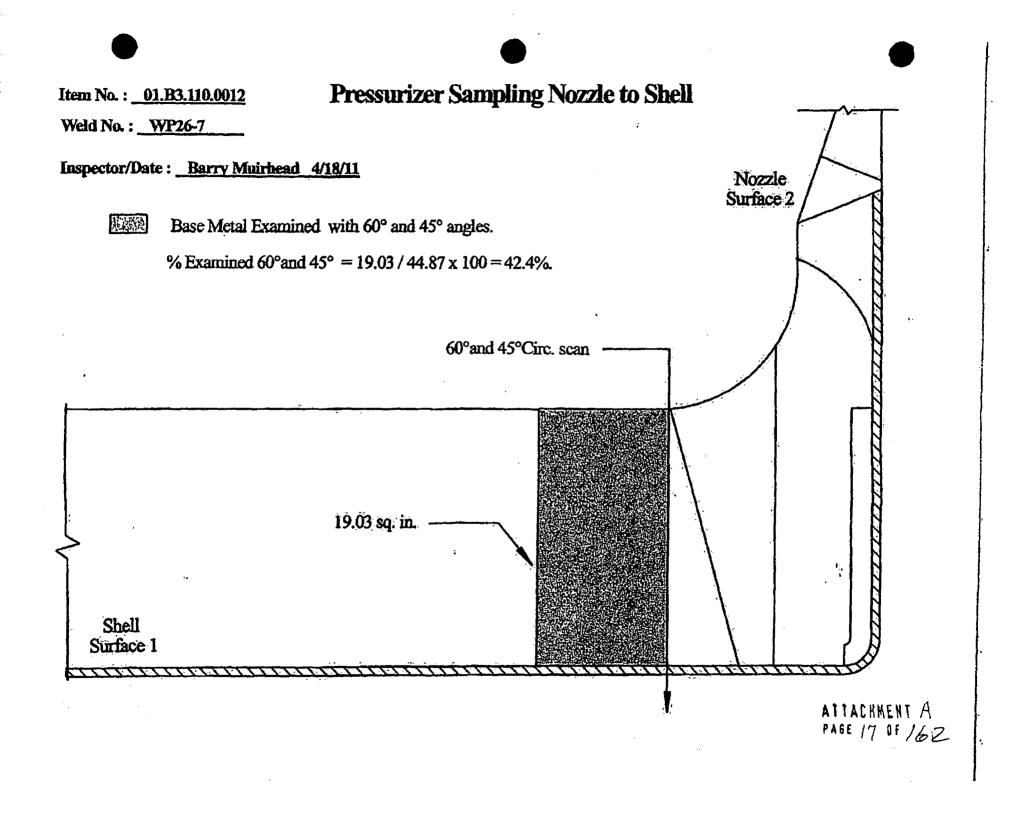
| ar han, sherichide | | ilte/Unit: - | Oconee | 1 | 1 | | | edure: | | NDE-820 | | | Outage N | ło.: | 01-26 |
|---------------------------------------|---------------|--------------|------------------------|--------------|---------------------------------------|------------------|---------------------------------------|----------------|--|-----------|----------|-------------------|-----------------------|--|-------------|
| | | ary No.: _ | 01. | B3.110.0012 | ÷ ` | - | Procedure | | | 6 | | | Report N | ło.: <u> </u> | 1-11-773 |
| | Wor | kacope: | ····· | 181 | | • | Work Orde | er No.: | | 01897677 | | | Pa | ge: <u>2</u> | of 9 |
| Code: | | 1998/2 | A900 | | Cat./I | tem: | B-D /B3.1 | 10 | | Location: | | | | | |
| Drawing No.: | | 181-0 | DCN1-002 | | | Description: | Nozzie to | Bhell | | | | | | | |
| System ID: | 50 | | | | | | | | | | | | | | |
| Component ID: | 1-PZR-WP2 | 8-7 | | 4 | | | | | Size/ | Longth: | NA | | Thickness/Dia | meter: C | 9/8.187/5.7 |
| Limitations: | Yes - See s | techad an | eets | | | | | | | Start | Time: | 1125 | Finite | Time: | 1150 |
| بر المحجو المكالية الي الي التركي الم | instrumer | t Settings | يجير التقريبيين الشراف | | 8e | arch Unit | | | | , | | | | | |
| Serial No.: | | OOT JX | Г | Serial No | | G14819 | | Cal, Checks | Time | Date | <u> </u> | | Orlentzted S | | ···· |
| Manufacturer: 💆 | 1 | RAUTKRA | MER | Manufac | discussion discus | KBA | · · · · · · · · · · · · · · · · · · · | Initial Cal | 1110 | 4/18/2011 | | ector A | Signal molified % | Sweep DMsion | Sound Pa |
| Model: | | UBN-6 | 0 | Size; | .5x1.0 | Shape: | Rect. | Inter. Cal. | 1120 | 4/18/2011 | ┝─── | 5" | 80 | 2.0 | 1.0 |
| Delay: | 14.0744 | Range: | 5,0" | Freq. | 2.25 MHz | Style: | GAMMA | Inter. Cal. | | | 1 | .0" | 70 | 4.0 | 2.0 |
| Will Cal/Vel: | .1268 | Pulser: | High | Exam Ar | ngle: 60 | # of Elem | ents: Single | Inter. Cal. | 1150 | 4/18/2011 | 1 | .5" | 58 | 6.0 | 2.0 |
| Damptng: | <u>1K</u> | Reject: | 0% | Mode: | | Shear | | Final Cal | 1312 | 4/18/2011 | | .0* | 4.0 | 8.0 | 4.0 |
| - | Autoldgh | Freq.: | 2.26 MHz | Measure | d Angle: | 60 | | 2 | Couplar | | | 14T | _ 50 | 7.0 | 3.42 |
| -Uter: | Fixed | Mode: | PE | 3 egbeW | 3tyle: | SWS | | Cel. Batch: | of the local division of the local divisiono | 09326 | | | ntial Oriente | | Unit |
| /oitage: Ax. Gain (dB): | Fbted 44.1 | Other: | Fullwave (dB): 58.1 | <u> </u> | Search | unit Cable | | Type: Mfg.: | SONO | | | ration actor A | Signel | Sweep Division | Sound Pa |
| 1 Screen Dh | | In. of | Sound Path | Type: | Quarter. | RG - 174 | | | | | . N | IA . | | -, | |
| | | | | Longth: | ť | No. Conn.: | 0 | Exam Batci | | 09325 | | | | <u> </u> | |
| Inearity Report I | No.: | <u> </u> | 138 | | فسعدتها الموطية | Coverage | | Type: Mfg.: | ULTRA | | | | | | |
| | Calibratio | | ÷ | l incimum | | tream [2] Sca | n dQ+ 59 4 | | auno | | | | l | | |
| al. Block No. | | 40338 | | | — | - | | Refe | rence E | liock | Gain | Refe | unce/Simula | the second s | |
| hickness | 7 | Dia.: | | | | CCW 🖉 Sca | 100; <u>50,1</u> | Serial No.: | :9 | 8-8522 | dB | Reflector | Signal Amplituda % | Sweep Division | Sound Pat |
| al. Bik. Temp. | 71 Temp. | | MCNDE40127 | | | <u>. 0.D.</u> | | Туре: | ROM | PAS | 38,8 | 2" Radius | . 80 | 0.8 | 2.0 |
| omp. Temp. | 78 Temp. | | MCNDE40128 | | Condition: | As Gro | | | | | | | | | |
| lecordable Indi | cation(s): | Yes [|] № [2] | (if Yes, Rei | f, Attached (| litrasonic Indic | ation Report. |) | | l | | <u> </u> | [| <u> </u> | L <u></u> |
| tesults: A | Accept | Reject | | Info 🔲 | | | | | - Coi | nmenta: | | | | 1 1 | |
| ercent Of Cover | age Oblained | l > 90%: | No | Raviawo | d Previous C | lata: | fes | | | | | | • | •, | |
| bamber | Lovel IL | | - // | Signatura | | | ato Revie | ver / | - AÀ | | | Stanaty | 10 | | Date |
| feuldin, Lerry E | | | dam. | | ulder | 4/18/2 | | Can / | M | 2 | | | | 4. | 10-11 |
| cominer | Lovel IH | N | | Signature | and it is and deal | 0 | ata Site R | mone // | | | | Signatu | 10: | · | Date |
| fùi rhaa d, Barry | A. | B | ans 1 | NIN | • | 4/18/2 | 110 | AK | ÷ | | | | | | |
| ther | Level N/ | A | 0 | Signature | | D | ate ANUS | oviow | 00 | AA C | Z. | L Sygnatu | 10 | 1. 1. | Date |
| NÄ | | | | | · · · · · · · · · · · · · · · · · · · | | 10 | my | | Teler | Duy | yun | <u> </u> | 20/1 | r |
| | | | | | | | | U | | | | | | ATTIC | LUCUS |

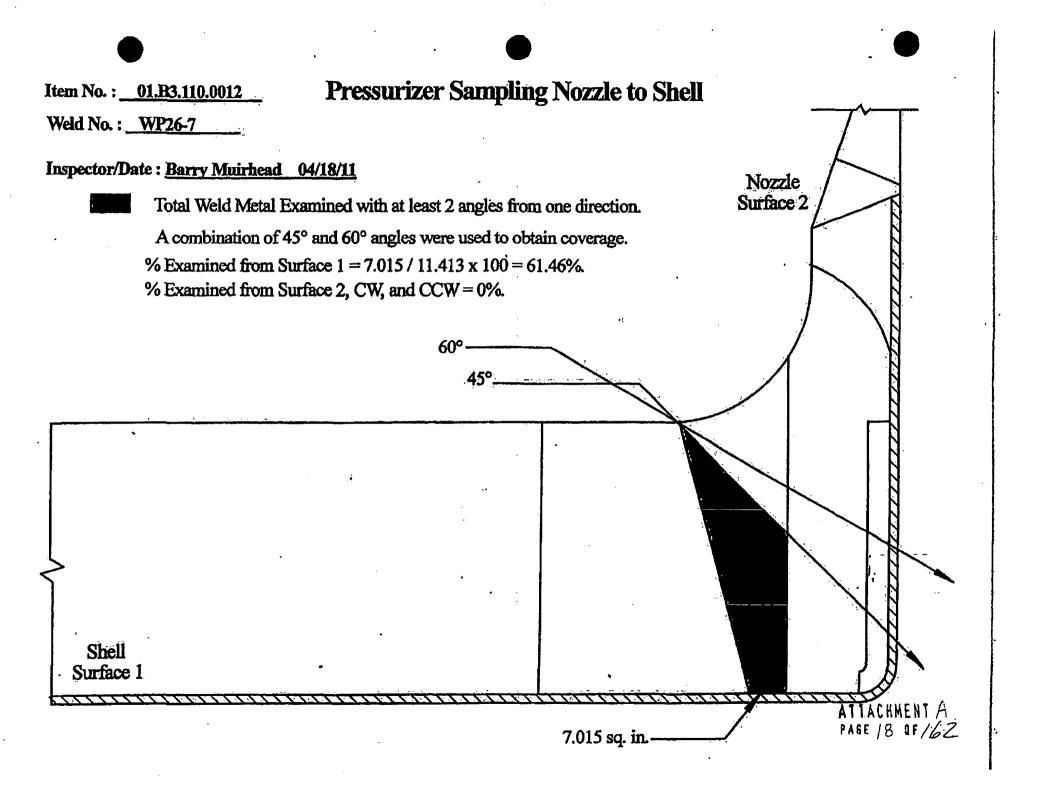
UT Calibration _____amination

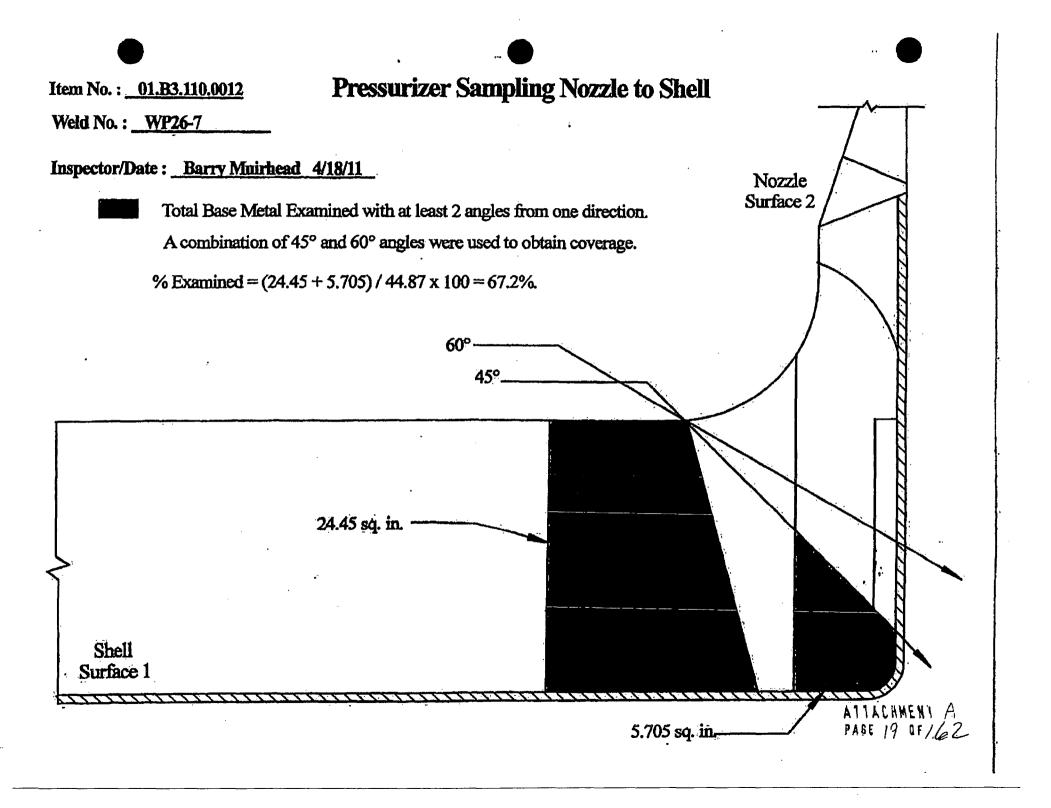
| | Site/Unit: | Oconse | 1 1 | | Proce | dure: | | NDE-820 | • | | Outage N | io.: | 01-25 |
|------------------------------------|------------------------|-----------------------|---------------------|--|--|--------------------------|--------------|---------------------|---|-----------|-----------------------|-------------------|--------------|
| Su | mmary No.: | 01, | B3.110.0012 | | Procedure | Rev.: | | 6 | | | Report N | ło.: U | T-11-773 |
| | Workscope: | | 181 | | Work Order | r No.: . | | 01897577 | | | Pa | go: 3 | of .9 |
| ode: | 1998/2 | A000A | | Cat./Item: | B-0 /B3,11 | 10 | | Location: | | | | | |
| awing No.: | 181- | OCN1-002 | | Description: | Nozzle to 8 | heil | _ | | , | | | | - |
| stem ID: 50 | | | | | | | | •. | | | | | |
| mponent ID: 1-PZR-V | VP26-7 | | | | | | Size/L | .ength: | NA | • | Thickness/Dia | meter: C | 5/6.187/5.75 |
| nitations: Yes - Se | e attached at | reets | · | | | | | Start | Time: | 1239 | Finist | Time: | 1245 |
| Instru | ment Settings |) | | Search Unit | · · · · · · · · · · · · · · · · · · · | Cal. | Time | Date | | Axtal | Orientsted 8 | arch Unit | |
| rial No.: | COT JX | <u>т</u> т | Serial No.: | G14819 | | Checks | 1000 | | Callb | ration | Signal | Sweep | |
| inufacturer: | KRAUTKR | AMER | Manufacturer: | KBA | | Initial Cal | 1100 | 4/18/2011 | | | Implitude % | Division | Sound Pat |
| del: | USN-C | 30 | Size: .5x1 | 1.0 Shape: | Rect. | Inter, Cal. | 1231 | 4/18/2011 | 1 | /8 | 50 | 1.1 | 3.43 |
| lay: <u>14.0744</u> | Range: | 28.0. | Freq.: 2.25 | MHz Style: G | AMMA | Inter, Cal. | | Aldebodd | 2 | /8 | 30 | 2.6 | 6.54 |
| Cal/Vel: .1288 | Pulser: | High | Exam Angle: | 60 # of Elemen | nts: Single | Inter. Cal. Final Cal | 1245 1310 | 4/18/2011 4/18/2011 | | /8 | 18/38 | 4.0 | 9.96 |
| mping: <u>1K</u> | Reject: | 0% | Mode: | Shear | | | | | in the second | tch | 80 | 5.0 | 12,15 |
| p. Rate: <u>Autohigh</u> | | 2.25 MHz | Measured Angl | والمحادث والمتشار وعويا فيستنا الشماع ومعيها | | | Coupler | | | 18 | 15 | 6.9 | 16.82 |
| er: Fixed | Mode: | PB | Wedge Style: _ | SW5 | | Cal. Batch: | | 09325 | | Circumfer | inted Orlegia | led Search | Unit |
| lage: Fixed Gain (dB): 58.6/62. | Other: 6 Ctro. Gain | Fulwave (dB); 76.6 | 8 | earch Unit Cable | | Type: Mig.: | SONO | | Caliba | | Signal Impiltude % | Sweep Division | Sound Pat |
| Screen Div. = 2.0 | | Sound Path | Туро: | RG - 174 | | Exem Batch | | 09325 | N | IA | | | |
| | | 1-138 | Length: 6 | No. Conn.: | 8 | Type: | ULTRA | | | | | | |
| early Report No.: | | | | Scan Covenage | ······································ | Mfg.: | SONO | | | | | | |
| | ration Block | _ | | •••• | /R• 78 8 | | | | · · · · | <u>ļ</u> | | | L |
| Block No. | 40338 | | | ownstream Scan | | Refe | rence B | lock | | Refe | rence/Simula | | |
| ckness 7 | - ' Dia.: | 5.76 | CW 🛛 | CCW 🔀 Scan | 08: | Serial No.: | 94 | -6822 | Gain dB | Reflector | Signal Amplitude % | Sweep Division | Sound Pat |
| Blk. Temp. 71 Ter | · | MCNDE40127 | Exam Surface: | | | Тура: | ROM | PAS | 38.8 | 2" Redius | 80 | .7 | 2,0 |
| np. Temp. <u>78</u> Ter | | MCNDE40128 | Surface Conditi | (in the second sec | | . | | | | | | | |
| cordable indication(s) | ; Yea (| 🗋 No 🔽 | (if Yes, Ref. Attac | had Ultrasonic Indica | tion Report.) | 1 | | | | | | | |
| ults: Accept |] Rojaci | t 🗹 🛛 | Info 🔲 | | | | Cor | nments; | | | | | |
| cent Of Coverage Obta | _ lined > 90%; | No | Reviewed Prev | ious Dats: Ye | 8 | | , | | | | | | |
| unioar Lovei | TL-M | 7 | Signature | Da | te Review | 4 . | 1 | 10 | | Signat | ÚTO OTAL | | Date |
| uldin, Larry E. | 1-14 | Laur | E. May | | | Han | 11 | Mar | > | | | 4- | 20-11 |
| iminar Laval | (I-N | | Signature | Da | | | | | | Signati | ura) | | Date |
| irhead, Barry A. | B | ang 1 | ULA | 4/18/201 | 11 <u>, P</u> | | <u>ا.</u> | | | A. C. A. | | | |
| ier Level | N/A | | Signature | Da | to ANIAR | Wew, | n | Retete | S | Sight | 10-4/- | na/11 | Data |
| A | | | | | | my | | come | \mathcal{O} | - yru | ~ /- | | 11111-11- |
| | | | | | | | | | | | | | |

| | | - · | | | • |
|--|---------------|-----------------------|---------|----------------------|--|
| D | UKE POWE | CR COMPANY | | | |
| · | ISI LIMITAT | ION REPORT | | | |
| Component/Weld ID: 1-PZR-W | P26-7 Ite | m No: _01.B3.110.0012 | | remarks: | |
| NO SCAN | SURFACE | BEAM DIRECTION | 1 | Due to nozzle config | uration. |
| LIMITED SCAN | 🛛 1 🖾 2 | 🛛 1 🖂 2 🖾 cw | 🛛 ccw | | <u>. </u> |
| FROM L N/A to L N/A | INCHES I | FROM W0 1.0" to | Beyond | | |
| ANGLE: 🛛 0 🖾 45 🖾 60 | other | FROM 0 DEG to | 360 DEG | | |
| NO SCAN | SURFACE | BEAM DIRECTION | 8 | | |
| LIMITED SCAN | 1 2 | 🔲 1 🗌 2 🗌 cw | CCW | | |
| FROM L to L | INCHES FF | ROM 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 | ROM W0 to | | | |
| ANGLE: 0 0 45 60 | other | FROM DEG to | DEG | | |
| | | BEAM DIRECTION | | | |
| LIMITED SCAN | | 🗌 1 🗌 2 🗌 cw | ccw | UT-11-773 | l <u>;</u> |
| FROM L to L | INCHES FR | :OM W0 to | | Sketch(s) atta | ched |
| ANGLE: 0 0 5 0 60 | | • | | 🛛 yes | No No |
| Prepared By: Larry Mauldin | nou level: | II Date: 04/18/11 | Shee | t_4of_9_ | |
| Prepared By: Larry Mauldin auf Reviewed By: San Mo. | Date: | Authorized Inspec | | | nate: 20/11 |
| | . | J | | 0 1 | ATTACHMEN |
| | | | | | PAGE 15 OF |









PZR Sampling Nozzle to Shell % of Coverage

Item No. : 01.B3.110.0012

Weld No. : WP26-7

ATTACHMENT A PAGE 20 DF 162

Weld Coverage

| Scan | Angle | % Coverage Obtained | |
|----------------|-------------------|---------------------|------------|
| S1 | 45° & 60° | 61.46 | |
| S2 | 45° & 60° | 0 | |
| CW | 45° & 60° | 0 | |
| CCW | 45° & 60° | <u>0</u> | |
| | Total | 61.46 | |
| | 61.46 + 4 = | <u>15.4</u> | % Coverage |
| Base Ma | terial Coverage | · · | |
| S 1 | 45° & 60° | 67.2 | |
| CW & C(| CW 45° & 60° | <u>42.4</u> | |
| | Total | 109.6 | |
| | 109.6 + 2 = | <u>54.8</u> | % Coverage |
| <u>0° Scan</u> | <u>Coverage</u> = | <u>33.8</u> | % Coverage |

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

34.7

Inspector / Date : Pavid K 3 - 4/cofi

Page 9 of 9

% Coverage

| and the second | - the second | Site/Unit: | Oconse | 1 1 | | | Proc | edure: | | PDI-UT-2 | | | Outaga I | No.: | 01-28 |
|-------------------------|---------------------|--|--------------------------|----------------------|----------------------|---------------|---------------|-------------|-----------------|--------------|-------------|------------------------------|----------------|-----------------|--------------------------------|
| | 8umi | nary No.: | 01 | .89.11.0029 | يبدي المتقافة المتقا | | Procedure | Rev.; | | E | | | ' Report l | No.: U | T-11-757 |
| | We | orkscope: | | 181 | | | Work Orde | ar No.: | | 01897774 | | - | Pa | age: <u>1</u> | of 8 |
| ode: | | 1998/20 | ADO | | Cet./Item | 1: | B-J /89.1 | 11 | · | Location: | | | | | |
| rawing No.: | | 181-0 | CN1-009 | | _ [| Description: | Nozzle to I | Bafe End | . . | ····· | | | | | |
| ystem ID: | 50 | | | | | | | - | | • | | | | | |
| omponent ID; | 1-PIB1-9 | <i>.</i> | | | | | | | Size/i | ength: | NA | | Thickness/Dia | imeter: E | 38/2.23/38.5 |
| mitations: | | ittached she | | | • | | | | | Start | Time: | 1400 | Fintel | h Time: | 1415 |
| | | nt Settings | | ···· | Searci | | | Cal. | | Data 1 | | Âvia | l Orientated 8 | earth Hall | |
| erial No.: | | 014738 | | Serial No.; _ | | 01F10K | | Checks | Time | Date | Callbr | | Signal | Sweep | -T |
| anufacturer: | | KRAUTKRA | | Manufacture | it: | KBA | · | Initial Cal | 1340 | 4/17/2011 | Refle | | Amplitude % | Division | Sound Pat |
| odal: | | USN-60 S | | Size: | · | Shape: | Round | Inter, Cal. | 1359 | 4/17/2011 | ID N | otch | 60 | 8 | 4.03 |
| | 5.8947 | Range: | 8 | ····· | 15 MHz | Style: (| | Inter. Cal. | 1000 | 41112011 | <u> </u> | <u> </u> | | | |
| "il Cel/Vei: amping: | <u>.1211</u> 600 | Puiser: Reject: | Bquare 0% | Exam Angle: | 48 | | ents: Single | Final Cal | 1550 | 4/17/2011 | | , í , , , , , [, | | | + |
| | Autohigh | Freq.: | 2.25 MHz | Mode: Measured Ar | | Shear 42 | | | Couplan | | · · · · · · | | | | ╬╧┯┯┯ |
| iter: | Fixed | Mode: | PE | Wedge Style | | 42 MSWQC | <u> </u> | Cal. Batch: | • | | c | Iroumfer | ential Oriente | ted Search | |
| ottage: | 450 | Other: | Fullwave | Weage Scho | ` | IND IT GO | | | ULTRA | | Calibr | | Signed | Sweep | T |
| c Gain (dB); | 27.7 | Circ. Gain (| (B): 27.7 | | Search Ur | lit Cable | | Mfg.: | BONO | | Refie | | Amplitude % | Division | Sound Pat |
| 1 Screen Di | V. = .\$ | In. of | Sound Path | Туре: | F | RG - 174 | | Exam Batch |)) | 09325 | See / | Nicial (| | | Ţ |
| nearily Report | No.: | L-11-1 | 42 | Length: | 6' No. | Conn.: | 0 | | ULTRA | | | | | | - |
| | | on Block | | | Scan Co | verage | | Mfg.: | SONO | | | | | | d |
| d. Block No. | CEIDIEL | 40397 | | , Upstream 📝 | Downstrea | _ m[_]Scar | 1 dB: 40 | | | | | | inite/Simula | tar Blank | |
| | 3.000 | Dia.; | Flat | CW 🗹 | | W 🗹 Scar | | | rence B | | Getn | | Signal | Sweep. | Sound Pat |
| ai, Bik, Temp. | | And and a second se | CNDE40136 | Exam Surfac | | O.D. | | Serial No.: | | <u>16737</u> | dB | Reflecto | r Amplitude 9 | | h |
| mp. Temp. | 76 Temp. | | CNDE40136 | Surface Cond | lition: | As Gro | | Тура: | ROM | r Að | 13.7 | 1" Redlu | 8 80 | 1.3 | 1 [*] 1 ^{**} |
| cordable Ind | ication(s): | Yes [] | No 🖌 | (II Yes, Ref. At | lached Utira | sonic Indici | alion Report. |) | | | | | | <u>+</u> | |
| | Accept | Reject (| | • | | | • | - | Con | nments: N/A | | · | | ېلىپىمەنىك • | |
| | unada 🗍 | Nojour (| Y) | into 🗌 | | | | | 000 | | • | | | | |
| reent Of Cove | rage Obtaine | d > 90%: | No. | Roviewad Pr | | | | | | | <u></u> | | | | |
| aminer | Level I)- | N | $\overline{\mathcal{O}}$ | Bignature R. Alls | | | ato Rover | ar / | $\frac{1}{2}$ | 1 | | Signal | lure | | Date |
| llis, Jacob | | | Sand | h fills | | 4/17/20 | | Jen/ | $\downarrow II$ | land | | | | 4-21 | |
| aminer | Level (j. | N C | 1 | Signature | | D: 4/17/20 | sto Site Re | Niew V | 1 . | | | Signal | urð | | Date |
| y, John, C. | | | - p | ~~~ | | 411//20 | 11 | <u> </u> | | | | Signat | | | |



UT Calibration

1. 1. 1. 1.

| | in the second second | Sita/Unit; | Ocones | 1 1 | | | Proc | cedure: | | PDI-UT-2 | | | Outage | No.: | 01-26 |
|------------------|----------------------|-------------------|------------|-------------------|--------------|---------------|-------------|--|-----------|---------------------------------------|------------|----------|-------------------------------|------------|--------------|
| | Sum | nery No.: | 0 | 1.89.11.0029 | | | Procedure | B Rev.: | | Ę | | | Report | No.: I | JT-11-757 |
| | Wo | rkscopa: | | 181 | | | Work Ord | er No.: | | 01897774 | | _ · | P | ege: 2 | of 8 |
| lode: | | 1998 | 2000A | | Cat./lterr | n: | 8-J /89. | 11 | | Location: | | | | | |
| Vrawing No.: | | · 18 | -OCN1-009 | | _ , [| Description: | Nozzle to | Safe End | | · · · · · · · · · · · · · · · · · · · | | | | | |
| lystem ID; | 6 <u>0</u> | | | | | | · · · | · | | | | | | | |
| component ID: 1 | 1-PiB1-9 | | | | | | | | Stze/ | Length: | N/A | • | Thickness/O | lameter; | 88/2.33/36.5 |
| Imitations: | Yes - See 4 | ittached a | heets | | | | | | | Start | Time: | 1417 | Fink | ih Time: | 1425 |
| | Instrume | nt Setting | | | Search | h Unit | | Cal. | Time | Date | · | Ax | al Orlentated I | Search Unb | 1 |
| ental No.: | | 0147 | 38 | Serial No.: | | SE0708 | | Checks | | | Calif | nation | Signal | Sweep | - <u></u> |
| lenufacturer: | | KRAUTK | RAMER | Manufacture | r: | KBA | | Initial Cal | 1345 | 4/17/2011 | | locior | Ampiltude % | Division | Sound Pat |
| lodel: | | USN-60 | 5W | Size: | :5 | Shape: | Round | Inter. Cel. | | | . 3/4 | 8DH | . 50 | 3.9 | 8.85 |
| elay: | 8.2934 | Range: | 10 | Freq.: 2.2 | 5 MHz | Style: C | omp - G | Inter. Cal. | 1410 | 4/17/2011 | | | | | |
| 'U Cal/Vel: | .1225 | Pulser: | Bquare | Exem Angle: | 60 | # of Eleme | nts: Single | Inter. Cal, | 4705 | 414710044 | | | | | |
| amping: | 500 | Reject: | 0% | Mode: | • | Shear | | Final Cel | 1565 | 4/17/2011 | | | | | |
| ep. Rate: Al | utoNgh | Freq.: | 2.25 MHz | Measured Ar | gie: | .57 | | | Couplar | nt | <u> </u> | |) موادي است به در ماندين . | L | |
| liter: | Fixed | Mode: | PE | Wedge Style | <u> </u> | MSWQC | | Cal. Batch: | <u>.</u> | 09325 | | Chroumfe | rential Orient | ted Search | n Unit |
| oltaga: | 450 | Other: | Fullwave | | | | | Тура; | ULTRA | GEL U | | ration | Signal | Sweep | Sound Pat |
| x. Gain (dB): | 45.3 | Circ. Gal | n (dB):N/A | L | Search Ur | nit Cable | | Mfg.: | . 80NO | TECH | Rei | ector | Amplitude % | Division | |
| 1 Screen Div. | = 1.0 | in. of | Sound Path | Тура: | . 1 | RG - 174 | · · | . Exam Batel | , | 09325 | <u> N</u> | VA | · | | |
| nearity Report N | o.: | 61 | 1-142 | Langth: | 6' No. | . Conn.: | 0 | Type: | ULTRA | GEL II | ÷ | | | | ╶┼╼╼╍╍╸ |
| | | | | | Scan Co | verage | | Mig.: | SONO | | | | | | ╺╉┶╍┶╼╼╴ |
| al. Błock No. | Generat | lon Block 4039 | | Upstream 🔀 | Downatrea | m 🗂 Scan | dB: 51.3 | | | | | | ference/Stmul | L | |
| | | Dia.: | Flat | cw [] | | W Scan | | | rence B | liock . | Gain | ru T | Signal | Sweep | 1 |
| | .000 | | | | | 0.D. | | Serial No.: | | 4-8737 | dB | Reflect | or Amplitude | | Sound Pat |
| al. Bik. Temp. | | | MCNDE40136 | Exam Surface | - | | | Тура: | ROM | IPAS | 15.0 | 1" Red | us 80 | . 1 | 1" |
| · · - | 78 Temp. | | MCNDE40138 | Surface Cond | ببدهمه | As Grou | | | | | | · · · | | | |
| ecordable Indici | ation(s): | Yes | □ No 🗹 | (If Yes, Ref. Att | ached Ultra | Isonio Indica | uon Report. | .) | | | L | <u> </u> | <u> </u> | | |
| esulte: Ac | coept 🔲 | Reje | × 🗹 | Info 📋 | | | , | | Çor | mments: N/A | • | | | | : |
| proent Of Covera | ne Obteine | 4 > 90% | No | Reviewed Pr | nvious Data | n: Ye | h.91. | | | | | | | | |
| caminer | Level II | | | Signature | | Da | | wit . | | <u> </u> | | Sign | iture | | Date |
| olls, Jacob | | -14 | | | lk; | 4/17/201 | | Man | Λ | Mon | > | | | 4-1 | 1-11 |
| aminer | Level (| | | Slapatore | indana. | Da | te Sile R | and the second | 4- | | | Sign | ture | | Date |
| ey. John. C. | | | 5 | 1LVV | | 4/17/201 | 15 | JA C | | | | | | • | _ |
| ther | Level N | /A | | Signature | | Da | | | | 1-1-4 | 0 | Sign | ture | | Date |
| VA | | | | - | - | •• | 1 1 | oney (| CK | tehis | Store | then | 4/2 | 1/10 | |
| | | | | | | | | <u> </u> | | <u></u> | | K | | | |
| | | | | | | | | • | | | | | | ATI | ACHMEN |
| | | | | | • | | | | | | | | | | E 2.2. OF, |

| | | Site/Unit: | : Oconee | | | | Decender | | | | | | • • • • • • | N | |
|----------------|-----------------|------------|------------------|----------------------|--------------|-----------------|--|------------------------------|----------|---|------------|---------------------------------------|-----------------------|-------------------------|--------------------------|
| | | nary No.: | | . / 1 | | Dee | Procedu | - | | PDI-UT-2 | | | Outage | | 01-26 |
| | | naly no. | 01. | 89.11.0029 /8/ | , | | ocedure Re ork Order No | - | | | | . | Report | | JT-11-757 |
| | | | | - | | | | | | 01897774 | <u> </u> | | P1 | age: 3 | 6 |
| de: | | | 2000A | | Cat/Item: | | J /B9.11 | | | Location: | | | | | |
| wing No.: | <u></u> | 181 | -OCN1-009 | | Des | ription: Noz | zzie to Safe | End | | <u> </u> | <u>-</u> | | | | مادين المتحديد مي روين ا |
| tem ID: | 50 | | | | | | | _ | • | | | | • | | <u></u> |
| nponent ID: | 1-PIB1-9 | | | | | | · <u> </u> | | Size/L | Langth: | N/A | | Thickness/Di | ameter: | 85/2.33/30.5 |
| tations; | Yes - See a | stached s | heets | | | | 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 1. 19 | | | Start | Time: | 1427 | Finis | h Time: | 1435 |
| | Instrume | nt Setting | 8 | | Search Vi | nlt | | Cel. | Time | Date | | Axb | J Orientated 8 | earch Uni | |
| si No.: | | 01473 | 5 | Serial No.: | | 20355 | | hecks . | | | Cellb | nation | Signal | Sweep | Sound Pat |
| ufacturer: | | KRAUTKR | | Manufacturer: | | ĜE | | tial Cal | 1350 | 4/17/2011 | | | Amplitude % | Division | Sound Pat |
| el: | | USN-60 | | Size:5 | | | | er. Cal. er. Cal. | 1426 | 4/17/2011 | 3/4 | BDH | 80 | . 4 | 5.9 |
| y: Cal/Vel: | 9.6613 | Pulser: | 16 Square | Freq.: 2.28 h | | yle: Comp | | or. Cal. | . 1420 | | | | | | · |
| ping: | 590 | Reject: | 0%_ | Exam Angle: Mode: | <u>70</u> #0 | of Elements: | | nal Cal | 1558 | 4/17/2011 | | | | | |
| | Autohigh | Freq.: | 2.25 MHz | Measured Angle | | 70 | | | Couplan | it | | | | | |
| | Fixed | Mode: | PE | Wedge Style: | | SWQC | Ca | . Batch: | | 9325 | | Circumfé | rential Oriente | ted Search | i Unit: |
| ige: | 450 | Other: | Fullwave | | | | עז |)9: | ULTRA | GEL II | Callb | ation | Signal | Sweep | Sound Pat |
| Bain (dB): | 58 | Ctro. Gain | (dB): <u>N/A</u> | 80 | arch Unit C | able | Mf | J.: 📜 | SONO | TECH | Roth | ector | Amplitudo % | Division | Sound Pau |
| Screen Di | v. = <u>1.5</u> | In. of | Sound Path | _ Туре: | RG - | | Ex شيتي | un Bato | h(| 09325 | N | | | • ••••• •••• | - <u> </u> |
| urity Report | No.: | L1 | 1-142 | Length: 6 | No. Co | nn.: 0 | Ту |): | ULTRA | GEL (I. | | | | . <u></u> | |
| | Calibrati | on Block | • • | - (| Bean Covera | ige | Mf | J.: | SONO | TECH | | | | | |
| Block No. | | 40397 | <u> </u> | _ Upstream 🖌 Do | ownstream [| 3 Scan dB: | 56 | Refe | irence B | iack | | Raf | erence/Simuli | tor Block | |
| uness | 3.000 | Dia.; | Flat | cw [] | ccw[|] Scan dB: | N/A Sei | tal No.: | • | -8737 | Gain dB | | Signal Amplitude 9 | Sweep | Sound Pat |
| lik. Temp. | 76 Temp. | Tool: | MCNDE40138 | Exam Surface: | | 0.D. | Тур | | ROM | and the second se | _ | 1" Radiu | | Division | .1" |
| p. Temp. | 76 Temp. | Tool: | MCNDE40126 | _ Surface Conditio | in: | As Ground | | <u>مور</u> قينية مورقينية | | | | | | • | |
| rdable indi | cation(s): | Y05 | | (If Yes, Ref. Attack | ned Ultrason | to Indication I | Report.) | | | | | | | 1. | |
| its: / | Accept 📋 | Rejec | t 🗹 🛛 II | 10 [] otr | | | | | Con | nments: N/A | i | | • | | |
| int Of Cover | rage Obtaine | d > 90%: | No | Reviewed Previ | ous Dala: | Yes | · • • | | • | | | | | | |
| iner | Lövel n. | N | 6 | Ignature | - | | Reviewer | 17 | Δ | .00 | | Signa | ture | | Date |
| , Jacob | | - | Ja | an Hl | 4 | 4/17/2011 | / | Jas | n/1 | 110 | 2 | · · · · · · · · · · · · · · · · · · · | | 4. | 20-11 |
| lner | Lavel []. | N | | Ignature | | · · · · | Site Review | | VI | | | Signa | ture | | Date |
| John, C. | | | | h Dr | | 4/17/2011 | A | | | `· •= | | 01 | | | <u> </u> |
| r | Lovel N | A | / 8 | Ignature | | Dete | ANII Revie | . / | 20- | ++- ! | SI. | Lina | - 4 | 124/1 | Date |

| Fight Services | Site | Unit | Ocones | 1 1 | | | | Proce | oduro: | | PDI-UT-2 | | | Outage I | lo.: | 01-26 |
|----------------------------|--|--------------|----------------------------|--------------------------|--|------------|-----------|----------------|----------------------------|----------|--|-----------|----------|-----------------|---|---------------|
| | Summary | No.: | 01.1 | B9.11.0029 | | | F | orocadure | Rev.: | | E. | | | Report N | lo.: U | 17-11-757 |
| | Workso | xopa: | | 181 | | | v | Vork Orde | r No.: | | 91897774 | | | Pe | ge: 4 | of <u>5</u> |
| Code: | | 1998/2000 | A | | Cat. | Atem: | | B~J /B9.1 | 1 | | Location: | | | | | |
| Drawing No.: | | 181-001 | 1-009 | | | Descript | ion: N | ozzie to S | Safe End | | | | | • | | |
| System ID: | 50 | | | | | • | . — | | | | | | | | | |
| Component ID: | 1-PIB1-0 | | | | | | | | | Size/i | Length; | N/A | | Thickness/Dia | metar: 1 | 38/2.33/38.5 |
| .imitations: | Yes - See attac | thed sheet | 6 | | | | | | | | Start ' | fime: | 1437 | Finial | Time: | 1443 |
| | Instrument S | ettings | | | 8 | serch Unit | | | Cal. | Time | Date | | Axle | I Orientated 5 | earch Unit | , |
| Serial No.: | | 014738 | | Serial No.: | | 98-25 | 8 | | Checks | • | L | Callb | nition | Signal | Sweep | Sound Pat |
| danufacturer: | KR | UTKRAM | R | Manufactur | b7: | R | TD | | Initial Cal | 1365 | 4/17/2011 | | ector | Amplitude % | Division | Source Fat |
| Aodel: | <u> </u> | ISN-60 SW | | Size:2 | 24x42) | Shape: | R | ect. | Inter. Cal. | 4490 | 4/17/2011 | 3/4 | BDH | - 80 | 3,9 | 3,68 |
|)elay: | | nge: | 10 | Freq.:2 | 0 MHz | Style: | | RL2 | Inter, Cal. Inter, Cal. | 1436 | 41772011 | | | | • | |
| /ti Cal/Val: | Contraction of the local division of the loc | liser: | Square | Exam Angle | . 6 | 0# of E | lement | s: <u>Duzi</u> | Final Cal | 1602 | 4/17/2011 | | ┉┈╒╋ | · | | |
| lamping: | and the second se | ject: | 0% | Mode: | | Long. | | نىسىب | | Couplar | | | | | | - |
| • | | eq.: | 2 MHz | Measured A | - | | 57 | ······ | Cal. Batch: | • | n 09325 | | | rential Orlents | ad Beern | ullani |
| illier: | and the second se | xde: her: | PE: Fullwave | Wedge Styl | | Inter | Fal | <u> </u> | | ULTRA | | Callb | | Signal | Sweep | 1. |
| 'oltage: .x. Gain (dB): | and the second design of the s | rc. Gain (dB | | | Rear | h Unit Cab | la. | | Mfg.: | SONO | the second s | Ret | | Amplitude % | Division | Sound Pal |
| | | • | ound Path | Тура: | | RG - 17 | | | | | | N | IA' | | | |
| 1 Screen Di | | | ويستعد والمستعملة والمنافق | Length: | 6' | No. Conn. | | 0 | Exam Batch | ULTRA | 09326 | | | | - | |
| Inearity Report | No.: | L-11-14 | | ` ···· | Boa | n Coverage | | | Type: Mfg.: | SONO | | | | | · | |
| | Calibration | | | Upstream 🕁 | | - | Scan d | R: 87.4 | | | | | <u> </u> | <u></u> | ton Din di | _l |
| cal, Block No. | | 40297 | | CW [| - | | | | | rence li | | Gain | PCIP4 | Signal | Sweep | 1 |
| hickness | | a.: | Flat | | | | .D. | | Sertal No.; | | 4-8737 | dB | Reflecto | x Amplitude 7 | Division | Sound Pat |
| | 78 Temp. To | | NDE40138 | Exam Surfa Surface Co | - energy - e | | Groun | | Туре: | ROM | IPAS | 64.7 | 2" Radi | 15 80 | 2 | 2" |
| Comp. Temp. | 78 Temp, To | | NDE40136 | | | | | · • | N | | | | [| | ᢤ᠁ᡝ | <u></u> |
| lecordable Ind | lication(s): | Yes 📋 | No 🔽 | (If Yes, Ref. A | | Omesonio i | 101110102 | ні порога, | , | _ | | | l | | <u>. </u> | <u> </u> |
| lesults: | Accept | Reject 🖌 |] | lafo 🔲 | • | | | | | Col | mmente: N/A | 6 | | | | |
| Percent Of Cove | arage Obtained > | 80%: | No | Reviewed F | revious | Data: | Yes | | | | المالة المراجع في معرد التعليات م | | | | | |
| Examiner | Lovel II-N | | | Signature | 1 10 | | Date | | 11 | Λ | MA | \sim | Sign | turo | | Date |
| Hollis, Jscob | | | - Edit | m R. H | | 4/1 | 7/2011 | 1 1 | Klan | 4 | 100 | <u>20</u> | | | 4. | <u>p-1-11</u> |
| Examiner | Lovel (I-N | | 0 | Signature | | | Data | | | / { | | , | Sign | iture, | | Date |
| Day, John, C. | | | | gin VI | | 4/1 | 7/2011 | | NAI | | | | Class | | | Date |
| Other | Level N/A | | • | Signature | | | Date | | NIN AL | 2+ | tel Slo | A | Signa | | , <u>HU</u> | 1.010 |
| N/A | | | | | | | | Non | My CP | \un | m - u | yni | \sim | | <u> – – – – – – – – – – – – – – – – – – –</u> | |



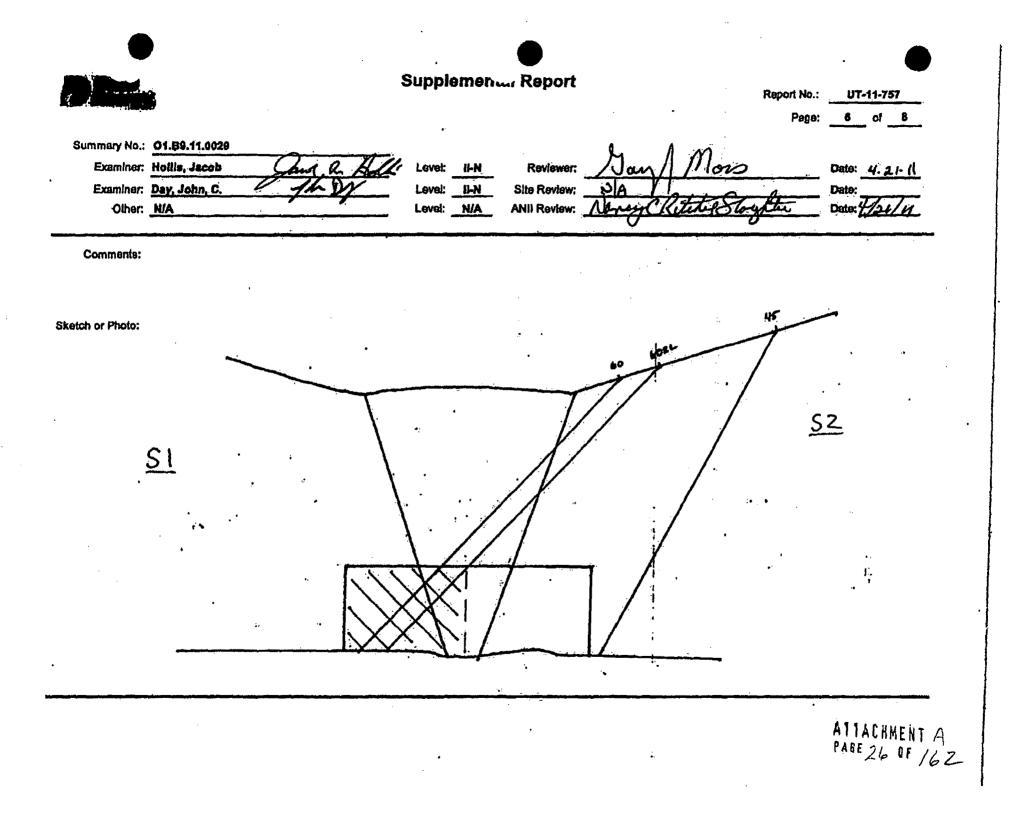


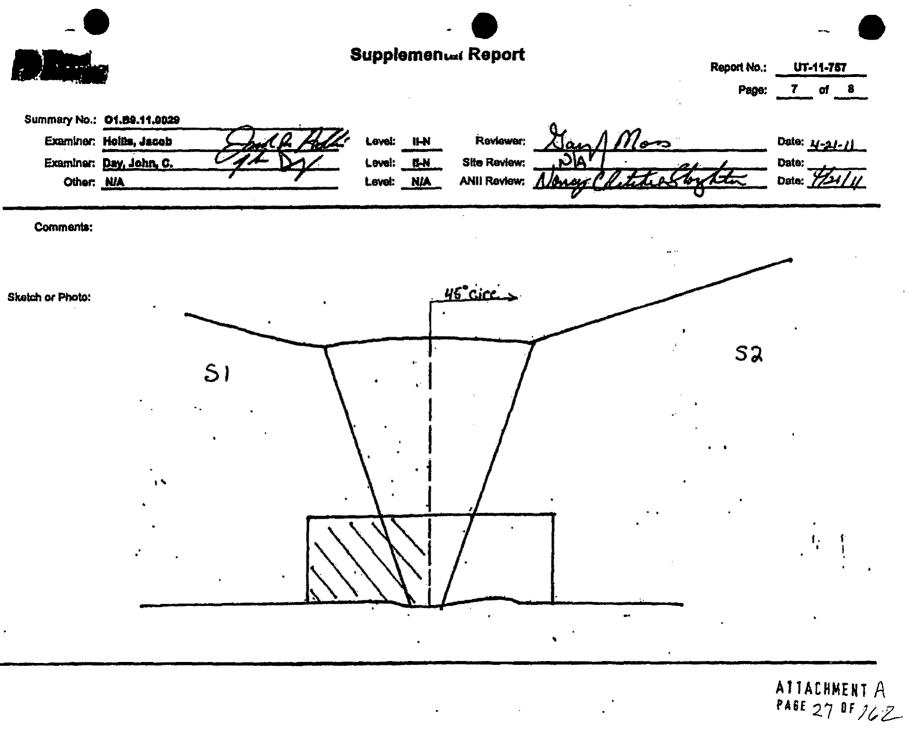
DUKE POWER COMPANY

ISI LIMITATION REPORT

| the second s | | | |
|--|--|-----------------------------------|------------------------------|
| Component/Weld ID: 1-PIB1-9 | iter | n No: 01.89.11.0029 | remarks: |
| 🖾 NO SCAN | SURFACE | BEAM DIRECTION | Due to cast material on pump |
| LIMITED SCAN | ⊠ 1 🗌 2 | 🗌 1 🛛 2 🖾 cw 🖾 ccw | side. |
| FROM L N/A to L N/A | INCHES F | ROM W0 CL to Beyond | |
| | | FROM 0 DEG to 360 DEG | |
| NO SCAN | النامي الخصيب بينيا عبد البينية منها الماكاني المهري الأخط | | |
| 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 | | BEAM DIRECTION | |
| LIMITED SCAN | 1 2 | 🗌 1 🗌 2 🗍 cw 🗌 ccw | |
| FROM L to L | | OM WO to | |
| ANGLE: 0 0 45 60 | other | FROM DEG to DEG | |
| NO SCAN | SURFACE | BEAM DIRECTION | |
| LIMITED SCAN | 1 2 | 🗌 1 🗌 2 🔄 cw 🔲 ccw | UT-11-757 |
| FROM L N/A to L N/A | INCHES FRO | DM W0 2.2 to Beyond | Sketch(s) attached |
| ANGLE: 0 0 5 0 60 | other <u>60RL</u> | FROM 0 DEG to 360 DEG | 🛛 yes 🗌 No |
| Prepared By: Jacob R. Hollis | Half. Level: 11 | Date: 04/17/11 Shee | t <u>5</u> of <u>8</u> |
| Reviewed By: Jan Ma | Date: | 4-21-11 Authorized Inspector? the | Sloufter 4/21/11 |
| Y (| | | ATTACHMENT PAGE 25 OF |

2





| Site/Unit: | Oconee / | 1 | Procedu | ure:PDI-UT-2 | Outage No | o.: <u>01-26</u> |
|---|---|---|--|--|-------------|---|
| nary No.: | O1.B9.11 | | Procedure R | | _ Report No | |
| rkscope: | 151 | | Work Order N | No.: 01897774 | Pag | e: <u>8</u> of <u>8</u> |
| <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 de</u> The data | eg <u>- 60</u> | . . | supplemental s | <u> </u> | | · · · |
| | eg - <u>60</u> to be listed belo | _ (to be used for | supplemental s that was not ob | scans) | 0.000 | % total for Scan |
| The data | eg - 60 to be listed belo 100.000 | _ (to be used for w is for coverage | supplemental s that was not ob | scans) otained with the 45 deg scans. | 0.000 | % total for Scan |
| The data Scan 1 Scan 2 | eg - 60 to be listed belo 100.000 | _ (to be used for w is for coverage % Length X % Length X | supplemental s that was not ob 0.000 50.000 | scans) stained with the 45 deg scans. % volume of length / 100 = | 50.000 | % total for Scan : |
| The data Scan 1 Scan 2 | eg - 60 to be listed belo 100.000 100.000 | _ (to be used for w is for coverage % Length X % Length X % Length X | supplemental s that was not ob 0.000 50.000 | scans) otained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = | 50.000 | <pre>% total for Scan 2 % total for Scan 2 % total for Scan 2</pre> |
| The data Scan 1 Scan 2 Scan 3 Scan 4 | eg - 60 to be listed belo 100.000 100.000 | _ (to be used for w is for coverage % Length X % Length X % Length X % Length X | supplemental s that was not ob 0.000 50.000 | scans) otained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = | 50.000 | <pre>% total for Scan 2 % total for Scan 2 % total for Scan 2</pre> |
| The data Scan 1 Scan 2 Scan 3 Scan 4 <u>Percent</u> | eg - 60 to be listed belo 100.000 100.000 | _ (to be used for w is for coverage % Length X % Length X % Length X % Length X | supplemental s that was not ob 0.000 50.000 | scans) tained with the 45 deg scans. | 50.000 | <pre>% total for Scan 2 % total for Scan 2 % total for Scan 2</pre> |
| The data Scan 1 Scan 2 Scan 3 Scan 4 <u>Percent</u> | eq - 60 to be listed belo 100.000 100.000 100.000 100.000 complete cover is for each scan | _ (to be used for w is for coverage % Length X % Length X % Length X % Length X | supplemental s that was not ob 0.000 50.000 | scans) tained with the 45 deg scans. | 50.000 | <pre>% total for Scan 2 % total for Scan 2 % total for Scan 2</pre> |
| The data Scan 1 Scan 2 Scan 3 Scan 4 Percent Add tota 37.500 | eg - 60 to be listed belo 100.000 100.000 100.000 complete cover lis for each scan % Total for | (to be used for w is for coverage % Length X % Length X % Length X % Length X % Length X rage required and divid complete exam | supplemental s that was not ob 0.000 50.000 | scans) tained with the 45 deg scans. | 50.000 | <pre>% total for Scan 2 % total for Scan 2 % total for Scan 2</pre> |

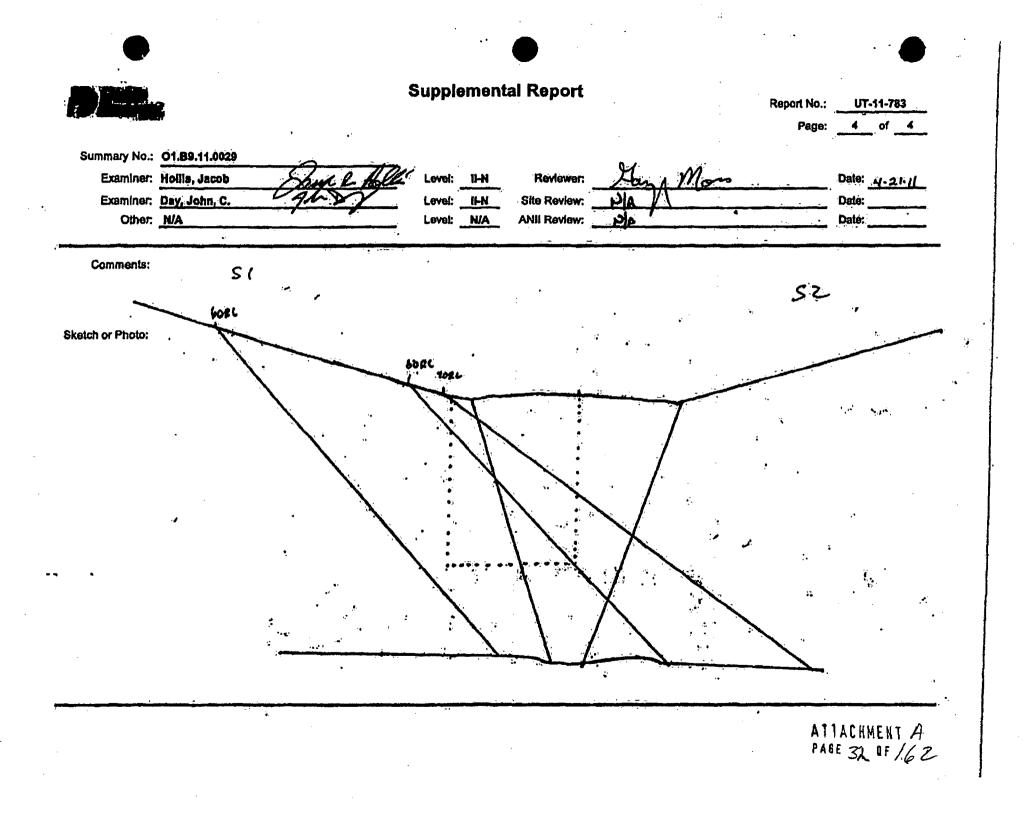
| | | Site/Unit: | Oconee | / 1 | | Proc | edure: | | NDE-830 | | | Outage I | No.: | 01-28 |
|-------------------|----------------------|-----------------|---------------|---------------------------------------|--|--|----------------|--|---------------------------------------|----------------|---|------------------------|-------------------|-------------|
| | Sum | nary No.: | 0 | 1.B9.11.0029 | المسمد وزور مراجعتها | Procedure | Rev.: | | 1 | | | Report | No.: U | T-11-783 |
| | Wo | rkscope: | | 181 | • | Work Orde | r No.: | | 01897774 | | | Pa | ege: 1 | of _4 |
| Code: | | 1998/200 | A | | Cat/item: | B-J /B9,1 | 11 | | Location: | | · | | | |
| Drawing No.: | | ISI-04 | CN1-009 | | Description | n: Nozzie to i | Safe End | | | | | | | |
| System ID: | -59 | | | | | | | | · · · · · · · · · · · · · · · · · · · | | | | | |
| Component ID: | : 1-PIB1-9 | | | | | Ì | • | Size/I | angth; | NA | | Thickness/Dis | meter: S | 8/2.33/38.5 |
| Imitations: | Yes - Ses a | itisched she | its | | | | | | Start | Time: | 1031 | Finisi | h Time: | 1044 |
| | Instrume | nt Settings | | · · · · · · · · · · · · · · · · · · · | Search Unit | | Cel. | | | | Avlai | Orientated 8 | eenste Linte | |
| Serial No.: | | 011LW6 | | Sorial No.: | 09-1252 | | Checks | Time | Date | Cellh | ration | Signal | Sweep | 1 |
| Aanufacturer: | | KRAUTKRAN | IER | Manufacturer | RTD | | Initial Cal | 1010 | 4/18/2011 | | | Implitude % | Division | Sound Per |
| Aodot: | | USN-60 | | Size: 2(10 | and a second | Square | inter, Cal. | | | 1/4T | Hole | 80 | 3.7 | 1:84 |
|)olay: | 10.9418 | Range: | 5.0" | Freq.: 2.0 | | TRLA | Inter. Cel. | 1030 | 4/18/2011 | | | | | |
| I'll Cel/Vol: | .2402 | Pulser: | High | Exam Angle: | and the second | nents: Dust | Final Cal | 1225 | 4/18/2011 | J | | | | |
| amping: | <u>1K</u> | Reject: | 0% | Mode: | L-WAVE | | • | | | ļ | | | | |
| | Autohigh Fixed | Freq.: Mode: | 2 NHz Dual | Measured Ans | | | | Couplan | | | | | | <u></u> |
| iller: oltage: | Fixed | Other: | Fullwave | Wedge Style: | integra | <u>.</u> | Cal. Batch: | designation of the local division of the loc | 09326 | | | ntial Orlanta | | |
| x. Gain (dB): | 74 | Circ. Gain (d | | | Search Unit Cable | | Type: Mfg.: | ULTRA | ومستالستك نصتي بججيب وانتها | Cellb: Refe | | Signai i mplitude % | Sweep Division | Sound Pet |
| 1 Sareen D | | - | iound Path | Туре: | RG - 174 | | | | | 800 | | | | <u>+</u> |
| | | | | كالانتخاري ومسينك | Mo. Conn.; | 0 | Exam Batch | and statements | 09325 | | | | | |
| incarity Report | | L-11-1 | | | Scan Coverage | ······································ | Type: Mfg.: | ULTRA BONO | | | | | | ľ., |
| | Calibrati | on Block | | | Downstream 💟 Sci | ••• dB • 74 | wiga | SUNU | IEGN | | | | | I |
| al. Block No. | | 50214 | | | | | Rafe | rence B | lock | 0.1 | and the second se | rence/8lmula | | |
| el. Bik. Temp. | 2,464 | Dia.: | Flat | | | an dB: 74 | | | 09322 | Gain da | Reflector | Ampéluda % | Sweep Division | Sound Pat |
| • | 69 Temp. 67 Temp. | | CNDE40130 | Exam Surface: Surface Condi | | | Турв: | ROM | PAS | 40.8 | 2" Radius | 80 | 4 | 1.95 |
| - • | | | | | | | | | | | | | | |
| scordable Ind | | Yes 🗌 | No 💋 | (IT TOS, POT. AUG | iched Ulirasonic Indi | canou veborr | | | | | | <u> </u> | لببط | |
| osults: | Accept | Reject [| 2 | into 📋 | | | | Can | nments: N/A | L . | | | . * | |
| ercent Of Cove | orage Obtaine | d > 90%: | No . | Reviewed Pre | vious Data: | Ýýa | | | | | | . <u>.</u> | · | - |
| xaminer | Level II. | * |) | Signature | | Date Roview | A. | $\overline{\Lambda}$ | 711 | | Signatu | ure | | Data |
| oliis, Jacob | | | NOL 2 | Alle | 4/18/2 | | Days | IL | 110 | ~> | | | 4. | 21-1 |
| xeminer | Level II- | N | _ | Signature | | Date Site Re | | 7. | | | Signatu | σμ | | Date |
| sy, John, C. | | | | av/ | 4/18/2 | | DA / | L_ | | | | | | |
| ther VA | Lavel N | A | | Signature | I | Date ANII R | <i>174</i> | - | | | Signatu | | | Date |

PAGE 29 OF 16:2

| | | | | U | T Cal | ilbratio | n, .ar | ninatio | n | | | ·•• | · | | |
|---------------------------------------|-----------------------|-------------------|--|--|--|---|--------------|-------------|---------|-----------------|-------------------|------------------------|--|--|---------------------------------------|
| | | Site/Unit: | Oconee | / 1 | | | Proc | edure: | | NDE-830 | | | Outage | No.: | 01-26 |
| | Sum | nary No.: | 01 | .B9.11.0029 | | | Procedure | Rev.: | | A, | | | Report | No.: U | T-11-783 |
| } | Wa | rkacopa: | | 161 | | | Work Orde | or No.: | | 01897774 | | | P | sge: 2 | of <u>4</u> ; |
| de: | | 1998/20 | 000A | | Cat./Iten | n: | B-J /B9.1 | 11 | | Location: | | • | <u></u> | | |
| wing No.: | | \$!-C | CN1-009 | | t | Description: | Nozzle to t | Safe End | | | - | | | | |
| tem ID: | 50 | | | | | | | • | | | | | | ` | |
| nponent ID: | 1-PIB1-9 | | | | | | | | Size/L | ength: | N/A | | Thickness/Di | emeter: 8 | 8/2,33/36.5 |
| itationa: | Yes - See 1 | ittached she | pete | | | | · | | | Start | Time: | 1045 | Finis | h Time: | 1102 |
| | Instrume | nt Settings | | | Searc | h Unit | | Cal. | | | | Avial | Orientzted 8 | aanh Link | |
| al No.: | | 011LW | 5 | Serial No.: | | 03-788 | | Checks | Tim● | Date | Callb | | Signal | Sweep | |
| ufacturer: | | KRAUTKRA | MER | Manufacturer: | | RTD | | Initial Cal | 1013 | 4/18/2011. | Refit | ctor A | mplitude % | Division | Sound Path |
| el; _ | | USN-60 | | Size:2(20 | | the second se | Square | Inter. Cal. | | 4/18/2011 | 3/4T | Hole | . 80 | .4,0 | 3.218 |
| y: | 14,8084 | Range: | 7.0 | Freq.:1.0 | | | TRL1 | Inter. Cal. | 1044 | 4/10/2011 | | | | | <u> </u> |
| al/Vol: | .2438 | Pulser: | High | Exam Angle: | 60 | # of Eleme | nta: Dual | Final Cal | 1230 | 4/18/2011 | ļ | | | | <u> </u> |
| xing: Rate: / | <u>1K</u> Autohigh | Reject: Freq.: | 0% 1 MHz | Mode: Measured Ang | | Long. 60 | | | Couplan | | | | | | |
| · · · · · · · · · · · · · · · · · · · | Fixed | Mode: | Dual | Wedge Style: | | Integral | | Cal. Batch; | - | | | lincumfere | rillel Orlents | ted Search | Únit |
| | Fixed | Other: | Fullwave | | | | | | ULTRA | | Celbr | | Signal | Sweep | T |
| lain (dB): | 75.1 | Circ. Gain (| (dB): 63.6 | | Search U | nit Cable | | Mfg.: | SONO | | Refie | | mplitude % | Division | Sound Path |
| Screen Oh | v. = .7 | In. of | Sound Path | Тура: | <u>` </u> | RG - 174 | | Exam Batch | | 09328 | 3/4T | Hole | 60 | 8.0 | 3.489 |
| utly Report | No.: | L-11- | 143 | Length: 6 | No. | . Conn.: | .0 | | ULTRA | | ┟╼┯╤╧ | · | | · | + |
| | | on Block | ************************************** | · | Scan Co | verage | | Mfg.: | SONO | TECH | | | | | |
| Block No. | | 50214 | | Upstream 🔲 🕻 | lownstrea | ım 🖌 Scan | dB: 75.1 | Pate | rence B | lock | <u> </u> | Refe | ence/Simul | tor Block | |
| - | 2.484 | Dia.: | Flat | cw 🕅 | cc | W 🖌 Scan | dB: 76.1 | Serial No.; | | 09322 | Gain | | Signal | Sweep | Bound Path |
| | 67 Temp | Tool: N | ACNDE40130 | Exam Surface: | | 0.D. | | Тура: | ROM | أحشدك كالمستحدة | <u>da</u> 45.8 | Reflector 2" Redius | Ampitude) 80 | 6 Division | 2" |
| p. Temp. | 67 Temp. | Tool: N | ACNDE40130 | Surface Conditi | lon: | As Grou | | | - | | 40,0 | Z POEQUAL | <u> </u> | | · · · · · · · · · · · · · · · · · · · |
| rdabie Indi | ication(s): | Yes [|] No [2] | (If Yes, Ref. Atlas | ched Ultra | sonic Indica | ion Report.) |) | | | · · · · · | | <u> </u> | | |
| dts: | Accept | Reject | | into 📋 | | | | | Con | nments: N/A | | | <i>,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ا ب ۲ | |
| | rage Obtaine | | No _ | Reviewed Prev | inin:Date | : Ye | • | | | | | | | | |
| | | | | | | | le Révieu | well . | | | | Signatu | | | Data |
| niner Is, Jacob | Level | -15 | Jud | Signature | | 4/18/201 | | Dais | Λ | Mon | | o'Bi alti | | LL . | -21-H |
| niner | Level]. | N 1 | Freeze | Signature: / | | Da | | | ¥†-1 | | | Signatu | irə | | Date |
| John, C. | 16 | | - 41 | LDY | | 4/18/201 | | NA ' | ((° | | | - | | | |
| 57 | Lovel N | IA | | Signature | | De | ANII R | oview | | | | Signatu | 18 | | Date |
| | | • | | ······································ | | | | NA | | | • | · | | ······································ | |
| | | | | | | | | • | | | | | • • • • | ATTAC | HMENT |
| | | | | | | | | | | | 1.1 | | | - | 8 af 14 |

| DU | JKE POWER COMPANY | |
|------------------------------|---|--------------------------------|
| | ISI LIMITATION REPORT | |
| Component/Weld ID: 1-PIB1-9 | Item No: 01.B9.11.0029 | remarks: |
| NO SCAN | SURFACE BEAM DIRECTION | Procedure allows scanning from |
| IIMITED SCAN | 🛛 1 🔲 2 🖾 1 🗌 2 🗋 cw 🗋 ccw | cast side only. |
| FROM L N/A to L N/A | INCHES FROM W02 to CL | |
| ANGLE: 0 0 45 0 60 | other 60RL FROM 0 DEG to 360 DEG | |
| NO SCAN | SURFACE BEAM DIRECTION | Procedure allows scanning from |
| LIMITED SCAN | ⊠ 1 □ 2 2 | cast side only. |
| FROM L N/A to L N/A | INCHES FROM W01.60 to _CL | |
| ANGLE: 0 0 45 0 60 | other 70RL FROM 0 DEG to 360 DEG | ····· |
| NO SCAN | SURFACE BEAM DIRECTION | |
| LIMITED SCAN | □ 1 図 2 図 1 □ 2 図 cw 図 ccw | |
| FROM L N/A to L N/A | INCHES FROM W0 CL to Beyond | |
| ANGLE: 0 0 45 0 60 | other <u>80RL</u> FROM <u>N/A</u> DEG to <u>N/A</u> DEG | |
| NO SCAN | SURFACE BEAM DIRECTION | |
| LIMITED SCAN | □ 1 ⊠ 2 ⊠ 1 □ 2 ⊠ cw ⊠ ccw | UT-11-783 |
| FROM_L_N/Ato_L_N/A | INCHES FROM W0 CL to Beyond | Sketch(s) attached |
| ANGLE: 0 0 5 0 60 | other <u>70RL</u> FROM DEG to DEG | 🛛 yes 📋 No |
| Prepared By: Jacob R. Hollis | A M CA Level: II Date: 04/49/44 Discourse | t <u>3</u> of _4 |
| Reviewed By: Day Mar | Date: 4-21-11 Authorized Inspector: NA | Data |
| V | | ATTACHMET PAGE 30 DI |

4



| UT Cal | ibration,an | nination | | | | | | |
|--|---|------------------------------|----------------------|----------------------|-----------------|---------------------------------------|-----------------------------|---------------------------|
| t: Oconee / 1 | Proce | dure: | PDI-UT-2 | <i>·</i> . | | Outage 1 | ło.: | 01-28 |
| ; 01.89.11.0072 | i erubeson9 | Rev.; | E | | . | Report N | 10.: (| UT-11-765 |
| : [5] | Work Order | r No.: | 01897425 | | - | Pa | ige: 1 | of: 8 |
| 98/2000A Cat/Hom | : 8-J /89.11 | 1 | Location: | | | · · · · · · · · · · · · · · · · · · · | | |
| SI-OCN1-013 D | escription: RC Pump 1 | B1 to Safe en | d | | | | | |
| | •••••••••••••••••••••••••••••••••••••• | | | | - | | | |
| | | 5 | Size/Length: | NA | | Thickness/Dia | meter: | 88/2.33/33.5 |
| i știeste | | | Start 1 | lime: | 1302 | | Time: | 1312 |
| ngs Search | h Unit | Cal. | | | Avial | Orientated 8 | a anoto i Insti | |
| MBT Sental No.: | 0105LJ | Checks | Inte Date | Calibra | | Signal | | |
| KRAMER Manufacturer; | KBA | Initial Cal 1 | 000 4/17/2011 | Rolloc | | * ebušiqm | Sweep Division | Sound Pa |
| N-60 .5 8125: 0,5 8 | Shape: Round | Inter, Cal. | | ID Not | ch | 80 | 5.2 | 4.086 |
| : 8.00 Freq.: 2.25 MHz | Style: Comp - G | | 302 4/17/2011 | | | | | 1 |
| High Exam Angle: 45 | # of Elements: Single | Inter, Cal. Final Cal / 1 | | - | | - | | |
| 0%Mode: | Shear I | | 546 4/17/2011 | | | | | |
| 2.25 MHz Moscured Angle: | 45 | | uplant | | | <u> </u> | | <u> </u> |
| PE Wedge Style: | | Cal. Batch: | 09325 | | | ntial Oriental | ed Bearch | 1 Un <u>¤</u> |
| Fuiheave ain (dB); 58.6 Search Un | | | TRAGEL II ONOTECH | Calibrati Reflect | | Signal mplitude % | Sweep Division | Sound Pat |
| | | | | See Ax | | | | |
| Lenoth: 8º No. | Cono : 0 | Exam Batch | ا فضحت تتقدم الم | | | | | |
| -11-13W | | | TRAGEL II | | ľ | | | |
| k Scan Cov | • | Mfg.: <u>8(</u> | ONOTECH | | | · | | L |
| Upstream Downstrear | The second se | Referen | ice Block | | Refer | ence/8imulai | or Block | |
| Flat CW 🗹 CCV | N 🗹 Scan dB: 68.8 | Serial No.: | 04-8740 | Gain dB F | - | Signal Amplitude % | Sweep Division | Sound Pat |
| MCNDE40130 Exem Surface: | 0.0. | Type: I | ROMPAS | | * Redius | 80 | 2.4 | 2.00 |
| MCNDE40130 Surface Condition: | As Ground | | | | | | | |
| s 📋 No 😥 (if Yes, Ref. Attached Ultras | onle Indication Report.) | | [| · | | | E. | |
| ect 🛛 Info 🗍 | | | Comments: Initia | d Section | XI Exam |) | , , , | |
| : No Reviewed Previous Data: | No | | | | | 1 | | |
| Signature. | Date Reviewa | "Y | Im | · | Signatu | 78 | | Data |
| | 4/17/2011 | Kay/ | 1110m | | | سىرىنى، بورىي | <u> 4-21</u> | |
| The Stapeture | Data Site Rev 4/17/2011 | | (γ) | | -Signatu | 19 | | Date |
| Signature | | | 11/ | | Signatur | 10. | | / Date |
| | Mi | XDX | KL_ | | | | Alezh | 1 |
| | | Date ANILE | Date Abit Boview | Data AND Boview | Date AND Bolder | Date AND Beview Bigmatu | Date Attle Boldow Bignature | Date AND Boview Signature |

PAGE 33 OF 162

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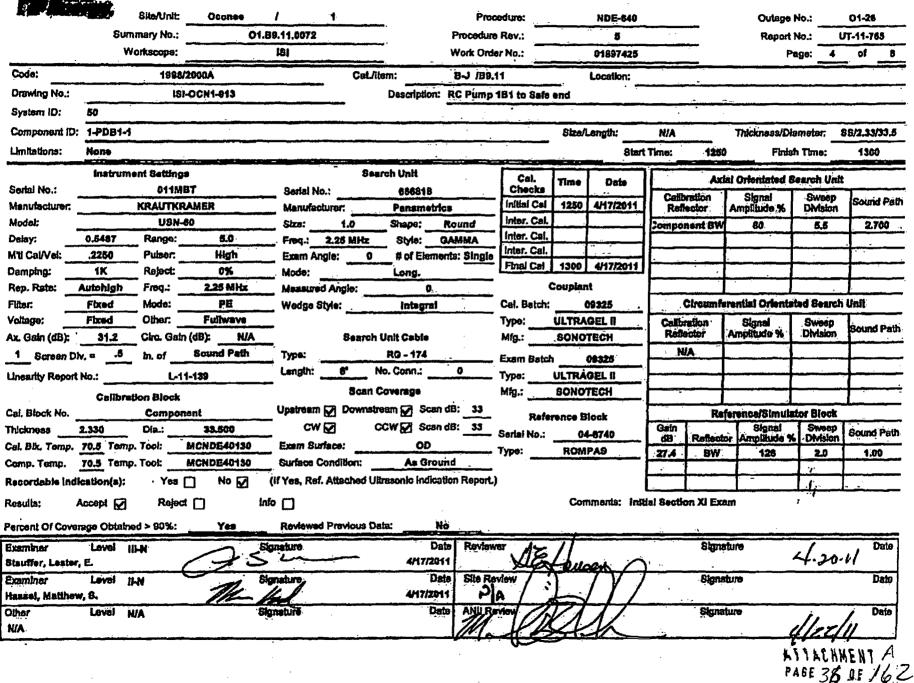
| | | • | | | | | | | | • | | ġ | |
|------------------------------|--|--------------------------------|--|--|-----------------|--------------------------|-------------|--|-------------|-----------|-----------------------|-------------------|--------------|
| | Site/Unit: | Oconee | . Ц 1 - 1 | T Calibratio | | ninatio | n | P01-1/T-2 | | | Ouderse | Na . | 01-26 |
| , | Summary No.: | | .B9.11.0072 | · | Procedure | | | E | ` | ÷ | Outage Report | | T-11-765 |
| | Workscopa; | | 191 | | Work Orde | | | 01897425 | -2 | | • | age: 2 | of 8 |
| Code: | 1998/20 | ADDA | | Cet/item: | 8-J /89,1 | 1 | | Location: | | | | | |
| Drawing No.: | | CN1-013 | | And a state of the | | B1 to Safe | . | | ÷ | | | | |
| System ID: | 50 | | | | | | | | | | | | |
| Component ID: | : 1-PDB1-1 | | •••••• | | • | | Size/L | ength: | NA | | Thickness/Di | ameler: E | 36/2.23/33.5 |
| Umitationa: | Yes - See attached she | ets | ······································ | | | | _ | | The: | 1326 | Finis | h Time: | 1335 |
| | Instrument Settings | | | Search Unit | | Cel, | | | [| · Awla | I Orientated E | tearch tint | |
| Serial No.: Manufacturer: | 011MBT KRAUTKRA | يبر بالانبي والاربي محيد والفا | Seriel No.: | 10-1204 RTD | | Checks Initial Cal | Time | Data 4/17/2011 | Callbr | ation | Signal Amplitude % | Sweep Division | Sound Path |
| Model: | USN-60 | ويراقع ببيبية فيستكفي الأفري | Size; 2(24x4 | المرجوع المراجع والمرجوع والمراجع والمرجوع والمرجوع والمرجوع والمرجوع والمرجوع والمرجوع والمرجوع والمرجوع والم | Rect | Inter. Cal. | | | 3/4T | | 80 | 4.4 | 4,350 |
| Delay: | 11.2203 Range: | 10.00 | Freq.: 2.0 ! | and a subscription of the second s | rki ź | Inter, Cal. | 1325 | 4/17/2011 | 1 | | | | |
| M'll Cal/Vel: | _2121 Pulsor: | High | Exam Angle: | 60 # of Elemen | to: Dual | Inter. Cal. Final Cal | 1550 | 4/17/2011 | | | | | |
| Damping: | 1K Reject: | 0% | Mode: | Long. | <u> </u> | | , | | ļ | · | | | ┟╍──── |
| Rep. Rate: | Autohigh Freq.: Fbred Mode: | 2.0 MHz Dual | Measured Angl Wedge Style: | e: 60 Integral | · | Cal. Betch: | ouplan a | 9325/ | | from for | ential Orlente | ted Search | l |
| Voltage: | Fixed Other; | Fullwave | - Wedge Strict. | energian | | | ULTRA | The second s | Calibr | | Signal | Sweep | 1 |
| Ax, Gain (dB): | 50.3 Circ. Gain (| dB); N/A | | earch Unit Cable | | Mfg.: | SONO | | Refie | | Amplitude % | Division | Sound Path |
| 1 Screen Di | tv. = 1.0 in. of | Sound Path | Туре: | RG - 174 | , | Exam Batch | | 9325 | N | | | | |
| Linearity Report | No.: L-11-1 | 139 | Longth: 6' | No. Conn.: | 0 | | ULTRA | | | | | ويرشين لومعميرها | |
| | Calibration Block | ···· | | Scan Coverage | | Mfg.: | SONOT | ECH | | | | | |
| Cal. Block No. | 40397 | <u></u> | Upstream 📋 D | ownstream 🖌 Scen o | £B: <u>71.3</u> | Refer | ence Bl | ock | | Refe | vence/Simuli | tor Block | |
| Thickness | 3.000 Dia.: | Flat | CW 🗋 | CCW 🔲 Scan o | B: NA | Serial No.: | | 8740 . | Gain dB | Défición | 8ignal Amplitude 9 | Sweep Division | Sound Path |
| Cal. Blk. Temp. | Address and a second se | CNDE40130 | Exam Surface: | 0.D. | | Туре: | ROM | AS | | 2" Radiu | | 2.0 | 2,00 |
| • • | | CNDE40130 | Surface Conditie | | | | | | · · · | | | · | |
| Recordable Indi | | - | • • | hed Ultrasonic Indicati | on Keport.) | • | | · | <u> </u> | | J | ارز ا | |
| Results: | Accept 📋 Reject | | nto 🔲 | | | | Con | menta: Initi | al Sectio | n XI Exar | 73 | | |
| Percent Of Cove | rage Obtained > 90%: | No | Reviewed Previ | ous Data: No | | •. | | | · · · | | | | |
| Examiner | Lovel (II-N | | Ignature | Det | Review | TO, | 1 | A | | Signat | ure | | Date |
| Stauffer, Lester, | | | and the second | - 4/17/201 | | Tan | Δ | Mor | <u>></u> | · | · | 4-21 | |
| Exeminer Hassel, Matthew | Lavel (LN | | lignature | Dat 4/17/2011 | | | 11 |)/) | | Signati | , me | | Date |
| Other | Level N/A | | ilgrature | .Dah | | | 21 | 717 | | Signati | iio: | 11 | / Deto |
| N/A | | | <u></u> | | 1 <i>74</i> A | K4 | يلحكو | <u>k</u> | | <u> </u> | | 4/22/ | King and |
| • | | | | • | <i>y y</i> ' | | | | - | ••• | | PAGE 3 | CHALAT / |

| | | | | UT | Calibratio | na | minatio | n | | | | | | |
|--------------------|--------------------|-----------------|-----------------------------------|-----------------------|--|--|---------------------|---------------|--|----------|----------------|--------------------------------|---------------------------|-----------------|
| | | Site/Unit: | Oconse | ! 1 | | Proc | adurs: | | PDI-UT-2 | | | Outage | No.: | 01-28 |
| • | Sum | mary No.: | 01 | .B9.11.0072 | - | Procedure | Rev.: | | E | | <u>-</u> | Report | | UT-11-765 |
| | W | orkscope: | | 181 | | Work Orde | er No.: | | 01897425 | | | • | Page: 3 | of 8 |
| Jode: | | 1098/2 | 000A | C | st./item: | B-J /B9. | 11 | | Location: | | | | | |
| Drawing No.: | | 181-4 | DCN1-013 | | Description: | RC Pump | 1B1 to Safe | end | | | | | | |
| System ID: | 50 | | | | | | · | , | | | | الكامية بريونية المكافر الرابي | | |
| Component II | D: 1-PQ81-1 | | · | | | | | Size/ | Length: | NIA | | Thickness/D | lameter: | \$8/2.33/33.5 |
| initations: | Yes See a | ttached ane | rts | | ••••••••••••••••••••••••••••••••••••••• | | ······ | | Start | Time: | 1314 | Finis | sh Time: | 1324 |
| | instrum | nt Settings | ·· | | Search Unit | | Cel. | Time | Data 1 | | Avia | Orientated | Search Ibi | |
| Sertal No.: | | Q11MB | | Serial No.: | SE0773 | | Checks . | | Date | Call | notient | Signal | Sweep | |
| Manufacturer | · | KRAUTKRA | | Manufacturer: | GE | | Initiat Cal | 1007 | 4117/2011 | | | Amplitudo % | Division | Sound Pat |
| Nodel: | | USN-8 | والكاف بالمتجري بتثليا كان الدارد | | Shape: | Round | Inter. Cal. | | | 3/41 | 8DH | 80 | 8.3 | 7.915 |
| Delay: | 9,5100 | Range: | 12.50 | Freq.: 2.25 MH | And and a second se | and the second | Inter, Cal. | 1313 | 4/17/2011 | · | | | | |
| /U Cei/Vet | ,1232 | Pulser: | High | Exam Angle: | 70 # of Elemen | nis: Single | Final Cal | 1548 | 4/17/2011 | ļ | <u> </u> | | | |
| Damping: | 1K | Reject: | 0% | Mode: | Shear | | | | | <u> </u> | <u>-</u> | | | -{ |
| lep. Rato: Har: | Autohigh Fixed | Freq.: Modec | 2.25 MHz PE | Measured Angle: | 70 | | Cal. Batch: | Couplar | 09328 | } | | entizi Orient | Land Barret | |
| nuer: /oltage: | Fixed | Other. | Fullwave | Wedge Style: | MBWQC | | Туре: | ULTRA | | [| | | | |
| x. Gain (dB): | | Ciro, Gain (| اجرائن وبجريات حمالا فرصد ال | ium Res | rch Unit Cable | | Mfg.; | SONO | | | milon ector | Signal Vmplitude % | Sweep Division | Sound Pati |
| 1 Screen | | h. of | Sound Path | Type: | RG - 174 | | | | | N | IA . | | | - |
| | | L-11- | 470 | Length: 6" | No. Conn.: | 0 | Exam Batch Type: | ULTRA | 09325 | | | | | 1 |
| insarity Repo | | | 139 | in Ba | an Coverage | | Mfg.: | BONO | | | | | - | |
| | - | ion Block | | | nstream 🕢 Scen | dB: 82.3 | | | · •••••••••••••••••••••••••••••••••••• | | <u> </u> | | | ┹╼╼╼ |
| at. Block No. | | 40397 | Flat | cw [] | CCW Scan | | | ence B | lock | Gain | Refe | rence/Simul | Sweep | T |
| hickness | 3.000 . 67 Temp | Dia.: | CNDE40130 | Exam Surface: | 0,D, | | Serial No.: | | -8740 | dB | Reflector | Amplibude 9 | | Sound Path |
| | 70.5 Temp | | ICNDE40130 | Surface Condition: | | | Тура: | ROM | PAS | · 51:9 | 2" Rediu | 80 | 1.8 | 1.890 |
| omp. Temp. | | | | (If Yes, Ref. Attache | the second s | The second s | 1 | | | | <u> </u> | | | <u> </u> |
| ecordable in | | Yes [| | • | | ion voborci | F | _ | | | L | 4 | _ _ ŧ _f | l |
| esulis: | Accept [] | Reject | | into 🗋 | | | | Con | nments: Initi | al Secu | on XI Exan | 3 | : | |
| ercant Of Co | verage Obtaine | id ≻ 90%: | No | Reviewed Previou | e Date: No |) | | | | | <u> </u> | | | |
| xaminer | Level 1 | I-N | | Blamature | Dal | a Review | 9 | A VI | 1 | | Signati | ue. | | Date |
| tauffer, Lost | er, E. | | | Sam | 4/17/201 | 1 | (bend | | 020 | | | | 4-2 | 11-A |
| xaminer | Lovel p | N C | | Signature | Dat | | | (| (\cdot) | -, | 6lgnati | 10 | | Date |
| laszel, Matth | | | | | 4417/201 | | $ \mathbf{A} /$ | \rightarrow | +#1- | <u> </u> | Claugh | | | |
| ther | Lovel N | <i>I</i> A | 2 | Signature | Dal | | | バ | VV | | Signatu | 18 | Ilia | Date |
| VA. | | | المحاديث بروديمود | | | 1 pe la | | | <u>m</u> | • | | | 4/22 | <u> </u> |
| | | | | | | | | | | | | | 61161 | hhent / |
| | | | | | | | | | | | | | PARE | 3 4 0F/4 |



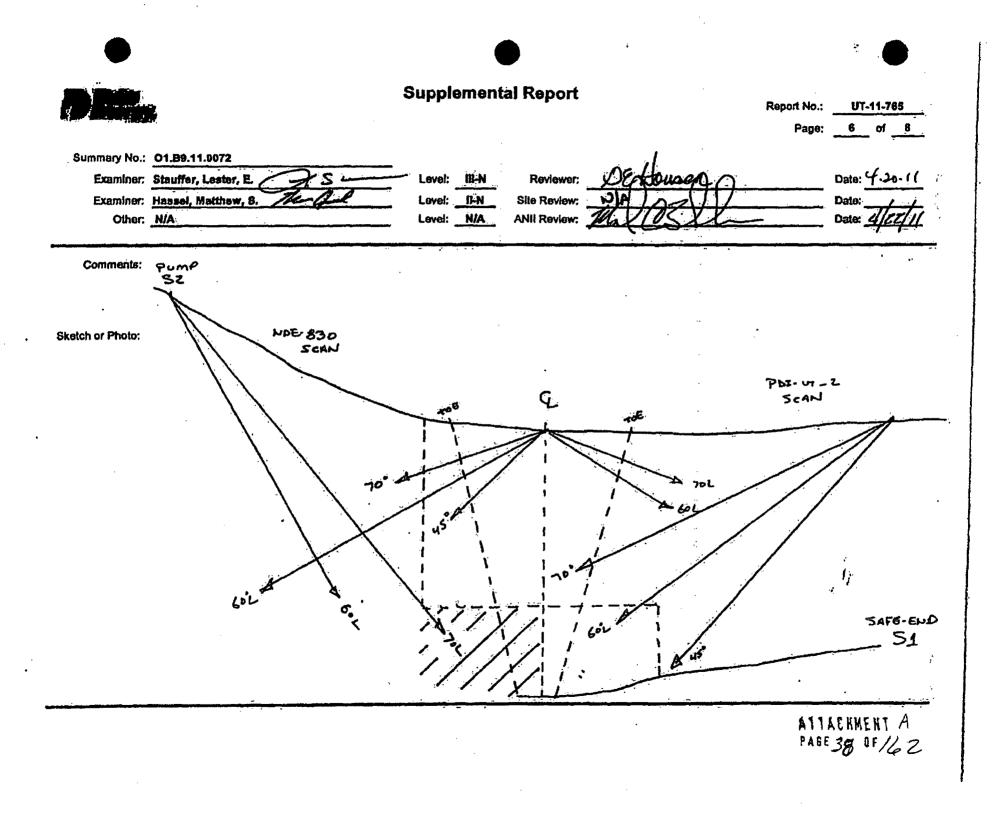


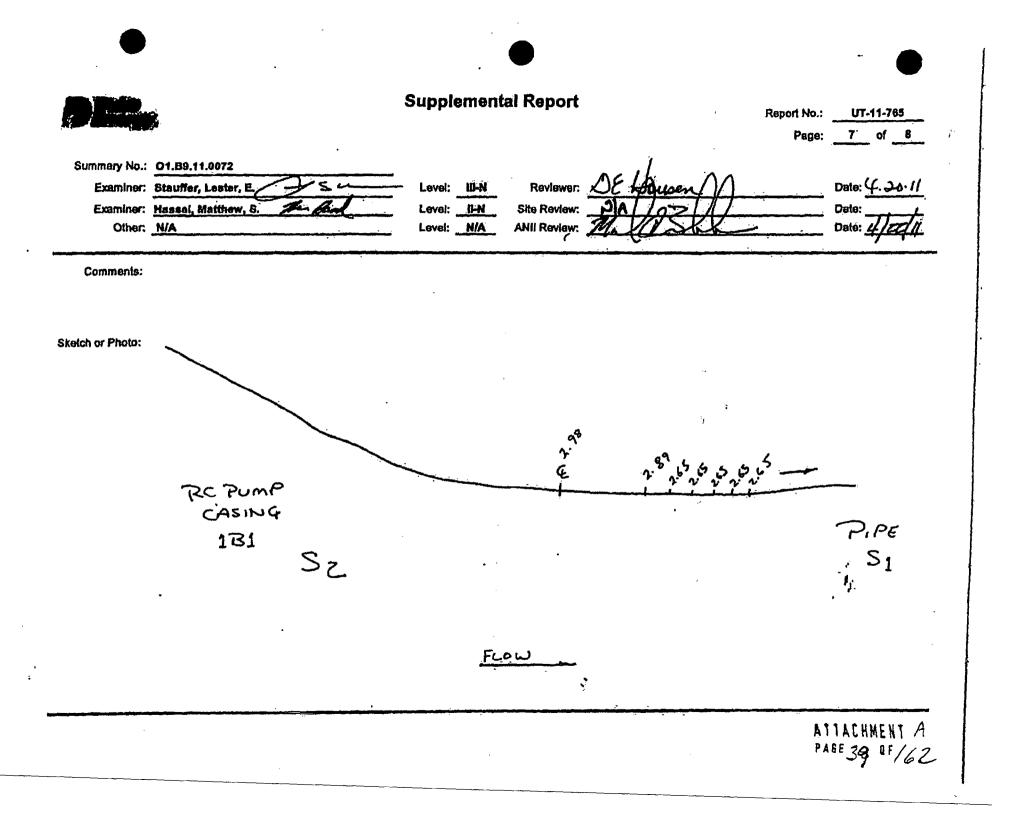
UT Calibrati....Examination



| D | UKE POWI | ER COMPANY | |
|-----------------------------|-----------------|-----------------------------|---------------------------------------|
| | ISI LIMITAT | TION REPORT | |
| Component/Weld ID: 1-PDB1-1 | it | em No: <u>01.89.11.0072</u> | remarks: |
| NO SCAN | SURFACE | BEAM DIRECTION | Due to 1B1 RCP nozzle |
| LIMITED SCAN | 1 2 | 🛛 1 🗌 2 🖾 cw 🖾 ccw | configuration. |
| | INCHES | FROM WO CL to Beyond | |
| ANGLE: 0 0 45 0 60 | other <u>70</u> | FROM 0 DEG to 360 DEG | |
| NO SCAN | SURFACE | BEAM DIRECTION | · · · · · · · · · · · · · · · · · · · |
| LIMITED SCAN | | 🗌 1 🗌 2 🗌 cw 🗌 ccw | |
| FROM L to L | INCHES F | ROM W0 to | |
| ANGLE: 0 0 45 0 60 | other | FROM DEG to DEG | |
| | | | |
| LIMITED SCAN | | 1 2 cw ccw | |
| ROM L to L | INCHES FI | ROM W0 to | · · · · · · · · · · · · · · · · · · · |
| NGLE: 0 0 45 60 | other | FROM DEG to DEG | |
| | | BEAM DIRECTION | |
| LIMITED SCAN | | 🔲 1 🗌 2 🗌 cw 🗍 ccw | · |
| ROM L to L | INCHES FF | ROM W0 to | Sketch(s) attached |
| | other | FROM DEG to DEG | yes 🗌 No |
| | Level: | | 1 5 of _8 |
| eviewed By: NEA OLIDEA | | .20.11 Authorized Inspector | Date: // stall |
| | | | ATTACRMENT |

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| Summary No.: Workscope: | | .0072 | _ | re: PDI-UT-2 | Outage N | o.: 01-28- |
|----------------------------|--|--|---|---|-----------------------------------|------------------|
| Workscope: |): <u>ISI</u> | | Procedure Re | v.: E | Report N | lo.: UT-11-76 |
| | | | Work Order N | o.: 01897425 | Pag | ge: <u>8</u> of |
| <u>45 deg</u> | α | | | • | | |
| Scan ' | | % Length X | | % volume of length / 100 = | • | % total for Scan |
| Scan | n 2 | % Length X | | % volume of length / 100 = | | % total for Scar |
| Scan | in 3 100.000 | % Length X | 50.000 | % volume of length / 100 = | 50.000 | % total for Scar |
| Scan | in 4 100.0 00 | P/ t anoth M | 50.000 | % volume of length / 100 = | 50.000 | % total for Scar |
| <u>Other d</u> | <u>r deg70</u> | | ns = <u>50.000</u> supplemental s | - | | *ē |
| The dat | <u>r deg - 70</u> ista to be listed beix | d divide by # scar (to be used for w is for coverage | ns = <u>50.000</u> supplemental s that was not ob | cans) tained with the 45 deg scans | | |
| The dat Scen | r deg - 70 Ista to be listed beig an 1100.000 | d divide by # scar (to be used for w is for coverage % Length X | ns = <u>50.000</u> supplemental s that was not ob <u>50.000</u> | cans) tained with the 45 deg scans % volume of length / 100 | = | % total for Sc |
| The dat Scan Scan | r deg - 70 ista to be listed beto an 1 100.000 an 2 0.000 | d divide by # scar (to be used for w is for coverage | ns = <u>50.000</u> supplemental s that was not ob <u>50.000</u> 0.000 | cans) tained with the 45 deg scans | = <u>50.000</u> = <u>0.000</u> | % total for Sc |

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| | | Sile/Unit: | Осолее | 1 1 | | • | Proc | edure: | | NDE-B30 | | | Outage | No.: | 01-26 |
|---|----------------|--|--|---------------------------------------|--------------|--------------|-----------------|---------------------------------------|---------------------------------------|-----------------------|------------|-----------------|-----------------------|--|------------------------------|
| | | mary No.: | 0 | 1.89,11,0072 | | • | Procedure | Rev.: | • | . 1 | | | Report | No.: | 17-11-774 |
| | Ŵ | orkecope: | | 181 | | | Work Orde | r No.: | | 01897425 | | | . P | age: 1 | of _4 |
| Code: | | 1998/ | 2000A | | Cat/Ite | sin: | B-J /89.1 | 1 | | Location: | | | | | مرعوات وهواليواني الماليونين |
| Drawing No.: | | 181 | -OCN1-013 | · · · · · · · · · · · · · · · · · · · | | Description: | RC Pump 1 | B1 to Safe | end , | | | | | | |
| System ID: | 50 | | | | - | | | | | | | | | | |
| Component (D: | 1-P081-1 | | | | | | | | Size/L | ength: | NA | | Thickness/Di | ameter: 19 | 8/2.330/33.5 |
| Jmitations: | Yes - See | attached a | heets | | • | | * | | | | Time: | .1041 | Finis | h Time: | 1058 |
| منار هم کر <u>ا می می می می اور اور</u> | instrum | nt Setting | | | | ch Unit | | Cal. | | | l' l' | | | and a second | |
| Serial No.: | | DOWH | DK | Serial No.: | | 03-789 | | Checks | Time | Date | | viation 1 | al Orientated Signal | Sweep | · |
| Manufacturer: | | KRAUTKR | AMER | Manufacture | | RTD | | Initial Cal | 1010 | 4/18/2011 | | sclor | Amplitude % | Division | Sound Path |
| Model: _ | | USN- | | Sizo:2(| 20x34) | Shape: | Rect | Inter, Cel. | | 4400044 | 3/41 | 8DH | 80 | 4.8 | 3,29 |
| | 16.7506 | Range: | 7.0 | Freq.: | | | TRL1 | Inter. Cal. Inter. Cal. | 1040 | 4/18/2011 | | | | | |
| Mill Cal/Vel: | .2600 | Pulser: | <u> </u> | Exam Angle | : <u>601</u> | | ds: <u>Dual</u> | | 1300 | 4/18/2011 | ļ | | | | |
| Damping: | <u>1K</u> | Rejact: | 0% | Mode: | | Long. | | | | المريسية بوجوات فتوجع | · | | | | |
| • | Autokigh | Freq.: | وبوالاخبيسيكي النوينطية الززعا مخالدهم | Méasured A | | 60 | | | ouplan; | | | | المستجمعين | | |
| Filter: Voltage: | Fixed Fixed | Mode: Other: | Fultwave | Wedge Style | | Integral | | Cal. Batch: Type: | ULTRA | | | | rential Oilente | | |
| Ax. Galn (dB): | 70.2 | | (dB): 71.8 | | Respondent 1 | Jnit Ceble | | Mig.; | SONO | | | nation actor | Signal Amplitude % | Sweep Division | Sound Path |
| 1 Screen Div | | in. of | Sound Path | Type: | | RG - 174 | | · · | | | 3/41 | SDH. | 80 | 5.2 | 3.60 |
| | | | | Length: | 6' N | o. Conn.: | | Exam Batch | ULTRA | 9325 | | | | | |
| Insarily Report N | | | [-130 | | | 0V87208 | | · · · · · · · · · · · · · · · · · · · | SONOT | | | | | | |
| | Calibrat | Ion Block | | Indease Ca | | um [] Scan o | | | 001101 | EVII | | | | | J |
| al. Block No. | | 50214 | | | | | | Refer | ence Bi | lock | (Section | Rei | erence/Simub | _ | |
| | 2,464 | Dia.: | | CW 🛃 | | CW 🖌 Scan o | | • | _ | -8740 | Gein dB | Reflecte | Signal Amplitude 9 | Sweep Division | Sound Path |
| Cel. Blk, Temp. | | the second s | | Exam Surface | | | 1 e | Type: | ROM | PAS | 48,5 | 2" Radio | IN 80 | 2.8 | 2.00 |
| | | | MCNDE40130 | | | As Groun | | | | | | ļ | | + | |
| Recordable India | cation(2): | Yes [| | (If Yes, Rof. At | | | on Report (| | | 1 | | L | | 1 | |
| lesulis: A | lccept 📋 | Reject | | info 📋 | | | , | | Corr | iments: N/A | | | | 1. ¹ | |
| ercent Of Coven | age Obtaine | id > 90%; | No | Reviewed Pr | evicus Dal | No | | | <u></u> | | | | · | | |
| Stamher | Lovel i | -N . | | Signature | | Dat | Reviews | * 0 | | | / | Signa | ture | | Data |
| lassel, Matthew | 1, 8. | | The | | <u>.</u> | 4/18/2011 | | Dan | es . | Aut | Lel | • | | 4.20 | 5. <i>11</i> |
| Syminer | Level 11 | HN | | Signature | | Deti | | fow d | | | , | Signa | ure | ••• | · Date |
| stauffer, Lester, | | | | <u>S</u> | | 4/18/2011 | | | · · · · · · · · · · · · · · · · · · · | | | | | | |
| Other | Level N | ia T | | Signature | | Date | | ž. | | | - | Signal | 1170 | | Date |
| N/A | | | | | | | | | | | | | | | 1 |

ATTACHMENT /1 PAGE 41 OF 162

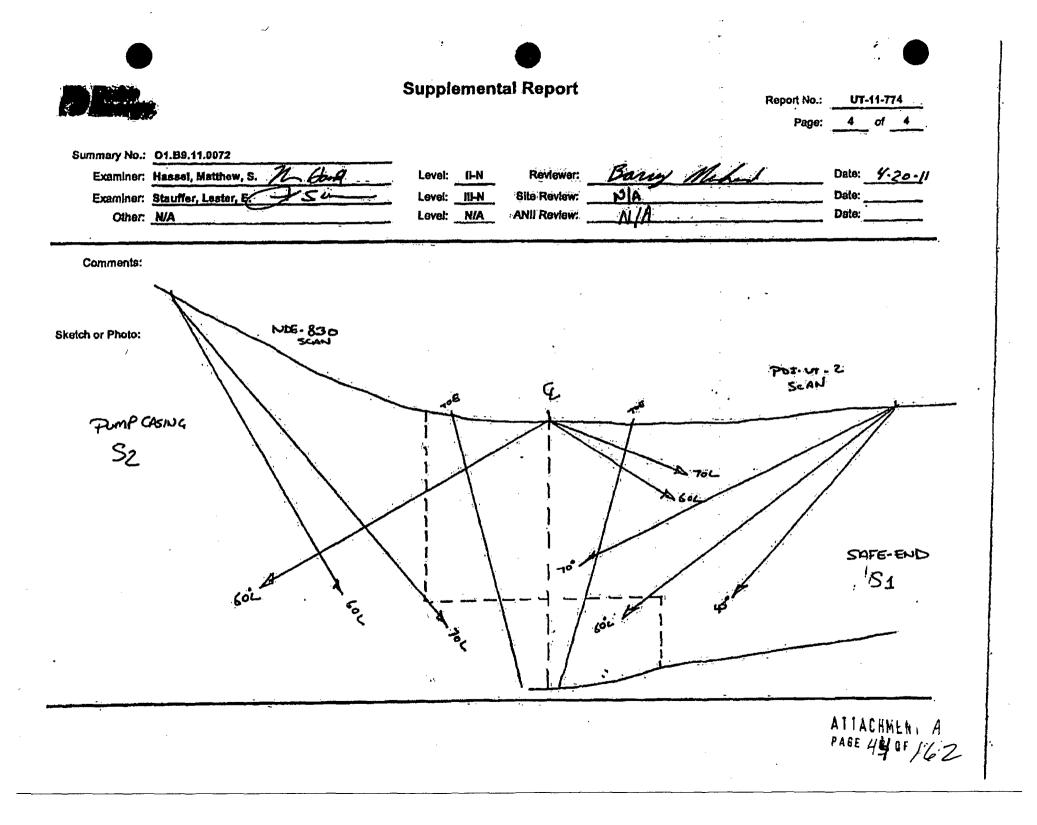
. **

| | | | · | • | UT | Calibrati | on, "a' | e minatio | on | | | | | | |
|----------------------|-----------------|-------------------|------------|--------------|-----------------------|--|--|----------------------------|---------------------------------------|---------------|------------|------------|-----------------------|-------------------|---------------|
| | | Site/Unit: | Oconee . | , | 4 | | | cedure; | | | | | Duber | | 04.08 |
| | Su | nmary No.: | - | 1.89.11.0072 | | | Procedun | | | NDE-630 | | | Outage | | 01-28 |
| | | Vorkscope: | <u></u> | .181 | <u></u> | . | Work Ord | | · · · · · · · · · · · · · · · · · · · | 01897425 | | | Report I | no.: <u> </u> | IT-11-774 |
| Code: | | | 2800A | | Ce | L/item: | B-J /89. | | | Location: | | | | | |
| Drawing No.: | | | -OCN1-013 | | - | | RC Pump | | and | 1.0000000 | | - | | ÷ | |
| System ID: | 50 | | | | | | | | | | | | | | |
| Component ID: | 1-PDB1- | | | | | | · · · · · · · · · · · · · · · · · · · | | Size/ | Longth: | N/A | <u></u> | Thickness/Dis | meter: S | \$/2,330/33.5 |
| Initations: | Yez - Se | attached a | hests | ····· | | | | | | · · · | Time: | 1041 | | h Thne: | 1058 |
| | Instrum | ent Setting | 3 | | 8 | learch Unit | | | 1 | , | | | | | |
| Serial No.: | | OOWH | | Serial N | | 90-371 | | Cal. Checks | Time | Date | | | Ortentated 8 | | |
| Manufacturer: | | KRAUTKR | AMER | Manufa | cturer: | RTD | | Inkiel Cal | 1013 | 4/18/2011 | | ector / | Signal Implitude % | Sweep Division | Sound Pat |
| Aodel: | | UBN- | | Stos; | 2(10×18) | Shape: | Rect. | Inter, Cal. | 49.49 | 4/18/2011 | 1/43 | SDH | 80 | 3.8 | 1.90 |
| lolay: | 10.6853 | Range: | 5.00 | Freq.: | 2.0 MHz | | TRLA | Inter. Cal. Inter. Cal. | 1048 | 4/16/2011 | <u> </u> | | | | - |
| l'ü Cal/Vel: | .2392 1K | - Pulser: - | High 0% | Exam A | ngie: <u>7</u> | and the state of t | ents: Dual | Final Cal | 1308 | 4/18/2011 | | | | | |
| amping: ap. Rate: | Autohigh | Reject: Freq.: | 2.0 MHz | Mode: | d Angle: | Long. | | | Couplar | nt | | | | | <u> </u> |
| iter: | Fixed | Mode: | Duri | Wedge | | integra | the second s | Cal. Betch: | • | 09325 | | Circumfere | ntial Orlenta | led Search | Unft |
| oltage: | Fixed | Other: | Fullwave | | ····· | | | Type: | ULTRA | | Callb | | Signal | Sweed | 1 |
| x. Gain (dB): | 80.1 | Ciro. Gain | (dB):80.6 | | Sear | ch Unit Cable | | Mfg.: | SONO | TECH | Refl | sctor A | mplitude % | Division | Sound Peth |
| 1_ Screen Di | iv. a <u>.5</u> | tn. of | Sound Path | Туре: | المواقد محجود ويتقالب | RG - 174 | | Exam Batc | h | 09325 | 1/41 | SDH | 08 | 3.9 | 1.95 |
| nearity Report | No.: | L1 | 1-138 | Longih; | <u> </u> | No. Conri.; | 0 | Туре: | ULTRA | GEL II | ┝┷┷┷ | | | | <u> </u> |
| | Calibre | tion Block | | — | Sca | n Coverage | | Mfg.: | SONO | тесн | | | | | |
| d, Block No. | | 50214 | | | | istream 🔲 Sca | n dB: <u>81</u> | Refe | rence B | fock | | Refe | rénce/Strauta | tor Block | ······ |
| hickness | 2.464 | Dia.: | Fiat | | | CCM 🛃 Sci | n dB: | Sertal No.: | 04 | -8740 | Gain dB | Rollector | Signal Amplitude % | Sweep Division | Sound Path |
| ai, Bik. Temp. | | | MCNDE40130 | | rfkce: | 0.D. | | Туре: | ROM | PAS | 44.7 | 2" Redius | | 4.00 | 2.066 |
| omp. Temp. | 67 Tem | | MCNDE40130 | | | As Gre | | | | | | | | | |
| ecordable ind | ication(s): | Yes | | (if Yes, Re | f. Attached | Ultrasonic Indig | ation Report. |) | | | | | | لبـــل | , |
| asulla: | Accept 🔲 | Rejec | | រោល 🛄 | | | | | Сол | nments: N/A | 1 | | | : ' | |
| ercent Of Cove | rage Obtair | ed > 90%: | No | Roviewe | d Previous | Date: | No | | | ······ | | | | | ····· |
| xaminer . | Lavel | J-N | | Signature | | | izte Review | 101 | | | / ; | Signatu | 10 | | Date |
| assel, Matthew | #, 8. | | TH | And | | 4/18/3 | | Da | m | M | he | 1 | | 4:20 | |
| aiupor | | я- N | | Skinsture | | 4/18/2 | ste Site Re | Now | | • • | | Signatu | r o | . — | Date |
| tauffer, Lester | | | $\angle Z$ | Signature | | البوي كف المندي المتعاد البريد | ato ANII R | | | · · · · | | Signatu | | | Date |
| ther NA | Level | N/A | | - 1 | | H | | V/A | | | | ~Aunut | | | COUR |

PAGE 42 OF 162

| | التتبيع فيستبعد ومحمو | |
|---------|-----------------------|---------------------------------------|
| | remarks: | |
| | Procedure allow | s scanning from |
| 🛛 ccw | cast side only. | |
| leyond | | |
| 0 DEG | | |
| | | |
| _ ccw | | |
| | | |
| DEG | | · · · · · · · · · · · · · · · · · · · |
| | | |
|] ccw | | |
| | | |
| DEG | | |
| | y | |
|] ccw [| ÚT-11-774 | , , , , , , , , , , , , , , , , , , , |
| [| Sketch(s) a | attached |
| DEG | 🛛 yes | 🗌 No |
| Sheet | _ <u>3</u> of | 4 |
| NA | | Date: |
| | DEG | DEG Sheet 3 of |

:



| | | | | | | | | | | | | | | | 4 . | | |
|----------------------------|--|-----------------|---------------------------|--------------|----------------------|-------------------|----------|-------------|----------------------------|---|-------------|---------------|-----------|---------------------------------------|-------------------|----------|-------------|
| PR. | · | | | | UT | Calibra | tio | xar | ninatic | n | | | | | • | : | |
| | | Site/Unit: | Oconee | 1 | 1 | | | Proc | edure: | | PDI-UT-2 | | r. | Outage | No.: | 01- | 28 |
| | Sum | mary No.: | 0 | 1.05.11.0029 | | | P | enubecon | Rev.: | | 8 | | | Report | No.:L | JT-11 | -875 |
| · | Wa | orkscope: | | 181 | | | W | ork Orde | r No.: | | 01909569 | | <u></u> . | P | age: 1 | , of | 7 |
| Code: | | 1998/20 | A00 | | C; | at./item: | ċ | -F-1/C5. | 11 | | Location: | | · · · · | , | | | |
| Drawing No.: | | 11.P | -128 | | | Descript | ion: Re | ducer to | Valve 1LP | 18 (Cas | () | | • | | | | |
| System ID: | 53A | | | | | | | | | | | | | | | | |
| Component ID: | 1LP-128-5 | 0 | | _ | | | | | | Size/1 | .ength: | N/A | | Thickness/Di | ameter: 1 | .168 / | 12,000 |
| Limitations: | Yes - 800 / | attached she | ot . | | | | | | | | Start | Time: | 1517 | Finis | h Time: | 1 | 543 |
| | Instrume | int Settings | | | | Search Unit | | | Cal. | | | | الدائده" | Orionitated 6 | erch ifai | | |
| Serial No.: | | 00X14L | | Serial N | lo.: | 8E07 | 8 | | Checke - | Time | Date | Colle | iratión | Signal | Śweep | | |
| Manufacturer: | | KRAUTKRA | MER | Manufa | cturer: | KE | A | | Initial Cal | 1500 | 2/1/2011 | | | Implitude % | Division | Se | und Path |
| Model: | | USN-60 | | Size; | .5 | Shape: | Roi | und | Inter. Cal. | | 0/4/0244 | ID N | lotch | .80 | 5.2 | | 1.548 |
| Delay: | 5.4644 | Range: | 3, | Freq.: | 2.25 MH | iz Style: | Com | <u>p-G</u> | Inter. Cal. Inter. Cal. | 1516 | 2/1/2011 | | | | | | |
| M'll Cal/Vel: | .1199 | Pulser: | High | Exam A | ngla: | | loments: | 5ingle | Final Cal | 1845 | 2/1/2011 | <u> </u> | | | | 4_ | |
| Damping: | 1K | Reject | 0% | Mode: | | Shear | | | | | | J | | | | <u>_</u> | |
| | Autohigh | Freq.: | 2.26 MHz | | ed Angle: | | 45 | | | Souplan | | } | | | | | |
| Filler: | Fixed | Mode: Other: | PE Fullwave | Wedge | Style: | MSW | QC · | | Cal. Batch: | | 9325 | | | intial Orlanta | | | |
| Voltage: Ax. Gain (dB): | Fixed | Circ. Gain (| ويتكرب المجال المتنز بالأ | | Gaa | rch Unit Cabl | ~ | | Type: Mfg.: | SONO | | Calib Rafi | | Signal mplitude % | Sweep Division | Soi | nid Path |
| 1 Screen Di | | • | Sound Path | Туре: | | RG - 174 | | | | | | ID N | otëh | 80 | 5.3 | +- | 1.59 |
| | | | | Length: | .6' | No. Conn.; | | n' | Exam Batch | | 09326 | | | | | Γ | |
| Linearity Report | | | 131 | | | u. sn Coverage | | | Type: Mfg.: | SONO | | | | | | | |
| | Çalibrati | ion Block | | linakong | | - | loon dB' | 40 | | | | ┝╍╍╍┽ | بالمحسب | | | | |
| Cal. Block No. | | 40413 | | | - | nstream 🗹 S | | 40 | | rence B | lock | 0.1 | Rote | rence/8lmut | | r | |
| | 1.125 | | | | | ccw 🗹 s | | | Serial No.: | A | 09325 | Gab dB | Reflector | Signal Amplitude 9 | Sweep Division | Sci | ind Path |
| Cal. Bik. Temp. | the second s | | | | uface: | | | | Туре: | Rom | paa | 25.1 | 1" Radius | 80 | . 3.4 | | 1" |
| Comp, Temp. | | | CNDE40129. | | | <u>As (</u> | ~~~~ | | | | | | | | | | |
| Recordable ind | (lcation(s): | Yes | } № 2 | • | i, Alteone | d Ultrasonic In | dicanon | Report.) | | | , | L | | l | | L | |
| Results: | Accept | Reject | Ŋ | Info 📋 | | | | | | Con | nments: N/A | | | | 4 | | |
| Percent Of Cove | arage Obtaine | sd > 90%: | No | Roviewe | d Previou | s Data: | Yes | i | | - • • | | | | <u> </u> | <u> </u> | | |
| Examiner | Level I | -H AI | 1 | Signature | الوكالي فيدون وكمسير | | Date | Review | er | | - <u>d</u> | 2110 | Signatu | Ire | | 1 | Date |
| Ransom, Grag | J. 🗾 | they | Than | | | 2/1 | /2011 | | | Z | 111 | jøs: | <u> </u> | · · · · · · · · · · · · · · · · · · · | 4 | /// | 2011 |
| Exeminer | Lovel II. | -N | 1 | Signettore | 1/ | | Date | Site Re | New Welv | ۵ | | | Signatu | ire | | | Date |
| Day, John, C. | | | 41 | $\sim H_{I}$ | <u> </u> | 2/1 | 1/2011 | | | <u>, </u> | | | | | | | |
| Olher | Lovel N | IA. | / | Signature | | | Data | | | A / | etitel | Ha | Signatu | | LIII. | , | Date |
| N/A | | | | | | | | | my | <u>U</u> | ma | 27 | nen | 7 | /4// | <u> </u> |] |
| | | | | | | | | | - | | | | | | 81116 | IVE | ит Д |

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ATTACHMENT A PAGE 45 OF 162

| | | Site/Unit: | Oconee | / 1 | | | Ргос | edure: | | PDI-UT-2 | | | Outage l | No.: | 01-26 |
|--------------------------|--------------|-------------------|---|----------------------|--|---------------|-----------------|----------------------------|----------|-------------|------------|-------------------|----------------|---------------|--|
| | Sum | mary No.: | 0 | 1.C5.11,0029 | | | Procedure | Rev.: | | E | | ` مەنى | Report i | No.: U | T-11-875 |
| | We | orkscope: | | t5) | | | Work Orde | or No.: | ···· | 01909569 | | | P | 3ge: 2 | of 7 |
| Code: | | 1998/201 | DOA | | Cat/Item | | C-F-1/C5. | 11 | | Location: | | | | | ······································ |
| Drawing No.: | | 1L.P. | 128 | | | Description: | Reducer to | Valve 1LP | -18 (Ças | rt) | | | | | |
| System ID: | 53A. | | | | . . | | | | e | | | | | | |
| Component ID | : 1LP-128-8 | 0 | | | | | | | Size/ | ength: | NA | | Thickness/Dia | meter: 1 | .165/12.000 |
| imitations: | Yes - See . | Attached She | ots | | | • | | | • | Start | Time: | 1548 | Finis | h Time: | 1810 |
| | Instrume | ont Settings | | | Search | n Unit | | Cal. | Time | Date | | Axial | Orientated S | earch Unit | |
| Serial No.: | | 00X14L | | Serial No.: _ | | 007Y13 | | Chocks | ļ | | Cellb | | Signal | Sweep | Sound Pa |
| Aanufacturer: | | KRAUTKRAN | <u>IER</u> | Manufacturer | | KBA | | Initial Cal | 1503 | 2/1/2011 | Reth | | Amplitude % | Division | |
| hodel: | | USN-60 | | | ······································ | - | cound | Inter, Cal. Inter, Cal. | 1545 | 2/1/2011 | ID N | otch | 80 | . 4;3 | 2.32 |
| lelay: I'll Cal/Vel: | 10.0522 | Range: Pulser: | 6 High | | 5 MHz | Style: Co | | Inter. Cal. | 10-40 | | | <u> </u> | | | - |
| amping: | 1K | Reject: | '0% | Exam Angle: Mode: | | shear | us: single | Final Cal | 1647 | 2/1/2011 | <u> </u> | <u></u> | | | + |
| ep. Rate; | Autohigh | Freq.: | 2.25 MHz | Measured An | | 60 | ······ | | Couplar | it i | | | | | |
| ilter: | Fixed | Mode: | PE | Wedge Style: | | MSWQC | | Cal. Batch: | • | 09325 | | Circumfen | ential Orienta | ted Search | Unit |
| ollage: | Fixed | Other: | Fullwave | | | | | Туре: | ULTRA | | Callbr | ation | Signal | Sweep | L |
| x, Gain (dB); | 45.5 | Circ. Gain (d | B): 45.5 | | Search Un | it Cable | | Mfg.: | SONO | TECH | Refle | ictor / | Amplitude % | Division | Sound Pat |
| 1 Screen D |)jy. = .5 | in. of S | iound Path | Type: | <u>R</u> | lG - 174 | | Exam Batch | h: | 09325 | N | | | | |
| nearity Report | L No.; | L-11-1 | 31 | Length: | B' No. | Conn.: | 0 | Туре: | ULTRA | GEL II | | | | | + |
| • • | Calibrat | ion Block | | | Scan Cor | verage | | Mfg.: | SONO | TECH | | <u> </u> | | | + |
| si, Block No. | | . 40413 | | Upstream [] | Downstream | m 🛃 Scan | dB: <u>53.8</u> | Refa | rence B | locir | | Röfe | rence/Simula | tor Block | |
| nickness | 1.125 | Ola.: | 12 | CW.[] | CC/ | W 🔲 Scan | d8: <u>N/A</u> | Sarial No.: | | 09325 | Gain | 5 A 4 | Signal | Sweep | · Sound Pet |
| al. Bik. Temp. | 72 Temp | . Took 🛛 🕅 | CNDE40129 | Exam Surface | | .0.0 | | Туре: | Rom | | dB 28.1 | 1" Radiu | Amplitude % | Division 2 | 1" |
| omp. Temp. | 81 Temp | Tool: MC | CNDE40129 | Surface Cond | ition: | As Grou | | | • | | .2.0.1 | I New I | | | |
| cordable Ind | lication(s): | Yes 🔲 | No 🖌 | (if Yes, Ref. Att | ached Ulbra: | sonic Indicat | ion Report.) | 1 | | | | | | · | |
| eeults: | Accept | Reject 5 | 2 | info 🔲 | | | | | Cor | nments: Use | d ID not | ch due to | 5 to 1 ratio. | — T. | |
| arcant Of Cove | | | No | . Reviewed Pre | ndave Mater | : Ye | | | | | | | | • | |
| | | | | | | | a Review | or. | <u>`</u> | | | Signati | 109 | | Data |
| iximiner Iansom, Greg | Level II | N A | and the | Signature | | 2/1/201 | | 61 | | In All | 2 let | | - | | 2/1/5011 |
| xaminer | Loval II | N | 7 E | Signature | | Dat | | view 1 | | | | Signati | | | Oate |
| ay, John, C. | 17 | | /</td <td>(D)</td> <td></td> <td>2/1/201</td> <td></td> <td>SA</td> <td>١.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | (D) | | 2/1/201 | | SA | ١. | | | | | | |
| other | Lavel N | /A | | Signature | ······ | Dat | a ANU Re | view | ~ (| (| à | Signat | lie | 1 , | Date |

PAGE 48 DE 162

| | S. | lte/Unit: | Oconse | <i>i</i> . 3 | I | | Proc | edure: | | PDI-UT-2 | | | Outage I | No.: | 01-28 |
|--------------------------|--|-----------------|------------------|---------------|--------------|----------------------|--|--------------------------|-------------|--|-------------------|-------------------------|--|---------------|---------------------------------------|
| | | ary No.: | 01 | .C5.11.0029 | | | Procedure | Rev.: | | E | | منت | Report I | No.: U | T-11-875 |
| | Work | .scope: | <u> </u> | 181 | | <u>،</u> ۱ | Work Orde | r No.: | | 01909569 | | | Pa | ıge: 3 | óf |
| Code: | | 1998/200 | 0A | | Cat/l | tem: | C-F-1/C8.1 | 11 | | Location: | | | | - | |
| rawing No.: | | 1LP- | | | | Description: R | leducer to | Valve 1LP- | 18 (Cas | 0 | | | | | |
| /stem ID: | 63A | | | | | - | | | | | | | | | |
| omponent ID: | 1LP-128-80 | | | | | | | | Size/L | ength: | NA. | | Thickness/Dia | meter; 1. | 169 / 12.00 |
| nitations: | Yes - See At | tached Shee | ats. | | | ····· | · · · · · | | | Start | Thne: | 1613 | Finis | h Time: | 1631 |
| | Instrument | t Sattings | | ببالال ويكرون | | urch Unit | | C del | | | | Avla | I Orientated S | onceh 11mit | |
| fal No.: | | 00X14L | | Serlai No.: | | 93-644 | | Cal. Checks | Time | Date | Collin | ration | Signal | Sweep | · · · · · · · · · · · · · · · · · · · |
| nufacturer: | ĸ | RAUTKRAM | ER | Manufactur | | RTO | | Initial Cat | 1504 | 2/1/2011 | | | Amplitude % | Division | Sound Pa |
| del: | | USN-60 | | | (10x18) | Shape: Rec | tangle | Inter. Cal. | | | 3/4 | SDH | 80 | 5.5 | 2.173 |
| lay: | 9,6803 | Range: | 5" | Freq.: 2 | | Style: T | RL2 | Inter. Cal. | 1812 | 2/1/2011 | | · | | | 1 |
| li Cal/Vel: | .2302 | Putser: | High | Exam Angle | e: <u>60</u> | # of Element | s: Duat | Inter. Cat. Final Cal | 1648 | 2/1/2011 | | | | | |
| mping: | <u>1K</u> | Reject: | 0% | Mode: | | Long. | - | | | | | | | | |
| | and the second division of the second divisio | Freq.: | 2 MHz | Measured / | _ | 60 | <u> </u> | | Couplan | | <u> </u> | Circumfe | ential Orlenta | ted Search | Unit |
| er: | and the owner of the owner owner owner owner owner owner own | Mode: Other: | Dual Fuliwaya | Wedge Styl | ke: | Integral | | Cel. Batch: Type: | ULTRA | 09325 | Cailbr | <u> </u> | Signal | Sweep | 1 |
| (tage: , Gain (dB): | | Circ. Gain (di | | | Search | Unit Cable | | Mfg.: | SONO | | Refle | | Amplitude % | Division | Sound Pa |
| | v. = <u>.5</u> | • | ound Path | Тура: | 000101 | RG - 174 | | | | 09325 | N | | | | |
| | | | | Length: | 6' | No. Conn.: | 0 | Exam Batch Type: | ULTRA | State of the local division of the local div | | <u></u> | | | |
| early Report | No.: | | <u>, n</u> | - ` - | | Coverage | | Míg.: | SONO | | | | ┉┈┈┥ | | · |
| | Calibratio | | | Upstmam [| | iream 🕢 Scan d | | | | | } | l. Ref | erence/Simula | tor Block | |
| al. Block No | 4.406 | 40413 Dia.: | 12 | - cw [| | CCW Scan d | | Refo | rence B | | Gatn | | Signal | Sweep | Sound Pa |
| ickness 1. Bik. Temp. | and the second se | | NDE40129 | Exam Surfa | | Ô.D. | | | | 09325 | dB | | r Amplitude % | 1. | |
| mp, Temp. | | | CNDE40129 | | | As Groun | | Туре: | Rom | pas | 53.1. | 1" Radlu | 80 | 2 | <u> </u> |
| ordable indi | | Yes [] | | | - | litrasonic indicatio | | • | | | | | | f | |
| | • | | | • | | | | | Cor | nments: Usa | ببسبيا http:// | ch dua tr | B to 1 mile. | | |
| sults: | Accept | Reject | 4 | Info 📋 | | | | , | 1,421 | HINGHO, YO | | | | | |
| rcent Of Cove | rage Obtained | > 90%; | No. | Reviewed F | Previous D |)ata: Yes |), | | | | | <u> </u> | مى بىلى بىلى بىلى بىلى بىلى بىلى بىلى بى | | |
| eminer | Level II-N | | | Signature | | Date | | let. | | | 1 | Signa | ture | | Dat |
| insom, Greg | | 134 | 2 Kan | <u>an</u> | | 2/1/2011 | | | | Con all | .10 | المرواحية المتحديد الشر | | 2 | Date |
| eminer | Lovel U-N | ، د | | Story | | Data 2/1/2011 | | iview 1 | NA | | | Signa | una . | | Dat |
| iy, John, C. | | | | Signature | | Data | - Linear and the second se | | | | <u> </u> | Bignat | ure - | | Dat |
| ther | Level N/A | | <i>.</i> | oifingmne. | | | | | D.D | the | | 14 | - dil | 11.11 | |

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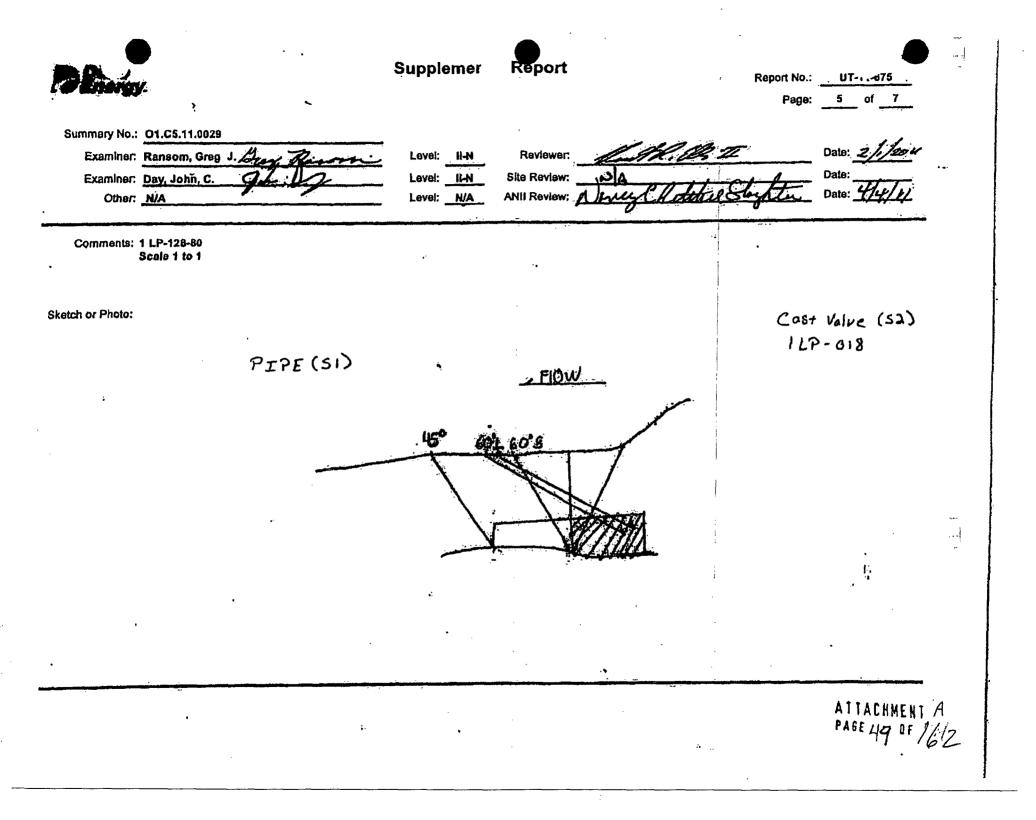


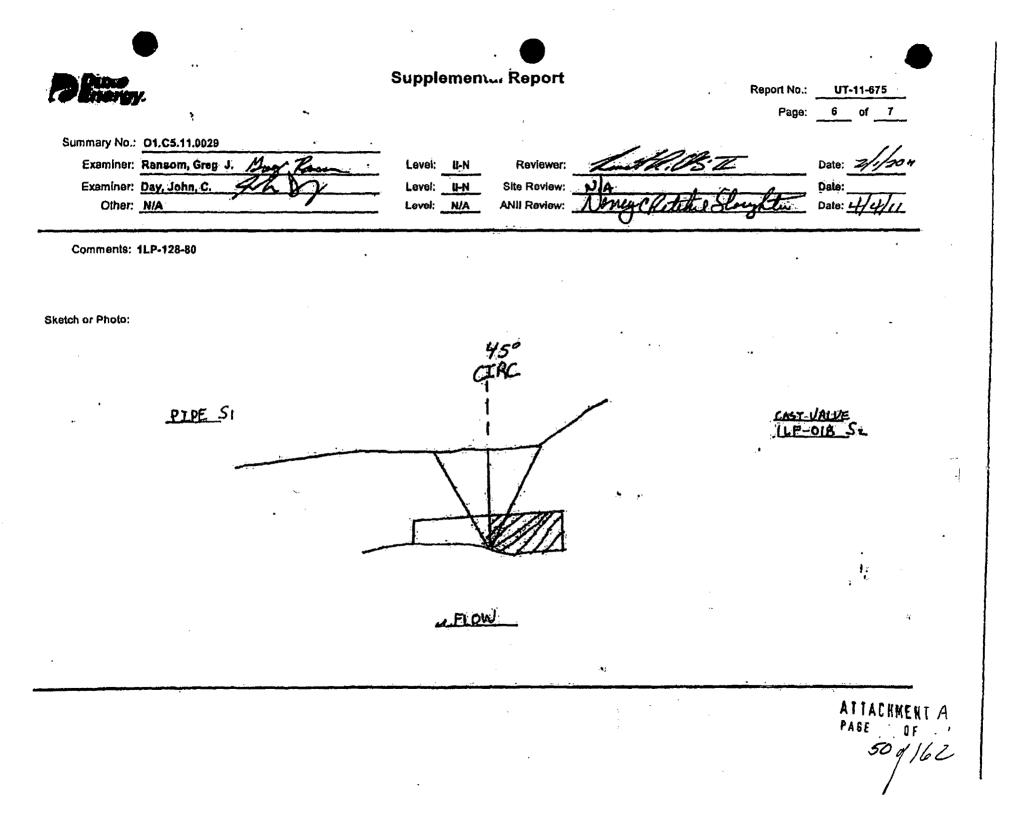




ISI LIMITATION REPORT

| | | ······································ |
|-------------------------------|--------------------------------------|--|
| Component/Weld ID: _1LP-128-8 | 0 Item No:01.C5.11.0029 | remarks: |
| 🖾 NO SCAN | SURFACE BEAM DIRECTION | Due to valve configuration |
| LIMITED SCAN | □ 1 ⊠ 2 ⊠ 1 □ 2 ⊠ cw ⊠ ccw | (Cast material) |
| FROM L N/A to L N/A | INCHES FROM W0 CL to Beyond | 1-LP-18 Valve |
| ANGLE: 🗍 0 🖂 45 🖾 60 | other FROM 0 DEG to 360 DEG | |
| | SURFACE BEAM DIRECTION | |
| | □ 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 | |
| | □ 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 | |
| | SURFACE BEAM DIRECTION | |
| LIMITED SCAN | □ 1 □ 2 □ 1 □ 2 □ cw □ ccw | UT-11-675 |
| FROM L to L | INCHES FROM W0 to | Sketch(s) attached |
| ANGLE: 0 0 45 0 60 | other FROM DEG to DEG | 🛛 yes 🗌 No |
| Prepared By: Gregory Ransom | eg Russe II Date: 02/01/11 Shee | t _4 of _7 |
| Reviewed By: Revet R. Co | Date: 2/1/2011 Authorized Inspector? | Stagetter 4/4/11 |
| | 0 | attachment A |
| | | page 48 of 162 |





| | | | | nations - Pipe | • | - |
|--|---|--|--|--|---------------------------------------|--|
| | onee / | 1 | Procedun | | Outage No.: | هي بعدي بيدا الأن بيدين بين الأب يقتلنا فعلمات |
| Workscope: | 01.C5.11 | .0029 | Procedure Rev Work Order No | | Report No.: Page: | |
| 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 | 100.000 | % Length X | 50.000 | % volume of length / 100 = | 50.000 | % total for Scan 3 |
| Scan 4 | 100.000 | % Length X | 50.000 | | 50.000 | % total for Scan 4 |
| A <u>Other deg</u> | | divide by # sca | | , % total for 45 deg | | • |
| <u>Other deg</u> | - 60 | (to be used for | supplemental sc | | | • • |
| <u>Other deg</u> | - 60 | (to be used for | supplemental sc that was not obta | ans) | 50.000 | % total for Scan 1 |
| Other deg The data to Scan 1 | - 60 be listed belo | (to be used for w is for coverage | supplemental sc that was not obt 50.000 | ans) ained with the 45 deg scans. | · · · · · · · · · · · · · · · · · · · | % total for Scan 1 % total for Scan 2 |
| Other deg The data to Scan 1 | - 60 be listed belo 100.000 100.000 | (to be used for w is for coverage % Length X % Length X | supplemental sc that was not obt 50.000 | ans) ained with the 45 deg scans. _ % volume of length / 100 = _ % volume of length / 100 = | 0.000 | |
| Other deg The data to Scan 1 Scan 2 Scan 3 | = <u>60</u> be listed below <u>100.000</u> 100.000 | (to be used for w is for coverage % Length X % Length X % Length X | supplemental sc that was not obt 50.000 0.000 | ans) ained with the 45 deg scans. _ % volume of length / 100 = _ % volume of length / 100 = | 0.000 | % total for Scan 2 % total for Scan 3 |
| Other deg The data to Scan 1 Scan 2 Scan 3 Scan 4 | = <u>60</u> be listed below <u>100.000</u> 100.000 | (to be used for w is for coverage % Length X % Length X % Length X % Length X | supplemental sc that was not obt 50.000 0.000 | ans) ained with the 45 deg scans. _ % volume of length / 100 = _ % volume of length / 100 = _ % volume of length / 100 = | 0.000 | % total for Scan 2 % total for Scan 3 |
| Other deg The data to Scan 1 Scan 2 Scan 3 Scan 4 Percent co | - 60 be listed belov 100.000 100.000 | (to be used for w is for coverage % Length X % Length X % Length X % Length X | supplemental sc that was not obt 50.000 0.000 | ained with the 45 deg scans. _ % volume of length / 100 = _ % volume of length / 100 = _ % volume of length / 100 = _ % volume of length / 100 = | 0.000 | % total for Scan 2 % total for Scan 3 |

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|--|---|-------------------|-------------------------------|----------------------|---|---|-----------------------|--------------------------|---------|---------------|------------|---------------------|---------------------|-------------|--------------|
| | | | | , I | UT Calib | ration | am | inatic | ท | | | • | | | •• |
| | i - Jan - Ali | Site/Unit; | Oconse | 1 1 | | • | Procedu | #e: | | PDI-UT-2 | | | Outage | No.: | 01-26 |
| | Sum | mary No.: | 01. | C5.11.0084 | | Proc | cedure Ri | »v.: — | | E | | | Report | No.: L | FT-11-760 |
| | W | orkscope: | | 181 | | Wor | nk Ondèr N | lo.: | | 01897784 | | | P | ego: 1 | of 6 |
| Code; | · | 1998/2 | 000A | | Cat./Item: | C-F- | -1/C5.11 | | _ | Location: | | | | | |
| Drewing No.: | | 1L | P-209 | | Desc | ription: Flow | / Rastrici | or to Pip | • | | | 1 41 | - · · | | |
| System ID: | 53A | | | | | | | | | | | | | | |
| Component ID: | : 1LP-209-1 | 7 | - | | | | | | Stze/L | engih: | NA | | Thickness/Di | ameter: | 88/1.0/10.0 |
| Imitations: | Yes - 844 | attached ah | eets | | | | | · | | Start | Time: | 1232 | Finis | h Time: | 1401 |
| ای بر این این این این این این این این این این | Instrume | nt Settings | ÷ | | Search Un | lt | T | Cal. | The | Date | 1 | Airl | il Orlantated 8 | earnh Lhuil | |
| iorial No.: | ; | 00X14 | مدب ولجورا ويرفع الإدراط فادو | Serial No.: | 01 | F7J2 | | Checks | | | Calib | ration | Signal | Sweep | |
| lanufacturor: | | KRAUTKR | | Manufecturer | | KBA | | ntial Cal | 0905 | 4/16/2011 | | octor | Amplitude % | Division | Sound Pr |
| lodot: | | USN-6 | | Stze: | <u>"5 </u> Sha | and statements of the second se | T. | nter. Cal. Iter. Cal. | 1230 | 4/16/2011 | N | | • | | |
|)elay: fù Cal/Vel: | 4,965 | Range: Pulser: | 2.5" High | Freq.: | and the second secon | de: <u>Comp</u> - | I, | ter. Cal. | 14.30 | | | <u></u> | | | |
| ru Calvel: ismping: | <u>.121</u> | Reject: | 0% | Exam Angla: Mode: | #c | f Elements: S | singis 🛏 | inal Cal | 1630 | 4/16/2011 | ļ | | | | <u> </u> |
| | Autohigh | Freq.: | 2,25 MHz | Mode: | | 45 . | | | Couplan | t | <u>}</u> | | | | + |
| liter; | Fixed | Mode: | PE | Wedge Style: | | SWQC | Ci | al, Batch: | - | 9325 | | Chroumfe | rential Orienta | ted Search | Ünit |
| oltaga: | Fixed | Other: | Fullwave | | | | | pe: | ULTRA | GEL II | Ceilb | nation | Signal | Sweep | |
| r. Gain (dB): | N/A | Circ. Gain | (dB): 27.7 | | Search Unit C | abi s | M | fg.: | SONO | TECH | Refl | ictor | Amplitude % | Division | Sound Pa |
| 1 Screan D | N. = .25 | In. of | Sound Path | Type: | RG - | 174 | | am Batch | 1 (| 09325 | 1" N | otch | 60 | 6.9 | 1.478 |
| nearly Report | | L-11 | -137 | Longth: | 6' No. Cor | າດ.:0 | | pė: | ULTRA | | <u> </u> | | | | + |
| · · · · · · · · · · | (1997) - Ale and a second s | lan Block | | | Scan Covera | 9 0 | M | fg.: | SONOT | TECH | | ÷ | | | + |
| al. Block No. | ÷#time #i | PDI-UT-2 | -Q | Upstream 📋 | Downstream [] |] Scan dB: _ | N/A | Pafa | rence B | look | | Re | lerençe/Simula | tor Block | |
| | .50 - 2.0 | Dia.: | Flat | ćw 🗹 | ccwig |] 8can dB: | 34.8 SA | riat No.: | | - 5741 | Gain | | Signal | Streep | Sound Pa |
| al. Blk. Temp. | 73 Temp | . Tool: 1 | MCNDE40130 | Exam Surface | | 0.D, | Ty | | ROM | | dB 25.7 | Reflection 1" Redit | | Division | 1.000 |
| comp. Temp. | | | CNDE40180 | Surface Cond | ition: | u Ground | | | | | | s - ryacan | | + | 1.000 |
| ecordable ind | fication(s): | Yes [| No 🖌 | (If Yes, Rol. Alt | sched Ultrasoni | c Indication R | l o port.) | | | | | | | 1. | |
| esults: | Accept | Reject | | info 🗂 | | • | | | Con | nments: N/A | | | | • • | |
| | | | No | Reviewed Pri | wime Date: | . Yeż | | | •• | | | | | | |
| ercent Of Cove | | | | Class also | | | Tax damas | | | <u> </u> | | (plane | | | Thé. |
| baminer Suli, W. Keith | Level | H C | | | <u> </u> | U80 H | Reviewer | | 1 | Mie | | | HALD. | 11 00 | Datı Datı |
| Examiner | Level I | -N | | Slanature | | | Sile Revie | Van | 11- | 449 | | Sign | ture | 4.22. | Date |
| iasesi, Matthe | | | and | | | 116/2011 | NO | : [] | | =++1 / | | | | | |
|)ther | Lovel N | | | Signature | | and the second | NURGE | | 77 | 111/ | ······ | Signa | ture | 1.1 | Date |
| NA. | | | | | | | M_{μ} | K | 62 | KK_ | | | · . · · Z | lezh | |
| | اليدي اللب الشالكي , واليون السيا | وبياري والمراجع | | | | | | V | | | | | | NI I | TUNNEN |
| | | | | | | | | | | | | | | PAGE | 52 01 |

| • | | | | •• | | | | | | | | | | | . 1 | |
|------------------------|-------------------|--------------|-----------------|------------------|---------------------|---------------------|--|----------------------------|----------|---------------|-------------|---------------------------------------|-----------------------|-------------------|-----------|-------------------|
| | | | | | UT C | allbratior | n | ninatio | n | | | • | | | | |
| | | Site/Unit: | Oconee | 1 1 | | | Proce | edure: | | PDI-UT-2 | | | Outage | No.: | 01-26 | ; |
| | Sum | mary No.; | 0 | 1.C8.11.0084 | | _ | Procedure | Rev.: | | E | | • • • • | Report | No.: L | T-11-7 | 80 |
| | Wa | orkacope: 🗍 | | 181 | | - | Work Orde | r No.: | | 01897784 | | · . | P | ago: 2 | òf | |
| ode: | | 1998/2 | 000A | _ | Cat./II | tem: | C-F-1/C6.1 | | | Location: | | | | | | يتفسير |
| rawing No.: | | 11.1 | -209 | •: _ | | Description: F | low Restr | ictor to Pip | • | | | · · · · · · · · · · · · · · · · · · · | | | | |
| rstem (D: | 53A | | | • | nd | | | | | | | | | <u> </u> | <u></u> | _ |
| omponent ID: | 1LP-209-1 | 7 | | | | | •••••••••••••••••••••••••••••••••••••• | | Size/ | Longth: | NIA | | Thickness/Di | meter: | 88/1.0/ | 10.0 |
| nilations: | Yes - Bes | attached shi | ets | | مي يوني بي م | | , | | | | Time: | 1232 | Finis | h Time: | 140 | 1 |
| فاروب فسأجه الكبير | inetrume | nt Settings | تغنيات ويعتمدون | | Sea | rch Unit | | (| _ | | | | | | | مينانيني ميدري |
| erial No.: | | 00X14L | | Serlaj No.: | ••• | 01F7J0 | | Cal, Checks | Time | Date | <u> </u> | | Orientated 8 | | | |
| anufacturer: | | KRAUTKRA | MER | Manufacture | | KBA | | Initial Cal | 0913 | 4/16/2011 | | ration A | Signal Implibude % | Division | Soun | d Pa |
| odel: | | U8N-60 |) | Size: | .5 | Shape: R | ound | Inter. Cel. | | | 1" N | otch | 80 | 8 | 1,1 | 800 |
| xiay: | 8:4169 | Range; | 3" | | to MHz | | mp - G | inter. Cal. Inter. Cal. | 1311 | 4/16/2011 | | · | | | | |
| U Cal/Vel: | .1924 | Pulser: | High | Exam Angle | 60 | # of Element | ts: <u>Single</u> | Final Cal | 1632 | 4/16/2011 | · · · · · · | | | · | <u> ·</u> | |
| unping: | 1X Autohigh | Reject: | 0% 2.25 MHz | Mode: | | Shear 58 | <u> </u> | | Couplar | | ; | | | | ╉╼╼╸ | |
| uer: | Fixed | Mode: | PE | | | MSWQC | | Cel. Batch: | • | 09325 | | Drounter | ntial Orlenta | ted Search | Unit | |
| linge: | Fixed | Other: | Fullwave | | | | · · · · · · · · · · · · · · · · · · · | Туре: | ULTRA | - | Callb | ····· | Signal | Sweep | 1 | |
| . Gain (dB); | 41.9 | Ctro, Gain (| dB): N/A | | Search | Unit Cable | | Mfg.: | SONO | TECH | Refle | ector A | mplitude % | Division | Sound | 1.68 |
| Soreen Di | v. = .3 | In. of | Sound Path | Тура: | | RG - 174 | | Exam Batch | 1 | 09325 | <u>'N</u> | <u>A</u> | | | | |
| earity Report | No.: | L-11- | 137 | Length: | <u>6'</u> ! | No. Conn.: | 0 | Type: | ULTRA | GEL II | | <u></u> | | <u> </u> | | |
| | Calibrat | ion Block | | | Scan (| Coverage | | Mlg.: | SONO | TECH | <u> </u> | | · | | + | |
| , Block No. | - | PDI-UT-2 | <u>o</u> | Upstream 🗍 | Downet | ream 🛃 Scan d | B: 51.1 | Refe | гелсе 8 | lock | | Rafa | rence/Stmut | tor Block | | |
| ickness | 50 - 2.0 | Dia.: | Flat | cw 🗆 | (| CCW 📑 Scan d | B: <u>N/A</u> | Serial No.: | | 4-8741 | Gain dB | Reflector | Signal Amplitude 9 | Sweep Division | Source | 1 Pa |
| L Bik. Temp. | 73 Temp | , Tool: | ACNDE40130 | Exam Surfac | e; | 0,D. | | Тура: | ROM | IPAS | 28.8 | 1" Redius | | 3,4 | 1 | |
| mp, Temp. | 76 Temp | . Tool: | ACNDE40130 | Surface Con | - | As Groun | | | | | | | | • | | |
| cordable ind | lication(s): | Yes [|] No 🛛 | (If Yes, Ref. At | tached U | itresonic Indicetic | on Report.) | | | | | | | <u>l</u> . | | <u></u> |
| sults: | Accept 📋 | Reject | Ø | Info 🛄 | | | | | Cor | mmanta: N/A | | | | • | | |
| roent Of Cove | rage Obtaind | sd > 90%; | No | Reviewed Pr | wyloius Di | sta: <u>Ye</u> e | I | | | | · | | <u>.</u> | | | |
| aininsi di, W. Keth | Lovel g | ** | S.C. | Bignatura | 3 | Date 4/16/2011 | | | <u> </u> | Alog | | Signati | 178 | 4.2 | | Dat |
| uminer usel, Matthe | Lovol () w, 8. | * 72 | - that | Signature | | - Date 4/16/2011 | 1 1 | view/ | VY | -1) | • | Signati | 110 | | | Data |
| her | Lovel N | /A | | Signature | | Date | | hier / | \leq | \mathcal{N} | | Signatu | re | 4/22/ | 11. | Date |
| N/A | | | | <u> </u> | | | L <i>/"(</i> / | XLe | Э1 | <u> </u> | <u> </u> | <u></u> | | AI | | Ņ |

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| · · · | Summ | lite/Unit: | Oconee | 1 . | | | | | | | | | | | |
|--|---|------------------------|---|-----------------|--|-------------------------|------------------|--|-------------|---------------------|-------------|------------|-----------------------|-------------------|---|
| Code: | | | | | : | • | Proc | edure: | • | PDI-UT-2 | | : | Outage | No.: | 01-28 |
| | 11/ | · • | 01. | C5.11,0084 | | • | Procedure | Rov.: | | 8 | | | Report | No.: L | JT-11-780 |
| | WQI | kacopa: | | .)81 | | • | Work Orde | er No.: | | 01897784 | | | P | 1ge; 3 | of 8 |
| Service a Maria | | 1998/2 | ADOD | ······ | Cet./it | em: | C-F-1/C5. | 11 | بواغد مجاجه | Location: | <u>.</u> | | | | |
| Drewing No.: | | 11 | P-209 | | 1 | Description: | Flow Rest | rictor to Pip | • | | | | - | | |
| Bystem (D: 6 | A | | | | | | | | | , | | | | • | 1993 - 1994 - 1995 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 |
| Component ID: 1 | LP-209-17 | ومساطوبات معيني بريانه | | | | | ويغديهم والمعاري | | Size/i | ength; | N/A: | | Thickness/Di | meter: | 85/1.0/10.0 |
| Imitations: Y | 'es - See at | tached ahe | sata | | | | | | • | Start ' | Time: | 1212 | Finis | h Time: | 1401 |
| | Instrumen | t Sattings | | | Sea | rch Unit | , , | Cat. | - | | | Avto | d Ortentated 8 | annh Hall | |
| Berlal No.: | | 00X14L | <u>, </u> | Serial No.: | | 03-762 | | Checks | Time | Data | Calle | ration | Signal | . Sweep | |
| Aanufacturer: | t | RAUTKRA | MER | Manufactur | ert : | RTD | | Initial Cal | 1009 | 4/16/2011 | | | Amplitude % | Division | Sound Pat |
| Addel: | | USN-60 |) | Size:2 | (10x16) | Shape: | Reat. | Inter, Cal. | | | 1" N | otch | 80 | 7.1 | 2.082 |
| Xelay: 9 | 9.438 | Range: | 3 | Freq.: 2 | .0 MHZ | Style: | rrl2 | Inter. Cal. | 1341 | . 4/16/2011 | | 1 | | | |
| 4 | .228 | Pulser: | High | Exam Angle | b: <u>60</u> | # of Elemen | ta: Dual | Inter. Cal. Final Cal | 1614 | 4/18/2011 | <u> </u> | | | - | 4 |
| | <u>1K</u> | Reject: | 0% | Mode: | | Long. | | Construction of the local division of the lo | | المقدمي متخذمه مرعي | | | ····· | | - |
| | | Freq.: | 2 MHz | Measured A | and the second sec | | | | Couplan | | | | | | |
| | | Mode: | Dual | Wedge Styl | 8 : | Integral | | Cal. Batch: | | 9325 | | | rential Orienta | _ |) Unit |
| | | Other: | Fullwave | | • | 11-11 A-Lt. | | | ULTRA | | Cally | | Signal Amplitude % | Sweep Division | Sound Path |
| x. Gain (dB): | | Circ. Gain (| | | Search | Unit Cable | | Mfg.: | SONO | TECH | 'N | | | | + |
| 1 Screen Div. = | = .3 | In. of | Sound Path | Type: | | RG = 174. io. Conn.: | 0 | Exam Batch | - | 09325 | | <u></u> | | | + |
| Inearlty Report No. | | L-11- | 137 | _ Longih: | | | | in the second | ULTRA | | | | | | |
| | Calibratio | n Block | | | | Coverage | | Mfg.:: | SONO | TECH | | | | | |
| al. Block No. | | PDI-UT-2 | <u>o</u> | | | eam 🖌 Scan o | | Refe | rence B | lock . | : | Ref | erence/Simula | tor Block | |
| the second s | and the second se | Dia.: | Flat | _ cw [|] 0 | CW Scene | B: <u>N/A</u> | Serial No.: | | -8741 | Gain. dB | Reflecto | Signal AmpStude 9 | Sweep Ofvision | Sound Pat |
| al. Bk. Temp. 7 | 73 Temp. | Tool: h | ACNDE40130 | Exam Surfax | | 0.D. | | Туре: | ROM | PAS | | 1" Redtu | | 3.3 | 1.001 |
| comp. Temp7 | rg Temp. ` | Tool:h | KCNDE40130 | Surface Con | | As Groun | | | | | | | | • | |
| ecordable indicat | ition(s): | Yes [|] No 💋 | (if Yes, Ref. A | Itached Ul | trasonic indicati | on Report.) |) | | | | | | 1. | |
| esults: Acc | capt 门 | Reject | | nto 🔲 | | | | | Con | nments: N/A | | | | , | |
| ercent Of Covereg | e Obtained | > 90%: | No | Reviewed P | revious De | sta: Ye | | | | <u> </u> | | . <u> </u> | | | |
| Liaminer | Loved 11-1 | N _ | 1 1 | Signature | | Dat | | Wer O 1 | ·A | 3 | | Signa | turo | | Dete |
| lassel, Matthew, S | | | the band | , | | 4/16/201 | | Nau | | Ilhar | 2 | | `` | 4-21 | |
| | Lovel (14 | ť | 1- | Hanature | >5 | Dat | Site R | Mow | W-V | |] | Signa | ture | | Date |
| iuli, W. Kelth | | 1 | $\leq \geq$ | | <u></u> | 4110/201 | | | h7 | 744 | | | | | |
| | Lavel N/ | 4 |) * | ilgnature | | Dat | ANIL | eyeew / | | X | | Signal | un o | ıl. | Date |
| N/A | | | | | | | | | | KK_ | | | | _4/ZZ | <i>{</i> // |

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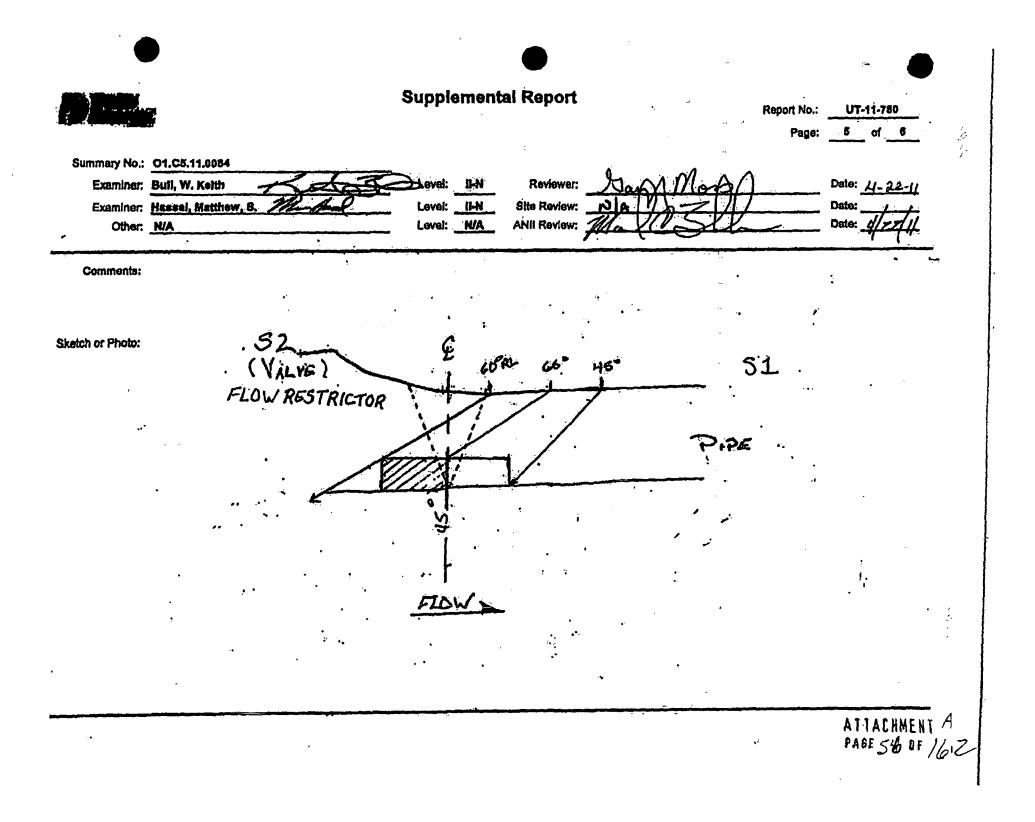
•

| D | UKE POWER CO | MPANY | · · · · · |
|------------------------------|--|---|-------------------------------|
| | ISI LIMITATION R | EPORT | |
| Component/Weld ID: 1LP-209- | 7 ttem No: | 01.C5.11.0084 | remarks: |
| NO SCAN | SURFACE | BEAM DIRECTION | Due to valve configuration |
| LIMITED SCAN | | 2 🛛 2 🖾 cw 🖾 ccw | cast material / FLOW RESTRICT |
| FROM L to L/A | ى كەمەر كۈكۈكۈك ە بىرىچە بەر دۆلەر كۈكەر دېكىمىرىكىكى كەربى كۈكەر بەر بەر كەر | اليان الحك والمحمول ويوارك بالمحمول الحالية والمرابع الذي الحوار المراجع المحمول والمراجع المحمول المحمول المحم | 4-22-11 217 |
| ANGLE: 0 0 45 8 60 | other FROM | 0 DEG to <u>360</u> DEG | |
| NO SCAN | | | |
| LIMITED SCAN | | 2 Cw Ccw | |
| FROM L to L | INCHES FROM WO | to | |
| ANGLE: 0 0 45 0 60 | other FROM | DEG to DEG | |
| NO SCAN | SURFACE E | BEAM DIRECTION | |
| LIMITED SCAN | | | |
| FROM L to L | INCHES FROM WO | to | |
| ANGLE: 0 0 45 60 | | | |
| | SURFACE B | | |
| | | 2 C cw C ccw | UT-11-780 |
| FROM L to L | INCHES FROM WO | to | Sketch(s) attached |
| ANGLE: 0 60 | | | 🛛 yes 🗋 No |
| Prepared By: Matthew Hassell | Level: II Dat | e: 04/16/11. / / Shee | t/4// of 7 |
| Reviewed By: Jan Me | Date: | Authorized Inspector: | Oate: 4/22/1 |
| vassf [110 | ······································ | | Δ11 |

ATTACHMENT A PAGE 53 OF 162

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| | | Determ | ination of Pe UT Examinat | rcent Coverage tions - Pipe | for | | トノービット |
|---------------|----------|--------|------------------------------|--------------------------------|-------------|-----------|--------|
| Site/Unit | Oconee / | 1 | Procedure: | PDHUT-2 | Outage No.: | 01-26 | 4 |
| Summary No.: | 01.05.1 | 1.0084 | Procedure Rev.: | E | Report No.: | UT-11-780 |) |
| Workscope: | IS | l | Work Order No.: | 01897784 | _ Page: | 6 of | 6 |
| | | | | | | | |
| <u>45 deg</u> | | | | | | | |

Scan 4 _______% Length X ______% volume of length / 100 = ______% total for Scan 4

Add totals and divide by # scans = 50.000 % total for 45 deg



Other deg - 60 (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

| Scan 1 100.000 | % Length X 50.000 | % volume of length / 100 = | 50.000 % total for Scan 1 |
|----------------|-------------------|----------------------------|---------------------------|
| Scan 2 | % Length X0.000 | % volume of length / 100 = | 0.000% total for Scan 2 |
| Scan 3 | % Length X | % volume of length / 100 = | % total for Scan 3 |
| Scan 4 | _ % Length X | % volume of length / 100 = | % total for Scan 4 |

Percent complete coverage

Add totals for each scan required and divide by # of scans to determine;

37.500 % Total for complete exam

Site Field Supervisor. David Ko 2 11

Date: 4/22/11



| | | | UŤ | Callbration | /Examina | lion | | | ····· . - | | |
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ATTACHMENTA. Prace 58 of 1.62



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UF Calibration/Examination

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| mitations | Yes - See stached at | | ۲۰۰۵ (۲۰۰۵), مربعه ۱۹۹۵ (۲۰۰۵) , در محمد معروب و ۲۰۰۵) ۱۹۹۵ (۲۰۰۵), مربعه ۱۹۹۵ (۲۰۰۹) , در محمد معروب و ۲۰۰۵) | والمرور والمستعدة والمروح المتعاد | ې د وې د د د ورسونه مېر نمونې ور د در د د | Tata T | Inel Same | 240 | in Time: 10 | 1401 |
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ATTACHMENT A



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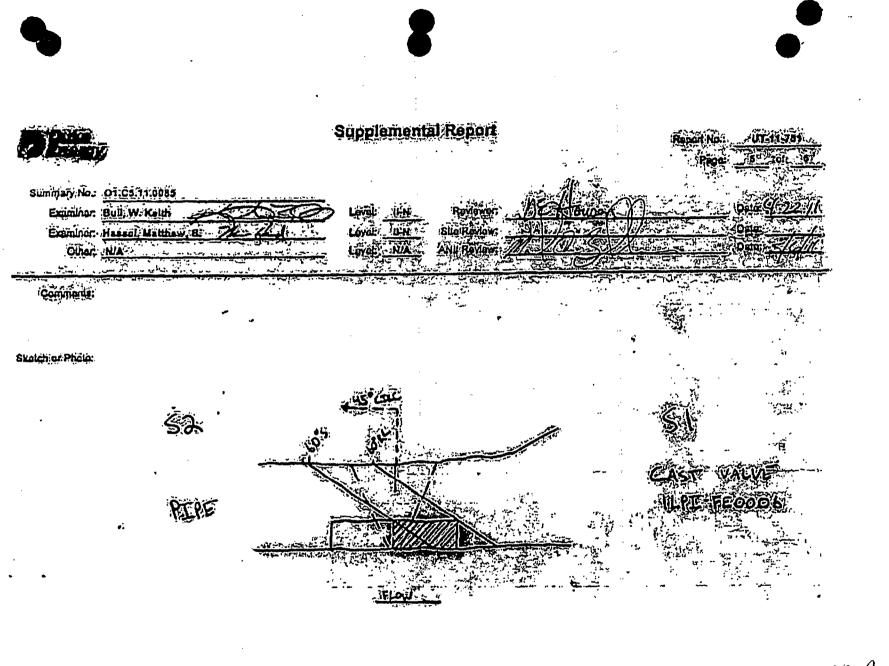
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ATTACHMENT A PAGE OF 162



ATTACHMENT A Page 62 1 162

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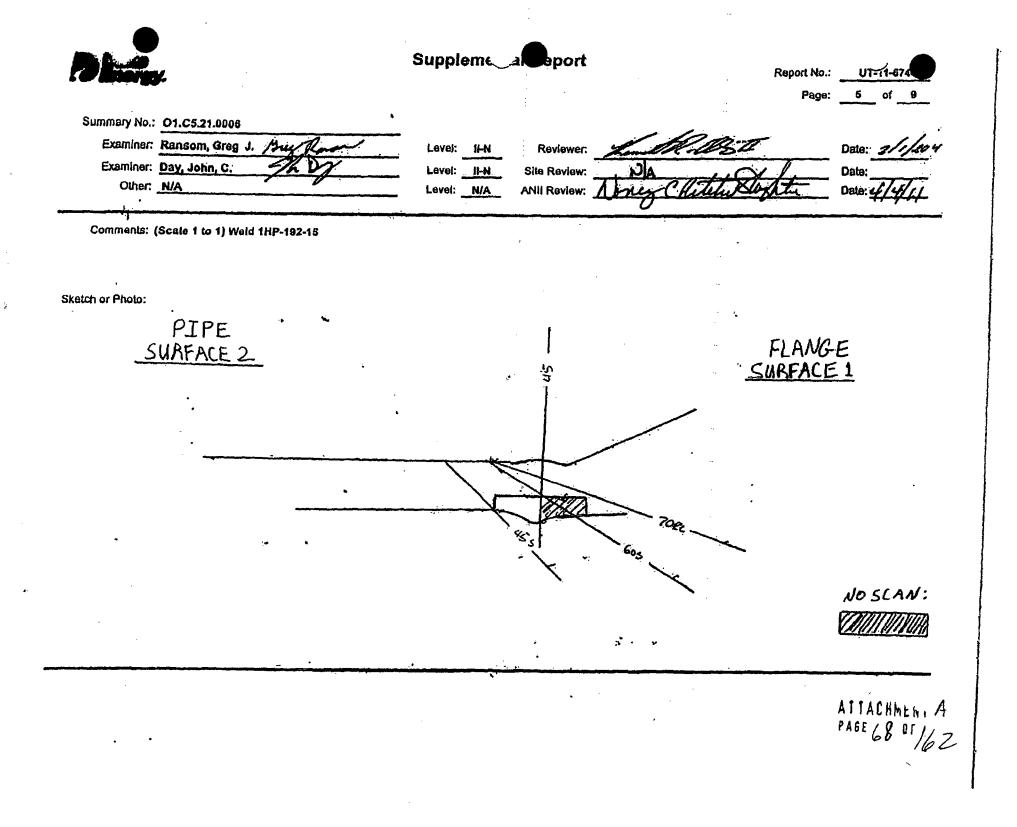
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|---------------------------|--|--------------------|-------------------|-------------------|-----------|------------------|--------------------|----------------------------|---------------------------------------|-------------|-------------|-----------|---|-------------------|------------|
| | | ary No.: | 01. | C5.21.0905 | | | Procedure | Rev.: | | <u> </u> | : | | Report | No.: U | T-11-874 |
| | Wor | kscope: | | 181 | • | Armite | Work Orde | ar No.: | <u></u> | 01909573 | | | P | sge: <u>1</u> | of |
| Codo: | | 1998/ | 2000A ' | | Cal | /item: | C-F-1/C5. | 21 | | Location: | | | | | |
| Drawing No.: | | 11 | HP-192 | | | Description | : Pipe to Fiz | inge Orlfice | | | | | | | |
| System ID: | 61A | | • | | - | | | | | | | | | | |
| Component iD; | 1HP-192-15 | | | | | | | | Size/i | ength: | N/A | <u></u> | Thickness/Di | amoter: 0. | 531 4.0/ |
| Limitations: | 'Yes - 800 at | tached si | heet | , | | | | | | Start | Time: | 1215 | Finis | h Time: | 1233 |
| | Instrumen | t Setting: | ui | | 6. | earch Unit | | Cal. | | | | Avia | Ortentated 6 | earch Link | |
| Serial No.: | المنصاب والجروعي والمروين | 00X14 | IL | Serial No | .: | SB0253 | | Checks | Time | Date | Cellib | notten | Signal | Sweep | |
| Manufacturer: | K | RAUTKR | | Manufact | urer: | ·GE | | Initial Cal | 0920 | 2/1/2011 | | | Amplitude % | Division | Sound P |
| Model: | | USN- | | Size; | | Shape: | | Inter. Cel. Inter. Cel. | 1214 | 2/1/2011 | ID N | otch | 80 | 4.5 | .674 |
| Delay: | | Range: | 1.0* | | 2.25 MHz | | Comp - G | Inter. Cal. | 1274 | 24 UZV13 | <u> </u> | | | | <u> </u> |
| M'ti Cal/Vel: Damping: | | Pulser: Reject: | High | Exam Ana Mode: | ye: | | ents: Single | Final Cal | 1430 | 2/1/2011 | <u> </u> | | | | + |
| | | Freq.: | 2.25 MHz | Mode: Measured | Angle: | Shear 45 | . <u></u> | | Couplan | t | <u> </u> | | | | |
| Filler: | | Mode: | RE | | yle: | | | Cal. Batch: | • | 9325 | | Circumfer | ential Orlente | ted Search | Unit |
| Voltage: | And in case of the local division of the loc | Other: | Fullwave | | | | | Туре: | ULTRA | GELII | Callb | ration | Signai | Sweep | Sound P |
| Ax. Gain (dB): | | | (dB): <u>44.5</u> | | Searc | h Unit Cable | | Mig.: | SONO | TECH | | | Amplitude % | Division | |
| 1 Screen Div | <u>, = _,15</u> | in. of | Sound Path | Type: | | RG - 174 | · | Exam Batch | n:(| 09325 | N GI | otch | 80 | 4.3 | .854 |
| Linearity Report I | No.: | L-1 | 1-131 | Length: | <u>5'</u> | No. Conn.: | 0 | Туре: | ULTRA | GEL II | | | | ****** | 1 |
| | Calibratio | n Block | | | Sear | Coverage | | Mfg.: | SONO | TECH | | | | | |
| Cal. Block No. | | 40406 | 3 | Upstream | | stream 🔲 Sca | | Refe | rence B | lock | | Refe | oronce/Simul | tor Block | |
| | | Dia.: | | _ CW | | CCW Sca | in dB: <u>49,9</u> | Serial No.: | A | 09325 | Gabri dB | Bafacto | Signal Amplitude ? | Sweep Division | Sound P |
| Cal. Bik. Temp. | | | | _ Exam Sur | | | | | Rom | Pas | 27.8 | 1" Radku | | 6.65 | 1= |
| Comp. Temp. | | | MCNDE40129 | Surface C | | | | | | | | | | 1 | |
| Recordable Indi | • | Yes (| | | Attached | Utirasenic Indic | ation Report. |) | | 1 | | | <u> </u> | L | |
| Results: A | Accept 🔲 | Rejec | | nfo 📋 | | | | | Con | nments: N/A | 1 | | | | |
| Percent Of Cover | age Obtained | > 90%: | No | Reviewed | Previous | Data: | Yes | | · · · · · · · · · · · · · · · · · · · | | | | · | | |
| Examiner | Loval II-N | | | Signature | | 1 | Dato Review | \\$1 | | All. | 2 11 | Signat | ш¢ | | 1 04 |
| Ransom, Greg | J. | /he | y flow | | - | 2/1/2 | | | Alexan, | A. | <u>ie</u> | | and all the second s | 21 | 11/201 |
| Examiner | Lavel II-N | 2 | NR | Knatur | | | ate Site Re | view | ا | Δ · | | · Signat | uno - | • | Dat |
| Day, John, C. | taual area | | | | | 2/1/2 | | | | | | 0 | | | D |
| Other N/A | Lovel N/A | l I | · · | lignature | | Ľ | ate ANII P | men (| n Ø | H-S | 1. | Stinat | | $ \psi $ | Dai 7 |
| | | | | | | | | MARY (| 111 | UNIC | 1 100 | MINA | J | 17/1 | (|

| | | | | | UT C | alibratio | r i | ninatio | n | | • | | | | |
|--------------------------|---------------|------------------|------------|--------------------|---------------|---------------------|--------------|---|--------------|-------------|------------|---|-------------------|---------------|----------------|
| (– E De | | Site/Unit: | Oconee | ·/ | 1 | • | Proc | edure: | | PDI-UT-2 | | | Outage I | No.: | 01-28 |
| | Summ | ary No.: | 01 | 1.C5.21.0006 | | | Procedure | Rev.: | | E | · * ···· | · | Report I | No.: 1 | IT-11-674 |
| | Wa | rkscope: _ | · · · | 151 | | - | Work Ord | er No.: | . | 01909573 | | | Pa | ige: 2. | of 9 |
| Code: | | 1998/2 | ADDA | | Cat./i | tem: | C-F-1/C5 | 21 | ~ | Location: | | | | | |
| Drawing No:: | | 111 | P-192 | | | Description: | Pipe to Fi | ange Orifice | | | | | | | |
| System ID: | 51A | | | ~ | | | | | | | | | | | |
| Component ID: | 1HP-192-15 | | | | <u>.</u> | | | | Size/ | .ength: | N/A | | Thickness/Dia | uneter: O | .531 / 4.0/ SS |
| Limitations: | . Yos - Son A | ttachad Sh | eets | | | | | | | Start | Time: | ,1305 | Finisl | n Time: 🗂 | 1344 |
| | • Instrumer | nt Settings | | | Sez | urch Unit | | Cal. | Time | Date | | Axiai | Orientated S | earch Unit | |
| Serial No.: | | 00X14L | | Serial No.: | · | SB0453 | : | Checks | | | Callb | ration | Signal | Sweep | Sound Pat |
| Manufacturer: | <u> </u> | RAUTKRA | | Manufactu | | GE | | Initial Cel | 0933 | _ 2/1/2011 | | | mplitude % | Division | |
| Model: Delour | 7.4500 | USN-60 Range: | <u> </u> | Size: | .25 | | Round | Inter. Cal. | 1304 | · 2/1/2011 | Note | h Tip | 80 | 4 | .855 |
| Delay: M'il Cal/Vel: | .1229 | Pulser: | High | Freq.: 2 | | Style: C | | Inter, Cal. | | | | | | <u> </u> | · |
| Damping: | 1K | Reject: | 0% | Exam Angl Mode: | - <u>- 60</u> | # or cleme Shear | nts: Single | Final Cal | 1437. | 2/1/2011 | <u> </u> | | | | ╉┅╍╍┊ |
| | Autohigh | Freq.: | 2.25 MHz | Measured / | Angle: | 60 | | , | Couplar | it . | · · · | | | | |
| Filter: | Fixed | Mode: | PE | Wedge Sty | | MSWQC | | Cal. Batch: | - | 9325 | i i | Circumfere | antial Orienta | ted Search | Unit |
| Voltage: | Fixed | Other: | Fullwave | | " | | | Туре: | ULTRA | GEL II | Calib | ation | Signal | Sweep | 6 |
| x. Gain (dB): | 58.4 | Circ. Gain (| dB): N/A | | Search | Unit Cable | | Mfg.: | SONO | TECH | Refit | sctor A | mplitude % | Division | Sound Pati |
| 1 Screen Div | v.≖ <u>.2</u> | in. of | Sound Path | Туре: | | RG - 174 | | Exam Batch | ר. וי | 09325 | <u>N</u> | A . | | | |
| Inearity Report i | No.: | L-11- | 131 | Longth: | 6 1 | No. Conn.: | 0 | Туре: | ULTRA | | · | | | | |
| | Calibratic | n Block | | | 8¢an I | Coverage | | Mfg.; | SONO | TECH | | | | | |
| Cal. Block No. | | 40408 | | Upstream 🙀 | j Downst | ream 🔲 Scan | dB: 58.4 | Paía | rence B | lock | | Refe | rence/Simula | tor Block | |
| | .631 | Dia.: | 4 | CW [|) (| CCW 🔲 Scan | dB: N/A | Serial No.: | | 09325 | Gain | | Signal | Sweep | Sound Pail |
| Cal. Bik. Temp. | 72 Temp. | Tool: N | ICNDE40129 | Exam Surfa | ce: | 0.0. | | Тура: | Rom | | dB 44.3 | Reflector | | Division 5 | |
| Comp. Temp. | 76 Temp. | Tool: N | ICNDE40129 | Surface Cor | ndition: | As Grou | nd | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | . 44.3 | 3" Madius | <u> </u> | | |
| tecordable Indi | ication(s): | Yes 🖓 | No 🗌 | (if Yes, Ref. A | uteched U | trasonic Indica | tion Report. |) | | | | | | | |
| Results: A | Accept | Reject | | Info 📋 | | | | | Con | nments: N/A | | | | - | |
| Percent Of Cover | rage Obtained | > 90%: | No | Reviewed F | revious D | ata: Ye | | | | <u>.</u> | | | | | |
| Examiner Ransom, Greg | Level ()-) | M | , Am | Signature | | Da 2/1/201 | | ver | | | R | Signati | ine | | Dete |
| Examiner | Level (1.) | _ lette | <u> </u> | Signature | | Da | | iview" | <u> </u> | | | Signatu | | | Date |
| Day, John, C. | | • - | AN | | | 2/1/201 | | | A C | ł | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | | ~ u.0 |
| Dther | Level N/ | | | Signature | | Da | ANII R | pview | ······ | <u> </u> | 0 | Signatu | ^{ire} Л. | . 1 | , Oate |
| NIA | | | | • | | | A |) onen | - C | Kite | tu . | Hore | the | 4/1 | 11 |
| | | | | | | | | 0 | | · | | (| 2 | 614 | CAMENI |
| | | | | | | | | | | | ۱. | | | PAGE | 65 OF |
| | | | | | | | | | | | | | | | ~> •'/ |

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|------------------------|-------------------------------------|-------------------|---------------------------------|---------------------------------------|----------------------|-------------------|--------------|-------------|-------------|---------------------|-----------------|-----------------------|-------------------|---------------|
| | ×e | | | U | Calibratic | on | minatic | n | | | | | | |
| | argy. | Site/Unit: | Oconee | 1 1 | <u>.</u> | Proi | edure: | | PDI-UT-2 | | • | Outage | No.: | 01-26 |
| | Sum | mary No.: | 01 | .C5.21.0008 | | Procedun | Rev.: | | E | | | Report | No.: U | T-11-874 |
| | W | orkscope: | | 181 | | Work Ord | er No.: | | 01909573 | | · | P | ego: 3 | of 9 |
| Code: | ر میرین باری ۲۰ بینید اول بارد. | 1998/2 | 000A | | Cst/item: | C-F-1/C3 | 21 | | Location: | | | - <u></u> | | |
| Drawing No.: | _ | · | P-192 | · · · · · · · · · · · · · · · · · · · | Description: | Pipe to Fé | anga Orlfice | | | م بند مه | | · | | |
| System ID: | 51A | | | | | | | | | | | | | |
| Component ID | : 1HP-192-1 | 6 | المتراجع المراجع والشاعة أكرانا | | | | | Sizel | Longih: | N/A | | Thickness/Di | ameter: Q | 531 / 4.0/ 81 |
| Limitations: | Yes - See | Attached Sh | loots | | | | | | | Time: | 1286 | Finis | h Time: 🗕 | 1302 |
| | Instrume | nt Settings | | | Search Unit | | Cal | r | J | | | | | |
| Serial No.: | | 00X141 | | Sedal No.: | 10-1208 | • • | Chacka | These | Date | Collit | Axia aration | Orientated S | Sweep | ÷, |
| Manufacturer: | | KRAUTKRA | MER | Manufacturer: | RTD | | Initial Cal | 1014 | 2/1/2011 | | | Signa) Amplitude % | Division | Sound Pat |
| Model: | | USN-6 | | 8ize:(7X10) | 1/4L_ Shape: | Roch | Inter. Cal. | | | 3/4 | 6DH | 80 | 3.9 | 1.174 |
| Dalay: | 6.4831 | Range: | 3 | Freq.: 2.0 M | | TRL 2 | Inter, Cal. | 1234 | 2/1/2011 | | | | | |
| Mil CalVel: | .2302 1K | Pulser: Reject | High 0% | Exam Angle: | | ents: <u>Dual</u> | Final Cal | 1435 | 2/1/2011 | <u> </u> | <u> </u> | | , | - <u> </u> |
| Damping: Rep. Rete: | Autohigh | Freq.: | 2 MHz | Mode: Measured Angle | Long. : 70 | | | Couplar | ÷ | ┟┈┷ | | | | + |
| Filler: | Fixed | Mode: | Dual | Wedge Style: | integral | | Cal. Batch: | • | 09325 | | Clicumter | ential Orienta | tod Search | Unit |
| Voltage: | Fixed | Other: | Fullwave | | thread and | | Type: | ULTRA | | h | nation | Signel | Sweep | 1 |
| Ax. Gain (dB): | 59.6 | Circ. Gain | (dB): N/A | \$0 | arch Unit Cable | | Mfg.: | SONO | TECH | | | Amplitude % | Division | Sound Pal |
| 1 Screen D | iv. =3 | in. of | Bound Path | Туре: | RG - 174 | | Exem Batch |): | 00325 | <u> </u> | <u>×</u> ; | | | |
| inearity Report | No.: | L-11- | 131 | Length: 6' | No. Conn.: | 0 . | Туре: | ULTRA | GEL II | | | | | |
| | Calibrati | on Block | | S | can Coverage | | Mfg.: | SONO | TECH | <u> </u> | | | | <u> </u> |
| Cal. Block No. | | 40406 | | Upstream 🖌 Do | wnstream 📋 Scan | dB: <u>59.6</u> | Refe | rence B | lock | | Refe | rencolSimula | tor Block | |
| hickness | .531 | Dia.: | 4 | cw 🗋 | CCW 🗌 Scan | dB: N/A | Sarial No.: | | | Gain | | Signal | Sweep Division | Sound Pat |
| al. Bik. Temp. | 72 Temp. | Tool: | ACNDE40129 | Exam Surface: | .م.ە | | Туре: | Rom | | dB 46.6 | Reflector | | 3.4 | 1" |
| Comp. Temp. | Temp. | Tool: | CNDE40129 | Surface Condition | h: As Grau | ind | | | | | | 1 | | |
| Recordable Ind | lication(s): | Yes [|] No [2] | (Il Yes, Rel. Allach | ed Ultrasonic Indica | tion Report. |) | | | | | 1 | | |
| Resulis: | Accept | Reject | | Info 📋 | - | | | Con | nmenta: N/A | • | | | | |
| ercent Of Cove | arage Oblaine | d > 90%: | No | Reviewed Previo | us Data: Y | 88 | | | | | | | | |
| Examiner | Lovel IL | N h | | Signature | Da | to Review | ACT. | | | | Signet | цтр | | Date |
| tansam, Grog | | Lier | Ran | - | 2/1/20 | 11 | | 2 | 97 | e de | K - | | 2/ | 1/2011 |
| Examiner | Loval (). | | A | Signature | Da 2/1/201 | | N welv | A | | | Signati | 410 | | Date |
| Jey, John, C. Juher | Lovol N | A | 70 | Similuro | 21120 Da | | | | | | Signati | ine // | | Data |
| N/Å | MALAN KI | ~ | | | | | None | استنا | ont. | LI- | You | Stu | 410 | 111 |
| | | | | | | | X V Y YY | 19-1-S | - unin | | 0 | | -4-7/ | |

ATTACHMENT A PAGE 68 OF 162

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|-----------------------------|----------------|---|------------------------|-------------------------|-----------|
| D | UKE POWF | ER COMPANY | • | | <u> </u> |
| | ISI LIMITAT | TION REPORT | · · · · · | | |
| Component/Weld ID: 1HP-192- | 15 Ite | om No: 01.C5.21.0006 | | remarks: | |
| NO SCAN | SURFACE | BEAM DIRECTI | NC | Pipe to flange orifice | |
| 📋 LIMITED SCAN | ⊠ 1 □ 2 | 🗌 1 🛛 2 🖾 c | w 🖾 ccw | configuration. | |
| FROM L N/A to L N/A | INCHI | ES FROM WO <u>CL</u> to | Beyond | | |
| ANGLE: 🗍 0 🛛 45 🖾 60 | other | FROM 0 DEG to | <u>360</u> DEG | ал 1. 1. | |
| NO SCAN | | | | | |
| LIMITED SCAN | 1 2 | 1 1 2 1 c | w 🗌 ccw | | |
| FROM L to L | INCHE | ES FROM W0 to | · | | |
| ANGLE: 0 45 60 | | | | · · · · · · · · · | · |
| NO SCAN | SURFACE | BEAM DIRECTIO | DN | 3 | |
| LIMITED SCAN | 1 2 | 🗍 1 🗌 2 🔲 ci | v 🔲 ccw | | |
| FROM L to L | | ES FROM WO to | والمتحدث والتحميم والم | | |
| ANGLE: 0 0 45 60 | | | • • | a . | . <u></u> |
| NO SCAN | | | | | · |
| LIMITED SCAN | | 🗌 1 🗌 2 🗌 cv | v 🔲 ccw | UT-10-674 | |
| FROM L to L | INCHE | S FROM WO to | | Sketch(s) attach | ed |
| ANGLE: 0 0 45 60 | other | FROM DEG to | DEG | 🛛 yes | 🗋 No |
| Prepared By: Gregory Ransom | a Ram Level: 1 | II Date: 02/01/11 | Shee | t <u>4 of 9</u> | |
| Reviewed By: | Date: 21 | 1/2011 Authorized Insp Authorized Insp | ector: Retel | at Slight Date | ž/4/11 |
| | | \mathcal{O} | • • • • • | | ATTACHMEN |
| | | · | | | PAGE 670 |



| Denney. | | Suppleme | al Report | Report No.: Page: | |
|---|--------------------------|---|--------------|------------------------|--|
| Examiner: <u>Da</u> Other: <u>N/</u> | insom, Greg J. Man Ramor | Level: <u>II-N</u> Level: <u>II-N</u> Level: <u>N/A</u> | Reviewer: | Un z A. teta Stafta | Date: <u>2//2000</u> Date: Date: <u>4/4/11</u> |
| Comments: Sketch or Photo: | <u>PIPE (52)</u> | | | FLANGE | (sı) |
| | | | 45°C | · | |
| | - <u>-</u> • | | | NO SLA | 77//7 |
| | | | | <u>_</u> | ATTACHMENT A Page 69 OF 162 |

| Participe. | Suppleme | Report | Report No.: <u>U'I-11-874</u> Page: <u>7</u> of 9 |
|--|---|--|---|
| Summary No.: 01.C5.21.0006 Examiner: Ransom, Greg J. Examiner: Day, John, C. Other: N/A | Level: II-N Level: II-N Level: II-N Level: N/A | Reviewer: Site Review: Nony Chita | Date: 21/2011 Date: 1/4/11 Date: 1/4/11 |
| Comments: Weld 1 HP-192-15 Indication #1 was dete | rmined to be a geometric reflector due to I.D | veld root geometry. This was determine | d using higher angles and ploting. |
| PIPE (\$ | Z) | | FLANGE(SI) |
| | 60°SHEAF | £ | •. • |
| مىمىرىنىدە ئىيەتىلە مەمەرمى ، | | | |
| · · · · · · · · · · · · · · · · · · · | Bian Roop | 207 | |
| | | | |
| | • | 14 14 | |
| Additional - Supplemental Reports <edit from="" setup=""> </edit> | · · · · · · · · · · · · · · · · · · · | | ATTACHMENT A PAGE DO OF 162 |
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| | | | | nations - Pipe | | • |
|---|--|---|-------------------------------------|--|-----------------|--|
| Site/Unit: Oc | onee / | t | Procedure | e:PDI-UT-2 | Outage No.: | :01-28 |
| nmaiy No:: | 01.05.21.0 | 0006 | Procedure Rev | /:: <u> </u> | Report No. | : <u>UT-11-674</u> |
| /orkscope: | 1SI | | Work Order No | o.: 01909573 | Page | : <u>8</u> of <u>9</u> |
| <u>45 deg</u> | | | | | | |
| <u>49 090</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 | _ | 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 dea</u> The data to | | - | supplemental so that was not obt | | | |
| The data to | be listed below | w is for coverage | that was not obt | ained with the 45 deg scans. | 0.000 | % total for Scan 1 |
| | be listed below | - | | | 0.000 50.000 | % total for Scan 1 % total for Scan 2 |
| The data to Scan 1 Scan 2 | 100.000 | w is for coverage | 0.000 50.000 | alned with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = | 50.000 | % total for Scan 2 |
| The data to Scan 1 Scan 2 Scan 3 | 100.000 | w is for coverage % Length X % Length X % Length X | that was not obt | almed with the 45 deg scans. % volume of length / 100 = | 50.000 | % total for Scan 2 |
| The data to Scan 1 Scan 2 Scan 3 Scan 4 Percent co Add totals | o be listed below 100.000 100.000 omplete cover for each scan of | w is for coverage % Length X % Length X % Length X % Length X | 0.000 50.000 | ained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = | 50.000 | % total for Scan 2 |

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| | | Site/Un ummary No Workscop | _ | | / .C5.21.0 [8] | 1 | | Proce | dure Re | re: v.: o.: | 1 | É | | Outage No.: _ Report No.: _ Page: _ | 01-26 UT-11-67/ 9 of | 49 |
|------------------------|--------------------------------------|--|---|-----------|----------------------|--------------|-----------|--------------|------------------|----------------------------------|-----------|---------|----------|---|----------------------------|------------------------------|
| Sea 'I MP RBR | Wo Loca Lo Loca Metal Remai | ation: ation: Path Ining Back ce From Di | 9.1.1 Reflection | .1 | • | D | istance l | 0 F | o To S.U A At | issels ≥ . At Maxin Ol | | inward) | | | Wo CL | Wmax W1 W2 DATUM Lo |
| Com | ments: i | % | 1 | w | · · | bráw | | ward | | · L | | RBR | i | | amarks | J D D V1 Witness W2 |
| Angle | No. | Of DAC | W | Max MP | Wt | Of Max MP | W2 | Max MP | Of Max | Max | OI Max | Amp. | | | | |
| 1 | 1 | 100 | .9 | 1,092 | NIA | N/A | Ň/A | N/A | NA | 360* | N/À | N/A' | Geometry | • | | |
| | | | | | | | | | | | | | | | | |
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| | | | | | · | | | | | | | | | , | | |
| | Level Greg J. | 14 | ing | then | Signature | | | 2/1/20 | | A | | L. | let. | , Signatur | | d/ilen |
| miner , John | Level C. | u-n | 2 | AL. | Ngnature | 1 | | Da 2/1/20 | ato Site 11 | Review | 2 | 4 | | Signature | 8 | Date |
| ər | Level | N/A | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | E | Ignature | | | D | ate ANII | Review | . 0 | 1- | 14 | ouffinitum | · Milin | Date |

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| . O lhe | | | | | ationxa | | 211 | | | | | | |
|--|------------------------------|--|-----------------------------------|--|--|-------------|----------|----------------|------------|------------|-----------------------|---------------------------------------|-----------------|
| | Summary No.: | Ocones | / 1 C6.21.0024 | | | cedure: | | PDHIT-2 | | | Outage I | Sector Street | 01-26 |
| | Workscope: | | ISI | b , | Procedu Work On | | <u> </u> | E- 01909579 | | ÷ | Report I Pa | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | of B |
| Code: | 1998/2 | DODA | | Cet/item: | C-F-1/C | | | Location: | | | | | |
| Drawing No.: | | i1A-Q1(8) | | - | ption: Pipe to V | | | | | | | | |
| System ID: | 61A | | | | • | | | | | | | | |
| component (D: | 1-51A-01-91A | | | | | ÷ | SizeA | ength: | N/A | | Thickness/Dia | meter: 0. | .531 / 4.0 / 85 |
| imitations: | Yes - See attached sh | ieșt | | | | ······ | | Start | Time; | 1001 | Finist | n Time: | 1021 |
| ي بي المركز المركز المركز بي المركز ا | Instrument Settings | | | Search Uni | ł | Cai, | 1 | | | Avia | Orlentated S | asorb Holi | |
| ierial No.: | 00X14 | the second s | Serial No.: | | 263 | Chacks | Time | Dete | Callb | ration | Signal | Sweep | - 1. |
| Vauntactorer: | KRAUTKR | | Manufacturer: | | (BA | Initiai Cal | . 0800 | 2/9/2011 | | | Amplitude % | Division | Sound Path |
| Aodei: Jolay: | 4.0688 Range: | 2 | | 25 Shap | the state of the s | inter. Cal. | 1000 | 2/9/2011 | H GI | etch | <u> </u> | 3.4 | .676 |
| A'll Cal/Vel: | .1224 Pulser: | High | Freq.: <u>2.26</u> Exam Angle; | | e: Comp - G Elements: Singl | - Vata Out | | | <u> </u> | <u></u> י | | | ┿╼╼╼ |
| amping: | 1K Reject: | 0% | Mode: | Shet | | Final Cal | 1200 | 2/9/2011 | <u>├</u> | ╶╌┶╍╌┥┙ | | | + |
| ep. Rate: / | utohigh Freq.: | 2.25 MHz | Measured Ang | | 45 | - | Couplan | it . | , | | | | 1 |
| lier: | Fixed Mode: | PE. | Wedge Style: | | WQC | Cal. Batch: | (| 9326 | | Circumfer | entiai Orlenta | ted Bearch |) Unit |
| oltage: | Fixed Other: | Fullwave | - | - | _ | Type: | ULTRA | | Callb | | Signal | Sweep | Sound Path |
| x. Gain (dB): | ···· | (dB): . 46.7 | | Bearch Unit Ca | | Mig.: | SONO | TECH. | Refi | | 80 | Division 4.3 | - |
| 1_Screen Div | | Sound Path | Type: Length:6 | RG - 1 No. Cons | | Exam Batch | | 09325 | ID N | oten | | 4.3 | 854 |
| nearly Report | No.:L-11 | -131 | | | | . Type: | ULTRA | | | | | | 1 |
| -1.011-11- | Calibration Block | | Hastroom (***) | Scan Coverag | | Mfg.: | SONO | IECH | | | | - | <u> </u> |
| al, Block No. | | | | | Scan dB: 40.6 | - Refe | rence B | lock | | Refe | rence/Simula | | |
| | .531 Dia.; 72 Temp. Tool: | يشفدونين والمنبي والمنبية المنبية الكراب | | CONN | Scan dB: 51.7 | Serial No.: | | -6590 | Gain dB | Reflector | Signal Amplitude % | Sweep Division | Sound Path |
| | 78 Temp. Tool: | يناف المتجاذب المتحد بالمتحد المتحد الم | Exam Surface: Surface Conditi | | O.D. s Ground | - Type: | ROM | PAS . | 27.1 | 1" Radius | 80 | 5 | 1* |
| ecordable indi | | | (If Yes, Ref. Alla | Contraction of the local division of the loc | | • f.1 | | , | | <u> </u> - | <u></u> | | <u> </u> |
| | vccept [] Reject | | • | | there are a section of the section o | ., | 0 | | | - <u>-</u> | | L | L |
| | | 1221 V | nto 🔲 | • | | | Con | nmonts: N/A | • | | | | |
| | age Obtained > 80%: | No | Reviewed Prev | Nous Data: | Yes | | -1 | | | | | و الشار | |
| baminer Inv. John C | Lovel II-N | A | incature | | Data Revis | - N VIC | Π | | | Signat | urə. | 4.8 | Date |
| ay, John, C. | Lovel (j-N | | ilganuro: | | Date Site F | | | 201 | | Signati | | 1-1 | Date |
| ansom, Greg . | | Dink | | · • | 29/2011 | AC | | | | adaran | ща | | L/200 · |
| ther | Level N/A | | Ignature | | | | | | | /Signati | Lie | | Date |
| i/A | | | | | NA | mey C | Ro | thel-S | land | Stonati | " 4/1 | 9/11 | |

. . .

| CO Ene | Site Site | e/Unit: | Oconee | 1 | | F | rocedure: | | PDI-UT-2 | | · | Outage | No.: | 01-26 |
|-------------------------|--|---------------|----------------|---------------------|--|------------------------------|------------------|----------|-------------|------------|-------------------|--|---------------------|----------------|
| | Summai | ry No.: | 01 | .C5.21.0024 | | Proce | iure Rev.: | | E | | ا م یب | Report | No.: U | T-11-878 |
| | Works | scope: | | 161 | | Wark | Jrider No.: | | 01809579 | - | | P | age: 2 | of 6 |
| Code: | | 1998/20 | DQA | | Cat./Item: | C-F-1/ | C5.21 | | Location: | | | ····· | | • |
| Drawing No.: | | 1-51 | A-01(3) | | Descript | ion: Pipe to | Valve 1HP-12 | 8 | ···· | | | | | |
| System ID: | 51A | | ····· | | | | | | ~ | | | | | |
| Component ID: | 1-51A-01-91A | · . | | | | | | Size/i | Length: | N/A | | Thicknes#/Di | ametor; 0. | 531 / 4.0 / 85 |
| .Imitations: 1 | Yes - See Alt | acted She | ols | | | ····· | | | Start | Time: | 1023 | - Finis | h Thne: | 1043 |
| | instrument | Settings | | | Search Unit | میں میں بنی 10 میں ایک میں ا | Cal. | Time | Dato | | Axiai | Orientated E | Search Unit | |
| Serial No.: | | 00X14L | | Serial No.: | the second s | _ | Checks | + | | | nation | Signal | Sweep | Sound Path |
| Manufacturer: Model: | <u> </u> | USN-60 | | Manufaoturer; | | | inilial Cal | | 2/9/2011 | Roff | | mpillude % | Division | |
| olay: | 5.4262 R | lange: | .2 | Size:2 | | Round Comp - G | | - | 2/9/2011 | 3/4 1 | ври | 80 | 3.7 | .735 |
| Will Cal/Vel: | · . | ulser: | High | Exam Angle: | | lements: Sin | [inter Cal | | | ļ | <u> </u> | ····· | | <u> </u> |
| amping: | 1K R | lojoct: | 0% | Mode: | Shear | | Final Cal | 1205 | 2/9/2011 | | | | | 1 |
| tep, Rate; | Autohigh F | | 2.26 MHz | Measured Angl | | 60 | | Couplar | nt | | | | | 1 |
| Bier: | Fixed M | lode: | PE | Wedge Style: | | AC . | Cal. Batch | : | 09325 | | Circumfore | ntial Orlent | sted Search | Unlt |
| oitage: | | ther: | Fullwave | - | | | Type: | ULTRA | GEL II | Callbr | | Signal | Sweep | Sound Path |
| x. Gain (dB): | ······································ | - | B): <u>NIA</u> | | earch Unit Cab | e | Mfg.: | SONO | TECH | Rofi | | mplitude % | Division | · |
| 1 Screen Di | lv. = <u>.2</u> la | n. of | Bound Path | Туре: | RG - 17 | | Exam Bat | ch: | 09325 | <u> </u> | <u> </u> | | | ·f· |
| Inearly Report | No.: | L-11-1 | 31 | Langün: 6 | No, Conn. | | — Туре: | ULTRA | GEL (I | - | | | | ╬╌╌╍┶ |
| | Calibration | Block | | | Scan Coverage | , | Mfg.: | BONO | TECH | | | | | |
| al. Block No. | | 40406 | | Upstream 💟 D | | | | arence B | liock | | Refe | rence/Simul | ator Block | |
| hickness | .531 D |)la.: | 4 | cw 🗆 | ccw 🖂 : | Scan dB: N | A Seriel No.: | 9 | 7-5590 | Gain dB | Paflorior | Signal Amplitude | Sweep & Division | Sound Path |
| al. Bik. Temp. | 72 Temp. To | od: <u>M</u> | CNDE40129 | Exam Surface: | | <u>D.</u> | Туре: | ROM | IPA8 | 29.3 | 1" Radius | the second s | 6 | 1" |
| omp. Temp. | Temp, To | 201: <u>M</u> | CNDE40129 | Surface Condition | | | سببه، ۲۰۰ تست | | | | | | 1 | |
| ecordable Ind | ication(s): | Yes 🗌 | No 🖌 | (If Yes, Ref. Attac | hed Ultrasonic li | dication Rej | ort.) | | | | | 1 | | |
| osulis: | Accept | Reject | 2 | talo 🔲 | | : | | Col | mments: N/A | • | | | | |
| ercent Of Cove | mage Obtained > | 90%: | No | Reviewed Prev | ious Data; | Yes . | | đ | • | | | | | |
| Licembrar | Level (1-N | | | Gignajure | | Date Re | viewer /> | - , - | ``, | | Signatu | 100 | | Date |
| Day, John, C. | - ···. | | 41 | KD7 | 24 | 9/2011 | XE | 4 | Inal | | | | ų. | 8.11 |
| vaniner | Lovel II-N | | | Skinalu | | Date Sit | s Review | No. | | • | Signatu | tre | | Date |
| lansom, Greg | | | <u></u> | from | 2/ | 9/2011 | | | | | | | | |
| Dither | Lovol N/A | | | Signature | | Date AN | A Review | 1- | the C | 1. 1 | Signatu | uo' | 4/19/ | Date |
| VA | | | | | | 1 / 1 | may C | 111 | thest | ouge | tu - | | 1111 | 41 |

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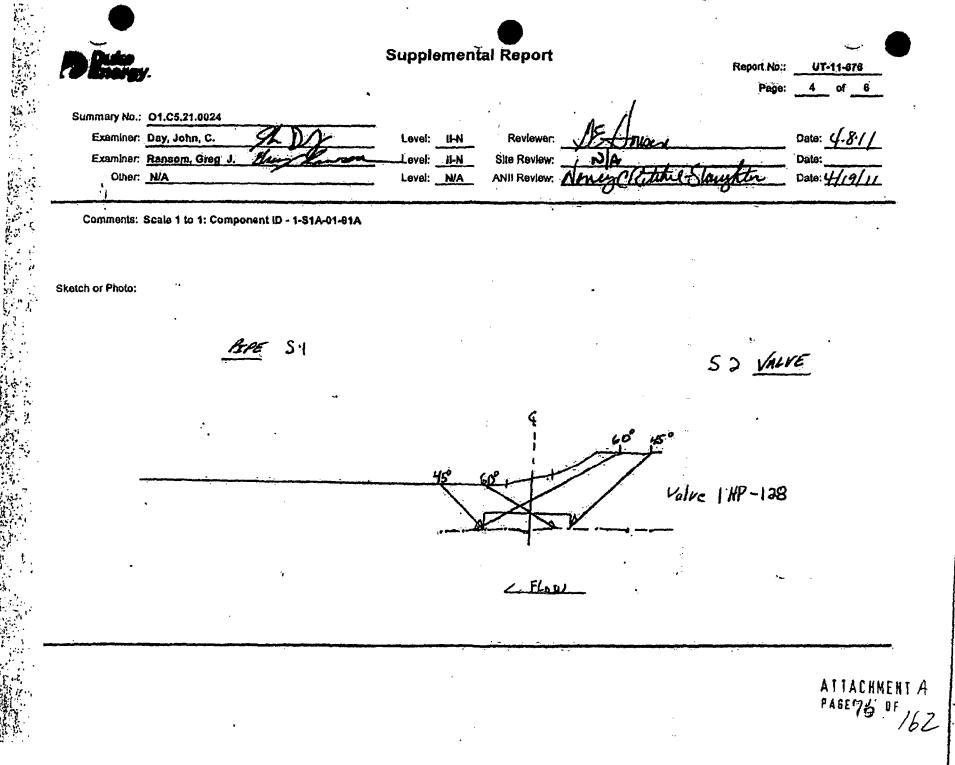
1 0.052

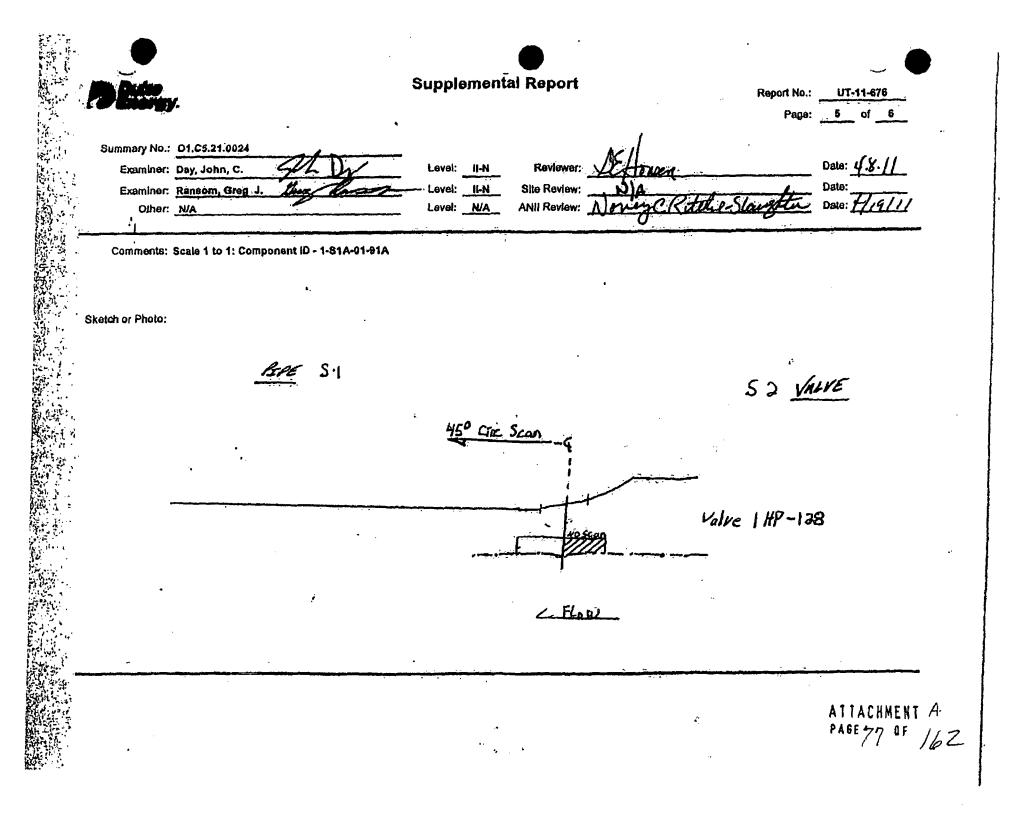
| D | UKE POWE | R COMPANY | | | |
|-----------------------------|---------------|---|----------------|------------------|----------|
| | ISI LIMÌTAT | ION REPORT | | | |
| Component/Weld ID: 1-51A-01 | -91A lte | m No: 01.C5.21.0024 | · · | remarks: | |
| 🖾 NO SCAN | SURFACE | BEAM DIRECTIO |)N | Due to component | |
| , LIMITED SCAN | | □ 1 □ 2 ⊠ ci | v 🛛 ccw | configuration. | |
| FROM L N/A to L N/A | INCHES I | ROM WO CL to | Beyond | | |
| ANGLE: 0 0 45 60 | other | FROM 0 DEG to | <u>360</u> DEG | | |
| NO SCAN | SURFACE | BEAM DIRECTIC |)N | | |
| LIMITED SCAN | 1 2 | | v 🗌 ccw | | |
| FROM L to L | | NOM WO to | : | | <u>.</u> |
| ANGLE: 0 0 45 60 | | | | | |
| NO SCAN | SURFACE | BEAM DIRECTIC | N | | |
| LIMITED SCAN | □1□2 | 1 2 C cv | / 🗌 ccw | | |
| FROM L to L | INCHES FR | OM W0 to | | 44 | |
| ANGLE: 0 0 45 0 60 | other | FROM DEG to | DEG | | |
| NO SCAN | SURFACE | BEAM DIRECTIO | N | | |
| LIMITED SCAN | 1 2 | | ccw | UT-11-876 | • |
| ROM L to L | INCHES FR | OM WÖ to | · | Sketch(s) atta | ched |
| NGLE: 0 0 5 0 60 | other | | | _ | |
| Prepared By: John Day | I DA Level: 1 | Date: 02/09/11 8.11 Authorized insp | Shee | t <u>3 of 6</u> | |

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ATTACHMENTA PAGE 75 OF 162





| | k | | | Percent Coverage inations - Pipe | for | | |
|---|--|---|---------------------------------------|---|------------|--|--------------|
| Site/Unit: | Ocones / | 1 | Procedu | ire: PDI-UT-2 | Outage No. | : 01-26 | 2989 PAGE |
| Summary No.: | 01.65.21. | .0024 | Procedure Re | av.: <u>E</u> | Report No. | : UT-11-678 | |
| Workscope: | <u>ISI</u> | | Work Order N | io.: 01909579 | - Page | <u>6</u> of <u>6</u> | |
| 48 da a | | | | | | | |
| <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 | ميسيبالينين الفاسيدي كاليها المتعر | % 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 de</u> The data | | (to be used for a | | - | | • | |
| <u>Other de</u> The data Scan 1 | a to be listed below | w is for coverage i | that was not ob | tained with the 45 deg scans. | 100.000 | _ % total for Scan 1 | |
| Other de The data Scan 1 Scan 2 | a to be listed below 1100.000 | w is for coverage i % Length X % Length X | 100.000 100.000 | tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = | 100.000 | | |
| Other de The data Scan 1 Scan 2 Scan 3 | a to be listed below <u>100.000</u> <u>100.000</u> | w is for coverage i % Length X % Length X % Length X | 100.000 100.000 | tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = | 100.000 | % total for Scan 2 | |
| Other de The data Scan 1 Scan 2 | a to be listed below <u>100.000</u> <u>100.000</u> | w is for coverage i % Length X % Length X | 100.000 100.000 | tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = | 100.000 | | |
| Other de The data Scan 1 Scan 2 Scan 3 Scan 4 | a to be listed below <u>100.000</u> <u>100.000</u> | w is for coverage i % Length X % Length X % Length X % Length X | 100.000 100.000 | tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = | 100.000 | % total for Scan 2 | |
| Other de The data Scan 1 Scan 2 Scan 3 Scan 4 Percent | a to be listed below 1 | w is for coverage i % Length X % Length X % Length X % Length X | that was not ob 100.900 100.000 | tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = | 100.000 | % total for Scan 2 | |
| Other de The data Scan 1 Scan 2 Scan 3 Scan 4 Percent | to be listed below <u>100.000</u> <u>100.000</u> <u>100.000</u> <u>100.000</u> <u>100.000</u> <u>100.000</u> | w is for coverage i % Length X % Length X % Length X % Length X | that was not ob 100.900 100.000 | tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = | 100.000 | % total for Scan 2 | |
| Other de The data Scan 1 Scan 2 Scan 3 Scan 4 Percent Add tota 75.000 | to be listed below <u>100.000</u> <u>100.000</u> <u>100.000</u> <u>100.000</u> <u>100.000</u> <u>100.000</u> | w is for coverage i % Length X % Length X % Length X % Length X % Length X % Length X | that was not ob 100.900 100.000 | tained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = | 100.000 | % total for Scan 2 % total for Scan 3 % total for Scan 4 | |

2.1

| | | • | • U | T Calibrati | or . | hinatio | n | | | | | | |
|------------------------------|-----------------------------|---|------------------------------|-----------------------------|--------------|-----------------------|-------------|---|----------|-----------------|-----------------------|-------------------|--------------|
| | Slie/Uni | lt: Ocones | | | - | edure: | | PD1-UT-2 | | | Outage | · Na.: | 01-26 |
| | Summary No | | .C5.21.0041 | | Procedure | Rev.: | · · · · | 6 | | ⁻ | Report | | JT-11-707 |
| | Workscope | | . 181 | | Work Orde | - | <u> </u> | 01909630 | | . | • | age: 1 | |
| Code: | 19 | 98/2000A | | Cat/item: | C-F-1/08. | 21 | | Location: | | <u> </u> | | | |
| Drawing No.: | | | | | : Tee to Vah | | - 44 | | | | | | |
| ystem ID: | 51A · | | - <u></u> | • | | | | | | | | • | • |
| | 1HP-324-118B | | | · | | | ĨŠĺze/I | ength: | NIA | | Thickness/Di | ameter: | BB/0.375/2.5 |
| mitations: | Yos- See attached | | | ······ | | ····· | | | Time: | 1348 | | ئىت. h Time: | 1405 |
| | | | | | | | | | | | | | |
| | ' Instrument Setti | - | | Search Unit | | Cal. | Time | Date | | Axla | I Orientated | Search Unit | |
| Serial No.: Manufacturer: | | VHDK KRAMER | Serial No.: Manufacturer: | CODBVW KBA | | Checks Initial Cal | 0920 | 3/30/2011 | | ration octor | Signal Amplitude % | 6weep Division | Sound Path |
| lodel: | فأنصحه والمتعاد المصحا | N-60 | Size: 0.2 | الم الاتين المراوي المستري | Round | Inter. Cal. | | | | ototi | 80 | 5.1 | .603 |
| elay: | 3.7058 Range | ₽; 1.0 " | Freg.: 6 M | | Comp - G | Inter, Cal. | 1346 | _3/30/2011 | | | | | |
| AU Cal/Vol: | .1226 Putse | r: <u>High</u> | Exam Angle: | 45: # of Elen | | Inter. Cal. | | | | | | | |
| amping: | 1K Rejec | t:0% | Mode: | SHEAR | ······ | Final Cal | 1625 | 3/30/2011 | | - 1 | | | |
| tep. Rate: | Autohigh Freq.: | 5 MHz | Measured Angl | 9: 43 | | | ouplan | t | ļ | | | | · L |
| liter: | Fixed Mode: | | Wedge Style: | MSWQ | C | Cal. Batch: | · (| 9325 | | Circumfe | rential Ortent | ated Search | h Unit |
| /oltage: | Fixed Other 36.7 Circ. G | Fullwave , Sain (dB); 47.4 | | earch Unit Cable | | Type: Mfg.: | BONO | | Cellb | ration actor | Signal Amplikuda % | Sweep Division | Sound Path |
| y (11) | v. = .1 In. of | | | RG - 174 | | | | المسببة المالي ويرزغ يغانسني | ID N | otch | 80 | 6.0 | .588 |
| | | | | No. Conn.; | 0 | Exam Betch Type: | - | 09325 | | | | | |
| - Mi + | No.: | | | Scan Coverage | | Mfg.; | BONO | and the second se | | | | | |
| an fi | Calibration Blo | | | ownstream 🕢 Sci | andB: 46.7 | | | | <u> </u> | | <u></u> | i . | · |
| hickness | 40 0.375 Dla.; | | CW 🖸 - | CCW 🖌 Sci | an dB: 47.4 | Refe | rence B | | Galn | ikai | srence/8tmul | Sweep | La stan |
| | 74 Temp. Tool: | the second s | | 0.0. | | | | 1-8737 | dB | Reflecto | Amplitude | | Sound Path |
| 3 (An) 1 (A) | 84 Temp. Tool: | | | on: As Gr | | Туре: | ROM | PAS | 36.7 | HD8 | 20 | <u></u> | .980 |
| acordable ind | | es 🗋 No 🐼 | | hed Ultrasonic Indi | |) | | • | | | | | · · · · · |
| tesults: | | alect 🔽 👘 | Info 🔲 | | . می. ۲ | | Cor | nments: PR | F = 2650 | Hz | | | |
| ercent Of Cove | rage Obtained > 909 | 4: <u>No.</u> | Reviewed Previ | ious Data: | Yes | | i | | | | | <u>.</u> | |
| xaminer | Lovel II-N | | Signature | | Date Review | EX EX | | | | Signe | ture 11. | | Date |
| oss, Stoven | · | Starrant. | Signature | 3/30/2 | 1011 | Klet | bus | | | | <u> </u> | <u>4.11</u> | |
| ucker, Stephe | Lovel IIL n.B. | State | Signature | 3/30/2 | | | | (γ) | | Signa | | | Date |
| | Lovel N/A | 7 | Signature | والمستجرب والمستحد والمتحاد | Date ANIL R | | 2 | W | | Signa | ture $4/z$ | z/.11. | Data |
| | | | | | | 0 60 | <u>ب</u> جې | | | | <u>/</u> | ATTAC | HMLNT /1 |
| SP3 TUS | | s | | | | | | | | | | "PAGE 7 | 9 OF 162 |
| A Colle- | • | 1997 - | | | • | | | | | | | 5 | |
| Junit | | | | | | | | | | | | | |

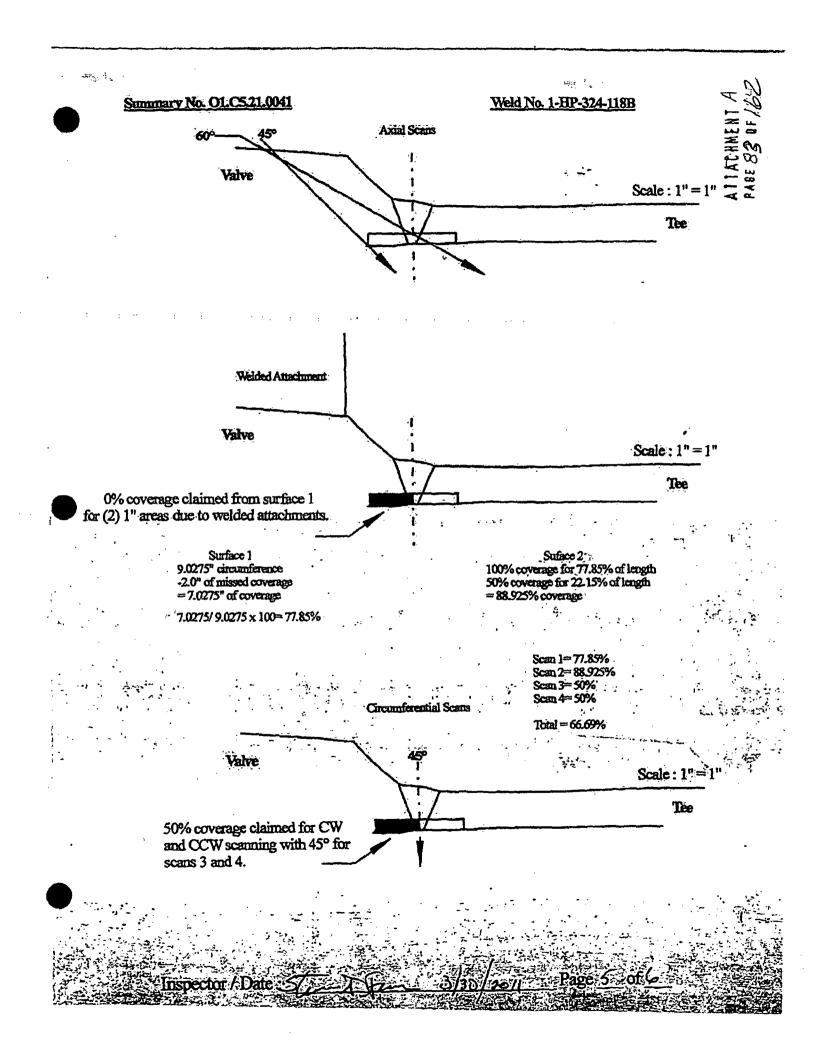
| UT Calibration .am |
|--------------------|
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k_{ai}

| | | | | ۰. | UT (| Calibratio | on .a | linatic | n | | | | | | j: 🔴 |
|----------------------------|--|-------------------|--|---|----------------|-------------------|---------------------|----------------|-------------------------|-----------------------------|-----------------------|------------|-----------------------|-------------------|----------------|
| | | Sita/Unit: | Oconee | <u>t</u> | 1 | | Proc | edure: | . . | PDI-UT-2 | · | | Outage | No.: | 01-28 |
| , cer pr | Summary No.: 01.C5.21.0041 | | 1 Procedure Rev. | | | Rev.: | E | | | | Report No.: UT-11-707 | | | | |
| | W | orkscope: | •••••••••••••••••••••••••••••••••••••• | ' 181 | <u> </u> | | Work Orde | x No.: | | 01909630 | | | P | age: 2 | of 6 |
| Çodē: | | 1998 | V2000A | ميرينينية المتناد ر الخيار عنه. - | Cat | Altern: | C-F-1/C8. | 21 | | Location: | | | | | |
| Drawing No.: | | 1 | IHP-324 | | • | Description: | Tee to Val | ve 1HP-119 | 'interio | | · | | | | |
| System ID: | 51A | | | | | | | | | | | | | | |
| component ID: | 1HP-324-1 | 18B | | | | | | - | Size/I | ength: • | NA | | Thickness/Di | ameter: 8 | 8/0.375/2.5 |
| Imitations: | .Y.e.s | | | : | | | | | | Start | Time: | 1346 | Finis | th Time: | 1405 |
| | 'Instrume | ont Setting |]5 | | 8 | earch Unit | | Carl | 1 | | | | | | |
| erial No.: | | 1000 | - | Serial N | | 01JPCD | : | Cel. Checks | Time | Date | | | Orientated 8 | | · · · · · |
| Aenufacturer: | | KRAUTK | RAMER | Manufac | iturer: | KBA | · | Inital Cel | 1000 | 3/30/2011 | | actor | Signal Amplitude % | Sweep Division | Sound Palh |
| lodel: | | USN | | Size: | .26" | Shape: | Round | Inter. Cal. | | | ID N | oten | 80 | 4:1 | .600 |
| lelay: | 4.895 | Range: | 1.5 | Freq.: | 5 MHz | | Comp-G | Inter. Cal. | 1409 | 3/30/2011 | | | | | |
| I'ti Cal/Vel: | .1250 | Puiser: | High | Exam Ar | ngla: <u>6</u> | | ents: Single | Final Cal | 1622 | 3/30/2011 | ļ | | | · | ÷ |
| emping: | 1K Autohigh | Reject: Freq.: | 0% 5 MHz | Mode: | d Anneles | Shear | | | Couplan | المانا فانبع فتعبق والمتعمل | | | | | + |
| ep. Rate: Iter: | Fixed | Mode: | PE | Measure Wedge S | | 60 MBWQC | <u> </u> | Cal. Batch: | - | | | | ential Orienti | ter Search | L |
| oltage: | Fixed | Other: | Fullwave | | ······ | morrige | | Туре: | ULTRA | المرادة ومناكلة معالي بين | Callb | | Signal | Sweep | T |
| x, Gain (dB): | 48.6 | Circ. Gai | in (dB): N/A | | Searc | h Unit Cable | | Mfg.: | SONO | | Roll | sctor / | Amplitude % | Division | Sound Path |
| Screen Dh | v. a .15 | In. of | Sound Path | Type: | | . RG - 174 | | Exam Batc | h. | 09325 | N | /A. | | | |
| nearity Report | No.: | L-1 | 11-136 | Longth: | 6, | No. Conn.: | 0 | Type: | ULTRA | | <u> </u> | | <u> </u> | | <u> </u> |
| | | ion Block | | | Scar | 1 Coverage | | Mfg.: | SONO | | | | | | - |
| al. Block No. | | | .: | Upstream | Down: | stream 😿 Scar | dB: 54.5 | Pafa | rence S | lock . | | Ref: | rence/Simul | stor Block | L |
| | 0.976 | Dia.: | 2.5 | cw | | CCW Scar | d8: N/A | Serial No.: | د جوراندار ان | -6737 | Gath | 1 | Sional | Sweep | Sound Path |
| 44941 14 1 | the second s | | MCNDE40128 | Exam Su | rface: | 0.0. | | Type: | ROM | | dB 48.5 | 8DH | Amplikude 1 85 | 6 Division 4.1 | .597 |
| omp. Temp. | | | | Surface (| Condition: | As Gro | | | | | | <u>onu</u> | | | 1962 |
| ecordable Indi | cation(s): | A Yes | No 💋 | (If Yes, Rel | . Attached | Ultrasonic Indica | tion Report. |) | | | | | | | |
| isulta: / | Accept | A Reje | ct TA | Info 🗖 | | | | | Cor | nments: PRI | F = 25 32 | Hz | | | |
| rcent Of Cover | | | No | Reviewa | Previous | Data: Y | | | 7 | , | | | | | |
| aminer | Level II | | | Signature | | | ate Review | er 115 | . 1 | | | Signat | nto. | | Date |
| ss, Steven | | | Sterm | X D. | | 3/30/20 | | _X12 | $\sqrt{-10}$ | Unen C | $ \Delta $ | | | <u> </u> | 21.11 |
| käminer ickeit, Stepher | Lavel () | L | A | Signature | | Di | ata Site Re 11 7 | Wew | $\overline{\mathbf{v}}$ | | 77 | Bignat | rila, | | Date |
| icker, Stepher | Level N | | m | Signature | | 2/30/20 Di | | | 10 | $ \rightarrow \downarrow $ | 47 | Olanat | | | |
| ил`, | N | /^ | | | | | | | Œ | SK | Ľ | Signat | | | ZII |
| | | | | • | | | | •. | | - | | | | | CHMENT |
| | | | 2 3 7 - | ·. • • | | | | | | | | | | PA6E | 80 OF /6 |
| 1. A.L. | | | , , | - | | | | | | | | | | | // ™ 🖌 |

| | Site/Unit: | | | | | A | | | | | Outor - | | 04.00 |
|--------------------------|--------------------------------|---------------------|----------------------|--|--|-------------|----------|---------------|------------|-----------|----------------------|-------------|--|
| | Current of the t | | 1 1 | | Proce Procedure I | | | PDI-UT-2 E | | | Outage I Report I | | 01-26 UT-11-707 |
| | Summary No.: Workscope: | | C5.21.0041 | | Work Order | | | 01909630 | - | | • | age: 3 | of |
| | ······ | | | | | | | | | | | | |
| Code: | | 3/2000A | ····· | Cat/Item: | C-F-1/C5.2 | | _ | Location: | | | | <u></u> | |
| Drawing No.: | | 1HP-324 | | Description: | Tee to Valve | e 1HP-119 | | | | | | | ······ |
| System ID: | 51A | | · | | | | | | | | | | |
| Component ID: | 1HP-324-118B | | ····· | | | | Size/L | .ength: | N/A | | Thickness/Dia | ameter: | \$\$/0.375 |
| Limitations: | Yes - See attached | shoots | | | | | | Start | Time: | 1428 | Finisi | h Time: | 1440 |
| | · Instrument Settin | 28 | | Search Unit | | Cal. | Time | Data | - | Axi | el Orlentated S | earch Uni | 1 |
| Serial No.: | 00W | | Serial No.: | \$B0253 | | Checks | | | Callb | ration | Signal | Sweep | Sound |
| Manufacturer: | KRAUTK | | Manufacturer: | KBA | | Initial Cal | 1150 | 3/30/2011 | Ref | ector | Amplitude % | Division | Sound |
| Model: | USN :USN | | Size:2 | and the second s | Round . | Inter, Cal. | 1427 | 3/30/2011 | ID N | lotch | 80 | 3.9 | .7 |
| | 6.6459 (Range: 1226 Pulser: | | | | the second s | Inter. Cal. | | . ere. | | | | | |
| Damping: | 1K Relect: | High 0% | Exam Angle: Mode: | <u>70</u> # of Elem Shear | eurs: <u>Sivilie</u> . | Final Cal | 1819 | 3/30/2011 | | | | | + |
| | utohigh Freq.: | 2.25 MHz | Measured Angle | | | (| Coupian | it | | | | | + |
| Filter: | Fixed Mode: | PE | Wedge Style: | | | Cal. Batch: | (| 09325 | · . | Circumfe | rential Orienta | ted Searci | h Unit |
| Votiage: | Fixed Other: | Fullwave | ~ ~ ~ | <u>, , , , , , , , , , , , , , , , , , , </u> | | Тура: | ULTRA | GEL (I | | ration | Signal | Sweep | Sound |
| Ax. Gain (dB); | 57.9 Circ. Ga | In (dB): <u>N/A</u> | 8 | earch Unit Cable | | Mfg.: | SONO | ТЕСН | Refl | | Amplitude % | Division | |
| 1 Screen Div | . = in. of | Sound Path | Туре: | RG - 174 | | Exam Batch | n | 09325 | <u>N</u> | <u>/A</u> | | · _ · · · · | |
| Linearity Report N | io.: | 11-136 | Langth: <u>6</u> | No. Conn.: | 0 | Тура: | ULTRA | GEL (I | | | | | |
| | Calibration Block | | - 8 | Scan Coverage | | Mfg.: | SONO | TECH | | | | | + |
| Cal. Block No. | 403 | 78 | Upstream 💟 Do | ownstream 💓 Scar | | Refe | rance B | lock | | Rei | lerence/Simula | tor Block | - 1 |
| Thickness 0 | .375 Dia.: | 2.5 | cw | CCW Scar | ndB: N/A | Serial No.: | | 1-8737 | Gain | | Signal | Sweep | Sound |
| Cal. Blk. Temp. | 74 Temp. Tool: | MCNDE40128 | Exam Surface: | <u> </u> | | Туре: | ROM | | dB 52.7 | SDH | or Amplitude % 80 | Division | .72 |
| Comp. Temp. | 84 Temp. Tool: | MCNDE40128 | Surface Conditio | on: As Gro | und | | | | | | | | |
| Recordable India | cation(s): Yes | No 🔽 | (If Yes, Ref. Attac | hed Ultrasonic Indic | ation Report.) | | | | | | | 1 | |
| Results: A | ccept 🗂 🛛 Reje | ict 📝 Ir | nfo 🖂 | | | | Cor | nments: PR | F = 1080 | Hz | | | |
| Parcent Of Cover | age Obtained > 90%: | No | Reviewed Previ | aue Dotor 🛛 🗎 | 63 | | | | | | | | |
| | | | | | | ন | <u> </u> | | | | | | |
| Examiner Foss, Steven | Level II-N | | ignature | 3/30/20 | ate Reviewa | "/)&/ | 1 | • | | Signa | ituro | () | 2 <u>1.71</u> |
| Examiner | Lavel IIL | Stevent s | P | | ate Site Rey | iew / | Jun | | | Signa | tura | | <u>-1.71</u> |
| Tucker, Stephen | | SH | P | 3/30/20 | | | 11 | | | | | | - |
| Other | Level N/A | s | Ignature | D | ate ANII Re | Den / | | ++- | | Signa | ture | | / 0 |

| DUKE POWER COMPANY | |
|---|--------------------------------|
| ISI LIMITATION REPORT | · / |
| Component/Weld ID: 1HP-324-118B Item No: 01.C5.21.0041 | remarks: |
| NO SCAN SURFACE BEAM DIRECTION | Limited due to welded |
| ☑ ↓IMITED SCAN ☑ 1 □ 2 □ 1 ☑ 2 □ cw □ ccw | attachments. |
| FROM L 1.75" to L 2.75" INCHES FROM W0 CL to Beyond | |
| ANGLE: 0 0 45 0 60 other 70 FROM N/A DEG to N/A DEG | |
| NO SCAN SURFACE BEAM DIRECTION | Limited due to welded |
| ☑ LIMITED SCAN ☑ 1 2 1 ☑ 2 cw ccw | attachments. |
| FROM L 6.25 to L 7.25 INCHES FROM WO CL to Beyond | |
| ANGLE: 0 0 45 0 60 other 70 FROM N/A DEG to N/A DEG | |
| NO SCAN | No scan due to valve |
| | configuration. |
| FROM L N/A to L N/A INCHES FROM WO CL to Beyond | · |
| ANGLE 0 45 60 other FROM 0 DEG to 360 DEG | |
| NO SCAN SURFACE BEAM DIRECTION | |
| | UT-11-707 |
| FROM L to L INCHES FROM W0 to | Sketch(s) attached |
| ANGLE: 0 0 45 0 60 other FROM DEG to DEG | yes No |
| | t <u>/4/ of _8</u> Date: // |
| House 4.21.11 Malles | 4/12/11 |
| Reviewed By: 12/0000 Date: 4-2/11 Authorized are sector | ATTACHMENT A |
| | PAGE 82 OF 162 |



| | Determ U | | Examina | | | ATTACHMEN PABESY OF | | | |
|----------------------------|---------------|----------------|-----------------|-------------|----------------------|--|----------------|-------------|--|
| Site/Unit: Oc | ones / | 1 | Рюсе | dure: | PDI-UT-2 | Outage No. | :01 | -26 | |
| Summary No.: | 01.05.21. | 0041 | Procedure Rev.: | | <u> </u> | Report No.: | : <u>UT-1</u> | UT-11-707 | |
| Workscope: | ISI | | Work Orde | r No.: | 01909630 | Page | : 6 0 | nt <u>6</u> | |
| <u>0 den Plana</u> Scan | Ĺ | _% Length X _ | | % volume | e of length / 100 = | - | % total for (|) deg | |
| <u>45 deg</u> | | | | | | | • | | |
| Scan 1 | 77.850 | _% Length X _ | 100.000 | % volum | e of length / 100 = | 77.850 | % total for \$ | Scan 1 | |
| Scan 2 | 88.925 | _ % Length X _ | 100.000 | % volum | e of length / 100 = | 88.925 | % total for | Scan 2 | |
| Scan 3 _ | 100.000 | _% Length X _ | 50.000 | % volum | e of length / 100 = | 50.000 | % total for | Scan 3 | |
| Scan 4 | 100.000 | _% Length X _ | 50.000 | % volum | e of length / 100 = | 50.000 | % total for : | Scan 4 | |
| Add tota | ls and divide | by#scans= | 66.694 | % total for | 45 deg | , • • | | | |
| ¢.,. | · · · | | : | | 1 | | | | |
| Other deg | | - | ۰. | | - | · ···· | • | • | |
| Scan 1 | | _% Length X | | wołum | e of length / 100 = | ية مني المارين. يليسية المريقة المسينة المريكينين | % total for | Scan 1 | |
| Scan 2 _ | | % Length X | | % volum | ie of length / 100 = | | % total for | Scan 2 | |
| Scan 3 | | % Length X | • • | % volum | e of length / 100 = | | % total for | Scan 3 | |
| Scan 4 | • | % Length X | | 94 unherr | ne of length / 100 = | | % total for | Seen 4 | |

Percent complete coverage

Add totals for each angle and scan required and divide by # of angles to determine;

68.694 % Total for complete exam

Note:

<u>,</u>*;

Site Field Supervisor



Supplemental coverage may be achieved by use of other angles / methods. When used, the coverage for volume not obtained with angles as noted above shall be calculated and added to the total to provide the percent total for the complete 2^{-3} , r_{12} examination.

Date:n

| UT Calibration ran | | | | | , | | | · |
|--|---------------------------------------|------------|------------------------------------|---------------|-----------------|-------------------------|-------------------|-----------------|
| | matio | n | | • | : | | | |
| Proo | sdure: | | PDI-UT-2 | | | Outage | No.: | 01-26 |
| Summary No.: 01.C5.21.0053 Procedure | Rev.: | | 6' | | | Report | No.: U | UT-11-785 |
| Workscope: 181 Work Orde | 7 No.: | | 01903807 | | | P | ege: 1 | of 7 |
| Code: 1998/2000A Cat./item: C-F-1/C5.2 | 21 | • | Location: | | | | | |
| Drawing No.: 1-61A-02 : Description: Elbow to V | alve 1HP-13 | 34 | | | | | | |
| System ID: 61A | · · · | , | | | | | | |
| Component ID: 1-51A-02-34B | | Size/i | Longth: | N/A | | Thickness/Di | emotor: | 88/.531/4.0 |
| Umitations: ' Veive configuration | ;;;;;-;-;-;-;-;-; | | Start | Тіле: | 1350 | Finis | h Time: | 1403 |
| Instrument Settings Search Unit | 0.1 | 1 | | | | | | |
| Serial No.: 014BLC Serial No.: 00DNL3 | Cel. Checks | Time | Date | | | Drientated 8 | | <u>- </u> |
| Manufacturer: KRAUTKRAMER Manufacturer: KBA | Initial Cal | 1033 | 4/17/2011 | | ration ector | Signal Amplitude % | Sweep Division | Sound Pai |
| Model: USN-80 SW Size: 0.25 Shape; Round | Inter. Cal. | | | ID N | otoh | 80 | 4.9 | .729 |
| Jalay: , J., 7,0016 Ranga: 1.50 Fraq.: 2.28 MHz Style: Comp-G | Inter. Cal. | 1349 | 4/17/2011 | | | | | T |
| rt Cel/Vel: .1230. Pulser: Square Exam Angle: 45 # of Elements: Single | Inter. Cal. Final Cal | 1835 | 4/17/2011 | | | | | 1 |
| amping: 500 Reject: 0% Mode: SHEAR | | | | <u> </u> | | | | |
| tep. Rate: Autohigh Freq.: 2.25 MHz Measured Angle; 44 | | Couplan | | | | | | |
| Altanos A 288 Other Eulhurya | Cal. Batch: Type: | ULTRA | 09325 | · | | rential Orlenta | | |
| x Gam (dB): \$1.0 Circ. Gain (dB): 36.2 Search Linit Cable | Mfg.: | SONO | دودوا كالتشكي التقصير التفصي الكان | Calib Refi | auon sotor | Signal Amplitude % | Sweep Division | Sound Pat |
| REALIZE TO LEASE AND A REAL AND A | Exam Batch | | هيابسي تشتير التلاق | ID'N | otch | 80 | 3.5 | .513 |
| Strange States and States | | ULTRA | 09325 | | | | • | |
| Con Courses | | SONO | | | | · | | |
| | · · · · · · · · · · · · · · · · · · · | | | | _ | | | <u> </u> |
| Block No. 50275 Upstream P Downstream Scan dB: 43 hickness. 0.631 Dia.: 4.5 | Rafe | rence B | lock | Galn | ree . | erence/8 inut Skinal | Sweep | T |
| A A A A A A A A A A A A A A A A A A A | Serial No.:- | | | ťВ | Roffecto | Amplitude | 6 Division | Sound Pail |
| | Тура: | ROM | PAS | 30.0 | 8DH | | 7.0 | 1.048 |
| acordable indication(s): Yes 🗍 No 🗖 (If Yes, Ref. Attached Ultresonic Indication Report.) | - | | | | | | ╉──── | { |
| equite: Accept Reject A | • | Con | nments: Pul | ee Width | | ~ ~~~~~ | - I | <u></u> |
| Sterright and St | | 000 | | | | • | •. | I |
| srcent Of Coverage Obtained > 90%: No Reviewed Previous Data: Yes | | | | | | | | |
| xeminer Level II-N Date Review | 1 | 1 | γ | | Signe | เนาอ | | Date |
| ester, Robert M. John M. C. 4/17/2011 | Jan | ЦĽ | los | | | | 4-2 | 2-11 |
| samliner Level II-N Stgnature Date Sile Re ass, Stayen Y | V LIC' | / <u> </u> | | | Signa | ture | | Date |
| ther Signature Signature de ANII Re | | | | <u> </u> | ARIAN | ture d | | Date |
| A set the set of the s | in w | CV | 2.1.1.1 | Klas a | tu | 4/2 | ch | U2(8 |
| The House and the second | the second | | mil | - Maria | in | | ej.[[| |
| | · | | | | | | | |
| and the second sec | | | | | | | Á114 | CHMENI 85 OF |

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UT Calibration

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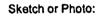
| | 1 | Site/Unit: | Oconse 📜 | <u>/ 1</u> 4 | | | Proce | dure: | | PDI-UT-2 | | | Outage | No.: | 01-26 |
|---------------------------------------|--|------------------|---|------------------------------|---|---------------------------------------|-------------|-------------------------|----------|-------------|-------------------|-----------|---|--|----------------|
| | Su | mmary No.: | O1.C | 6.21.0053 | <u></u> | . P | Procedure I | Rev.; | • | E | | | Report | No.: U | T-11-785 |
| | - 1 | Norkscope: | | , 181 | • • | а с <mark>м</mark> | Vork Order | No.: | | 01903607 | | | Pi | sge: | of 7 |
| de: | 4 4 | 1998/20 | HODA | · · · · | Cat./item: | | C-F-1/C5.2 | 1 | | Location: | | | | | |
| wing No.: | . | 1-5 | 1A-02 | | Der | scription: El | lbow to Va | aive 1HP-13 | 4 | | | | | | |
| stem (D: | 51A | | | | • | | | , | | | ·. | | - | | |
| mpoment ID: | 1-614-02 | l-348 | | | | | | | Size/l | ongth: | N/A | | Thickness/Dis | smeter: | 88/.531/4.0 |
| mitations: | | nfiguration | • | • | | | | | | Start | Time: | 1405 | | h Tìme: | 1417 |
| . 0 ⁴ .5 | | nent Setlings | | | Search l | Jnit | | Cal. | Time | Date | | Axt | l Orlentated 8 | earch Unit | |
| orial No.: | | 014BLC | | Serial No.: | | 0DCC8 | ······ | , Checks Initial Cal | 1153 | 4/17/2011 | Callb | | Signal | Sweep | Sound Path |
| | | USN-60 5 | | Manufacture | the second s | KBA | | Inter. Cal. | 1105 | 4/1//2913 | Refl | | Amplilude % | Division | |
| locel. | 5.4803 | Range: | 2.00 | Size: Freq.: 2.2 | | ape: <u>Ro</u> Style: Con | ound | Inter. Cel. | 1404 | 4/17/2011 | 3/4" | BUN | 80 | 3.7 | .728 |
| ₩ Cal/Vel: | .1230 | Pulser, | Square | Exam Angle: | and the second se | of Elements | | Inter. Cal. | | | · | | | | 4 |
| amping: | 500 | Reject; | 0% | Mode: | And an an an other states | IEAR ' | | Final Cal | 1640 | 4/17/2011 | | | | | |
| p. Rate: | Autohigh | Freq. | 2.25 MHz | Measured Ar | ngle; | 60 | ÷ | Ċ | Couplar | if. | | | | | 1 |
| lter: | Fixed | Mode: | PE | _ Wedge Style | : | MSWQC | ······ | Cal. Batch: | (| 09325 | | Circum fo | rential Orlente | ted Search | Unit |
| sitage: | 450 | Other: | Fullwave | - T | | | • • | Type: | ULTRA | | Calibi | | Signal Amolitude % | Sweep Division | Sound Path |
| . Gain (dB): | 35.7 | Circ. Gain (| Sound Path , | • • | Search Unit | • | | Mfg.: | 80N0 | TECH | N | | 14.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4. | , | ÷ <u> </u> |
| Screen Di | | | | Type: Longth: | S" No. C | - 174 0nn.: | n | Exam Batch | | 09325 | <u>''</u> | | | | |
| nearity Report | No.: | L-11- | | | Scan Cove | | | Туре: Мfg.: | ULTRA | | | | | | |
| | Callbr | ation Block | | مينيسمان فلاحلا برا | | | | Mary | BONO | IEUR | · | | أبني حص | | |
| Biock No. | . 1 8 | 50275 | · • • • • • • • • • • • • • • • • • • • | Upstream 🔲 | | | A CARLAN | | rence B | lock | | . Rei | ference/Shub | and the second division of the second divisio | |
| · · · · · · · · · · · · · · · · · · · | 0.521 | Dia.; | 4,8 | | F4 | |)n | Serial No.: | <u> </u> | 09322 | Gain dB | Reflect | Signal or Amplitude 9 | 6 Division | Sound Path |
| I. Bik. Temp. | 68 Ten | | ICNDE40128 | Exam Surface Surface Conc | | O.D. " | | Туре: | ROM | PAS | 39.1 | F8DH | 48 | 7,4 | 1.474 |
| mp. Temp. | '· | · · | | •. | | · · · · · · · · · · · · · · · · · · · | | | | | | | | _ | |
| | ication(a) | 20 Yes-5 | | (If Yes, Rof. Al | | | • | | _ | l | | | | | Ļ |
| esuite: | Accept |] Reject | | 6 | and the state of the | 1 | • 4• , | | Cor | nments: Pul | se Width | = 220 N | 8 | E, | |
| roant Of Cove | rage Obia | ined > 90%; | No | Reviewed Pr | evious Data: | Yes | | | | | | | | | |
| camilner " | Lovel | IHN | Ch B | gnature/ Ver: | | d Date | Review | r, | | Λ | | Signa | iture | | Date |
| ister Robert | M. (| · · . | Kolut | Milyo | بالم المسلحة | 4/17/2011 | 12 | Jan 1 | 17 | los | | | | 4-2 | 2-11 |
| caminer 3 | | 11-11 | SI | gnature | <u>1111</u> | ्र प्रत्यक्ष | | New 7 | (| | | Signa | ture | | Date |
| bee, Steven | | | Sin | | n | 4/17/2011 Date | ANN Re | <u>N</u> | <u>\</u> | | | Signa | 11100 | | Date |
| VA | | HIA' | 1 | in suite à | r | - | | un CI | 2-1. | tota | A. | | 101 0 | 4/561 | |
| | | | | 144 July 1 11 Jac | | 1. | LUNPH | mg-61 | | Jun | The | <u> </u> | | Hart | 4 <u>~</u> |
| | ************************************** | , ¹ , | المية الموجوع المراجع المراجع المراجع ا المراجع المراجع | | · · · · · | • <u>•</u> • | - 1 | * - | | | | | , | ATTACH | IMENT A |
| -3205. | | • | 11 m | | · e. t. day o | | , . · | • • | | • | | | | PAGE 84 | |
| e Sealer hand | | | • ` -th:- | | | · | 1. A | | | | | | | -04 | ' " <i>162</i> |

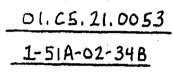
| | | | • | | | | | | | | | |
|---|---|---|---------------------------------------|--|--------------------|---|--------------|---|----------|-----------------------|-------------------|--------------|
| | | | UT | Callbration | aminat | lon · | | | | • | • | |
| | Site/Unit: | Oconee | / 1 | | Procedure: | | PDI-LIT-Z | | | Outage I | No.: | 01-28 |
| | nmary No.: | 01.0 | 5.21.0053 | P | rocedure Rev.: | | E | | | Report i | No.: L | JT-11-785 |
| V | /orkscope: | | នេរ | W | ork Order No.: | ······ | 01903607 | | | Pe | rge: <u>3</u> | of 7 |
| e: | 1998/200 | 30A | Cal | L/Item: C | -F-1/C5.21 | | Location: | | | | | |
| Ing No.: | 1-51 | A-02 | · · · · · · · · · · · · · · · · · · · | Description: Ell | bow to Valve 1HP | -134 | · | | | | | |
| milD: 61A | | • | · · · · · · · · · · · · · · · · · · · | | • | : | · | | ····· | | | •* |
| ponent ID: 1-51A-02 | -34B | | | | | Size | Longth: | N/A | | Thickness/Dia | imeter: | 85/.531/4.0 |
| ations: X Valve co | figuration | | | | | | Start | Time: | 1419 | Finial | n Time: | 1430; |
| Instrum | ent Settings | | 5 | Bearch Unit | Cel. | Time | Date | | Axla | l Orientated 8 | earch Unli | ······ |
| 1 No.: | D14BLC | | _ Serial No.: | 10-1205 | Check Initial C | | | | nation | Signal | Swoop | Sound Path |
| facturer: | KRAUTKRAN USN-60 SI | | Manufacturer: | RTD Shape: Re | Inter. Ci | | 41112011 | i i and i | SDH | Ampiltude % | Division | .768 |
| 6.7625 | Range: | 2.00 | Size:2(7X10) Freq.:2.0 MHz | | L 2 Inter, Ca | | 4/17/2011 | 3/47 | - nue | | 3.9 | 1,100 |
| al/vel:2273 | Pulser: | Square | | 60 # of Elements | : Dual Inter. Ca | and the second se | | <u> </u> | | | | |
| ling: (: | Reject: | 0% | Mode: | Long. | Final Cr | al 1645 | 4/17/2011 | | · · · · | | | · |
| Rate: Autohigh | Freq.: | 2 MHz | Measured Angle: | | | Couples | | | | | | |
| a: 450 | Mode: Other; | Dual Fullwave | _ Wedge Style: | Integral | Cal. Bate | xh: ULTR/ | 09325 | h | | ential Ortente | | |
| na: <u>450</u> alm (dB): 43.0 | Circ. Gain (d | بالقبيرة ليشن الجبير المبرج المتجاجعا الأ | - '.; Sent | ch Unit Cable | Type: Mig.: | SONO | | | ector | Signal Amplitude % | Sweep Division | Sound Path |
| Screen Div2 | | | Type: | RG - 174 | Exam Be | | 09325 | N | VA. | | | |
| ity Report No.: | | 40 .ut,1:8 | Longth: 0' | No. Conn.: | 0 Type: | ULTRA | مستحدث فبتبا | <u> </u> | | | <u> </u> | |
| Calibr | tion Block | | P-4 8ci | n Coverage 👘 🖓 🗸 | Mig.: | SONO | TECH | } | | | | |
| lock No. | 50275 | | Upstream Down | nstream 🕢 Scan dB | : <u>46.0.</u> R | oference E | Black | | , Ref | erence/Simula | tor Block | · |
| ness 0.531 | Ola.: | 4.5 | cw 🗖 | CCW Scan dB | : N/A Serial No | .: / | 09322 | Gain | 1 | Signat | Sweep | Sound Path |
| ik. Temp. 74 Tem | | | Exam Surface: | 0.0. | Type: | | PAS . | <u>dB</u> 30.0 | 1"Rediu | r Amplikude 9 s 83 | 5 Division 8.0 | 1.007 |
| Temp | | CNDE40128 | • | As Ground | تعلوكما الترجيب | | | | 1 | | | , |
| rdable indication(s): | | · • | (If Yes; Ref. Attached | I Ultrasonic Indication | n Report.) | | | L | <u>I</u> | <u></u> | 1 | ļ |
| þa: 🦾 🥙 'Accept [| Reject | | fo 🔲 | s | | Co | mments: Wk | dth ≈ 25(| DNS | | ະ • | |
| nt Of Coverige Obtal | and the second se | | <u> </u> | Date: Yés | • • | | | | | | | * |
| net Level | ILN CA | 1.05 | gnature | Data | Reviewer | | .\\\ | | Signa | ture | | Data |
| | | | | H-, 4/17/2011 | | m | 110 | 3 | | | 4-2 | 2-11 |
| iner Level | IFN the | | gnature mi (4) | Date | Site Review | Y. | | | Signa | ture | | Data |
| Staven | Dile | | gnature | 4/17/2011 Date | ANIIReview | <u>.</u> | | <u></u> | Rinnel | ture | | Date |
| | , 14 A | 2. L. | - 115 1 Leve + | | Nonce | CK | titula | Stor | Algne | 5 4 | 24/1 | |
| | | | titut staff sint | | 0 | | | | <u> </u> | | | |
| the second star | 1+ | | | | | | | | | | ALLA | CHMENT ET OF |
| · · Stapeza, | , - | \$15 | 7 4 | 1 \$ 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + | ĩ | | | | | | P A 6 E | ET OF M |

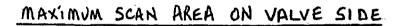
| Ι | UKE POWER | COWPANY | | |
|------------------------------------|----------------|---------------------------|-------|------------------------------|
| | ISI LIMITATIO | N REPORT | | |
| Component/Weld ID: 1-51A-0 | 2-34B Item N | No: 01.C5.21.0053 | | remarks: |
| NO SCAN | SURFACE | BEAM DIRECTION | | Upstream scan limited due to |
| LIMITED SCAN | 1 🛛 1 | 🛛 1 🗌 2 🖾 cw [| 🛛 ccw | valve configuration |
| FROM L <u>0.0"</u> to L <u>14.</u> | 3 INCHES FRO | DM W0 to8 | 5" | |
| ANGLE: 0 🛛 45 🗌 60 | other | FROM N/A DEG to N/ | A DEG | |
| NO SCAN | | | , | Upstream scan limited due to |
| LIMITED SCAN | 🗌 1 🛛 2 | ⊠ 1 □ 2 □ cw [|] ccw | valve configuration |
| FROM L _0.0" to L14.1 | 3" INCHES FROM | W W0 1.15" to B | eyond | |
| | 41-11 | | | |
| | | BEAM DIRECTION | | Upstream scan limited due to |
| | 1 2 | ⊠ 1 □ 2 ⊠ cw 8 | ∑ ccw | valve configuration |
| FROM L 0.0" to L 14.1 | 3" INCHES FROM | AWO CL to B | eyond | |
| ANGLE: 0 8 45 8 60 | | | | · · · · · |
| | | | | |
| LIMITED SCAN | 1 2 | 1 2 cw [|] ccw | UT-11-785 |
| FROM L to L | INCHES FROM | / W0 to | ľ | Sketch(s) attached |
| ANGLE: 0 0 5 060 | | ROM DEG to | DEG | yes 🗌 No |
| Prepared By: Robert Lester | ayon Level: 11 | Date: 04/17/11 | Sheet | |
| Reviewed By: Jan Mo | Date: 4-2: | 2-11 Authorized Inspector | Rethe | Stoute 4/26/11 |

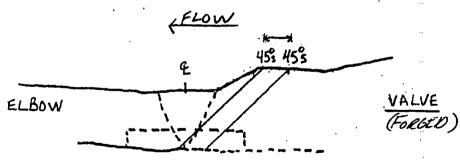
| | | Supple | eme. | .l Report | ŗ | Report No.: | UT-11 | 1-785 |
|-------------------------|-----------------------|--------|-------------|--------------|-----------------|-------------|---------|--------|
| | | | | | | Page: | | of |
| Summary No.: 01.C5.21.0 | 53 | - | | | | | | |
| Examiner: Lester, Rob | ert M. Kolud M Lus am | Level: | ll-N | Reviewer: | Dan/Mor | > | Date: 4 | -22-11 |
| Examiner: Foss, Steve | n Steven I Form | Level: | <u>II-N</u> | Site Review: | WAV / | <u> </u> | Date: | |
| Other: <u>N/A</u> | | Level: | <u>N/A</u> | ANII Review: | Noney C Kitcher | Soughter | Date: 4 | 127/1 |

Comments: See pages 4 & 7 for limitations and coverage calculations.

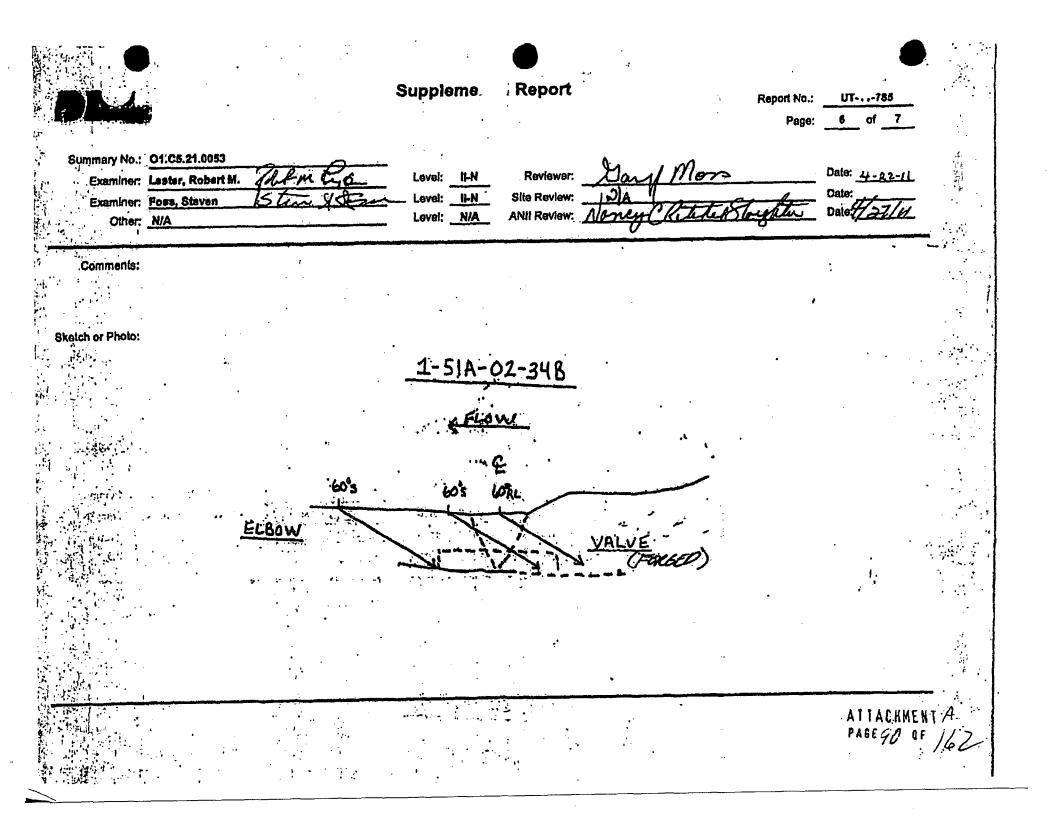


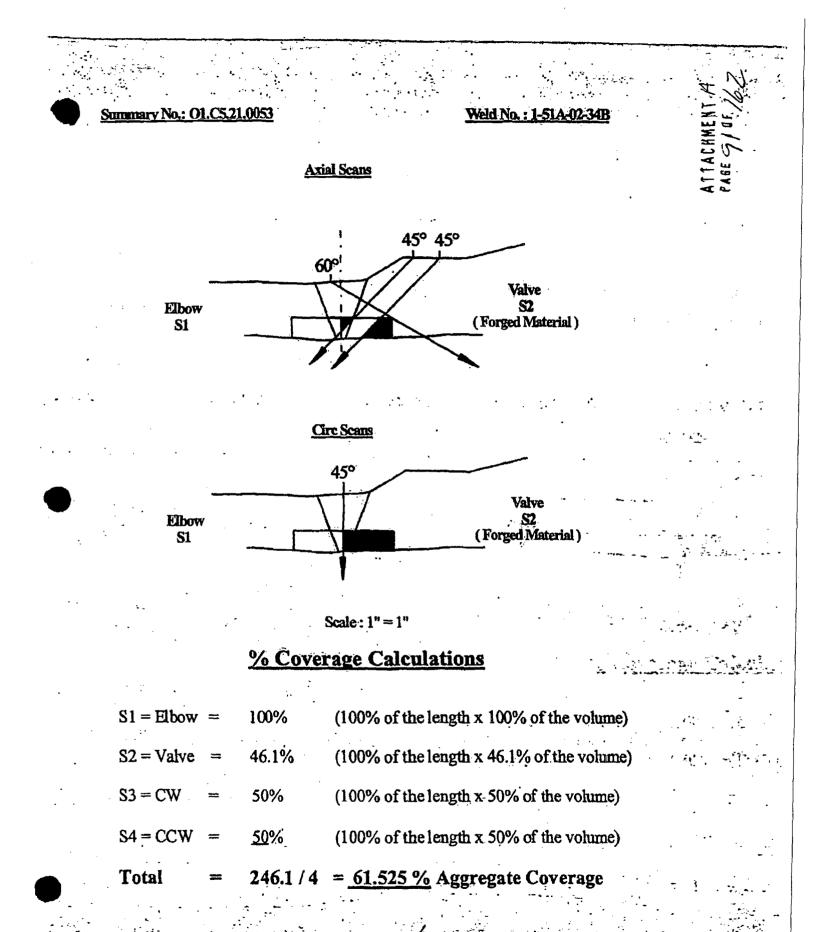






alluchment A Page 87 of 162





Inspector / Date : David C 3

The second

o<u>//r-__</u>rage

| | Site/Unit: | Oconee . | / 1 | · • | Proce | adura: | | PDI-UT-2 | | | Outage i | No.: | 01-28 |
|--|-----------------------|--|------------------------------|--|--|-----------------------|---------------|-------------|----------------|-----------|-----------------------|-------------------|--------------|
| S | ammary No.: | 01.0 | 05.21.0057 | | Procedure | Rev.: | | Ë | | | Report | No.: L | JT-11-677 |
| | Workscope: | | ISI | A. | Work Orde | r No.: | | 01909633 | | | P | age: 1 | of 7 |
| ode: | 1998/2 | 2000A | * • • • • | Cal/item: | C-F-1/C5,2 | 21 | ······ | Location: | | | | | |
| hawing Na.: - | 18 | 1P-193 | <u></u> | Description | on: Tee to Valv | /a 1HP-26 | | ··· | | | | | |
| ystem ID: | | · · · · · · · · · · · · · · · · · · · | | | · · · · · · · · · · · · · · · · · · · | | - | | | | | · | |
| omponent ID: 1HP-18 | 3-12 | | ···· | | • | | Size/l | Length: | N/A | | Thickness/Dia | - | SSI.531/ 4.0 |
| | oo attachod sh | ieota i, | | | | | | Start | Time: | 1385 | Finis | h Time: | 1345 |
| 1. 1 . 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | ment Setüngs | | • | Search Unit | ć | Cal. | Time | Date | | Axial | Orlentated 8 | learch Unit | · · |
| anufacturer: | 014BL KRAUTKR | | Serial No.: | , 000.07 | and the second s | Checks Initial Cal | 0900 | 3/30/2011 | | ration | Signel | Sweep | Sound Path |
| odel: | USN-60 | | Manufacturer: Size: 0.2 | KB. 15 Shape: | Round | Inter. Cal. | | | ID N | | Amptitude % | Division 5.0 | .744 |
| alay: 4.7000 | Range: | 1.600 | Freg .: 2.25 N | • • | Comp - G | Inter, Cal. | 1330 | 3/30/2011 | | | | | |
| 1 Cal/Vol: .1230 | Pulser: | Square | Exam Angle: | · · · · · · | ements: Single | Inter, Cal. | | | | | | | |
| amping: <u>500</u> | Reject: | 0 | Mode: | SHEAR | ······································ | Final Cal | | 3/30/2011 | | | | | |
| p. Rele:, Autohigi | | 2.25 MHz . | Measured Angle | | 46 | | Couplar | • | | | | | |
| ler: Fixed | | PE | Wedge Style: | MSWI | | Cal. Batch: | | 09325 | | | ential Orienta | | 1 Unit |
| ltage: 450 . Gain (dB): 27.1 | Other: Circ. Gain | Fullwave (dB): 27.1 | - Fi | earch Unit Cable | | Type: Mfg.: | SONO | | Calibr Refe | | Elgnal Amplitude % | Sweep Division | Sound Path |
| Screen Div1 | | Sound Path | Type: | RG - 174 | | | | | See' | Axial | | | |
| earity Report No.: | | 1-140 | Length: 6' | | | Exam Batch Type: | ULTRA | 09325 | | | | | _ |
| | | ······································ | Pro 1919 - Secure - 195 - 19 | Scan Coverage | | Míg.: | SONO | | | | | | - <u>+</u> |
| i. Block No. | ration Block 50275 | | Upstream D | | | e i Dare | | | | E | rence/Simula | stor Block | |
| Ickness .526 | Dia,: | | - cw 🗹 | CCW S | Can dB: 33.1 | <u>م</u> ۲۰۰۰ م | rence 8 | | Gain | | Signal | Sweep | Sound Path |
| 1. Bik, Temp: 73 Te | | MCNDE40135 | Exam Surface: | | mounter a term | Serial No.: | | 4-8741 | dB | Reflector | r Amplitude ? | | |
| mp. Temp. 87 Te | | | - | on: ••• A# G | | Туре: | ROM | IPAS | 26.2 | 1" Radiu | <u>s 80</u> | 6.7 | .707 |
| sordable indication(e |): Yes [| □ No 🔽 | (If Yes, Ref. Attaci | hed Ultrasonic in | dication Report. | , . | | | | | · | | |
| suits: Accept [| 1 | | nfo - 🗂 🐃 👘 | una tiny marana | | | Cor | mments: N/A | · | , , | | | |
| 19 6. | | | | tredicity (A. 1997) International Content | | | | . : | | • | | | |
| reent Of Coverage Obt | | | Reviewed Provi | <u>- 15 55 100 100 100 100 100 100 100 100 1</u> | | | | | | | | | Dete |
| aminer, Leval II, W. Kelth | IIIN . | K- Ki | Idinatures Attain | | Date Review | | $\frac{1}{2}$ | A | | Signat | 18 | 4.9 | - / / Date |
| aminer Level | -find | | Inneture "sa d | | Date Site Re | view . | শ্ব্য | Sucer | | Signat | ure | | Date |
| ssel, Matthew, S: | T | L | 1. 11 × 11 | 2/30 | W2011 | N | | • | | - | | · | |
| bar 13 Lovel | NIA | S | Ignature | E Pairs | Date ANJ Re | view | 0. | 10 | L | Signat | ure` | 4/2111 | Data |
| | 174-14 77 | 4 4 15 14 | Manuar and Co | | Ner | ry C. | rite | hieStr | gpti | <u>i</u> | 7 | 12111 | |
| | 1.12.14 | | | S S S S S S S S S S S S S S S S S S S | - | | | | e | • | | | |

| | Site/Unit: Summary No.: | Ocones | / 1 01.C5.21.0057 | | , | Proce Procedure | | · | PDI-UT-2 E | | | Outage Report | - | 07-28 UT-11-877 |
|---------------------------------------|--|-------------------------------------|--|-------------|-----------------|---------------------------------------|-----------------------|---------|--|------------|-----------|--|---------------------|------------------------|
| A. Salar | Workscope: | | 181 | | | Work Orde | No.: | | 01909633 | | | P. | age: 2 | of <u>7</u> |
| Code: | 1998 | /2000A | · · · · · · · · · · · · · · · · · · · | · Cal./iter | n: | C-F-1/C5.2 | 1 | _ | Location: | | | | | |
| Drawing, No.: | <u> </u> | HP-193 | • | . | Description: | Tee to Valv | 9 1HP-26 | | | | | | | |
| _ | A | | | | | • | | · | | | · | | | |
| | iP-193-12 | | | | | | ······ | Size/L | Longth: | N/A | | Thickness/DI | | 55/.531/ 4.0 |
| Initations: Ye | s - See Attached | Sheets | | | | | | | Start . | Time: | 0624 | | h Time: | 1057 |
| | instrument Setting | • | • • • • • • | Searc | h Unit | | Cal. | Time | Date | | Axial | Orientated S | Bearch Unl | Į , |
| Serial No.: | 014B | ويستعادهم واليوي والأستعياد ومواكره | Serial No.: Manufactur | er: | 01F3J5 KBA | ······ | Checks Initial Cal | 0824 | 4/9/2011 | Calibr | | Signal Amplitude % | Swaap Division | Sound Palh |
| lodel: | USN-6 | | Sbe: | .25 | Shape: | Round | Inter. Cal. | | | 3/4 H | _ | 80 | 6:A | .805 |
| 1 | 8378 Range: | 1.5 | Freq.: 2. | | Style: | | Inter. Cal. | 1001 | 4/9/2011 | | | ~~~~ | | |
| iti Cel/Vel: | 123 Pulser: | ensup8 | Exam Angle | e: 60 | | ents: Single | Inter, Cal. | | 41010044 | | | | | <u> </u> |
| | 100 Reject: | 0%. | Mode: | • | Shear | | Final Cal | 1167 | 4/9/2011 | ļ | | | | |
| | ohigh Freq.: xed Mode: | 2.25 MHz PE | | | 60. | | | Couplan | | | | ential Orlenti | fad React | |
| · · · · · · · · · · · · · · · · · · · | iso · Other: | Fultwave | Wedga Styl | | MSWQC | · · · · · · · · · · · · · · · · · · · | Cal. Batch: Type: | ULTRA | GEL II | Calibri | | Signal | Sweep | <u> </u> |
| x. Galn (dB): | 41.3 Ciro. Gal | n (dB): N/ | A | Search U | nit Cable | | Mfg.: | SONO | | Refle | | unplitude % | Division | Sound Path |
| 1 Screen Div. = | .15 In. of | Sound Path | Type: | | RG - 174 | er. | Exam Batch | ····· | 09325 | NU | A | | | |
| | : | 1-140 | Length: | 6° No | . Conn.: | • | | ULTRA | | | <u> </u> | | | |
| | Calibration Block | | | Scan Co | verage | | Mfg.: | BONO | TECH | | | | | |
| al. Block No. | • | 5 | Upstream 🙀 | | | | Refe | rence B | lock | | Refe | rence/8lmul | ator Block | |
| hickness 5 | a a construction of the second se | 4.04 | CW[|] co | W 🗖 , Scal | dB: N/A | Serial No.: | | -8741 | Getn dB | Reflector | Signal Amplitude | Sweep 6 Division | Sound Path |
| sl. Bik, Temp: | | MCNDE4013 | | ce: | 0.0. | · • • | Тура: | ROM | PAS | 41.5 | NSH | 45 | 4.5 | .868 |
| a dinas li | | MCNDE4013 | | | As Gro | | | | | | | 1 | | <u> </u> |
| ecordable Indicat | | - | | • | • • | | | : | | i | | J | <u> </u> | L |
| esults: Acc | ept 📋 🛛 Reje | et 🗹 🐘 | Info 🔲 | | | stan a | | Con | nments: N/A | | | | | • • |
| rcant Of Coverag | • Obtained > 90%: | No | Reviewed P | revious Dat | <u>11</u> , Y | (63 | | 1 | والمراجع وا | | | المفاجيبيين فلايين بسيمي من ا | | • |
| xaminer l uli, W. Kelth | evel II-N | A | Signature | >"`` | D | ale Review | MEL | Town | ŝn | : | Signat | ure | 4 | .9- 1(^{Date} |
| xeminer Wirhead, Barry A. | lavel II-N Be | ang | Signature | ent. | .: D .4/8/20 | | | | · | | Signat | | | Date |
| ther | | | | | .14 | ato ANIJ Re | view reg C | Ret | te 5 | buft | | uro 4/3 | 4/11 | Date |
| | • | | 1+34 (1. · · · · · · · · · · · · · · · · · · · | | | | | | | | | | | ··· |

| | | Sile/Unit: | Oconse | UT | Calibratio | Procedure: | tion | PDI-UT-2 | • | • | Outage I | | |
|---------------------------|-----------------|--|-----------------------------------|-------------------------------------|----------------------|---------------------------------------|------------------|-------------|-----------------|-------------------|-----------------------|--------------------|---------------|
| | Sum | nary No.: | | 5.21.0057 | | Procedure Rev.: | | E | | | Report I | | 17-11-677 |
| <u>.</u> | - | rikacope: | | 181 | | Work Order No,: | | 01909633 | | | • | ige: 3 | of 7 |
| de: | | 1998/20 | 00.6 | | at./item; | C-F-1/C5.21 | | | | | | | |
| awing No.: | | | -193 | , Ce | م د به د | Tee to Valve 1HP- | | Location: | | | | | |
| tem ID: | 51A | | -100 | | Description, | | | | | | | | |
| nponent (D: | سمب جسيد فشت | ······································ | ····· | | | ÷ | Size/I | ength: | N/A | | Thickness/Dis | | 88/.531/ 4.0 |
| litationa: | | ttached she | ate | | | · · | | - | Time: | 0812 | | n Time: | 1059 |
| | -d | | | | | | | | | 4012 | | | |
| nal No. | mauune | nt Settings 014BLC | *•` | Serial No.: | Search Unit 11-87 | · Cal Chec | | Date | | | Orientated 8 | earch Unli | |
| nufacturer. | | KRAUTKRA | | Manufacturer: | RTD | Initial | | 4/9/2011 | | nation actor A | Signà) mplitudo % | 8weep Division | Sound Path |
| del | 1 | USN-60 S | W | 8ize: 2(8x14)1 | | Reot. Inter." | Cel. | | - | Hole | 80' | 8.8 | 1.149 |
| lay, The | 9,6559 . | Range: | 3" | Freq.: 2.0 MH | يستبيب فيستبيب | RL 2 Inter. C | | 4/9/2011 | | | | | |
| Cal/Vel: | .230 | Pulser: | 8quare' | Exam Angle: | 70 # of Elemen | is: Dual Inter. C | | 4/9/2011 | | | | | |
| mping: | 500 | Reject: | 0% | _ Mode: | Long. | | | | | | | | |
| p. Rate: | Autohigh | Freq.: | 2.0 MHz | Measured Angle: | 68 | | Couplan | | } | | | (a.d. () a a a a b | |
| er: ' : tage: | Fixed 450 | Other: | . Dual . Fullwave | _ Wedge Style: | Integral | Cal. Ba | ULTRA | 09825 | <u></u> | | ntial Orienta | | |
| Gain (dB): | 40.8 | Circ. Gain (| | | rch Unit Cable | Type: Mfg.: | SONO | | Callbu Rofk | | Signal mplituda % | Sweep Division. | Sound Path |
| Screen D | | - | Sound Path | Type: | RG - 174 | · · · · · - | | | N | A | | | + |
| _ | | | | Length: 8' | | Exam B | | 09325 | | | | | |
| earity Report | | | | * | | Type: Mfg.: | ULTRA 80NO | | | | | | |
| • | Calibrat | • | | Upstream [] Dow | | · · · · · | | | | <u>_</u> | | | |
| Block No. | | 50275 Dia.: | 4.0" | CW [] | | 1 | leference B | lock | Gain | Rofei | ence/Simute Signal | Sweep | |
| cknoss . | .526 73 Temp | | | • | CCW 🛄 Scan | | lo.: <u>82</u> 7 | 79-0409 | dB | Reflector | Amplitude % | | Sound Path |
| . Bik, Temp. np. Temp. | | Tool: M | CNDE40135 | Exam Surface: Surface Condition: | O.D. As Groui | туре: | IIW | AH, | 30.1 | 24 | 82 | 6.6 | 1.977 |
| Certification and | lication(s): | Yes | اجبال في تصحيح الشبع مسيحت عنها - | (if Yes, Ref. Attache | * <u></u> | ······ | , • • • | ••• | ļ | | | <u> </u> | |
| | | e 1. Fie (1. 1 | .14 | | • | - | _ | • • • • | L | <u>I</u> | L | L | L |
| uits: | Accept | Reject | | , | | * • • • | Сол | nments: N/A | • | . . | • | | • |
| cent Of Cove | arage Obtain | d > 90%: 🖓 | No | Reviewed Previou | s Data: Ye | 8 | - | - | | | | | • |
| | Level (| N | 1 | netwo the state | , Dal | A CHARGE AND A COMPANY | Ά. | Nor | | Signatu | ľa. | | Date |
| II, W. Keith | | | 24 CF 3 | | 4/8/201 | | $\alpha/1$ | Non | 2 | | | 4-20. | |
| aminer | | | | gnatura | - Dal | | | | | Signatu | (9) | | Cata |
| irhead, Barr Ier | | IA ···· | they be | pnature | Als/201 Dat | | | | | A Sinnatu | nA | | Oate |
| A | i Lighten N | | | ti nagatara 12. Inggata | tr. | Aleren | n.R. | H.o.S | low | Linalu Un | 4/2 | 4/11 | wata |
| | | 1111 | | at a second | 411 1 1 | - i ur nor | | çax 0 | | | | | A 1632 F 11 F |
| | | | | - | | ····· ··· ··· ··· ··· ··· ··· ··· ··· | | | - | • | | ATTA | CHMENT |
| in the second second | مورق م مورق | an tha bh | *: | | ng finite sea | ··· •·· | | • | с ⁵⁴ | | ** • | PABE | 94 OF./6 |
| | | | | | | | | | | | | | |

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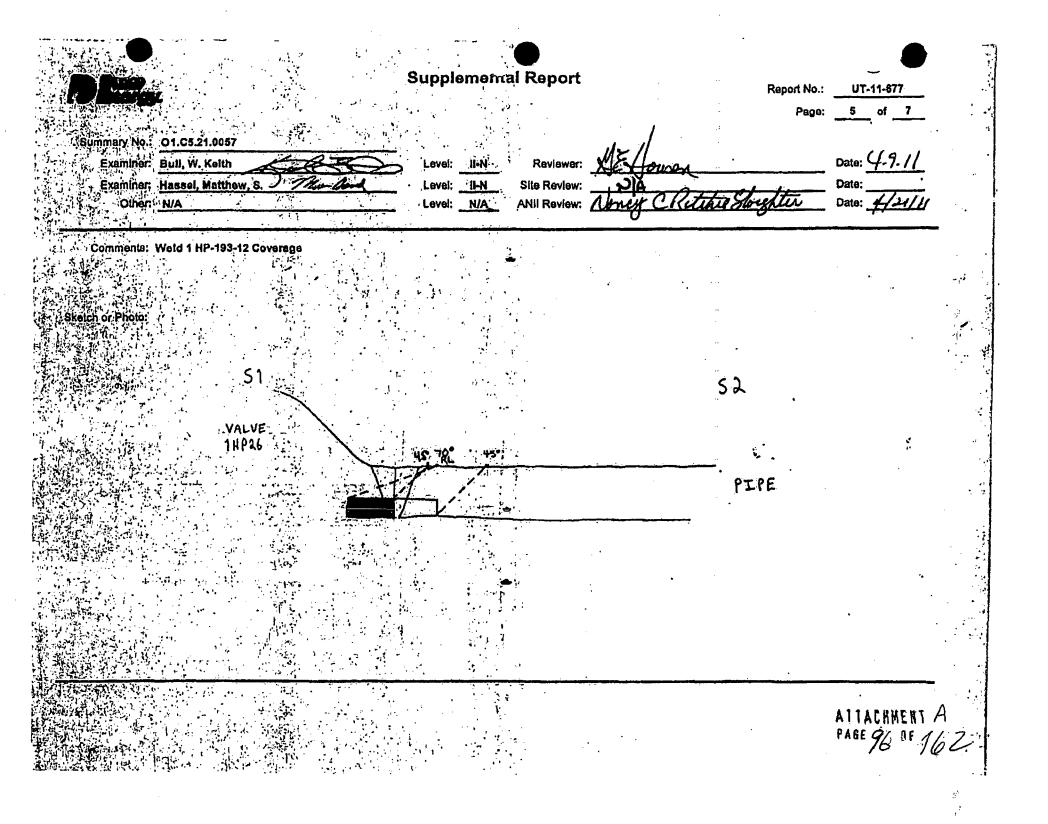
| | • • | | | 4 | |
|-----------------------------|-----------------|--------------------------|-------------|-------------------------|--------|
| | 4 · · | TION REPORT | | | |
| | | | | | |
| | | tem No: 01.C5.21.0057 | | narks: | |
| | | BEAM DIRECTIO | | to cast stainless valve | |
| LIMITED SCAN | ⊠ 1 □ : | 2 🗌 1 🛛 2 🖾 cw | CCW conf | iguration. | |
| FROM L 0 to L | <u>360:</u> INC | HES FROM WO CL to | Beyond | | |
| | | FROM 0 | | 4 | |
| NO SCAN | | BEAM DIRECTIO | | | |
| LIMITED SCAN | | 1 . 2 . cw | | | |
| FROM L to L | INC | HES FROM WO to | | | |
| | | FROM DEG to _ | | | { |
| | SURFACE | BEAM DIRECTIO | 00 | | |
| | | BEAM DIRECTION | | | |
| | | | | <u></u> | |
| | | IES FROM W0 to | | | |
| ANGLE: [] 0 [] 45 [| 60 other | - FROM DEG to | DEG | | |
| | SURFACE | BEAM DIRECTION | a | , | |
| LIMITED SCAN | | BEAM DIRECTION | | 1-677 | |
| ROM L to L | INCH | IES FROM WO to | | Sketch(s) attached | |
| ANGLE: 🗍 0 🗍 45 [|] 60 other | FROM DEG to | DEG | 🤇 yes 🗌 | No |
| Prepared By: Matthew Hassel | The Level: | II Date: 03/30/11 | Sheet 4 | of | |
| Reviewed By: Jan A | Mor Date: | 4-20-11 Authorized Inspe | Return Stor | with Pate: | |
| | | | ````` | ATTACHM PAGE 95 | ENT A. |

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1.5

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| | Supplemental Report | Report No.: UT-11-677 Page: 6 of 7 |
|---|--|---------------------------------------|
| Summery No:: 01.C5.21.0057 ,Examiner: Bull, W. Keith Examiner: <u>Hassel, Matthew, S. Mass Mark</u> | Level: 11-N Reviewer: ME House, Level: 11-N Site Review: DA | Date: <u>4.9.11</u> Date: |
| Other: N/A | Level: <u>N/A</u> ANII Review: <u>Maney Cl & tea</u> | It Soufter Date: 4/31/4 |
| Sketch or Photo: | | |
| 51 | H5 CIRC | 57 |
| VALVE 1HP25 | | PIPE |
| | | • • • |
| | | |
| | | ATTACHMENT A PASEGIT OF 162 |

| | | Dete | rmination of Perc UT Examination | • | e for | | TACHMENT BE 98 DF |
|-----------------|----------|-----------|-------------------------------------|----------|-------------|-----------|----------------------|
|) Site/Unit: | Oconee / | 1 | Procedure: | PDI-UT-2 | Outage No.: | 01-26 | PAG |
| Summary No.: | 01.0 | 5.21.0057 | Procedure Rev.: | E | Report No.: | UT-11-677 | |
| Workscope: | | isi | Work Order No.: | 01909633 | Page: | 7 of 7 | - |

<u>45 deg</u>

| : | Scan 1 | 100.000 | _% Length X _ | 0.009 | % volume of length / 100 = $\frac{1}{2}$ | 0.000 | % total for Scan 1 |
|---|--------|---------|----------------|--------|--|--------|--------------------|
| | Scan 2 | 100.000 | _ % Length X _ | 50,000 | % volume of length / 100 = | 50.000 | % 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 and divide by # scans = _______% total for 45 deg



Other deg - (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

Scan 1 :: - -👾 🗧 🛠 Length X % volume of length / 100 =% total for Scan 1 Scan 2 % volume of length / 100 = % Length) % total for Scan 2 Scan 3 % Length X % volume of length / 100 = % total for Scan 3 . **N** % Length X % total for Scan 4 Scan 4 % volume of length / 100 =

Add totals for each scan required and divide by # of scans to determine;

Puid K.

37.500 % Total for complete exam

Site Field Supervisor:

HiDate: 4/12/2011

| Site/Unit: | Oconee | | | | Procedure | | | -UT-2 | : | ~~~ | Outage i | | 01-26 |
|---|--|--|---|--|---|----------------|----------------|----------|------------|-----------------|-----------------------|---------------------|-------------------|
| Summary No.: | | | | | edure Rev.: | | | E | | . | Report | rxo.: U age: 1 | JT-11-670 of 8 |
| Workscope: | | | | 1 | Order No.: | | 019 | 09587 | : | | F (| 396. 1 | |
| oce: 1998/20 | واستكانا فالتبريج الكافر والكافر | | | | 1/C5.21 | | Loca | tion: | | | | | |
| rawing No. 1-51 | | . U | j Desr | cription: Valve | 1HP-109 t | o Pipe | | | | | | | |
| ystem ID 51A | | | | | | | ·.· | | | | | • | |
| omponent ID: 1-51A-01-103A | | | | | <u> </u> | Sb | e/Lengt | | NIA | | Thickness/Di | | |
| mitations : 1 - 1Yes - See attached she | | | <u>. (i. (</u> | | | | | Start | Time: | 1421 | Finis | h Time: | 1440 |
| instrument Settings | | | | nit, | | al. Tim | D | ate | | Axia | Orientated S | iearch Unit | : |
| enulacturer | FR STATE | | | KBA | and the second se | ecks | ia) 2/2 | 2/2011 | | ration ector | Signal Ampiltude % | Sweep Division | Sound Pa |
| odel + | | | | ape: Rouni | 1 | r. Cal. | | | J | otch | 80 | 6.0 | |
| 1.9322 Range: | | | | yle: Comp - | | r. Cal. 140 | 10 2/2 | 2/2011. | | | | | + |
| u Cal/Vel: | High | Exam Angle: | 45 #0 | of Elements: S | ingle inter | r. Cal. | _ | | | | | · · · · · | |
| amping: A 1K Reject: | | | Sh. | 10100 ····· ···· ···· ···· ···· ········ | | I Cel 180 | | 2/2011 | · | | | | ; |
| Autohigh Freq.: | | | gle: | | | Coup | | | <u> </u> | | l | tod Reamt | |
| linge: Star Fixed Other | | | 1.12 (1.14) M | | Type | Batch: | 09325 RAGÉL | | | ration | Signal | Sweep | 1 |
| Gain (dB): 1. 31.3 Circ. Gain (d | A A MANAGE AND A | | Search Unit C | able | Mfg. | | OTECH | | | | Amplitude % | Division | Sound Pai |
| Screen Div. = 1 - In of | Sound Path | Туре: | RG | - 174 | ······ Exan | Batch: | 0932 | 5 | Sec | Axiat | | | |
| early Report No. | 33 t. Tor. | | | nn.: <u></u> . | | · · · · · | RAGEL | J] · | | | | | |
| Calibration Block | | | Scan Cover | ago 🦾 | Mig | - 801 | OTECH | | | | | | - |
| Block No: | · . 24 27 | | Downstream 6 | Scan dB: | 6.3 | Reference | a Block | , | | Ref | arenco/Simula | ator Block | |
| ickness 0.436 Dia. | | CW 🗹 | CCWE | 2] . Scan dB: 73 | 8.3 Seria | | 04-874 | 1 | Gain dB | Reflecto | Signal Amplitude 9 | Sweep 6 Division | Sound Pat |
| I. Blk, Temp. 76 Temp. Tool: M | | Exam Surface | | 0.0. | Туре | R | MPAS | | 29.7 | 1"Radiu | | 10 | 1.0 |
| mp Temp: 177- Temp. Tool: 1. M | | • • • • • • • • • • • • • • • • • • • | | As Ground | | | | | | | | | <u>.</u> |
| cordable Indication(s): Yes I | and the second | (If Yes, Ref. Att | 1. S. | 121 | | 1 | | , | | <u>.</u> | | | <u>L</u> |
| Accept Reject | | 10 🕞 | Distances | | | <u>)</u> | Commen | its: N/A | • | | | | - |
| roani Of Coverage Obtained > 90%: | No | Reviewed Pre | wous Data: | OT Yes 3 | | | | | | | | <u></u> | |
| eminer Level II.N | | consture (4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4. | 1111 | - Z Date ! R | eviewer | 1 | | 10 | 110 | Signat | we | | / / Date |
| | | | 18 | | | Im | 11 | 1.1 | lk. | <u></u> | • | 2/2 | 2/2001 |
| eper, Winfred C. | 1/55 | godun | | Date S 2/2/2011 | ite Review | م ادر <u>ا</u> | • | • | | Signat | nte | | Date |
| her Level N/A | Menter 1 | gnalare : | | Date A | NII Review | | | | 00 | Signat | | | Date |
| | SHAW | A CHARTER STOR | | | NIL Review | + CR | tel | o ک | layte | ii. | 4 | 14/11 | |
| | | 14.94 | to the state | 2.4 | | | | - | - <u>Q</u> | | | | |
| | | West and a start | | 10 | | | | | | | • | ATTACI | AMENI |
| | the second second | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 3 76 2 3 | | | • | | • | | | PAGE Ga | 7 DF /6 |

| Site/Unit | Ocones | 1 ···································· | , | Pro | | | PDI-UT-2 | | | Outage | Sector Sector | 01-28 |
|--|--|--|--|--------------------------|------------------|---------------|------------|--|----------|-------------------------------|---------------|---------------|
| - Worksone | | 3.21.0000 | <u> </u> | Procedu | | | <u> </u> | | | Report | | JT-11-670 |
| | 1997 - | 1999 () () () () () () () () () | 1.2.10 | Work Or | | | 01909587 | | | ۲ س ر مربق مربق | Page: 2 | of 8 |
| 190 | 8/2000A | | Cat-litem: |), C-F-1/C | 5.21 | • 1 L | Location: | ور المراجع ا | | | | |
| Bwing No. | 1-51A-01(4) | | NS Dasc | ription: Valve 1H | | | | | | | | |
| stem ID: 51A | | | | -17 - 41 | · · · · | | | • ` | | | | |
| imponent ID: 1-81A-01-103A | | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | | • • | Size | ength: | N/A | | Thickness/Di | iameter: 0, | A38 / 3.0/ 85 |
| nitations: Yes - See Attached | the second s | | | | | | Start | Time: | 1442 | E Finis | sh Timo: | 1500 |
| instrument Settin | 0 | | Search Un | It is a lite | Cal. | | | | | al Orientated 1 | Search Holt | |
| nal No. 31, 19 0111 | ABT: State State | Serial No.: | | | Checks . | Time | Date | Callb | ination | Signal | Sweep | |
| nutachiren | | Manufacturer | | KBA | | 1325 | 2/2/2011 | | ector | Amplitude % | Division | Sound Pat |
| 18U: | | | the second s | x: CRound | Inter. Cal. | | - DIRIDAL | 1D N | lotch | 80 | 4.9 | .876 |
| | 2.0 | | | le: Comp - G | | 1441 | 2/2/2011 | <u> </u> | · · · | | <u> </u> | + |
| I CalVal: .1234 Pulser: mping: | High | | | f Elements: Singl | Final Cal | 1605 | 2/2/2011 | J | | | | + |
| | 6 MHz | Mode: Measured Ang | She | | | Couptan | | | | | | |
| Fixed Mode: | RE | Wedge Style: | • | | Cal. Batch: | | 9326 | | Circumfe | rential Orient | ated Search | , Unit |
| | Fullwave | | | | Type: | ULTRA | | Callb | nation | Signal | Sweep | 1 |
| Gain (dB): 47.2 Circ. Ga | in (dB): N/A | | Bearch Unit C | nble | Mfg.: | SONO | | | lotoe | Amplitude % | Division | Sound Patt |
| sr. Screen Div. = .2 In. of | Sound Path | Type: | RG - | 174 | . Exam Bald | h: (| 09325 | N | 1A | · | | |
| arity Report No. | 11-133 | Length:6 | No. Con | n.: <u>0-2-</u> | Times | ULTRA | | | | | | ╉━━━━ |
| Calibration Block | | 1. 1. 1. 1. 1. | Scan Covera | 80 | Mig.: | SONO | ГЕСН | <u> </u> | { | | i | |
| Block No. 502 | 25 | Upstream [] C | | Scan dB: 48.1 | \$ | ni ji ji ji | laak | | Rei | forence/8imuli | ator Block | , |
| kness 5. 0.438 Dla.: | 3.5 | *:• `Cw ⊡ | THI COW | Scan dB: N/A | Seriel No | i unicu D | -8741 | Galn | | Signal | Sweep | Sound Path |
| Blk: Temp. 478 Temp. Tool: | MCNDE49129 | Exem Surface: | 1.46 · · · · | 0.D. | Type: | ROM | | dB . | | or Amplitude 9 | | |
| np. Temp. 177 Temp: Tool: | والمحاذر والمحاذر والمحادث والمحادث والمحادث والمحادث والمحاد والمحادث والمحاد والمحادث والمحاد والمحادث والمحا | Surface Conditi | on: A | s Ground | | | | 31.8 | 1" Radio | us 80 · | 6 | <u> </u> |
| ordable Indication(s): | No 2 | If Yos; Ref. Allac | nad Ultrasonic | Indication Report | i) | | | | | | | |
| ults: Accept 📄 Reja | ct 🔽 🖓 👘 Inf | 6. [1] * 1. F actor | alar da ser en | timesters to a d | a sa sa sa a da | · Con | ments: N/A | • • | | | • | |
| cent Of Coverage Obtained > 90%: | No | Reviewed Prev | ious Data: | | | 11-1- | • | | | | | |
| | | _ | | Date Revie | State - CT of 14 | | | | Classie | | | |
| Miner () | a | D | | 2/2/2011 | | | 4. O | 62 | Signa | ITTI O | į | |
| miner Level ILN | 1 | nation if - 50 Yr | 12711-212 | Date Site R | eview | 1 | | | Signa | ture | | Date |
| NAME AND ADDRESS OF A DESCRIPTION OF A D | Will | Lin | 10.7 | 2/2/2011 | G | A | | | | | | |
| Lovel N/A | L. Ing Sk | Anderson and Angle | | Date ANII,F | weive | • | 0.1.1 | 0 | Sigha | ture | 1.1 | Date |
| NE REAL | | the second s | | $\underline{\mathbf{x}}$ | mig | <u>- C la</u> | the | Sto. | ytte | T 41 | 4/11 | 1 |
| | and the second second | 1- a(4 : 2, 11) | ng fénni é a | وم الديس ميراد | 0 | | | | 0 |) | | |
| | A SULATION | | | | | | | | | | ATTACH | IMENT A |
| | a strange of the second | 2011 - A | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | ⁿ v. [| · · · · · | | | | | | PARE TAS | 5 OF 18 |

| CE. | Site/Unit: Oconee | | Procedure | : | PDI-UT-2 | | | Outage | No.: | 01-26 |
|---|--------------------------------------|--------------------------------------|---------------------------------------|------------------|---|----------|----------------|-------------------------|-------------------|----------------------|
| | Summary No:: | 5.21.0068 | Procedure Rev | : | Ê | ,, | | Report | No.: U | T-11-870 |
| 3 | Workscope: | 181 | Work Order No | : | 01909587 | | | P | ege: 3 | of 8 |
| odo. Setes | 1998/2000A | Cat/Item: | C-F-1/C5.21 | | Location: | | | | | |
| wing No | 1-51A-01(4) | | on: Valve 1HP-109 | o Pipe | · | | | | | |
| stem ID: Y | 51A 5 | | | | ч. | | | | | |
| | 1-51A-01-103A | | i i i ti | Size | /Longth: | N/A | | Thickness/DI | ameter: 0. | 438 / 3.0/ 88 |
| 1.7 9.9 | Yes - See attached sheet | | | | Start | Time: | 1130 |) Finis | h Time: | 1200 |
| | Instrument Settings | t' Search Unit | · · · · · · · · · · · · · · · · · · · | Cal. Time | Date | | Ax | al Orientated § | earch Unit | |
| | 00X14L KRAUTKRAMER | Serial No.: SB020 Menufacturer: C | | al Cal 082 | | | ration | Signal | Sweep Division | Sound Path |
| anunacurer odel | USN-60 | Size: | | r. Cal. | 20,2017 | | ector Notch | Amplitude % | 2.1 | .526 |
| lay; Y | (14:0000 r 1 Hange: 2:02:01 X:02:019 | Freq.: 2.25 MHz Style: | | r. Cel. 1000 | 2/8/2011 | | Notch | 80 | 4.1 | 1.03 |
| U CalVel | 1224 Pulser: High | Exam Angle: 1. 45.0 # of El | ements: Single int | r. Cal. | 2/8/2011 | 1.250 | Notch | 80 | 6.9 | 1.701 |
| | IK Reject: 0%. | Mode: Shear | · · · · · · · · · · · · · · · · · · · | ei Cai 1830 | | | | | | |
| | Autohigh Freq.: 2.25 MHz | Measured Angle: | | Couple Batch: | .09325 | | Circumf | erential Orlenti | ted Search | - <u>I</u> 1 Unit |
| oltage North | Fixed Other: Fullwave | | | | and the second se | Calib | ration | Signal | Sweep | Sound Pat |
| | 2 (33.6) Circ. Gain (dB): 33.6 | | Mig | SON | OTECH | | ector | Amplitude % | Division | |
| | Ny. = 25 Stinl of Sound Path | | Exe | n Batch: | 09325 | See . | Axial | | | + |
| nearity Repor | L-11-131 | Longth: 11 5 No. Conn.: | <u></u> "Тур | | | | | | | |
| 1. sa ite jinum | Calibration Block | Scan Coverage | T _e Mig | : <u>60N</u> | DTECH | | | | | |
| al. Block No. | 375-1.25 Dia: Flat | | can do: 40.6 | Reference | Block | Gain | Re | ference/Simul Signal | Sweep | r |
| | 72 Temp Tool: MCNDE40128 | | Sen | I No.: | 04-8740 | dB | Reflect | or Amplitude ? | | Sound Patt |
| | * 77 ' Temp. Tool: . MCNDE40128 | Surface Condition: | Type | : <u>RO</u> | MPAS | 27.0 | 1" Radi | us <u>80</u> | 4.0 | 1.0 |
| | dication(s): Yes No V | | | 1 . | | | { | | | <u> </u> |
| . C. G. | Accept . | | 1997年1月1日 1997年1月1日 1997年1月1日 | -C | mments: N/A | | | | | |
| Ser Hally | ange Obtained > 90%: No. | Reviewed Previous Date | | | • | | | | | |
| | | | | | | | Slan | stuce | | C Dete |
| ay, John, C. | Lovel III-N | 2007 - 11 - 21 | /2011 | Cherry Com | 10 | 2 | | | ZI | 4001 |
| xaminor 13 | Level II-N | anatum of the second of the | Date + Site Review | 51. | • | • | Sign | atura | | Date |
| ansom, Greg | J. Hughle | | 2011 | AG | | | <u> </u> | | | <u></u> |
| lhar. I/A | Lovel N/A | nature Shacura Shill | Date ANII Review | u. P | 1 to | t- | Jon | sture 4 | !/4/1 | Date |
| | | WENGI (a) | | J. | nun | | | | | · |
| 1 - LANDARD - LANDARD L'ANDARD - LANDARD - L | | | | | | | | | | CHMENT |
| | | 140 AT 18 | | | • | | ·. | | | 101 OF |

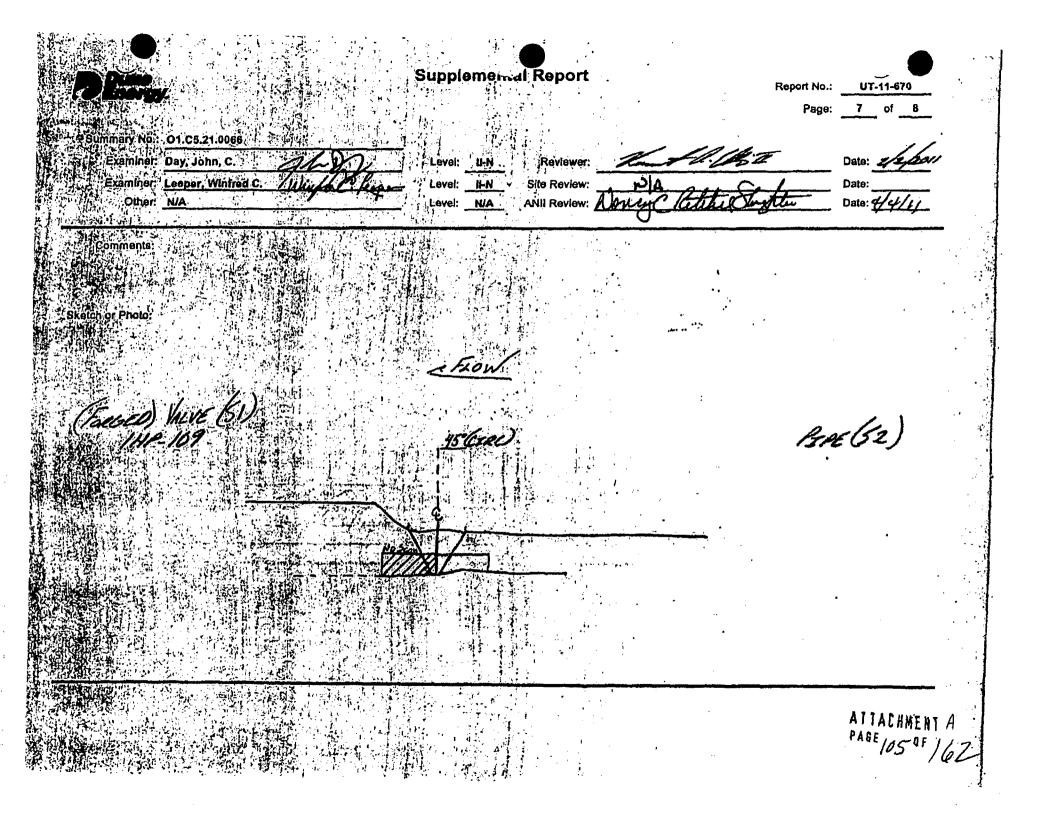
| | Ocones | Procedure: | PDI-UT-2 | | Outage | | 05-28 |
|---|---|--|----------------|--|---------------------------------------|---------------------------------------|-----------|
| Summary No.: | 01.C5.21.0066 | Procedure Rev.: | E | | Report | | T-11-670 |
| Workscope! | 181 | Work Order No.: | 01909587 | | Pi | ape: | of 8 |
| Code: 1998/2 | | | Location: | | | | |
| Drawing No.: 4-5 | | Description: Valve 1HP-109 to Pipe | | | | | |
| Bystom ID: 51A | | | ÷ | | · · · · · · · · · · · · · · · · · · · | | |
| ي ې د دې د د د د د د د د د د د د د د د د | | | Size/Length: | N/A | Thickness/Di | | |
| Initiations: Yes - See Attached Sh | and an an an and a second s | | Start | Time: '120 | 6 Finis | h Time: | 1221 |
| Instrument Settings | Searci 1 | Unit Cal. | Time Date | Ax | ial Orientated S | earch Unit | |
| Berial No. | | SB0453 Checks | 0845 2/8/2011 | Calibration | · Signal | Sweep | Sound Pat |
| Abnutacturer: KRAUTKRA Aodel: USN-60 | | | 0845 2/8/2011 | Reflector | Amplitude % | Division | .671 |
| belay: 5.4262 Range: | ······································ | Stidpe. Koulid | 1205 2/8/2011 | 375" Notch Tip | 80 | <u> </u> | 1.351 |
| A'1 Cal/Vel: .1229 Pulser: | High Exam Angle: 60 | | | 1.25 Notch | 80 | 5.0 | 2.506 |
| amping: 1. IK Reject: | Mode: | Shear Final Cal | | | | | |
| | 2.26 MHz Measured Angle: | | Couplant | | | | <u> </u> |
| مست المستوجد والمستوجد المستوجد المستوجد والمستوجد المحاد المحا | PE Wadge Style: | and the second | ULTRAGEL II | Calibration | Signal | | T |
| x. Gain (dB): 41.8 Circ. Gain (| | Type: | SONOTECH | Reflector | Signal Amplitude % | Sweep Division | Sound Pat |
| 1 Scropn Div | | IG - 174 Exam Batc | · · | N/A | | | |
| meanity Report No.: L-11 | | Conne | ULTRAGEL II | | | | · |
| Calibration Block | Scan Co | | BONOTECH | | | | |
| al, Block No. 4 PDI-UT-24 | | m 🖌 Scan dB: 47.8 | rence Block | R | ference/Simula | tor Block | |
| hickness 3.76-1.26 Dia. | | W Scan dB: N/A Serial No.: | 04-8740 | Gain | Signal | Sweep | Sound Pat |
| al. Bik. Temp: 72 Temp. Tool: | ACNDE40129 Exem Surface: | O.D. Type: | ROMPAS | dB Reflec | tor Amplitude 7 | 6 Division 2.0 | 1.0" |
| omp. Temp. 11 77 . Temp. Tool: | | As Ground | | | | | |
| ecordable Indication(s): Yos | 이 이 가지 않는 것 같아요. 이 가지 않는 것 같아요. 지수는 것 같아요. 이 것 않는 것 같아요. 이 것 않아요. 이 있 않아요. 이 것 않아요. 이 있 않아요. | sonic Indication Report.) | | | | | |
| Accept | | | Comments: N/A | L Contraction of the second seco | | | |
| ercant Of Covence Obtained > 90%; | No Roviewed Previous Data | Yes a state of the second s | | • | | | |
| | | المحي مسجعها الشنفاء جميركا فيحمد مردد فيتشر الشراك فكرت البراجي | م وشرف الم الم | Shar | alure | | Bate |
| xeminer Level II-N | and the second second | 2/8/2011 | Alla | 67 | | 1 | 2/2/20 |
| kuminer Level II-N | Signature | Data Site Review | | | eture | | Date |
| lansom, Greg J. | y Know | | \ | | | · · · · · · · · · · · · · · · · · · · | |
| ther Level N/A | Signature | Date ANII Review | P D- | the Store | ature | dut | Dete |
| N/A | The second se | Ume | F L ICIA | W Stor | man | 4/4/17 | / |
| and the second | | | · | • | | 14114 | HMENT |
| | 91 L | | * 4 . 1 • | | | PASEIX | 2 35 11 |
| | | | • | | | -10 | c · 1/ |

| | DUKE POWER COMPANY | ······································ |
|------------------------|--|--|
| | ISI LIMITATION REPORT | · · · · · · · · · · · · · · · · · · · |
| Component/Weld ID: 1-5 | LA-01-103A Item No: 01.C5.21.0066 | remarks: |
| NO SCAN | SURFACE BEAM DIRECTION | Due to forged valve con- |
| LIMITED SCAN | 🕺 🚺 🚺 2 🔲 1, 🗋 2 🖾 cw 🖄 | ccw figuration. |
| FROM LENA | NA INCHES FROM WOLCL to Be | yond |
| ANGLE 0 8 45 | 60 other FROM 0. DEG to 360 | DEG |
| NO SCAN | SURFACE BEAM DIRECTION | |
| LIMITED SCAN | 1 1 2 1 1 2 . cw . |] ccw |
| FROM L to L | INCHES FROM W0 to | |
| ANGLE: 0 45 |] 60 other DEG to | DEG |
| NOSCAN | SURFACE BEAM DIRECTION | · |
| ELIMITED SCAN | □ 1. □ 2 □ 1! □ 2 □ cw □ |] ccw |
| FROM LI | INCHES FROM WO | |
| ANGLE 0 0 0 45 1 | 1 2 1 2 cw 1 1 2 1 2 cw 1 1 1 2 cw 1 1 1 1 2 cw 1 1 1 1 2 cw 1 1 1 1 1 2 cw 1 1 1 1 1 1 2 cw 1 1 1 1 1 1 1 1 1 1 1 1 </td <td>DEG </td> | DEG |
| NO'SCAN | SURFACE BEAM DIRECTION | · · · · · · · · · · · · · · · · · · · |
| | 1 2 cw | |
| FROM L | INCHES FROM WO to | |
| | 60-1 other | DEG Ø yes 🗌 No |
| Prepared By: John Day. | Level: II Date: 02/03/11 | Sheet 5 of 8 |
| Reviewed By: | Date: Authorized Inspector | thestropter 914/11 |

| | | SupplemesReport | | epart Na.: <u>UT-11-870</u> Page: <u>6</u> of <u>8</u> |
|---|-------------------------------|---|---------------------------------------|---|
| Summary No.: ,01.C5;21.0 Examiner: Day, John, MExaminer: <u>Leeper, Wi</u> Other: <u>N/A</u> | on all XX | Level: II-N Reviewer: Level: II-N Sile Review: Level: <u>N/A</u> ANII Review: | Novey Chitthen St | Date: 2/4/2007 Date: Date: <u>4/4/14</u> |
| u | A-01-103A See attached limit: | itlon report. | · · · · · · · · · · · · · · · · · · · | |
| Sketch or Photo: | | ation | | • |
| (Eeced) Val | 16 (SI) 9 145 - 14 | | · · · · · · · · · · · · · · · · · · · | BAE (52) |
| | | e _45 | | • |
| | | 201 415 ³ | | • • • • • • • • • • • • • • • • • • • |
| | | | | ATTACHMENT A PAGE 104 OF 162 |

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| | | Dete | rmination of Perc UT Examinatio | · - | e for | |
|-----------------|---------|--------|------------------------------------|----------|-------------|-----------|
|) Site/Unit: | Conte / | 1 | Procedure: | PDI-UT-2 | Outage No.: | O1-26 |
| Summary No.: | O1.C5.2 | 1.0066 | Procedure Rev.: | E | Report No.: | UT-11-670 |
| Workscope: | 15 | | Work Order No.: | 01909587 | Page: | 8 of 8 |

45 deg

| Scan 1 | | % Length X | | % volume of length / 100 = | | % total for Scan 1 |
|---------|--------|------------|--------|----------------------------|------------|--------------------|
| Scan 2 | | % Length X | | % volume of length / 100 = | <u>. ۲</u> | % total for Scan 2 |
| Scan 31 | 00.000 | % Length X | 50,000 | % volume of length / 100 = | 50.000 | % total for Scan 3 |
| Scan 41 | 00.000 | % Length X | 50.000 | % volume of length / 100 = | 50.000 | % total for Scan 4 |
| | | - | | • | | |

Add totals and divide by # scans = 50.000 % total for 45



(to be used for supplemental scans) Other deg -- 60 1. = 51 The data to be listed below is for coverage that was not obtained with the 45 deg scans.

100.000 Scan 1 100.000 Scan 2: % Length X 100.000 -% volume of length / 100 = 100.000 b - % total for Scan and the second sec Scan 3 % Length X % volume of length / 100 = 7 % total for Scan 3 % Length X Scan 4 % volume of length / 100 = total for Scan

Percent complete coverage WILL THE THE PARTY Add totals for each scan required and divide by # of scans to determine; 75.000 % Total for complete exam 237 2.00

Site Field Supervisor. Date:

| | bration, amin | ation | | | | | |
|---|---|----------------------------------|------------|---------------|-----------------------|-------------------|--------------|
| Sila/Unit: | Procedure: | PDI-UT-10 | | _ | Oulaga | No.: | 01-28 |
| Summary No.: 01.C5.51.0050 | Procedure Rev.: | E | | | Report | No.: U | T-11-878 |
| Workscope | Work Order No.: | 01913780 | | | P | age: <u>1</u> | of 9 |
| ode: | Ç.F2/Ç5,51 | Location: | | | | | |
| 1 De | acription: Pipe to Valve 1L | P8-022 | | | | | |
| Ham 1034 1914月 经公司公司 1 注意目上的最近的 日本 1 人名 | | | | | | | |
| mpoment ID) 1LPB-562-14 | 12 | Size/Length: | N/A | .: | Thickness/Di | smeter: <u>C</u> | 8-55/0.5/8.0 |
| mitalions . I Yes See attached sheet | | Slar | Time: | 0910 | Finis | h Time: | 0948 |
| instrument Settings | Unit | | | Axial | Orlentated 5 | iearch Unit | |
| ntal No. | Ch Initia | il Cal 0735 3/31/2011 | | ration | Signel | Sweep | Sound Pat |
| delta Size: 0.375 St | Boe: Round Inter | |]] | ector / DH | AmpiRude % | Division 5.2 | .788 |
| tay: 1.5.7450 Range: 1.5 . 1.5 . Freq. 1.5 MHz | Style: Comp - G, Inter | . Cal. 0911 3/31/2011 | | | <u>,</u> | | |
| CalVeliner, 1288 Pulser. High Star Exam Angle: 48 | of Elements: Single | Cal, | | 1 | | | |
| mping at the first Reject 1. On Mode: | heer | I Cal 1140 3/31/2011 | · | | | | · |
| P. Rete: LTAutohigh Freq. 2.0 Mitz Messured Angle: F Britshort C. Fixed Mode: PE Mitz Wedge Style: | | Couplant | | | ntial Orlentz | diad Baasab | |
| errore Flued | | Batch: 09325 | Callb | T | Signel | | 1 |
| Cale (dD) (4 90 6) Cim Cale (dD) 90 6 | Martin Contraction of the second | والمحاصب وتشتيته المتجنب المتحار | Ref | | | Sweep Division | Sound Pat |
| Screen Div. # 15 In, of Sound Path | -174 Exert | Batch 09325 | 800 | Axial | | | |
| Screen Div. = .15 In. of | onna Type | | · [| | | | ╉╧╾╤╼╼ |
| Bearty Report No.: Calibration Block | Mig. | SONOTECH | · | <u> </u> | | · | ╉╍╧╍╍╍╸ |
| Binetthin Upstream Downstream | Scan dB; 40 | Reference Block | | Refe | rence/Simula | tor Block | , |
| Cknoss 4 Dis.: Flat CW 2 CCW | Scan dB: 40 Seria | | Gain dB | Reflector | Signal Amplitude 1 | 6 Division | Sound Pell |
| Bik Temp: 74.5 Temp: Tool: MCNDE40135311 Exam Surface: | 0.D | ROMPAS | 21.7 | 1" Redlu | | 6.6 | 1.0 |
| | AS Ground | | | | | | |
| cordable indication(a): 🛫 Yes 🔄 No 🖉 👬 (ii Yes, Ref, Altached Ulinas | onic Indication Report.) | | | | 1 | | I |
| suits: Accept Reject Reject Reviewed Previous Date: | | Comments: Ini | | on XI Exan | n | • | • |
| rcent Of Coverage Obtained > 90%: No. No. Reviewed Previous Date: | No | | • | | | | • |
| | and the second secon | | | Signat | uno . | | Dale |
| amher F Level ILN Signature river | Date Reviewer | tousan | · . | • | | 4.12 | <u>2. //</u> |
| aminer the Lavel II-N | Date Site Review | | , | Signati | ure . | | Date |
| | 3/31/2011 | A | i | Cleart | | | Data |
| A HILLEY Lovel N/A | L Dato ANII Review | 1 Rtite | - 5/2 | Signati | in l | H20/1/ | , , |
| | | | ميس _ | - Xin | | 1-161 | |

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| | Site/Unit: | Осолев, 57 | | 1 | | cedure: | i. | PDI-UT-10 | | | Outage N | ło.: | 01-26 |
|--|--|--|--|--|---|----------------|-------------------------|--------------|------------|-------------------|------------------------|------------------|-----------------------|
| 2000 - 2000 | Summary No.: Workscope: | . 01.65 | | | Procedur | \$? | - <u>-</u> | <u> </u> | | | Report N | ومتراسي مخصرة | T-11-878 |
| | | | | | Work Ord | | | 01913780 | _ | | Pa | ge: 2 | 9 |
| the second s | 1998/200 | | | Cat /item: | | | | Location: | | | | | |
| ing No. m ID: | 1LP8 | -563 | | Uescript | ion: Pipe to V | | 2 | | | | | • • | |
| | -503-14 | | | | 2000-000-00 2010-00-00 | _ | Size/ | Length: | N/A | | Thickness/Dia | meter C | 5-55/0.5/8.0 |
| 1. UP | Bee Attached She | 1 | | 4 | | <u></u> | 0.207 | Start | _ | 0910 | | Time: | 0948 |
| inst | rumant Sattings | ويستباب والشارجية | | Search Unit | | | ř. | | | | | | |
| | O'IMBT | | Sertal No.: | OIMH | V4 | Cal. Chacks | Time | Date | Call | Axial | Orientated S Signal | Sweep | 1 |
| | KRAUTKRAM | | | · · · · · · · · · · · · · · · · · · · | A | [Initial Cal | 0740 | 3/31/2011 | | | mpillude % | Division | Sound Path |
| | USN-60 | | ستستحص سيست فروا | the second s | Round | Inter. Cal. | 0920 | 3/31/2011 | Near | SDH | 80 | 3.4 | .684 |
| s/Vol: 129 | 8 Range: | High | | | Comp - G | John Cal | | | | | · | | |
| ng: 1K | and the second s | 0% | | Shaar | | Final Cel | 1143 | 3/31/2011 | | | · | | |
| ste: Autohi | h Freq | | | le: | | | Couplar | nt | | | | | 1 |
| P.F. Fixer | | | | M8W | IQC | | - | 09325 | | Circumfere | nilal Orlenta | ted Search | · Unit |
| ain (dB): 42 | | Fullwave | | Bearch Unit Cabl | 目的 | Mfg. | ULTRA | | | retión actor A | Signal mpillude % | Sweep DMislôn | Sound Path |
| Some Diver | 2 In. of | ound Path | Type: | RG - 17 | 4 | | 7 | ······ | Ň | IA | | | 1 |
| | | 77 17 7 19 19 19 19 19 19 19 19 19 19 19 19 19 | Longth: 6 | No. Conn: | 0 2 | | ULTRA | 09325 | | | | | |
| | Ibration Block | F | | Scan Coverage | Here See | | BONO | | | | | | + |
| lock No: h-H | 86-3259 | | Upstream [] | Downstream 2 | Scan'dB: 43 | Second Ref | rence B | | | Rafer | ence/Simula | tor Block | |
| N/A: | Dia.: 3 | Flat | CW [] | ÇCM⊡, | Scan dB: N/A | Serial No.: | | 6-3259 | Gain | l. | Signal | Sweep | Sound Path |
| k. Tomp. 74.6. | Temp. Tool: M | CNDE40135 | Exem Surface: | | . D. | Type: | | IPAS | dB 28,4 | 1" Redlus | Amplitude % | DMsion 5 | 1.0 |
| | emp. Tool: M | | | | | - 6.7 | | | · . | | : | | |
| dable indication | (a): Yoa. 🖸 | NO M | if Yes, Rat. Aus | cheo Ultrasonio (r | Idication Report | L) - | •. | I | | L | [| L | ļ |
| a Accept | Reject [| | • □ • ••••••••••••••••••••••••••••••••• | ALTER ALL | | | ုင်းငံ Cor -၂ | mments: Init | al Secti | on XI Exem | • | • | |
| nt Of Coverage O | blained > 90%: | No | Reviewed Prei | Vous Date: | No. | | ji i | | _ | <u> </u> | | | والكند الأفر الإلاريس |
| iner Lev | Bas | Store Sk | nature () | Sugar Bran | Date Revie | | 1 | · · · · | | Signatu | re | | Dato |
| | the second s | 7-11 | the | | A DESCRIPTION OF THE OWNER OF THE | | 0400 | 1 | | | | 7.1 | 2.11 |
| 1. S. | | | nature | 1. A. | 'Date Site F 1/2011 | A G I' | | • | | Signatu | re | | Date |
| | 1-, N/A | | nature | · In a Girper | | Review | | | | Signatu | ria , | 1 | Date |
| | | | 11111111111 | | | | D | teter S | Land | the | · 4 | 20/11 | ,- |

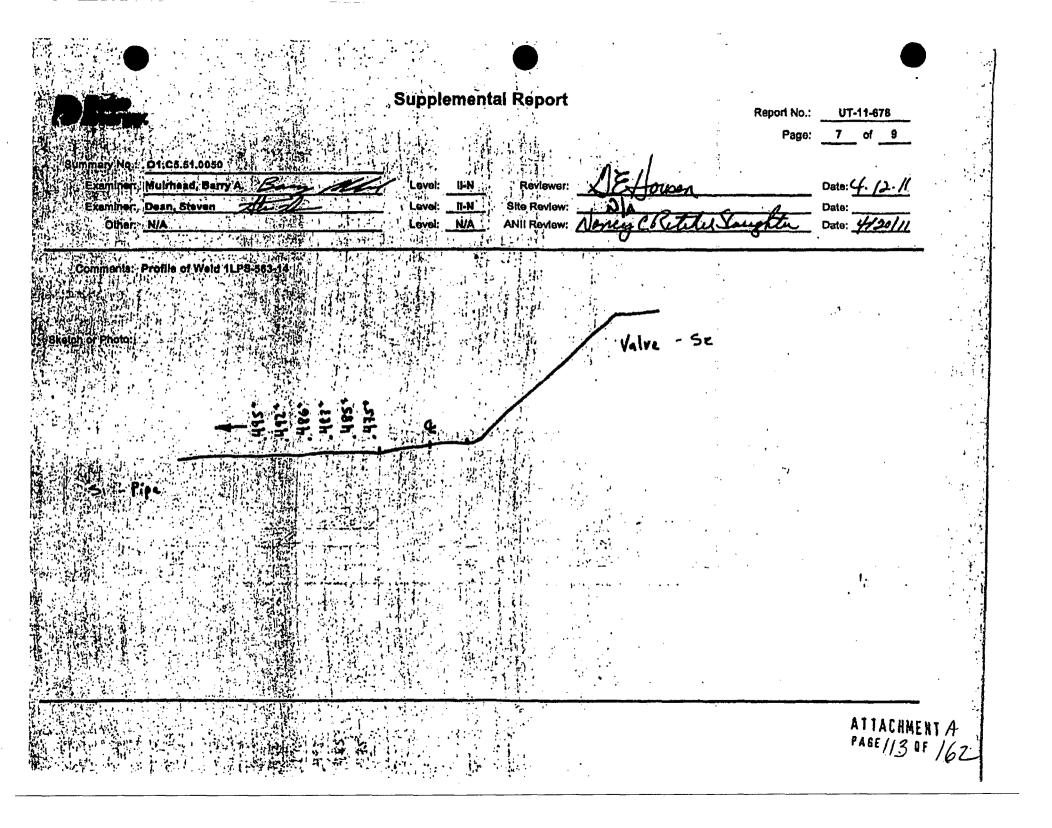
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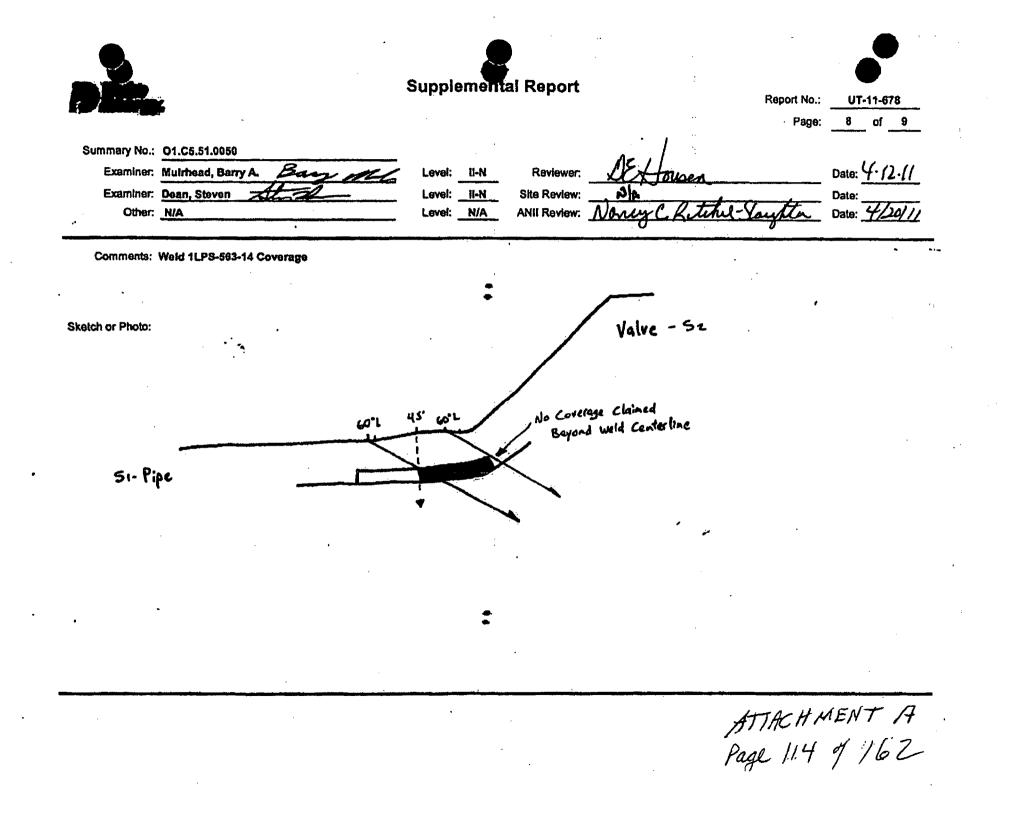
| | | | | | :) |
|--|------------|-----------|---|-----------------|--------------|
| UT Calibrationamination | | | | | |
| Site/Unit: Oconee, Stall | | | Outage | No.: | 01-28 |
| Summary No | • | | Report | No.: U | T-11-878 |
| Workscope | | | P | nge: 3 | of 9 |
| Cat./item Cat./item | | | | | |
| Description: Hips to Valve 1LPS-022 | | | | | |
| | | | | < | |
| Size/Length: | N/A | <u> </u> | Thickness/Dia | ameter: C | 5-55/0.5/8.0 |
| | t Time: | 0910 | Finis | h Time: | 0948 |
| Bearch Unit Cel. Time Dete | 1 | Axta | l Orientated 8 | earch Unit | |
| 011MBT Seriel No. RTD Checks Initial Cal 0745 3/31/2011 | | isctor | Signal Amplitude % | Sweep DMsion | Sound Path |
| UBN-60 Size: 2(7x10) Shepe: Rept.] Inter. Cal. | | DH | 80 | 5.6 | .848 |
| 18.7078 Range: 1.8.1 Freq.: 1.2.0 MHz 1 Style: TRLA Inter. Cal. 0928 3/31/2011 | | | | | |
| Vel: 2350 Pulser: High A B. Exam Angle: 48 # of Elements: Dual Final Cal 1148 3/31/2011 | \$┣ | _ <u></u> | | | |
| te chautohigh Freq. 2.0 MHz 3. Maasured Angle: 45 Couplant | · | | | | |
| UILT Fixed A Mode: Dual Wedge Style: A Integral 1 Cal. Batch: 09325 | | Circumfer | rential Orienta | ted Search | Unit |
| Type: ULTRAGEL II | | nollari | Signal | Sweep | Sound Path |
| 17dB):55 Sch40% TVCIm, Gain (dB):ESY (2408052) - UT TVC Seambiling Cable 11.55 / High Sonotech | - | | Amplitude % | Division | |
| oreen Div:= 18./m.of; Sound Path Type: RG : 174 Exam Batch 09325 Report No: | | Axiai | | | |
| Report No. 12 March 11139 Contract 1 Coverage Mig. SonOTECH | • [| | | | |
| Calibration Block Upstream Downstream Y Soan dB: 40 Reference Block | · | باليوسد | | | |
| A Reference Block | Gain | Ren | erence/Slimuli Signsf | Sweep | Laine and |
| A*k In Dia: Flat Street CW 2 CCW 3 Scan dB: 40 Secial No.: 86-3259 Temp: 74.5. Temp: Top: D.D. Type: ROMPAS | dB | Reflecto | e Amplitude 9 | Division | Sound Path |
| emplited is the ground when the second second second second as the second s | 23.4 | 1" Radiu | is 80 | 6.6 | 1.0 |
| bie indication(e): Yes I No 📝 (if Yes, Ref. Attached Ultrasonic Indication Report.)- | | ŀ | | | |
| Accept. [] { Reject @ Frino [] Services Merinet Services and a service services and a service service services and a service service service service service service services and a service ser | itial Sect | on XI Exa | m | I | • |
| Of Coverage Obtained > 90%: No Internet Reviewed Previous Date: No | • • | | • | | • · |
| Lovel ILN | • | Signal | and the second se | | Date |
| Berry States Taken | <u>-</u> | . | | ¥.1 | 2.11 |
| Triven II.N Delta II.N Anglas Statistica Sta | · | Signat | lure | | Date |
| Anil Anil Review | | | 100 | | Date |
| Noncy CK that ? | Jour | hter | 41. 41. | 11/05 | V010 |
| | Ő | 1 | | | |
| | , | | A | TIACK | MENT A |
| 約1945~4月1日には「「4458月1日」の4月1日にあります。その1月1日にあり、日本日本の2月1日には4月1日になった。1月1日にした。1月1日にように、1月1日にあった。 | | | e e e e e e e e e e e e e e e e e e e | A6E//)9 | ar Lis |

| Signifultion Doome 1 Procedure PDLUT-10 Outage No.: Summery No. 0172.51.0000 Pice | | | 1 | T Calibrati | on a | minatio | n . | | | | | | · |
|---|--|--|--|---|---|--|----------|--------------|--|---|--------------|-------------|----------------|
| Summer No. Difference Difference Difference Provedue No.: E Report No.: Verif Order No.: Verif Order No.: 01112730 Page: d Verif Order No.: 10112730 Page: d Verif Order No.: Verif Order No.: 011017 Verif Order No.: Page: d 8120/Longth: N/A Verif Order No.: Verif Order No.: Stant Time: 0410 Verif Order No.: Verif Order No.: Stant Time: 0410 Verif Order No.: Verif Order No.: N/A ThicknessfDiamator Verif Order No.: Verif Order No.: Verif Order No.: N/A Verif Order No.: Verif Order No.: Verif Order No.: N/A Verif Order No.: Verif Order No.: Verif Order No.: N/A Verif Order No.: Verif Order No.: V | Silver | Unit: Oconae | | | | | | BDLUT-46 | | | Outoos | No • | 04.94 |
| Workscope: Index Page: Work Order No. D1913780 Page: A 41 1089/2000A 1521/1 CeL/Lism: C-F-2xC5.51 Location: 418/2 148-543 55.51/2 Dept/plice: Pips to Yes, Star Time: Div 418/2 148-543-14 - Star Time: DV Firsh Time: DV 418/2 148-543-14 - Star Time: DV Firsh Time: DV 418/2 0111657 - Start Time: DV Firsh Time: | | the second s | | | 1 1 1 1.5970 | | | | <u></u> | | | - | |
| Image: State of the second state of the sec | CONTRACTOR OF THE OWNER | | | | Stan be | · · · · · | | | <u>.</u> | | • | | |
| ILPS-68.1 In 81.2 Description: Prise to Valves ILP8-68.2 april D ILPS-68.4 Statuards NA Thickness/Diamolar. april D ILPS-68.4 Statuards Statuards NA Thickness/Diamolar. april D Ites - 68.4 Statuards Statuards Statuards NA Thickness/Diamolar. april D Ites - 68.4 Statuards Statuard | AND A CONTRACT OF A CONTRACT. | | | | C.F.7/C5 | | | | | <u> </u> | | | |
| Index Index Index N/A Thickness/Diameter International Construction of Status and Stream St | | the second s | | | | | | | ····· | | | | |
| International State N/A Thickness/Diameter Riscurgenti State Stacklong Biredia | | | | | | 1 | 1 | ····· | | | | | |
| Pinstrument Settings Bearch, Unit Chi. Time Date Axial Orientated Search Unit No. 031MBT 2 Serial No. 03-767 Initial Cal. 0750 USHAD No. 03-767 Initial Cal. 0750 J312011 Initial Cal. 0750 J312011 No. 04-60 Visite Street 20101 Shape: Resc. Initial Cal. 0750 J312011 Ref. Cal. 04-60 Visite Street 20101 Shape: Resc. Initial Cal. 10840 J312011 Ref. Cal. 04-761 Pulser Attist Orientated Search Unit Byle: Initial Cal. 10840 J312011 Initial | | | | · · · · · · · · · · · · · · · · · · · | • | | Size/L | ength: | N/A | ······································ | Thickness/Di | ameter: Č | 8-\$\$/0.5/8.0 |
| No. O11MBT Jack Seriel No.: O3-767 Checks Imm Date IstCarey IKRAUTKRAMER Manufacturer: IRTD IRTD Initial Call Orso 23/31/2011 IstCarey IstRacey IstRacey IstRacey Initial Call Orso 3/31/2011 IstCarey IstRacey IstRacey IstRacey Initial Call Orso 3/31/2011 IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey IstRacey </td <td>Yes -See Attac</td> <td>hed Bheats</td> <td></td> <td>e i se la compañía de la compañía de</td> <td></td> <td>.</td> <td></td> <td>Start</td> <td>Time:</td> <td>0910</td> <td>Finia</td> <td>h Time:</td> <td>0948</td> | Yes -See Attac | hed Bheats | | e i se la compañía de | | . | | Start | Time: | 0910 | Finia | h Time: | 0948 |
| No. O11MBT U.S. Sardal No.: O 3-767 Checks Internet Called Manufacturer. I RTD Indurg U.S.RAUTKRAMER Manufacturer. I RTD Inter. Cal. Inter. Cal. Inter. Cal. Inter. Cal. Inter. Cal. Manufacturer. I RTD I RTD I RTD | | | | | 5.6 | Cal | | Det. | | Avia) | Orlantated S | teenth Link | |
| Secure 1 KRAUTKRAMER C Menufacture: Image: 1 Image: 1 Menufacture: Menufacture: Image: 1 Menufacture: Menufacture: <td< td=""><td></td><td></td><td></td><td></td><td></td><td>Checks</td><td><u>.</u></td><td></td><td>Calib</td><td></td><td></td><td></td><td>Sound Pat</td></td<> | | | | | | Checks | <u>.</u> | | Calib | | | | Sound Pat |
| Bit 6.7512 Range 2.0 // // // // // // // // // // // // // | | | | | 1. 1. 1. | | 0750 | 3/31/2011 | Ref | ector / | Amplikude % | Division | |
| AVer (2): 2277. Pulser fillight 1.551 Exam Argies: 60 # of Elemanitic Dual. Inter. Cal. Inter. Cal. <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0940</td><td>3/31/2011</td><td>Near</td><td>HOB</td><td>80</td><td>3.5</td><td>.700</td></t<> | | | | | | | 0940 | 3/31/2011 | Near | HOB | 80 | 3.5 | .700 |
| inc Refer: 09// dis Mode: 1.Long: IFinal Cal 1152 3/3/2011 ine 12// Fixed Mode: 0 Couplant Cal Batch: 09325 If Fixed Other Funders/Fixed Other Funders/Fixed Cal Batch: 09325 Circumforential Orientated Sear If Fixed Other Funders/Fixed Other Funders/Fixed Other Signal Signal Screen ON Fixed Other Funders/Fixed Other Signal Signal Screen ON Fixed Other Funders/Fixed Other Cal batch: 09325 Circumforential Orientated Sear Screen ON Fixed Other Funders/Fixed NA Division Screen ON Fixed SonoTECH NA NA Division Screen On Screen On Other Screen Objeck Calibration Book Screen Coverage Mig.: SonoTECH NA Calibration Book CVV CCW Scan dB: Mig.: | | | | | | Inter. Cal. | | | | ╧╾╌┠ | | | + |
| Pibed Mode: Dush: Wedge Style: Integral. Cal. Batch: 09325 Circumferential Orientated Sear 61 File Other Fullwave: F | Roj | | | | 1 3 1 1 | Final Cal | 1152 | 3/31/2011 | | | | | 1 |
| et | | | | | | | | | | | · · · · · | | 1, <u> </u> |
| In (dB): 53.8 Circ. Gain (dB): N/AI Search Unit Cable Mig: SONOTECH Relation Andplutue a Units of Reference Block Calibration Block States Condition: Coverage Mig: SONOTECH N. Reference Block Search Unit Coverage Mig: SONOTECH Searce Block Searce Unit Coverage Coverage Mig: Sonotech Searce Block Searce Unit Coverage Coverage Mig: Sonotech Searce Block Searce Unit Coverage Coverage Mig: Searce Block Searce Unit Coverage Cover | | de: P Duatr | Wedge Style: | Integra | | 14 A | | | | | | | Unit |
| Screen DV. # 2 in. of Sound Path [] Type: (RG - 174 (R gent No. Langth: 6 No. Com.: 0 Type: ULTRAGEL II Calibration Block Bears Coverage Mig. SONOTECH Mig. SONOTECH Reference/Simulator Block Reference/Simulator Block Reference/Simulator Block Bears Dia. Fist CCW CCW Scan dB: 45 Reference Block Reference/Simulator Block Bears Dia. Fist CCW CCW Scan dB: N/A Serial No.: 88-3259 Gain Reflector Amplitude % DMek Serial No. Bears Dia. Fist CCW CCW Scan dB: N/A Serial No.: 88-3259 Gain Reflector Amplitude % DMek Serial No. Bears Dia. Fist CCW CCW Scan dB: N/A Serial No.: 88-3259 Gain Reflector Amplitude % DMek Serial No. Bears CCW Scan dB: N/A Serial No. Bears CCW Scan Serial No. Bears Serial Seria | 51.6 Circ | . Gain (dB): | | Search Unit Cable | Procedure No.: E Report No.: UT-11. Work Order No.: 01913780 Page: 4 of C-F-2/CS.51 Location: | Sound Pat | | | | | | | |
| IV Report No. L-11-139 Length: 8 No. Conn. 0 Type: ULTRAGEL II Cellbrailon Block Boan Coverage Mig.: SONOTECH Mig.: SONOTECH book No B6-3250 Upstream Downstream Scan dB: 45 1* Dia. Flat CCW Scan dB: 45 1* Dia. Flat CCW Scan dB: 1* 1* Scan dB: A: Ground Type: Rometactor Amplib | i DN. # 💭 🧏 👘 In. c | of Sound Path | , Type: | RG - 174 | | Procedure: PDI-UT-10 Outage No.: UT addure Rev: E Report No.: UT conder No.: 01913780 Page: 4 2/C5.81 Location: to Valve 1L PS-022 Start Time: 0910 Finish Time: CE Start Time: 0910 Finish Time: CE Start Time: 0910 Finish Time: CE Call Call Call Date Astal Orientated Search Unit Callbraiton Start Start Start Time: Division Start Start Start Time: Division Start Start Time: Division Start Start Time: Division Start Time: | | | | | | | |
| Calibration Block Soan Coverage Mig.: SONOTECH bok Noi 86-3259 Upstream Downstream Scan dB: .45 Reference Block css 1* Dia. Flat CW CCW Scan dB: .NA Reference Block css 1* Dia. Flat CW CCW Scan dB: .NA Serial No.: 89-3259 1* Dia. Flat CW CCW Scan dB: .NA Serial No.: 89-3259 Gein dB Reference Block css 1* Dia. Flat CW CCW Scan dB: .NA Serial No.: 89-3259 Block Gein Amplitude % Division Division css 74.8 Temp. Tool: MCNDE40136 Surface: O.D. Type: ROMPAS 29.0 1" Radius 80 5 abble lindication(s): Yes No. Trainino Comments: Initial Section XI Exam abble lindication(s): Yes Reviewed Previous Date: No. Comments: Initial Section XI Exam accept Inv Signature Signature | ort No. | L-11-139 | Length: 6 | No: Conn.: | . 01.t. | Type: | ULTRA | GEL II | <u> </u> | Report No.: Page: Thickness/Diamet 0910 Finish Tir Axial Orientated Secret braiton Signal S flector Amplitude % Di FSDH 80 Gircumferential Orientated braiton Signal S flector Amplitude % Di Reflector Amplitude % Di 1* Reflector Amplitude % Di 1* Reflector Amplitude % Di 1* Reflector Amplitude % Di 1* Reflector Signal Signature Signature Signature Signature Uth 4/20 | | | |
| Dock No: S66-3259 Upstream Downaream Scan dis: A5 Reference Block Reference/Simulator Block ess 1/2 1 Dis. Flat CW CCW Scan dis: N/A Serial No:: 88-3259 Gain dis Signal | | | | Scan Coverage | 21-1 C | Procedure: PDLUT-10 Outage No.: 01-2 sedure Rev: E Report No.: UT-11- Corder No.: 01913780 Page: 4 of 2/06.61 Location: | 1 | | | | | | |
| ass 1 Dla. PlatCWCWScandB: N/A Sertal No.: 88-3259 Gah Gah Bignal Signal Swea k.Temp: 74.5; Temp: Tool: MCNDE40135 Exam Surface: 0.D Type: ROMPAS 29.0 1" Radius 80 5 Temp: Cesiz Temp: Tool: MCNDE40135 Surface: 0.D Type: ROMPAS 29.0 1" Radius 80 5 Temp: Cesiz Temp: Tool: MCNDE40135 Surface: 0.D Type: ROMPAS 29.0 1" Radius 80 5 dable indication(s): Yes No Hereicolic Condition: As Ground Comments: Initial Section XI Exam Accept [] Reserved Previous Data: No Reviewed Previous Data: No Signature Signature 4 Accept [] II-N Signature Signature Signature 4 4 Signature 4 Accept [] II-N Signature Signature Signature 4 5 5 Accept [] I-No Signature Signature | | | | | | | | | | Refe | rence/Simula | tor Block | |
| Tamp: (1. 1682: Temp: Tool: MCNDE40135-T: ISurface Condition: As Ground dable indication Report.) a. Accept [] Reject [] Reject [] Reject [] Reviewed Provipus Data: No. Accept [] Reviewed Provipus Data: No. No. Reviewed Provipus Data: No. Signature 4 Signature 4 Signature 5 Signature 5 Sign | <u>S.</u> 1 | in the state was | CW [] | CCW Sa | an dB: N/A | Serial No.: | 80 | -3259 | | Referen | | | Sound Pat |
| Tamp: (1:683/Temp: Tool: MCNDE40138-T: Surface Condition: As Ground | p. 74.8. Temp. Tool | L MCNDE40135 | Exam Surface: | .O.D. | | Type: | ROM | PAS | and the second | | | | 1.0 |
| Accept Reject Z Info Comments: Initial Section XI Exam Cof Coverage Obtained > 90%: No Reviewed Provipus Data: No The Barry A Signature XIII A State Reviewer K Signature Signature Signature Signature Signature Signature Signature Signature Signature | | | | | | | | | | | | | |
| t Of Coverage Obtained > 90%: No Reviewed Provious Data: No No Reviewed Provious Data: No Reviewer Signature Signat | ndication(a): | Yes I H No Mit | 54 (II Y65, KOI, AUD | ched Ultrasonic indi | cauon kepun. | 17 . A 44 1 | | | | | <u> </u> | J | |
| t Of Coverage Obtained > 90%: No Reviewed Provious Data: No No Reviewed Provious Data: No Reviewer Signature Signat | Accept | Reject 1 | | | | | Con | nments: iniț | ial Section | on Xi Exer | n | •. | |
| Alexandre Site Review Site Review Signature | overage Obtained > 9 | 10%: No 🖓 | Reviewed Prev | lous Date: | No | | 1. | | | | - | | |
| net Lavel II.N Signature Rit NHA | Level II-N- | | Shnaturaturan | | Date Review | ver NZ | 1 | • • | | Signati | UTO | 11 | Date |
| Signature All and Signature Signature | LITY A. | Dany - | achin | | in the second | Ney | tou | aen | | | <u></u> | 7.1 | 2.11 |
| Staven 3/31/2011 2 1 A | | Alia | | | | | | | | Signati | | | Dale |
| Signature | Contraction of the local division of the loc | | Signature | La Salar I | ويتعاد والمستخد | | 0 | | | Signati | ire , , | | Date |
| Noncy Chitchel-Slaufter 4/20/11 | | | A strategic biogs in | 4 A | 1 No | neye | Kiti | tu-Sl | aus | th | 41. | 20/11 | |
| | | | A REAL PROPERTY OF A READ REAL PROPERTY OF A REAL P | | 11 | 1 × 1 | | | | | | | |

| - And Anna | | Site/Unit: | Oconee | 1. 1 | | | | | ••••• | | | | NDE-640 | | | Outage | No.: | 01-26 | |
|---|---------------------------------------|------------|--|---------------------------------|---|-------------------------|-------------------|---------------|---------------------|----------------------------|--|-------------------|---------------|----------------|-----------------|------------------------|-------------------|------------|----------|
| | | | | | | | | 1 2 1 | Procedu | | - | | | | ÷ | · Report | | JT-11-678 | |
| 5 ST | | | | | and the second se | N | The Lat | , - | | | | | 01913780 | | | | age: 5 | of | <u> </u> |
| in an | | | | | | - | | _ | C'F-2/C | | | | Location: | | — — | - | | | |
| | | | | | | | · · · · · | | Pipe to \ | | _ | | Location; | | ~ | | | | |
| | 148 | | | | · · · · | | 0000 | | Tipe to t | | | | | • | | | | | |
| mponent ID | 1LPS-563 | .14 | <u>ф.</u> | 3 | | | ÷ | · | | 1 | | Size/I | ength: | N/A | | Thickness/Di | ameter: C | S-88/0.5/8 | |
| mitationa | None 3 | K | | | | | | | | | <u></u> | 0.207 | | Time: | 0905 | | h Time: | 0910 | |
| 11 (14) (1 | | 7t Cattler | | 50 / 10 1 va | | • | an on he life | | | | | | | | | | | | |
| ertal No.: | | 011MI | BT | 11 | Serial No.: | ` | 57462 | 2.08724 | alle i | | Cal. hecks | Time | Date | | | Ortentated 1 | | t | |
| lanufacturer: | er a | KRAUTKR | AMER | 1:-51 | Manufactu | rer: | | KBA | | | ial Cal | 0730 | 3/31/2011 | Callbi Refi | ration potor | Signal Amplitude % | Sweep Division | Sound P | ath |
| odel: | · · · · · · · · · · · · · · · · · · · | USN- | 50 | · (§) | Size: 3 | 5X10mm | Shap |)8: | Round | | ir, Cal. | | | В | Ŵ | 80 | 5 | 45. | |
| | 4,1000 | | 1.0 . | | | | | | | | nr. Cal. nr. Cal. | 0905 | 3/31/2011 | | | | | | |
| ti Cel/Vel: | | Pulser: | High 0% | | | | | | ents: Dúa | | the second s | 1135 | 3/31/2011 | | | | | | - |
| n. Rate: | Autohiah | Free | 4.0 MH | 5 6 | Moasumd | Angle: | | 0. | | - 1 | . (| Couplar | it | | | | | | |
| ler: | Fixed | Mode: | j Dual | 133 | Wedge Sty | le: | 1 in | tegral | | Cal. | Batch: | | 09325 | | Circumfe | rential Orlent | stad Search | h Unit | |
| htage: | Fbred - | Other: | Fullway | | | | 212.7.2.7 | 121 | | Тур | B; | ULTRA | GEL II | Celibi | | Signal | Sweep | Sound P | àth |
| . Gain (dB): | Pixed | Circ, Gain | (dB): 3 | 8.0 | | Searc | h Unit Cr | able | | Mig | · · _ · | ¹ 80NO | TECH | Refle | | Amplitude % | Division | | |
| Screen L |)iv. = | in. of | Sound Par | 9.5. 14. 19 . 855 | Type: | | RG - | 174 | 1. 1 . 1. 1. | | m Balci | | | <u></u> | <u> </u> | | | + | |
| early Repor | rt No.: | L-1 | 1-139 | 1721C | | | | | | Турі | | SONO | | | | | | | |
| 的代码 | t No.: Callbre | Hon Block | | | linetreiem F | Down | etream EZ | 8. D. Scar | 1 1 dB: 38 | ν, Σ. : «.Σ.: μ. Σ.: | " • | 3040 | | | l | | | | |
| I. BICCK NO. | Calibre .500 .74,5 Temp | Compon | | | ···· CW F | -) (784.47 A | CCW IZ |) Scar | dB: 38 | | Refs | rence B | Hock. | Gain | Ret | erance/81mul Signal | Swaap | 1 | |
| I. Bik. Temp. | 74.5 Tem |). Tool: | MCNDE401 | 551 1.41 | Exam Surfi | | | OD | | - Serti | R) No;:_ | | 4-7837 | Bb | | r Amplitude ! | Division | _ | AUT |
| mp. Temp. 1 | 68 . Term | , Tool: | MCNDE401 | 35 - 1 - S | Surface Co | nditions | A-ni hin | ta Groi | und 斗 I - | ≓, iype | | | | 36.7 | .5" Sta | 80 | . 5.0 | ,5 | - |
| | allen Handlaley | Yan | | 1.1500 | Van Daf | Ittachad | litranonie | o Indice | tion Room | | | ્યાલ્ટ્સ | Тори | | | | + | | |
| sulta: | Accept 7 | Rejec | 4° 🖂 🕹 🖓 | N#Info | | ar an an Specific Ve | 4 | | .(.) ⊾,⇒1 _]. | Lit | بالمطلقة | - Co | nments: Init | lai Sectio | on XI Exe | m | | 1 | |
| 25,45 | erage Obtain | | | 1 Size | Reviewed | | ling - in | | tr i | i ir | | l. | | • | •. | | | • | |
| | | | | Clan | ahum t | 1011000 | A. MIL : 17 | | ato Devi | | | | | | Siona | | | Da | |
| ubhead. Bar | Level | Bar | à n | | 5 | | | 3/31/20 | 11 | , I | 13 | tou | | - | 0000 | | - 4. | 12.11 | Ĩ |
| aminer | Lovel | IN | | | ture | 1.Blift | 1.11 | | ate . Site | Review | | <u>, uv</u> | <u> </u> | | Signa | ture ' | | Del | ie |
| an, Staven | 12 15 | | Ku- | U | Sigli | al Lucks | 1 19 3 | 3/31/20 | | <u>1</u> | | | · •· • | | | | | | |
| hor y Stati | Level . | IIA | 1997 - 19 | 1Signi 1 | sture | ti sinanipe | 1 - 3 '059 | De | ANII | Review | in A | 0- | -1 . Cl. | | Stona | ture 4/2 | 0/11 | Dat | ia |
| A 175 | | 1.4 | 110 1 | - 11 - V | (二)、(本語)】(2) | の死した。 | 84 ° ° | | - I €7V | m | <i>KK</i> (* - | 16:11 | ・ ル・・ ビー・ ヽしん | NYN | w | 71 | ~(17 | | ŀ |

| DUKE POWER COMPANY | | . | | |
|--|--|--------------|------------------|---------|
| Component/Weld ID: 1LPS-563-14 Item No: 01.C5.51.0050 | tem | narks: | | |
| NO SCAN | | | s due to cast | |
| LIMITED SCAN | | alve. | | ~~~~ · |
| FROM L 0 to L 360411 INCHES FROM W0 CL to Bey | | · · · | | |
| ANGLE 0 2 45 2 60 to other FROM N/A DEG to N/A | DEG | | | |
| | | | | |
| ☐ 1 🛛 2 🗍 1 🖸 2 🖾 cw 🖄 | ccw | • | | |
| FROM L 0 to L 360 INCHES FROM WO CL to Beyo | ······································ | <u> </u> | | |
| ANGLE: FROM N/A, DEG to N/A | | | | |
| SURFACE BEAMDIRECTION | | ** | | |
| 2 LIMITED SCAN | ccw | | | |
| FROM L to L to to | | | · | |
| | DEG | | | |
| SURFACE BEAM DIRECTION | | | •••••• | |
| | ccw UT-1 | 1-678 | | |
| FROM L to L to L FROM W0 to | · · · · · · · · · · · · · · · · · · · | Sketch(s) at | ttached | • |
| ANGLE: . 0 . 45 60; other FROM DEG to | DEG | yes 🛛 | 🗌 No | 2 · · |
| Prepared By: Barry Multhead Bern Merel II Date: 03/31/11 | Sheet 6 | of _ | | |
| Reviewed By:// Authorized inspector | the Slow | ighter | Date: 4/20/11 | |





| | y. | | UT Exam | inations - Pipe | | |
|---|--|--|---|--|-------------------------|--|
| Site/Unit: | Oconee / | 1 | Procedu | ure: PDI-UT-10 | :- Outage No | o.: 01-26 |
| Summary No.: | 01.C5.51 | | Procedure R | | - Report No | |
| Workscope: | 151 | | Work Order N | No.: 01913780 | Pag | e: 9 of 9 |
| | | | | | | |
| <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 | | 50.000 | % volume of length / 100 = | 50.000 | - % total for Scan 3 |
| Scan 4 | | | | . 50.000 | - % total for Scan 4 | |
| Other de The data | | (to be used for w is for coverage | | scans) otained with the 45 deg scans. | | |
| The data Scan 1 | to be listed belo | w is for coverage | that was not of | otained with the 45 deg scans. % volume of length / 100 = | 50.000 | % total for Scan 1 |
| The data Scan 1 Scan 2 | 100.000 | w is for coverage | that was not of | btained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = | 50.000 | % total for Scan 2 |
| The data Scan 1 | 100.000 100.000 100.000 | w is for coverage | that was not ol 50.000 | otained with the 45 deg scans. % volume of length / 100 = | 0.000 | |
| The data Scan 1 Scan 2 Scan 3 Scan 4 Percent | 100.000 | w is for coverage % Length X % Length X % Length X % Length X | that was not of 50.000 0.000 | btained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = | 0.000 | % total for Scan 2 % total for Scan 3 |
| The data Scan 1 Scan 2 Scan 3 Scan 4 <u>Percent</u> Add tota 37.50 | 100.000 | w is for coverage % Length X % Length X % Length X % Length X mage required and diving complete exam | that was not of 50.000 0.000 | <pre>btained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = ms to determine;</pre> | 0.000 | % total for Scan 2 % total for Scan 3 % total for Scan 4 |
| The data Scan 1 Scan 2 Scan 3 Scan 4 <u>Percent</u> Add tota 37.50 | 100.0000 100.000 100.000 100.000 100.000 100.000 100.000 10 | w is for coverage % Length X % Length X % Length X % Length X mage required and divis complete exam <i>Daw</i> | that was not of 50.000 0.000 de by # of scan | <pre>btained with the 45 deg scans. % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = % volume of length / 100 = ms to determine;</pre> | 0.000 | % total for Scan 2 % total for Scan 3 % total for Scan 4 |

| | | | | | •1 | | | | | | | , | | | · (* |
|----------------------------------|---------------|-------------|------------|--|--------------|--------------------|----------|-------------|--------------|--|------------|--------------|--|-------------------|---|
| | | | | | UT Ca | libration, | .aı | minatio | n | | | ı | | | |
| See Courses | | Site/Unit: | Осопее | / 1 | | | Proc | enuba: | | PDI-UT-10 | | | Outage I | No.: | 01-28 |
| | Sum | nary No.: | . 01 | .C5.51.0053 | | Pro | ocedure | Rev.: | | E | | | Report I | Na.: L | JT-11-879 |
| | Wo | rkscope: | | ISI | | Wo | ork Orde | er No.: | | 01913758 | | | Pa | 1 1 1 | of 9 |
| Code: | | 1998/ | 2000A | | Cat/iter | n: C-I | F-2/C5. | 51 | | Location: | | | | | |
| Drawing No.: | | 11 | PS-702 | | | Description: Pip | e to Va | ive 1LPSW- | 16 (Cast | : 85) | | : | | | مى مەربىي يېلىپ كانت ە يەلىپ |
| System ID: | 14B | | | | - | | | | | | | | | | |
| Component ID: | 1LP8-702- | 50 | | ***** | | | | | Size/L | ength: | N/A | | Thickness/Dia | imeter: S | S-CS/0.5/8.0 |
| Umitations: | Yes - See : | ittached sl | hoet | | | | | | | Start | Timo: | 0957 | | n Time: | 1035 |
| التغييري والكافة المسيحية البراي | Instrume | nt Settings |) | | Searc | h Unit | | Cal. | | | | <u></u> | | | |
| Serial No.: | | 011ME | | Serial No.: | | 011CXD | | Checks | Time | Date | | | Oriontatod S | | |
| Manufacturer: | | KRAUTKR | AMER | Manufacture | r. | КВА | | Initiat Cal | 0735 | 3/31/2011 | | octor A | Signai Mpliludo % | Sweep Division | Sound Pat |
| Model: | | U8N-6 | 30 | Size: C | .375 | Shape: Rou | กป | Inter. Cal. | | | s | рн (| 80 | 5.2 | .788 |
| Delay: | 5.7450 | Range: | 1.5 | Freq.: 1.0 | 8 MHz | Style: Comp | - G · | Inter. Cal. | 0957 | 3/31/2011 | | | | | 1 |
| Viil Cal/Vel: | .1288 | Pulser; | High | Exam Angle: | 45 | # of Elements: | Single | Inter. Cal. | | | | | | | 1 |
| Damping: | <u>1K</u> | Reject: _ | 0% | Mode: | | Shear | | Final Cal | 1140 | 3/31/2011 | | | | | |
| | Autohigh | Freq.: | 2,0 MHz | Messured Ar | | 45 | | | Couplan | t | | | | | |
| "Iter: | Fixed | Mode: | PE | Wedge Style | : | MSWQC | | Cal. Batch: | | 9325 | | Circumfore | ntial Orienta | led Search | Unit |
| /oitage: | Fixed | Other: | Fullwave | | | | | Туре: | ULTRA | JEL II | Calib | | Signal | Sweep | Sound Pat |
| Ax. Gain (dB): | 39,0 | Ciro, Gain | | | Search U | nit Cable | | Mfg.: | SONO | TECH | J | | mplitude % | Division | |
| 1 Screen Dh | V. # .15 | in, of | Sound Path | Тура: | | RG - 174 | | Exam Batch | . (| 9325 | <u> </u> | Axial | | | |
| Inearly Report | No.: | L-11 | -139 | Length: | <u>6'</u> No | . Conn.: 0 | | Тура: | ULTRA | JEL II | | | | | |
| | Calibrati | on Block | | | Scan Co | vorage | | Mfg.: | SONOT | IECH | | | | | • |
| Bl. Block No. | | 89-428 | 7 | Upstream [] | Downstree | im 🖌 Scan dB: | 40 | Refe | rence B | lock | | Rofe | rence/Simula | tor Block | - <u>t</u> |
| hickness | 4" | Dla.: | Flat | CW 🖸 |) CC | W 🗹 Scan dB: | 40 | Serial No.: | | -3259 | Gain | | Signal | Sweep | Sound Pat |
| çal. Bik, Temp. | 74.5 Temp. | Tool: | MCNDE40135 | Exam Surface | 9: | 0,D. 🛖 | | | ROM | | <u>d8</u> | 1" Reflector | Amplitude % | | |
| Comp. Temp. | 68 Temp. | Tool: | MCNDE40135 | Surface Cond | lillon: | As Ground | | | | | 21.7 | T REDIUS | 80 | 6.6 | 1.0 |
| lecordabis Indi | lcation(s): | Yes [| No 🗹 | (If Yes, Ref. Att | ached Ultra | aonic Indication f | Report.) |) | | 1 | | [| 1 | <u> </u> | |
| lesuito: | Accept 🔲 | Reject | | info 📋 | | | | | Con | imenta: Init | ial Sectio | on XI Exam | ······································ | ! | • |
| ercent Of Cover | rege Obtained | i > 90%: | | Reviewed Pre | vious Deta | i; No- | | | / | | | | | • | |
| Saminer | Lavel IL | | | Signature | | | Review | te it | | | | Signatu | In | | Data |
| Muirhead, Barry | | Bar | | mh.1 | • | 3/31/2011 | X | Etto | uno. | | | -91010 | | Ч. | 12.1 |
| Examiner | Lovel ILI | | | Signature | | | Site Re | vew . | Walt | L | | Signatu | ire | ····· | Date |
| Dean, Stevan | | ZIL | in de | | | 3/31/2011 | | NA | • | | | | | | |
| Other | Lovel N/ | A | | Signatura | | | ANII Be | | ~ | 1 / 1 | / | Signatu | 18 | | Date |
| N/A | · · · · · · | | | | | 1 | None | | (te | test | ngt | ti | 4/ | 20/11 | |
| | | | | ************************************** | | | <u> </u> | 0 | • | ************************************** | | | | | 14 P N T |
| | | | | | | | | | | | | | I | ATTACI | HMENT A |
| | | | | | | | | | | | | | ~ | PAGE /] | 6 01 /6 |
| | | | | | | | | | | | | | , | | 10 |

| Site/ | Juit: Oconee | 1 1 | | Proc | edure: | •. | PDI-UT-10 | | | Outage | No.: | 01-28 |
|--|---------------------------------------|---------------------------------------|------------------|---------------|---------------------------------------|----------------|--------------|-----------------|-------------------|-----------------------|---------------------------------------|----------------------|
| Summary | | 5.51.0083 | 130 | Procedure | Rev.: | | E | | | Report | No.: U | T-11-879 |
| > Worksc | | 181 | | · Work Orde | n No.: | | 01913756 | | | P | aga: <u>2</u> | of 9 |
| de: r | 1998/2000A | , | Cat./Item: | C-F-2/C5: | 51 | | Location: | | | | | · · · · · · |
| wing No. | 1LP5-702 | · · · · · · · · · · · · · · · · · · · | Description | I: Pipe to Va | ive 1LPSW- | 16 (Cas | t S8) | | | | | ·· |
| tem ID: • 148 | | | | 1 | · · · · · · · · · · · · · · · · · · · | | | | | | | |
| nponent ID: 1LPS-702-50 | | 3 | A Stark and A | | | Size/I | Length: | N/A | <u> </u> | hickness/Du | | S-CS/0.5/8.0 1035 |
| Itations: "Yes - See Altac | | | Starting out | | | | Start ' | | 0987 | Pinis | h Time: | 1039 |
| | ttings | Serial No.: | Search Unit | | Cal. Checks | Time | Date | | Axlal | Orientated S | earch Unit | |
| 1. A 1 19 | UTKRAMER | | KBA | | initial Cal | 0740 | 3/31/2011 | Calibr Refie | | Signal mpilitude % | Sweep Division | Sound Pat |
| iei: | UBN-60 | | Shape: | Round | Inter. Cal. | | | Near | | .80 | 3.4 . | .684 |
| | nge: 2.0 1. 1 | | Hz 1 x Style: | | Inter. Cal. | 1005 | 3/31/2011 | | | | | |
| | sor: High | | 60 9 # of Elen | | Final Cal | 1143 | 3/31/2011 | | | | · · · · · · · · · · · · · · · · · · · | |
| Rate: Autohigh Fre | | Mode: Messured Angle: | Shear 60 | | | Couplar | nt | | | | | + |
| | de: PE | | MSWQ | | Cal. Batch: | | 09325 | C | Ircumfere | ntial Oriente | ted Search | Unit |
| age: Fixed Ot | · · · · · · · · · · · · · · · · · · · | | | 1 ÷ ¢ | Туре: | ULTRA | GEL II | Calibr | | Signal | Sweep | Sound Pat |
| | Gain (dB): NIA | | arch Unit Cable | | Mfg.: | SONO | TECH | Refle | | nplitude % | Division | |
| ma Reise de la Sammer de la Sammer de la Samer | of Sound Path | | RG - 174 | | Exam Bald | | 09325 | N/ | <u> </u> | | | |
| anty Report No: | L-11-139 | -Lengui, C. B | No. Conn.: | | СТуре: | ULTRA | GEL II | | | | | |
| entry Report No: Cellbration E Block No. | lock | | | SUL CIT | • MID. | SONO | IECH | | | | | |
| Block No. | 56-3259 | CW I | | an dB: N/A | Refe | rence E | llock . | Galn | Refer | ence/Simula Signal | Sweep | |
| Bik Temp. 74.5 Temp. Too | MCNDE40135 | Exam Surface: | O.D | | Serial No.: | | | dB | | Amplitude 9 | Division | Sound Pau |
| np. Temp | | - Surface Condition | n: As Gr | ound | Type: | ROM | PAS | 26.4 | 1" Radius | 80 | | 1.0 |
| ordable indication(s): | | (If Yes, Ref. Attach | | | | | | | | | | |
| uits: Accept | Reject 🗹 | • | | | 4 | • Co: | mments: Init | al Sectio | m XI Exam | | | |
| pent Of Coverage Obtained > 1 | No. | Reviewed Previo | ere Strand | No | | ' | | | | | | |
| | 1: Way has a | maturestatorta | | Date Review | mr Al · | , 1 | | | Signalu | 69 | | Date |
| miner Lavel II.NA | B | and in | .3/31/2 | 2011 | List | tous | L M | | | , | 4.1 | 2.11 |
| mhier? | 11-11 | mature :: 3/5P | | Date Site Re | total miles | 4174 | · · · · · · | · · | Signatu | re | | Date |
| n, Steven | Allen Len | | 36 3/31/ | | DA | " | · . | | | | | |
| Lovel N/A | S | insture | | Date ANI R | Wew C | 0- | 1.05 | Inch | U Signatur | re 4 | 1/20/11 | Öste |
| | a start the second second | ing states | | | top C | 142 | inco | | | | | <u> </u> |

| Site/Unit Ocones | | Calibrati | Proc | | | PDI-UT-10 | | | Outage | Na.: | 01-26 |
|--|---|---|---------------------------------------|------------------------------------|--------------|---------------------------------------|-------------|-----------|-----------------------|-------------------|--------------|
| | 5.51.0053 | | Procedure | A | | E | | | Report | | JT-11-679 |
| | 181 | | Work Orde | r No.: | | 01913758 | | هنئ | | age: 3 | of 1 |
| ode: 1998/2000A | · · · · · · · · · · · · · · · · · · · | st.Atem:" | C-F-2/C5. | <u>и</u> | - 4 | Location: | | | | | ····· |
| tawing No. 1LPS-702 | | Description | - Pipe to Va | ve 1LPSW | -16 (Cas | t 6S) | | | <u></u> | | * <u></u> |
| yetem)ID:45 16B | | | | | <u></u> | * | · · · | | | | |
| omponent ID:7 1LPS-702-50 | | | | 1 | Size/I | Length: | -N/A | | Thickness/Dis | imeter: S | S-CS/0.5/8.0 |
| Imitations Yes - See attached sheet | | | | | | Start) | Time: | .0957 | Finis | h Time: | 1035 |
| Instrument SetUngs | | Search Unit | | Cal. | Time | Date | | Axia | Orientated S | earch Unit | |
| erial No. | | الموجود فبالمراجع والمتناف والمتعاد والمتعاول | | Checks Initial Cal | 0745 | 3/31/2011 | | ration | Signal Amplitude % | Sweep Division | Sound Pat |
| odel: | 1 - 1 - 1 - 1 - 1 - 1 |)) Shape: | | Inter. Cal. | | · , | سننشحط | DH I | 80 | 5.6 | .848 |
| elay: 5.8.7078 C. Range: 1.8 | a sector a s | | | Inter, Cal. | 1015 | 3/31/2011 | | | | | |
| n Calvel | | 45 # of Elen | ients: Dual, | Final Cal | 1148 | 3/31/2011 | <u> </u> | | | | - |
| ep Rate 30 Autohigh Freq. 2.0 MHz | | 45 | | | Couplan | 1 <u>t</u> | | | | | |
| Her / Fixed / Mode: Dual | Wedge Style: « | | | Ca). Batch | : | 09325 | · | Circumfen | ential Orienta | ted Search | ı Unit |
| otroe: Fixed P Other: Fullwave | | A Hanne . | | Type: | ULTRA | | Calibi | | Signal Amplilude % | Sweep Division | Sound Path |
| x. Gain (dB) 40 Circ. Gain (dB): 40 40 | Type: | PG - 174 | | Mfg.: | SONO | · · · · · · · · · · · · · · · · · · · | See / | - است | unpinere is | | |
| nearly Report No.: | Length: 4 8' | | | Exam Baic Type: | ULTRA | 09325 GEL H | | | | | |
| Calibratian Black | 1 | aniCoverage | · · · · · · · · · · · · · · · · · · · | | _ | | ••••• | | | | |
| Celibration Block | Upstreem' Dov | vnstream 🖌 *Sca | | | erence B | | | Ref | irence/Simula | tor Block | |
| locness | | | | | | 5-3259 | Gain d8 | • | Signal | Sweep | Sound Peth |
| al: Bik. Temp. 74.5 Temp. Tool: MCNDE40138 37. | Exam Surface: | 0.D. | <u> </u> | Туре: | ROM | | 23.4 | 1" Radiu | Amplitudé 9 s 60 | 6.8 | 1.0 |
| omp. Temp. 68 Temp. Tool: MCNDE40136 | | | | | | r ., | | | | 1 | |
| | (If Yes, Ref. Altache | | | | | | | | <u> </u> | + | <u>.</u> |
| ssuits: Accept 🔲 Reject 🗹 | | 1. A. | | ر ۹ میلی ۱۰۰۰ ۲۰۰۰ ۱۰۰۰ ۲۰۰۰ | ုး င၀ျ | nmenis: Inili | 81 5900 | on Al EXE | 11 | • | • |
| stoent Of Coverage Obtained > 90%: No | | | Ng | | 1 | | | يرفندهي | | | |
| utriand, Barry A. Bary A | gnature Million | 1 2 4 1 | Date Review | 121 | | | • •• | j, Signat | ure . | 4.1 | Data 7.// |
| anning Strike Level I.N. 4 | mature | ular Style C | Site Site Re | Vigw | <u>fal</u> o | en_ | | Signat | ure | | Dale |
| ean Steven | F-ma Antikes: | n 3/31/2 | 01.1 Site Re | | 1 . 4 | | •••• | • | | | • |
| ther Level N/A | mature | its terg. C | ate ANII,R | iview | n n | 1-am | S. | Sinat | | <u>.</u> | Date |
| | مرد (را (بعن 22) · المواج | | 1.00 | neg (| <u>- Re</u> | tehel - | σи | ghte | <u>172</u> | 0/11 | |

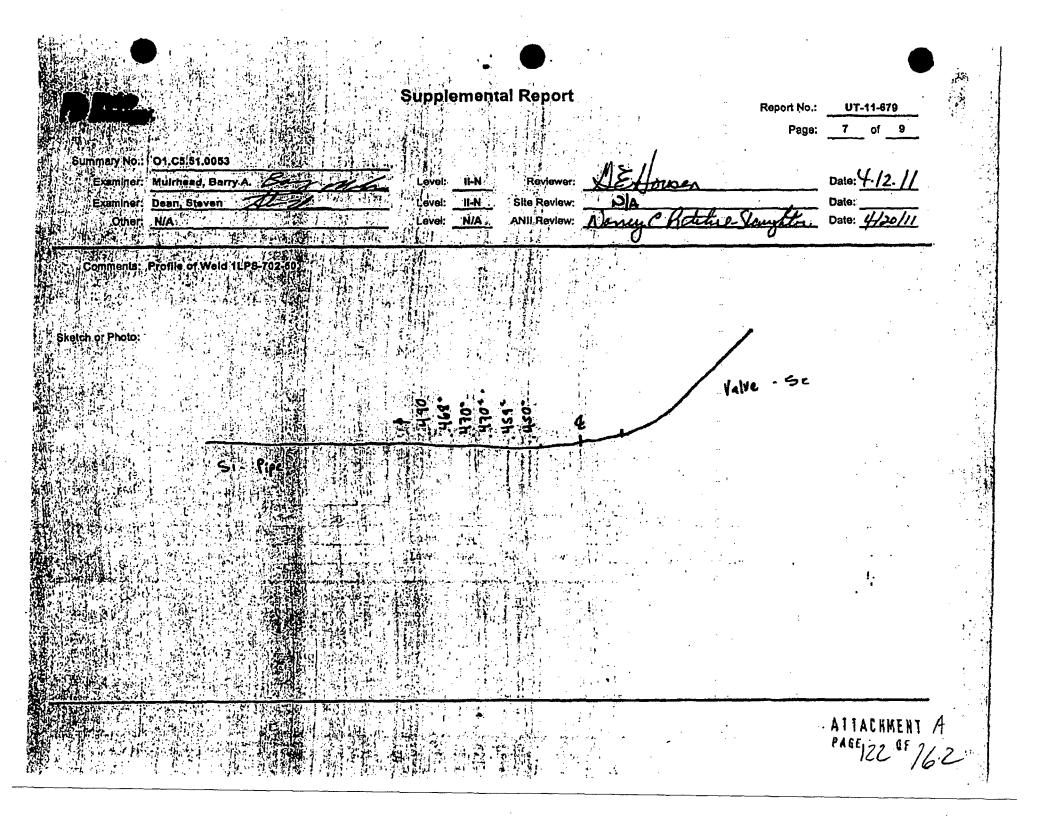
гÌ

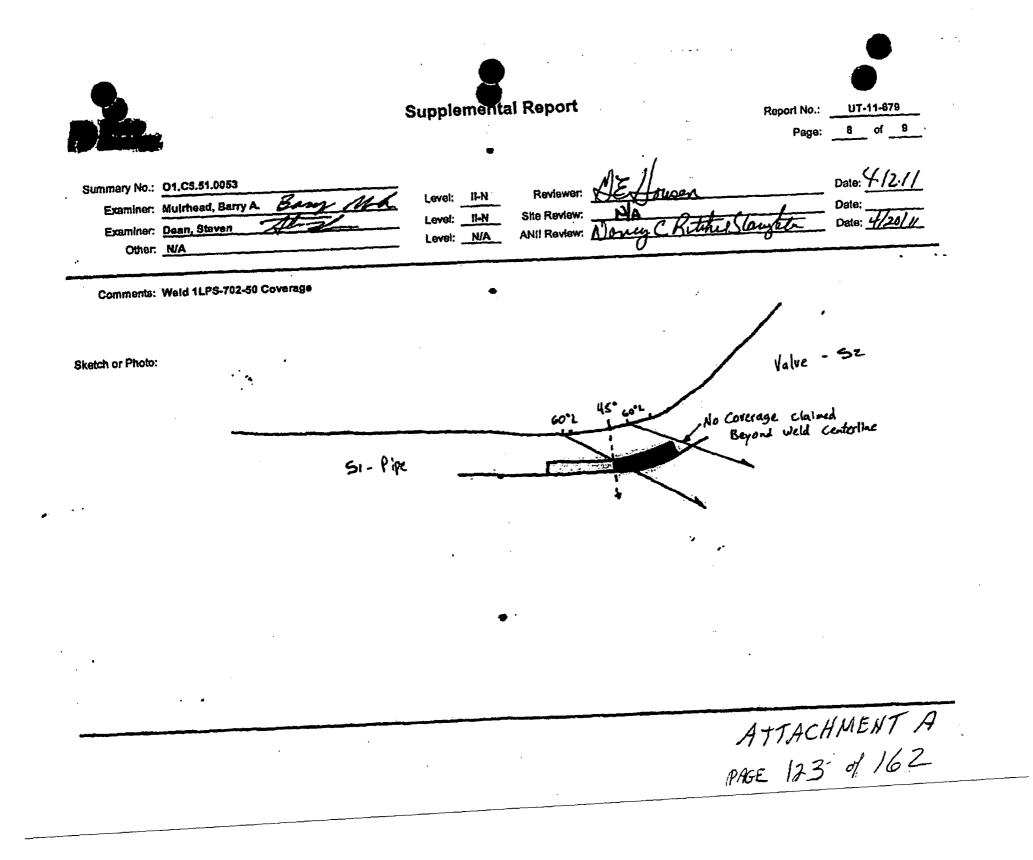
۲.

| Start The Start | N/A me: 090 | Outage Report P Thickness/Di | | 01-28 IT-11-679 of 9 |
|---|----------------------------|---------------------------------------|-------------------|---------------------------------------|
| Summary No.: O1.C5.81.0053 Procedure Rev.: E Workscope: | | Report P | No.: U | IT-11-679 |
| Workscope 01913756 1998/2000A Cal Jiem: 1998/2000A Cal Jiem: 1998/2000A Cal Jiem: 11PS-702 Description: 14B Description: 11PS-702-50 Size/Length: 11PS-702-50 Size/Length: Start Time: Start Time: | | P. | | |
| | | | age: 4 | of 9 |
| | | Thickness/O | | · · · · · · · · · · · · · · · · · · · |
| em ID porent ID: 11.P8-702-50 Size/Length: start Ti Start Ti | | Thickness/Qi | | · · · |
| em ID ponent ID: 11LP8-702-50 Size/Length: Start Th Start Th | | Thickness/Ol | | |
| Start The Start | | Thickness/Ol | | |
| | me: 09(| · · · | | |
| | | 57 Finis | h Time: | 1035 |
| No: 011MBT | À | kial Orientated E | learch Unit | |
| ING:: 3 011MBT 22 ATRICE Seriel Not 23 03-767 Initial Cal 0750 3/31/2011 | Celibration Reflector | Signal Amplitude % | Sweep Division | Sound Path |
| UBN-60 HILL Size 12(Tx10) of Shape: (Rect.) Inter. Cel. | Near SDH | 60 | 3.5 | .700 |
| 6.7612 Range: 2.0 Till Fred. 2.0 MHZ 1 Style: ITRL2 : Inter. Cel. 1025 3/31/2011 | | · · · · · · · · · · · · · · · · · · · | | |
| Final Cal. 1152 3/31/2011 | | · | | <u>,</u> |
| Releved Autohigh Freq. 2.0 MHZ Model Measured Angle: 60 i Couplant | | | | |
| Fixed Mode: Dual Wedge Style: Integral Col. Batch: 09325 | Circum | ferential Orienti | ted Search | Unit |
| Gen Fixed Other: ULTRAGEL II | Celibration | Signal Amplitude % | Sweep Division | Sound Path |
| Isin (dB): 53.5 Circ. Gain (dB): NIA Screen Div. 2 In. of Sound Path Type: RG - 174 RG - 174 Bandh 08225 | N/A | Confrance 14 | Civiaidi: | |
| | | | | |
| Ally Report No: | | | | · |
| Calibration Block | ĥ | Leference/Simul | tor Block | · |
| Sear dB; 45 , Reference Block | Gain ' | Signal | Sweep | Sound Path |
| RATemp. 74.8 Temp. Tool: MCNDE40135. Exam Surface: O.D. | dB. Refie 29.0 1" Ref | otor Amplitude 1 dius 80 | 6 OMsion | 1:0 |
| Temp (68 Temp. Too) MCNDE49135 Surface Condition | | | | |
| rdable indication(s): Yes - No 7 (If Yes, Ref. Attached Ulinasonio Indication Report.) | <u> </u> | | 1 | ļ |
| its: Accept Reject Accept Reject Accept No. Reviewed Previous Data; No. | I Section XI E | ixem | • | |
| Int Of Coverage Obtained > 80%; No No Reviewed Previous Data; No | | , | | |
| Lavel ILN | Sig | nature | 11 | Date |
| had Barry & Latto Voen | · | nahuro | <u> </u> | 12-11 |
| Steven | Sig | nature | | Date |
| Dato ANII Review Dato Noney C Ritchel SL | auptin | | H20/1 | |
| "你们是你的你们不知道,你们就是这个人,你不知道你的你的你们都是你的你们,你们还是你们的你们的你的?""你说了你,我们不能不知道,你们们还是你不是你,你不是我们 | | | ATTA | CHMENT P |
| | · | | PAGE | (19 st/6 |

| | | | | | · | , | | | , | | |
|--|----------------------------------|---|-----------------|-------------|---------------|-------------|-----------|------------------|-----------------------|-------------------|--------------|
| | | UT Callbrati | on an | inatio | n, i . | ۰. | | | | | |
| Site/Uni | Cones | 1 | Proce | ture: | | NDE-640 | | | Outage I | 1o,: | 01-26 |
| Summary No. | O1.C5.51.0 | 053 | Procedure I | tev.: | | 5 | | | Report t | ła.: U | T-11-679 |
| Workscope | : Juisi | | Work Order | No.: | | 01913758 | | | Pa | ige: 5 | of 9 |
| 19 | 8/2000A | Cat./item; | C-F-2/C5.5 | | 1 | ocation: | | | | | · · |
| wing No. at | 1LP9-702 | Description | n: Pipe to Valv | 1LPSW-1 | e (Cast | SS) | | | | | |
| am ID: | | | | | . 41 | | | · · · · · · | | | |
| nponent ID; 1LPS-702-50 | | 的复数 网络马斯特尔 | | 1. 1 | Size/L | ength: | N/A | | Thickness/Dis | meter: S | 5-CS/0.5/8.0 |
| Intiona:+ 4 - None | | 进行中国,他们 <u>都</u> 建了了 | 「おお」と | ξ. | | Start | Time: | 0950 | Finisi | Time: | 0957 |
| Instrument Setti | nge MBT Ser | Search Unit al No.: 87462-087 | | Cal. | Time | Date | [| Axiai | Orientatod S | earch Unit | |
| B No.: 011 ufacturer: T KRAUT | MBT Ser | lal No.: 57462-037 hufacturer: KBA | 24 | Checks | 0730 | 3/31/2011 | | nation: actor | Signal Unplitude % | Sweep Division | Sound Pat |
| US | N-60 | 3.5X10mm Shape: | Round h | Inter. Cel. | | | | W. | 80 | 5 | |
| 8.1850 Range | : 1.0 作用 Fre | A.D MHz Style: | MSEB | Inter. Cal. | 1025 | 3/31/2011 | | | | | 1 |
| al/Vel: 2371 Pulser | High Exa | m Angle: 0 # of Eler | nente: Dual | Inter. Cal. | | 0/04/0044 | | | | | |
| | | le: Long. | | Final Cal | | | ļ | | | | <u></u> |
| | | sured Angle: 0 | | | ouplant | • | | | | | 16-14 |
| Fixed Mode; | Weight Built State | ige Style: | al trackets in | • N | | 9325 | | | Intial Orienta | | 1 |
| lain (dB): ¹¹ 38.0 Circ. G | - HOW - AND | Search Unit Cable | | | SONOT | | Calib | | Signal Implitude % | Sweep Division | Sound Pat |
| Boreen Div. = 1 in. of | Sound Path 114 Tra | | | • | | | N | A | | | |
| | | Ma Conta t | | Exam Batch | ULTRAG | 9325 | | | | | |
| inty Report No.: | -11-139 | Scan Coverage. | Sec. 1 | Mfn • | SONOT | , | | | · · | | |
| Celibration Bloc | R | nam ET Downstream ER Sc | an dB::/ 38 | | 2 94 8 | | | | | | <u></u> |
| Block No: Comp rress | Change State Charles Angeler and | 7 TO THE 3 BE WERE THE | | i'i Dofar | ence Bl | ock. 🗠 | Gein | Rete | rence/Simula | Sweep | |
| Bik Temp 74.8 Temp. Tool: | NCNDF40138 | mSurface | | Serial No.: | | | dB | | Amplilude Y | Division | Sound Pat |
| Temp 68 Temp. Tool: | | | | | STEP W | EDGE | 38.7 | .5" Step | 80 | 5.0 | .5 |
| norte en | | Ph. S. Allowshing & Hitson and Inc. | lastian Rootan | | • | | | | · <u>{</u> | - | |
| Union Contraction | | He Bull Barris Barris | | | Com | menta: Init | lei Sacti | on VI Ever | | d | |
| reable indication(s): references: referenc | | -naral sar | Ne | 1 E | | | | | | | • |
| | The Service Internation | | Date Review | | 71 | | | Signat | | | Dale |
| iner Level II-N head, Barry A. | and the | Land Anna Wath | 2011 | \sqrt{E} | In | pen ! | • | | | 4.1 | 2.11 |
| iner the Lovol II-N | 1. Signatum | | | law | | | | Signat | uro | | Date |
| Steven | Un de | 5.444 Fry 3/31/ | | NA | | 1 | | | | | |
| Level N/A | Signatun | | Date ANII Re | How C | Rit | the S | Store | efter | ure 4/ | 20/11 | . Date |
| | | A Life At | | · 0 · ; | | | | 0 | <i>i</i> i | | CRMENT |
| | | | | tar 👘 | | • | • | | | | 20 9F /4 |
| 1 | | i de la deste dont francé. Augusta - Angel - Carlos - Carl | | | | | | • • | | | 40 • 11 |

| | POWER COMPANY | | |
|---|---|-----------------|--|
| Component/Weld ID: 1LPS-702-50 | IMITATION REPORT [tem No: _01.C5.51.0053 | remarks: | |
| | JRFACE BEAM DIRECTION | Single side acc | ess due to cast |
| | l ⊠ 2 ⊠ 1 □ 2 □ cw □ | ccw SS valve. | |
| FROM L 0 to L 360 | INCHES FROM WO CL to Beyo | and | |
| · "你想法说了, · · · · · · · · · · · · · · · · · · · | FROM N/A DEG to N/A | | |
| | | | |
| 网络教育学校教育教育学校 化二苯基苯基 法法律法 法法律法 化二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙二乙 | ⊠ 2 , □ 1 □ 2 ⊠ cw ⊠ | ccw | |
| | INCHES FROM WO to | | |
| | FROM N/A DEG to N/A | | |
| | | | |
| | 2. 11 2. cw | ccw | ************************************** |
| BOM I | A A A A A A A A A A A A A A A A A A A | | |
| | FROM U to | | |
| | BEACE | | |
| | □;2,, □,1, □ 2, □ ew, □ e | ccw UT-11-679 | |
| ROM | INCHES FROM W0 | | attached |
| ROM L to L NGLE: 0 45 60 to ther | FROM DEG to | DEG 🛛 yes | |
| NGEE: [] 0 - 45 - 60 other repared By: Barry Multhead | Level: II Date: 03/31/11 | | 9 |
| eviewed By Eforgen | Dates 4. 12.11 Authorized Inspector | the Slaught | Date; 4/20/11 |







Determination of Percent Coverage for UT Examinations - Pipe

| Site/Unit: | Oconee / | 1 | Procedure: | PDI-UT-10 | Outage No.: | 0 | 1-28 |
|--------------|------------|------|-----------------|-----------|-------------|------|-------------|
| Summary No.: | 01.C5.51.0 | 0053 | Procedure Rev.: | E | Report No.: | UT-1 | 11-679 |
| Workscope: | <u> </u> | | Work Order No.: | 01913756 | Page: | 9 | of <u>9</u> |

<u>45 deg</u>

| Scan 1 | | K 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 | . .∖ | |
| | • | | | - | · | | . ميند | |

Add totals and divide by # scans = _ 50.000 % total for 45 deg

Other deg ______ (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

Scan 1 - + 100.000 % Length X 50.000

% Length X % total for Scan, 100.000 50.000-Scan 2 100.000 % Length X % volume of length / 100 = _____ 0.000 0.000 % total for Scan 2 -Scan 3 ~ % volume of length / 100 = %:Length X % total for Scan Scan 4 % Length X % volume of length / 100 = 4 % total for Scan 4

Percent complete coverage

Add was to each scall required and divide by # of scalls to determine.

37:500 % Total for complete exam

Site Field Supervisor:

Date: 20/12/200

TACHMENT SE/24 OF 7



UT Vessel Examination

E

| | e/Unit: Oce | | | | Proc | edure: | NDE-3830 | | | Dutage No.: | N/A |
|---|-------------------------------------|------------------|-----------------------|--------------------------------|---|---|---------------|--------------|------------|-----------------------|--|
| Summa | | WJ-32, | | • | Procedure | | 1 | | | Report No.: BOP | |
| (WORC | 500pe: | P\$ [| | H aring dia tra ing | Work Orde | 17 NO.: | 01889357 | | | Page: 1 | of _4 |
| Code: | 199 | \$/2000A | | et./ttom: | B-8/82.51 | and the second secon | Location: | | 1 . | N/A | |
| Prewing Na.: | | NU-D-1149 | -1 | | Description: Ch | emical connect | tor to chann | el body | , , | | |
| System ID: Component ID: | N/A W.1-32 | | | | | | e/Length: | N/A | Thic | kness/Diametar: | .875/8.0/88 |
| | ومواصفه الجي يتشتق الألفى | upplemental the | | | | | | t Time: | 1035 | - Finish Time: | 1105 |
| Examination St | | Inside [] | | | Surface Conditio | | | | | | |
| | • | | | | 1 | | | | | Rateh Ala S | |
| Lo Location: | | 9.1.1.1 | WO LOC | elion: <u>C</u> | Centerline of Wel | ld Coup | | ULTRAGE | . I | Batch No.: | 09125 |
| Temp. Tool Mig | | FISHER | Seria | u No _: : | MCHDE32770 | Surfa | ce Temp.: | 70 | _ °F | | |
| Cal. Report No. | | SHD 1-14 | | CAL-09-454 | <u>, 459, 460, 461 A</u> | 462 | ; | · | · · | | |
| ngle Used | 0.4 | 6' 45T, - 89- | | TOL | | •. | | | | | |
| Icanning dB | 43 | .0 01.7 60.2 | 85.0 | 48.0 | | | | | | | |
| Indication(s): | Yes 🛃 | No 🔲 | | iScan C | Coverage: Upstr | eam 🖌 Down | nstream 🗹 | cw₽ | CCW | | |
| Comments: | | | | 7 | | ; •• | | . , | | | |
| Scanning db k | wered from | n +14db to maint | zin 2:1 signs | I to noise rati | • | | ×* | | | • | |
| · · · · · · | ; | | | | , · · · · · | | • | | | | |
| | | | | · • | | • | • | , | | | |
| Resulta: | Accept [|] Reject 😥 | lnio [| | examination B/ | N N-32389-1 FC | C 09-01, 09- | 95 | | | |
| ÷ . | | | lnio [No 87.7% | | exemination 8/ | | C 09-01, 09-1 | 95 | | | |
| Percent Of Cov | erage Obtair | | No 87.7% | | viewed Previous (| Dala; | | D5 | Signa | lire | / / Date |
| Percent Of Cov | | | 1 | | | Dala; | | os P.E.L. | Signa | lure | 7/19/11 Data |
| Percent Of Cov keminer La san, Steven keminer La | erage Obtair | | No 87.7% | | Viewed Previous (Date Ré 11/4/2009 | Dala; | | os Pello | | - | 7/19/11 Date |
| Percent Of Cov xeminer La san, Steven xeminer Le I/A thet Le | erage Obtair vel (j-N | | No 87.7% | | Date Re 11/4/2009 Dete Sil | Dala: | No | P CH | Z | | 7/19/11 Date |
| oan, Steven xaminer La VA | erage Obteir wel fi-N wel N/A | | No 67.7% Signature | | Date Re 11/4/2009 Dete Sil | Dala: İvlgwar Le Révlew | No | P CH | Signal | ture | 7/19/11 Date |
| Percent Of Cov xeminer La san, Steven xeminer Le WA that Le | erage Obteir wel fi-N wel N/A | | No 67.7% Signature | | Date Re 11/4/2009 Dete Sil | Dala: | No | P CH | Signat | ture ture 1/20, | 7/19/11 Date /// Date /// Date /// Date |
| Percent Of Cov xeminer La sen, Steven xeminer Le VA thet Le | erage Obteir wel fi-N wel N/A | | No 67.7% Signature | | Date Re 11/4/2009 Dete Sil | Dala: | No | P CH | Signat | ture ture 1/20, | 7/19/11 Date |

| | • | •. | | | | 4 | • • • | | | | 114.1 14 | | |
|-------------------------|------------|-------------------|------------------|----------------------|--------------|-----------|---------------------|----------------|-------------|------------|--------------------|-----------|---------------------------|
| | No | | | ý milite Comulita | | i i | litras | onic l | ndica | i. tion | Reno | et | |
| | iergy. | • | | | | Tau 🕈 | | | | · · . | • | | |
| • | • | Site/Uni | | onee , | <u>/</u> | ب مرجعه م | | | Procedur | · . • | _ | -3630 | Outage No.; N/A |
| | | Immary No | | <u>]</u> | WJ-32 P81 | | | | idure Rev | | | 1 | Report No.: BOP-UT-09-112 |
| | | Workscope | | | P01 | | | WOIK | Order No | D,: | 018 | 9357 | Page: 2 of 4 |
| 80a | rch Unit A | nnfar ' | 45 8.7 | 10 | | , | | 0.8 | lping We | Lela | | · | Wo Wmax GL 1 |
| 000 | | illon: <u>Cer</u> | | | • | | • . | - | erritic Ve | • . | - 2 ⁴ T | | WI W2 |
| · . | Lo Loca | • | 9.1.1. | | • . | | | | | Vesaels | | | |
| | | | | | | | · . | ت کې منځيې | | | | | |
| MP | Motel I | Path | | 1 | Ŵ | nax i | Distance | From Wo | o To 8.U. | At Mex | imum Re | sponse | - DATUM |
| RBR | Remai | ning Back | Reflectio | n | wi | • • • | Distance | · · · · · | | · 0 | f Max (F | orward) | |
| Ŀ. | Distan | ce From Di | atum | í | . W2 | | Distance | From Wo | AI . | 0 | f Max (F | (brewno | |
| Com | menter V | Neld WJ-3 | 2 | | S/N | / | N- | 777 | 89- | 1 | | | |
| | | | | | | | | • | | | * . 1. | | Without W2 |
| T | Indication | .% | T iv | Ň | | braw | | kward | 1 11 | <u> </u> | 1 12 | RBR | Remarks |
| gia | No. | O | 1 1 A M | lax, | | Of Max | | Of Max | Or | Мах | OF | Amp. | |
| | 1-45" | DAC 90 | W 1.5 | . MP 2,14 | W1' | MP NA | W2 N/A | MP N/A | Max 360* | i 0-1" | Max INT | NA | Root Goemetry |
| 2 | 2-45" | 70 | 0.9 | 1.20 | NA | N/A | N/A | NA | 360* | 0+1* | UNT | N/A | Root Geometry |
| 2 | 3.70* | 50 | 0.9 | 2.30 | NA | NA | N/A | N/A | 360* | 0+5" | INT | N/A | I.D Geometry |
| 2 | 4-45% | 80 | 0.8 | 1.20 | NA | NA | NA | N/A | 360* | 0+1* | INT | N/A | Root Geometry |
| ╧┯╋ | | | ्राष्ट्र जन्म | 8 | 10.000 | · · · · · | | | | | 1 | + | |
| | | | | 1 | | | | | | | | 1. | |
| ┯╋ | | | | | 4 - 4 - | | | | | | 1 | | |
| - | | | 142 | | | | 4. L | | | | 1 | <u> </u> | |
| | | | | | | F aj | | | | | | 1 | |
| بالمحمد ال مراجع الم | | | | | | | | | | | | | |
| niner , Ster | Level | 1 1-N | -1 | | Signature | | | 11/4/2 | ate Rev | iewer y | 1 | M. | Signature Date |
| liner | Leval. | II-N | π | 7-0 | Signature |) | ्यः हृद्धेष्टः म | | | Review | M | 116 | Signature Date |
| oel, Ďi | wid M. | | 1/2 | 1- | 1 | i , | lige et t | 11/4/20 | 09 | | | | - |
| r | Lovel | N/A | | F_{i} | Signature | | | . <i>i</i> - D | ate ANII | | | 04 | he Shupter 4/27/11 Dete |
| | | | <u></u> | <u>1 </u> | | | <u></u> | <u> </u> | <u> </u> | One | <u>yrci</u> | <u>~u</u> | ux 0 mgrun 4/21/11 |
| : | | | | | | | | | | | | | |
| ; | · · | | 102.62 | | 1 | • • | | | | . • | | | ATTACKMEY |

| | 3 V . |
|---|-----------------------------|
| | |
| DUKE POWER COMPANY | |
| ISI LIMITATION REPORT | |
| Component/Weld ID: WJ-32 Item No: BOP-UT-09-112 | remarks: |
| NO SCAN SURFACE BEAM DIRECTION | Due to nozzle. |
| □ LIMITED SCAN | |
| FROM L 0+3" INCHES FROM W0 CL+1.1 to Beyond | |
| ANGLE: 0 0 45 0 60 other 70 FROM 0 DEG to 360 DEG | |
| NO SCAN SURFACE BEAM DIRECTION | Taper on chemical connector |
| ⊠ LIMITED SCAN □ 1 ⊠ 2 ⊠ 1 ⊠ 2 ⊠ cw ⊠ ccw | |
| FROM L N/A to L N/A INCHES FROM W0 +0.6 to +1.5 | |
| ANGLE: 1 0 🛛 45 🖾 60 other 70 FROM 0 DEG to 360 DEG | ς. |
| NO SCAN SURFACE BEAM DIRECTION | |
| Imited Scan Imited 2 Im | |
| FROM L to L INCHES FROM WO to | |
| ANGLE: 0 1 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 0 5 60 other FROM DEG to DEG | 🛛 yes 🗌 No |
| Prepared By: Steve Dean Level: II Date: 11/04/09 Shee | t <u>3</u> of <u>4</u> |
| Reviewed By: San More Date: 11/04/09 Shee Non More Date: Authorized Inspector: Ritche | 1-Sloughter 4/27/11 |
| V 1 | |

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ATTACHMENT A PAGE 27 OF 162

| Puke' | | S | uppiement | al Report | , | Rep | ort No.: <u>B</u> Page: | <u>DP-UT-09-112</u> | - | • • • |
|--|-------------------------------|------------------------|---------------------|---------------------|---------------------------------------|-----------------|----------------------------|---|------------|-------------|
| Summary No: WJ-32 | | | | | | | | • | • | |
| Examinari Dean, S Examinari Griebel | toven a plant | | Level: II-N | Site Review: | | no ket Story | D | ite: <u>12.8.e7</u> ite: :10: <u>4/27/1</u> | - | ••• |
| Ölher: <u>N/A</u> | | | Level: N/A | ANII KOVIOW: 20 | | | | | | |
| is | 1-32 2 & 4 ere root geomet | ry. Ind. # 3 is a geon | netric reflector fr | rom offset on the L | D, surface. | а • • • • | | | • | بر ر |
| | | | 1 | | Our o | A 1 | · | | | |
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| | | -05 ES | | | снети | | · | • | | • |
| | CHANN | EL | | | LONNE | | | | | • |
| | CHANN BOD | | | \mathcal{I} | | | | | | 1 1 1 |
| | | | | 11 70 • 52 1 | | | | | •. | · • • |
| | 52 | | | | | 51 | | · · | . <i>.</i> | • |
| | | | | | · · · · · · · · · · · · · · · · · · · | | | | | |
| | | | | | | 4 | ۰. | | ÷ • . | - |
| | | | | 4. 1. 1. | | • | · · | | | A |
| | | | | | | | | PAGE | 184.0F | 162 |

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Let Down Cooler - Chemical Connector to Channel Body

% Coverage Calculations

Weld No. : WJ- 32

Ø = 8.625"

"t" = 0.875"

Weld Length = 27.1"

Total Inspection Area = 2.28 sq. in.

% Length Limited due to nozzle = 6" / 27.1" x 100 = 22.1%

Aggregate Coverage Calculation

Axial Scans

22.1% of length x 96.5% of the volume of length / 100 = 21.3% 77.9% of length x 97.4% of the volume of length / 100 = 75.9%

Aggregate coverage Axial scans = 21.1 + 75.9 = 97.2%

Circ. Scans

100% of length x 78.1% of the volume of length / 100 = 78.1%

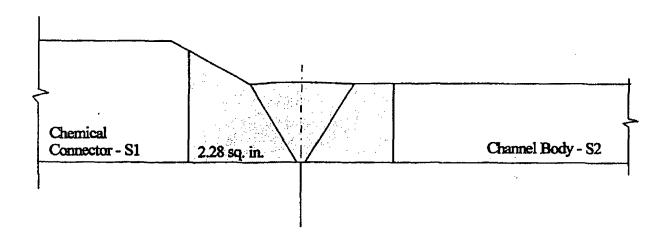
Total = (97.2 + 78.1) / 2 = 87.7% Aggregate Coverage

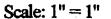
Inspector / Date: Pool Stellard 11-4-09 Page 1 of 5

Letdown Cooler Chemical Connector to Channel Body Total Exam Area

Weld No. : <u>WJ-32</u>

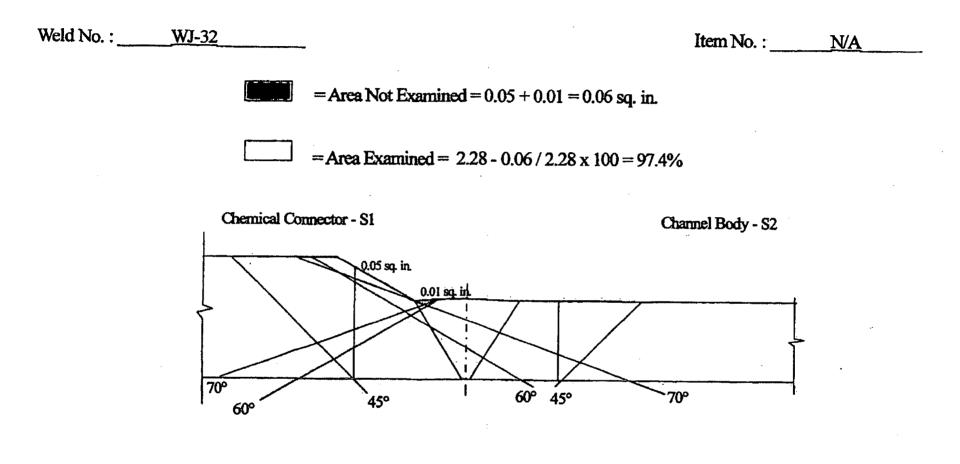
Item No. : <u>N/A</u>

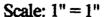




ATTACHMENT A page 130 9/62 2015

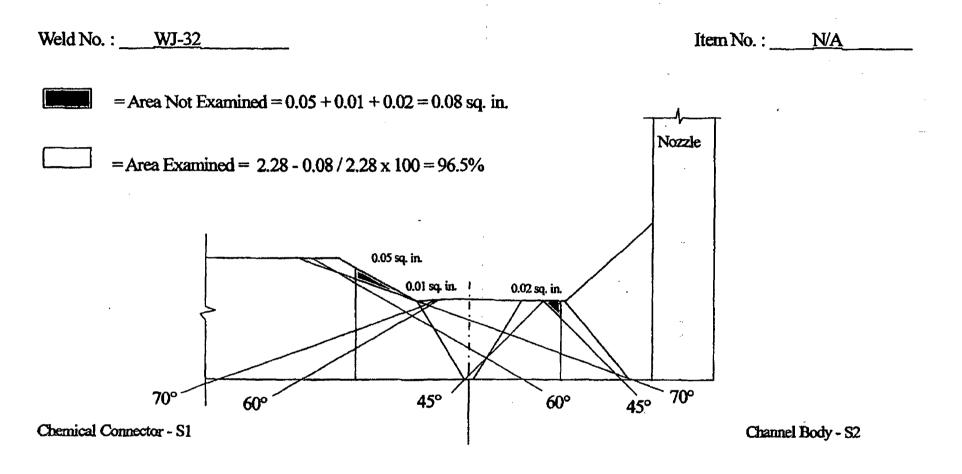
Letdown Cooler Chemical Connector to Channel Body Area Examined - Axial Scans





ATTACHMENT A page 131. 7 162 3075

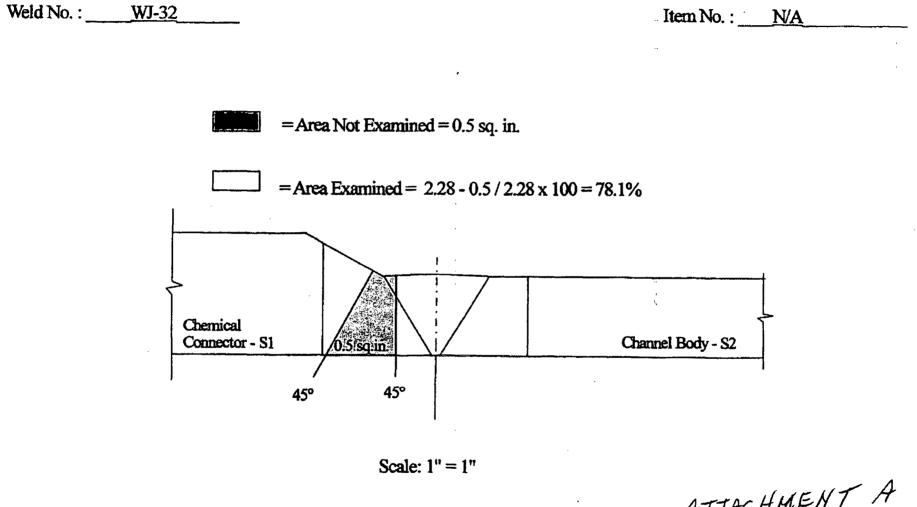
Letdown Cooler Chemical Connector to Channel Body Area Examined @ Nozzle - Axial Scans



Scale: 1'' = 1''

ATTACHMENT A PAGE 132 9 162 4 4 5

Letdown Cooler Chemical Connector to Channel Body Area Examined - Circ. Scan



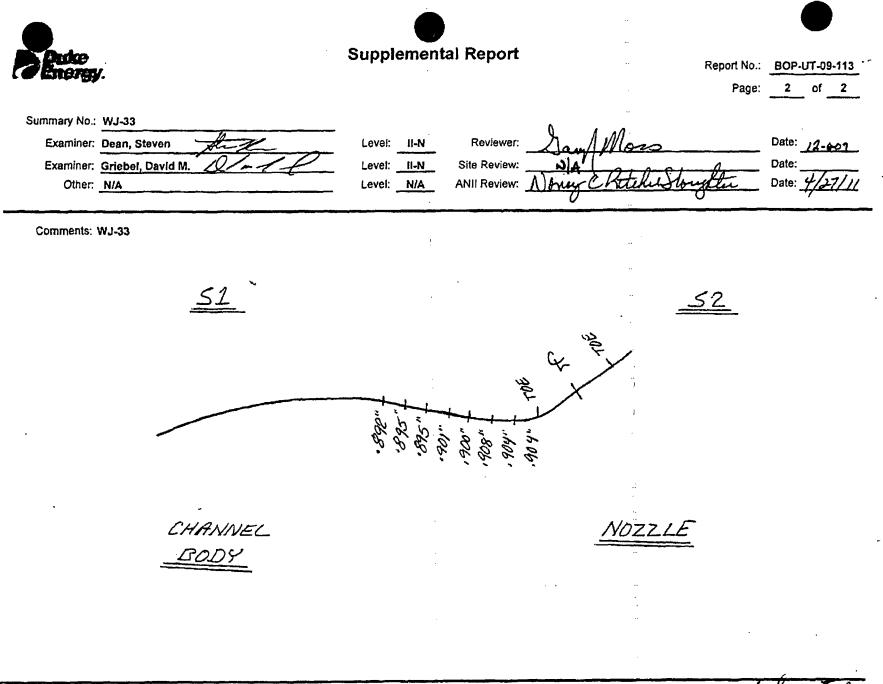
ATTACHMENT A page 133 7.162 5015



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UT Base Metar Lamination

| | Site | e/Unit: Oco | nee / | 0 | | | | | Proced | ure: | <u>N</u> | DE-640 |) | - | Outage No.: | | N/A | |
|---------------------|-------------------|------------------|--------------------|----------|-----------|-----------|---------|---------------|------------------|-------|-----------|--------|---|----------|-----------------|--------|----------------|---------|
| | Summar | y No.: | W | /J-33 | | | | Pro | cedure R | ev.: | | 5 | | | Report No.: | BOP-I | UT-09-1 | 13 |
| | Works | scope: | | PSI | | | | Wo | rk Order N | No.: | 01 | 889357 | / | • | Page: | 1 | of | 2 |
| Code: | | ٨ | 1/A | | | Cat./ | ltem: | | NÏA | | Loc | ation: | | | N/A | | | |
| Drawing | No.: | | | N/A | | | | Descriptio | on: N/A | | | | | | | | | |
| System | ID: N | 1/A | | | | | | | | | | | | | | | | |
| Çompon | ent ID: M | VJ-33 | | | _ | | | | | | Size/Le | ngth: | N/A | Ţ. | hickness/Diamet | ter: | 875/3:0/ | SS |
| Imitatio | ns: <u>N</u> | lone | | | | | | | | | | Sta | rt Time: | 0825 | Finish Tin | ne: | 0829 | |
| Examin | ation Surf | ace: In: | side 🗔 | Oi | utside 🔽 | | ş | Surface C | Condition: | AS GR | | | | | | | | المستخط |
| Lo Loca | ition: | 9. | 1.1.1 | | | ocation: | | | of Weld | | Couplant: | | ULTRAG | EL II | Batch No.: | | 09125 | |
| Temp. 7 | rool Mfg.: | | FISHER | | Se | rial No.: | | MCNDE: | | | Surface T | emp.: | 70 | °F | Scannir | ng dB: | 47 | .0 |
| Cal. Rej | port No.: | | | | | CAL-0 | -457 | | | | | - | | | | | | |
| ind. | % | Amplitude | | Posit | ion One | | | Positi | on Max | · | 1 | Pos | ition Two | | | | | |
| No. | Loss Back Wall | % Full Screen | L1 | W1 | W2 | MP | LM | W1 | W2 | MP | L2 | W1 | W2 | MP | Re | emarks | | |
| NRI | | 1 | | 1 | 1 | | | | | | 1 | | 1 | | | | | |
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| | | | | | | | | | | | | • | 1 | | | | | |
| ommen | nts: N/A | | | 1 | ل | | | | · · | | | | | | | | | |
| | | | | | | | | | | | | _ | | , | | | | |
| esults: | | Accept 🗹 | | ect 🔲 | Info | | PSIex | | | | N^{-1} | 32. | 389- | 1 | | | •···· | |
| ercent (| Of Covera | ige Obtained | > 90%: | <u>}</u> | /es | | Revie | wed Pre | vious Data | 3: | No | | | | | | | |
| kaminer ean, Ste | | el II-N | -4 | the the | Signature | | <u></u> | Da 11/4/20 | ate Revie 09 | wer | A | M | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | Sig | nature | 12. | 8.09 | Date |
| aminer riebel, C | Leve David M. | el II-N | ∇ | 4- | Signature | | | Da 11/4/20 | ite Site R 09 | | 3/A | ~ | | Sigi | nature | | | Date |
| her /Á | Leve | N/A | | | Signature | | | Da | te ANI F | | | the | Slow | the Sign | nature 4/2 | t/4 | , | Date |
| | | | | | | | ····· | | | -0 | <u> </u> | | 0 | ····· | Ű | lloch | ment | 1 |
| | | | | | | | | | | | | | | | 1 | . / | $\prec \gamma$ | d1 |



adackment A page 135 of 162



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UT Vessel Examination

| Code: 1998/2000A Cat./Item: B-D/B3.150 Location: N/A Drawing No.: NU-D-1149-1 Rev. A Description: Nozzle to channel body System ID: N/A Component ID: WJ-33 Size/Length: N/A Limitations: Yes - See supplemental sheet Start Time: 0952 Flnish Time: Examination Surface: Inside Outside Surface Condition: AS GROUND Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: Temp. Tool Mfg.: FISHER Serial No.: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: pm6 /1-/4-64 CAL-09-458, 459, 460, 461.8, 462 Location: 70 °F | of 2 |
|--|---------------------------|
| Code: 1998/2000A Cat./Item: B-D/B3.150 Location: N/A Drawing No.: NU-D-1149-1 Rev. A Description: Nozzle to channel body System ID: N/A Component ID: WJ-33 Size/Length: N/A Limitations: Yes - See supplemental sheet Start Time: 0952 Flnish Time: Examination Surface: Inside Outside Surface Condition: AS GROUND Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: Temp. Tool Mfg.: FISHER Serial No.: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: pm 6 //-/4/-04 CAL-09-458, 459, 460, 461.8, 462 Location: 70 °F | <u>875/3.0/SS</u> 1010 |
| Drawing No.: NU-D-1149-1 Rev. A Description: Nozzle to channel body System ID: N/A Component ID: WJ-33 Limitations: Yes - See supplemental sheet Start Time: 0952 Flnish Time: Examination Surface: Inside Outside Surface Condition: AS GROUND Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: Temp. Tool Mfg.: FISHER Serial No.: Drescription: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: pm6 | 1010 |
| System ID: N/A Component ID: WJ-33 Limitations: Yes - See supplemental sheet Start Time: 0952 Finish Time: 1 Examination Surface: Inside Outside Surface Condition: AS GROUND 1 Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: 1 Temp. Tool Mfg.: FISHER Serial No.: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: Dm 6 | 1010 |
| Component ID: WJ-33 Size/Length: N/A Thickness/Diameter: I Limitations: Yes - See supplemental sheet Start Time: 0952 Flnish Time: Examination Surface: Inside Outside Surface Condition: AS GROUND Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: Temp. Tool Mfg.: FISHER Serial No.: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: pm 6 11-14-04 CAL-09-458, 459, 460, 461 & 462 461 462 | 1010 |
| Limitations: Yes - See supplemental sheet Start Time: 0952 Finish Time: Examination Surface: Inside Outside Ø Surface Condition: AS GROUND Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: Temp. Tool Mfg.: FISHER Serial No.: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: Dm 6 11-14-04 CAL-09-458, 459, 460, 461 & 462 461 462 | 1010 |
| Examination Surface: Inside Outside Surface Condition: AS GROUND Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: Temp. Tool Mfg.: FISHER Serial No.: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: Dm 6 11-14-04 CAL-09-458, 459, 460, 461 & 462 461 Cal. Cal. | |
| Lo Location: 9.1.1.1 Wo Location: Centerline of Weld Couplant: ULTRAGEL II Batch No.: Temp. Tool Mfg.: FISHER Serial No.: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: pm 6 11-14-04 CAL-09-458, 459, 460, 461 & 462 | 09125 |
| Temp. Tool Mfg.: FISHER Serial No.: MCNDE32770 Surface Temp.: 70 °F Cal. Report No.: pm 6 11-14-04 CAL-09-458, 459, 460, 461 & 462 Surface Temp.: 70 °F | 09125 |
| Cal. Report No.: Dm 6 11-14-09 CAL-09-458, 459, 460, 461 & 462 | |
| | |
| | |
| 452 602 Angle Used 0 45 45T -00- 607 70L | |
| Scanning dB 43.0 61.7 50.2 55.0 46.0 | |
| Indication(s): Yes 🗌 No 🗹 CCW 🗹 Scan Coverage: Upstream 🖌 Downstream 🖌 CW 🐼 CCW 🖉 | |
| Comments: | |
| Scanning db lowered from +14db to maintain 2:1 signal to noise ratio | |
| | |
| Results: Accept Reject I Info PSI examination S/N N-32389-1 FL 09-0 | 09-05 |
| Results: Accept Reject Info PSI examination S/N N-3Z 389-1 FC 09-0 Percent Of Coverage Obtained > 90%: No 54.6% Reviewed Previous Data: No Y Y | 4127/11 |
| Examiner Level II-N | Date |
| Dean, Steven 11/4/2009 an // (or) 12/8/8 ixaminer Level II-N Signature 12/8/8 | Date |
| Sriebel, David M. 11/4/2009 DIA | 200 |
| other Level N/A Signature Date ANII Review N/A Signature 4/27/11 | Date |
| 1. Martine | A II: |
| page 13 | 6 of 162 |

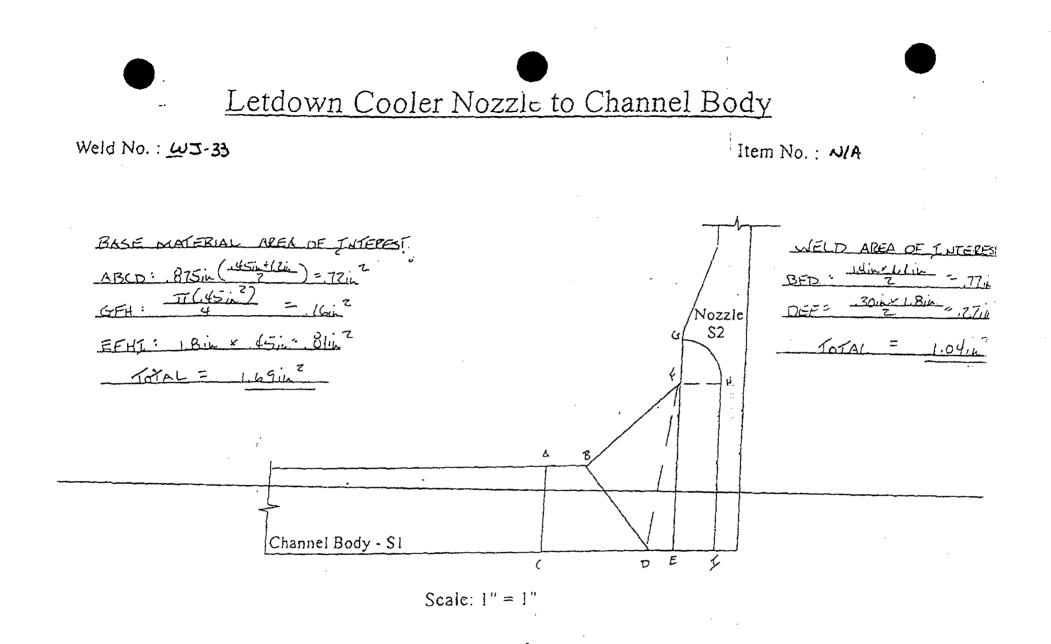
| D | UKE POWER COMPANY | |
|--------------------------|---|---------------------------------|
| | ISI LIMITATION REPORT | |
| Component/Weld ID: WJ-33 | Item No: BOP-UT-09-117 | remarks: |
| 🖾 NO SCAN | SURFACE BEAM DIRECTION | Due to nozzle. |
| LIMITED SCAN | □ 1 ⊠ 2 ⊠ 1 ⊠ 2 □ cw □ ccw | |
| FROM L N/A to L N/A | INCHES FROM W0 Toe to Beyond | |
| ANGLE: 🗌 0 🖾 45 🖾 60 | other 70 FROM 0 DEG to 360 DEG | |
| | SURFACE BEAM DIRECTION | |
| LIMITED SCAN | | |
| FROM L to L | INCHES FROM W0 to | |
| ANGLE: 0 0 45 0 60 | other FROM DEG to DEG | |
| | SURFACE 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 | |
| | SURFACE BEAM DIRECTION | |
| LIMITED SCAN | | |
| FROM L to L | INCHES FROM W0 to | Sketch(s) attached |
| ANGLE: 0 0 5 60 | other FROM DEG to DEG | 🛛 yes 🗌 No |
| Prepared By: Steve Dean | Level: II Date: 11/04/09 Sheet | |
| Reviewed By: Jan Mor | Date: Authorized Inspector. 12-8-09 Uoncy Chitchel-S | loughter 4/27/11 |
| | | allachment ? page 137 of 162 |

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| • | · · · · · · · · · · · · · · · · · · · | | 2 162 162 |
|----------|--|---|--------------|
| | Letdown Cooler Noz | | 3 ``` |
| | | p. WJ-33 | 00 6 |
| | Base Materi | al Coverage | Nº M |
| Scan | Radius View | Non-Radius View | |
| Axial | 68.2% | 52.7% | . 4 |
| Circ | 65.2% | 54.4% | 30 |
| | Aggregate @ 68.2 + 52.7 | 7 + 65.2 + 54.4 = 240.5/4 = 60.1% | a d |
| | 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 Pool Stuffuld Date 11-4-09

1 of 7

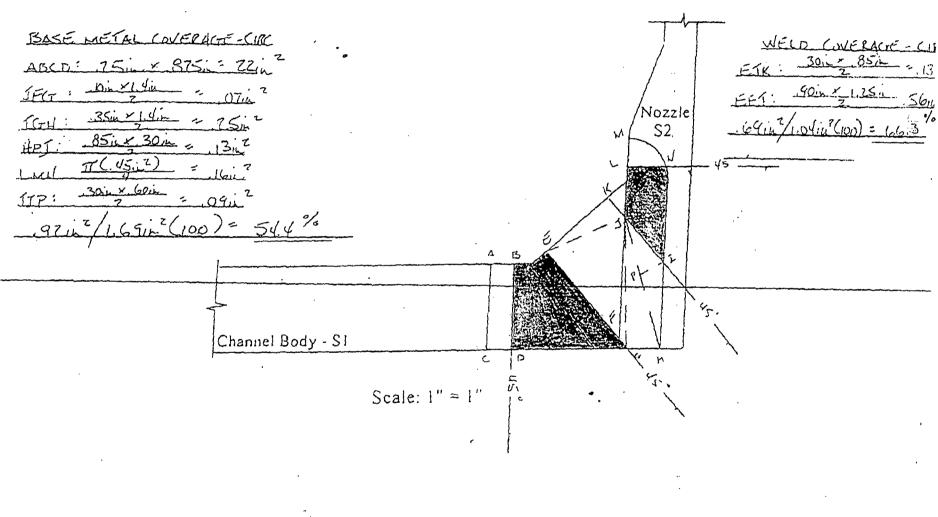


attachment A page 139 of 162 2 of 7

Letdown Cooler Nozzie to Channel Body

Weld No. : WJ-33

Item No. N/A

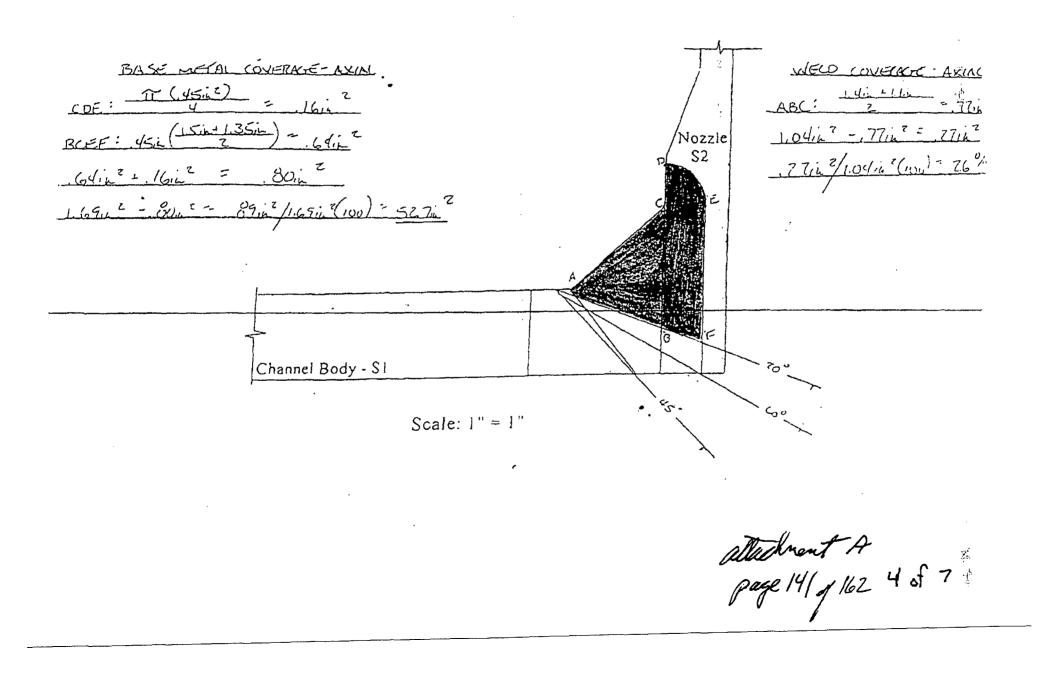


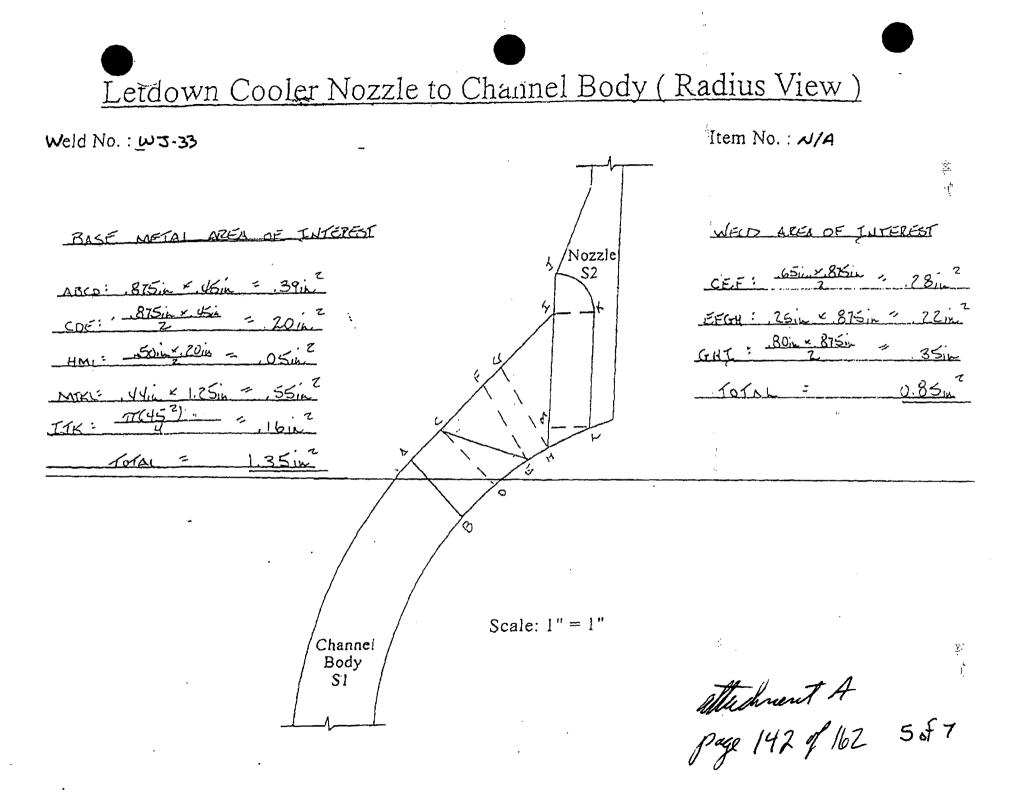
attachment A pege 140 g 1/2 3 of 7

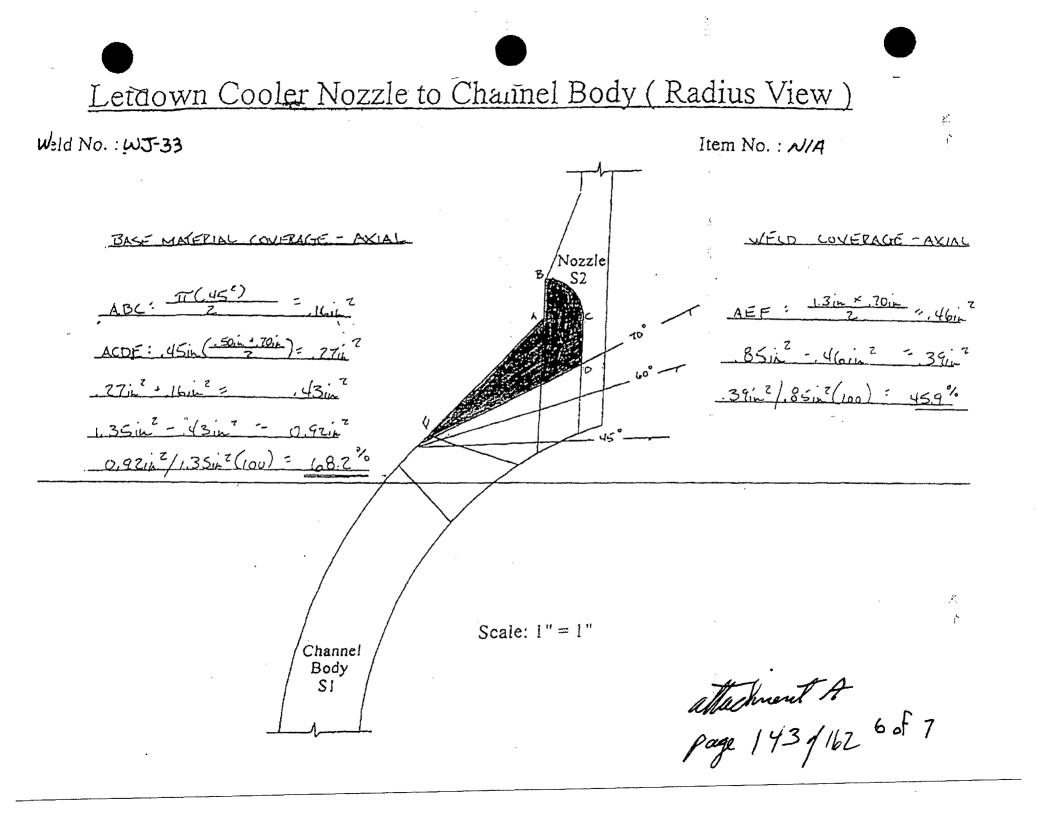
Letdown Cooler Nozzle to Channel Body

Weld No. : 45-33

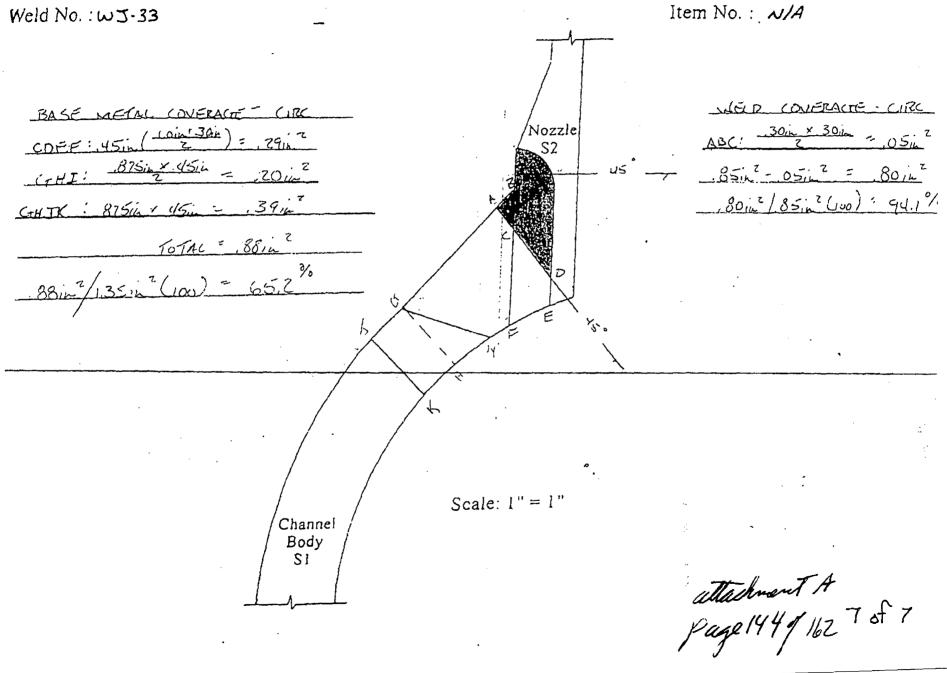
Item No. : N/A







Berjown Cooler Nozzle to Charlel Body (Radius View)



| 1 . | Charles Series |
|--------|--|
| - Lamo | |
| 5.00 | Energy. |
| | and a second |

UT Vessel Examination

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| Summa | BCODE: | Oconee 1998/200 NU- | WJ-3 PSI | | | Cat./iten | Proce Work n: 6-B/B | | NDE-363 1 01889351 Location: onnector to chan | | | Dutage No.: Report No.: BO Page: 1 N/A | N/A P-UT-09-119 of 4 |
|--|-------------------|---------------------------|-------------|-----------------|--------------------|---------------------------------------|------------------------------------|-----------------------------------|---|-----------------|--------------|---|------------------------------|
| System ID: Component ID: Limitations: | | ið suppla | | | 1 1 | | | | Size/Length: | N/A rt Time: | Thic 1107 | kness/Diamater: Finish Time: | .875/5.0/5S 1130 |
| Examination S Lo Location: Temp. Tool Mf Cal. Report No Angle Used | g.:. | | <u>1</u> | | Se | ocation: rial No.; | <u>Centerline of</u> | 70 | Couplant: Surface Temp.: | ULTRAGE 70 | | Batch No.: | <u>09125</u> |
| Scanning dB Indication(s): Comments: Scanning db M | Yes 2 | No [| | 50.2 naintai | os.b n 2:1 sig | 48:0 | Scan Coverage: U Diae ratio | pstream <table-cell></table-cell> | Dawnstream 🗹 | cw 🛛 | CCW (| 2 | |
| Results: Percent Of Cov | Accep erage Ob | • | | t [] | Info 10 - 87,71 | • 🗖 📜 | PSI examination Reviewed Previo | | 89-1 FC 09-01, 0 No | 9-0 <u>6</u> | | | |
| Doan, Steven | Nel N/A | | 7 | Uh. | Signature | | Data 11/4/2009 Data | Reviewer Site Review | lind A | ! des | Signat | | 7/19/11 Date |
| | A'N Iov | , ; , ; | | | 3 Ignature | · · · · · · · · · · · · · · · · · · · | Dale | ANINReview | yCRitet | 0 Sta | Signati | | 0/11 Date |
| | | | | , . | • | | | | | | . • | A 1 P A 1 | TACHMEN, A SE MYS-DF. 162 |

| | | | | i |
|--------|---------|---------|--------|-----|
| Ultras | ionic l | ndicati | on Rep | ort |

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| | | StarUr Summary No Workscop | | | Proced | rocedure: | NDE-3830 | Outage No.: Report No.: Page: | N/A BOP-UT-09-119 2 of 4 | |
|-------------|--|--|--------------------------|-----------|--|---|--|-------------------------------------|--------------------------------|-------------------------------|
| | Wo | nit Angle: Location: Ce | 70 | | v∜ Q Fe | ping Welds milic Vessels ≥ her <u>/essels</u> | 2 "T | | Wo Wi CL | ₩2 |
| | RBR | eneining Back Istance From D S: Weld WJ- | intum 2570 | W1 | Distance From Wo Distance From Wo Distance From Wo | AL OI | num Response Max (Forward) Max (Forward) | | | |
| | Ahgio India 81 14 | DAC | Max SW Min 1125 22 | With Min. | Backward Of Max | U. L. Of Min Max 390* 0-5* | L2 RBR OI AMP MAX | Root Geoinștry | Remerks | |
| | | SL | | | | | | Root Geometry | | |
| | | | | | | | | | | |
| D B C | xaminer L epn, Steven xaminer L riebel, David I ther L | evol II-N | Alu. | Stotature | 11/4/200 Da 11/4/200 | nte Site Review | V(| Signa Signa Let Sloughte | /2-5- | Date 07 Date Date |
| | | | | | | O | <u>r Cirita</u> | ur sroughten | 34114 | IIMEN I 6 ^{df} /6 |

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| | D | UKE POWER COMPANY ISI LIMITATION REPORT | |
|---------------------------------------|---------------------------|---|---------------------------------|
| | Component/Weld ID: WJ-35 | Item No: BOP-UT-09-119 | remarks: |
| | | SURFACE BEAM DIRECTION | Due to nozzte. |
| P - | LIMITED SCAN | - 🖾 1 🖸 2 🖾 1 🖾 2 🖾 cw 🖾 ccw | |
| 19世纪11年 19月2日 - 11日 19月2日 - 11日 | | INCHES FROM WO CL+1.1 to Beyond | |
| | 44.450 | other 70.4 FROM 0 DEG to 360 DEG | |
| | | SURFACE BEAM DIRECTION | Taper on chemical |
| | | 1 3 2 X 1 X 2 C CW | connector. |
| | FROM L N/A to L N/A | INCHES FROM W0 +0.6 to +1.5 | |
| | ANGLE: 0 8 45 8 60 | other 70 FROM 0 DEG to 360 DEG | |
| | NO SCAN | SURFACE BEAM DIRECTION | |
| | | • • • • • • • • • • • • • • • • • • • | |
| | FROM L | INCHES FROM W0 to | |
| | | other FROM DEG to DEG | |
| | | BEAM DIRECTION | |
| | | 1 2 1 cw ccw | |
| | FROM L | to | Sketch(s) attached |
| | ANGLE: 0 0 5 0 | other FROM DEG to DEG | yes 🗋 No |
| 9 | Prepared By: Steve Dean | Level II Date: 11/04/09 Shee | |
| | Reviewed By: A gran A Mon | Date: Authorized Inspector, 12-5-09 Nenew Chitchee Sta | ughter 4/27/11 |
| | ν(| | ATTACHMENT A PAGE 147 DF 162 |

| | Report No.: BOP-UT-09-119 Pege: 4 of 4 | |
|--|--|----------------------|
| Examinar: <u>Orisbel Devid M.</u> Other <u>NA</u> | Level: H-N Reviewer: 2 Micro Date: 12-9-09 | |
| Commerta: Weid WJ.55 Ind. 2 1; 2 5 7 ara Poo | | |
| | Annuel CODY | |
| | 52 SZ | |
| | ATTACHM PAGE /49 | - ENT A 9F 162 |

et Down Cooler - Chemical Connector to Channel Body

% Coverage Calculations

ATTACHMENT A

Weld No.: WJ-35

- 8.625" Ø =
- 0.875" "t" =

Weld Length =

Total Inspection Area =

% Length Limited due to nozzle = 6" / 27.1" x 100 = 22.1%

Appregate Coverage Calculation

Axial Scans

22.1% of length x 98.5% of the volume of length / 100 = 21.3% and the second 77.9% of length x 97.4% of the volume of length //100=75.9%

Aggregate coverage Axial scans = 21.1 + 75.9 = - 97.2%

14

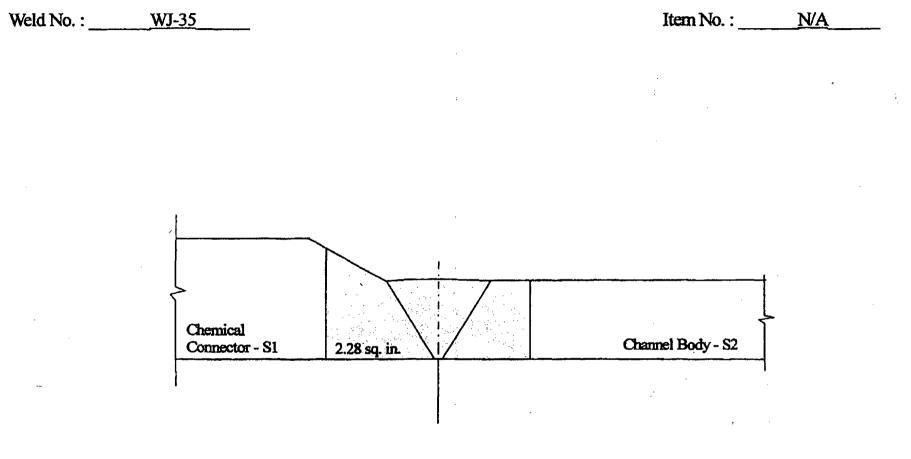
Circ. Scans

100% of length x 78.1% of the volume of length /.100 # 78.1%

2,51 V 1877 Total = (97.2+78.1) / 2 = 87.7% Aggregate Coverage

Inspector / Date: Ked

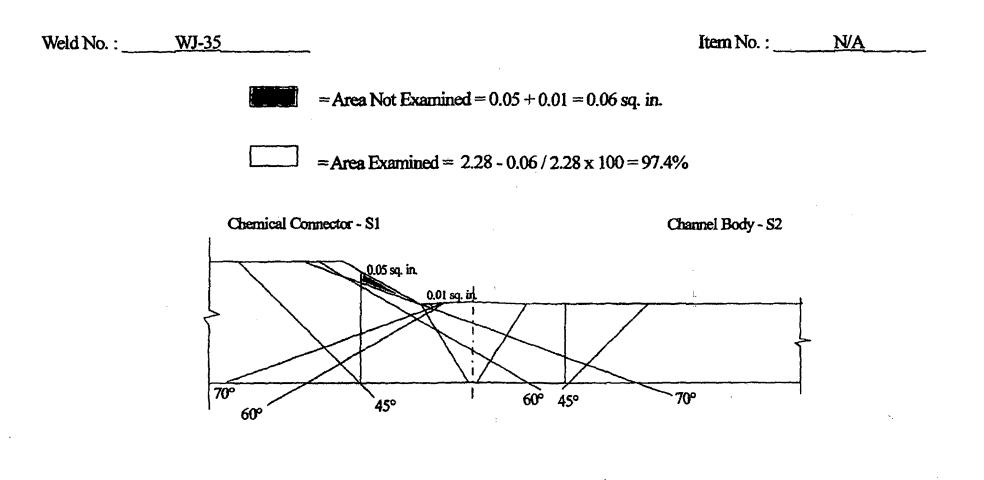
Letdown Cooler Chemical Connector to Channel Body Total Exam Area



Scale: 1'' = 1''

ATTACHMENT A page 150 9162 2015

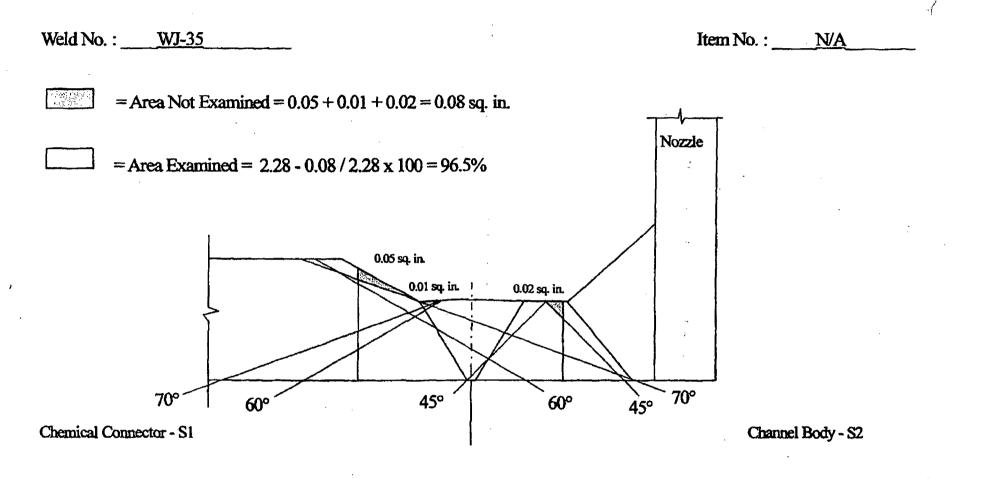
• Letdown Cooler Chemical Connector to Channel Body Area Examined - Axial Scans



Scale: 1" = 1"

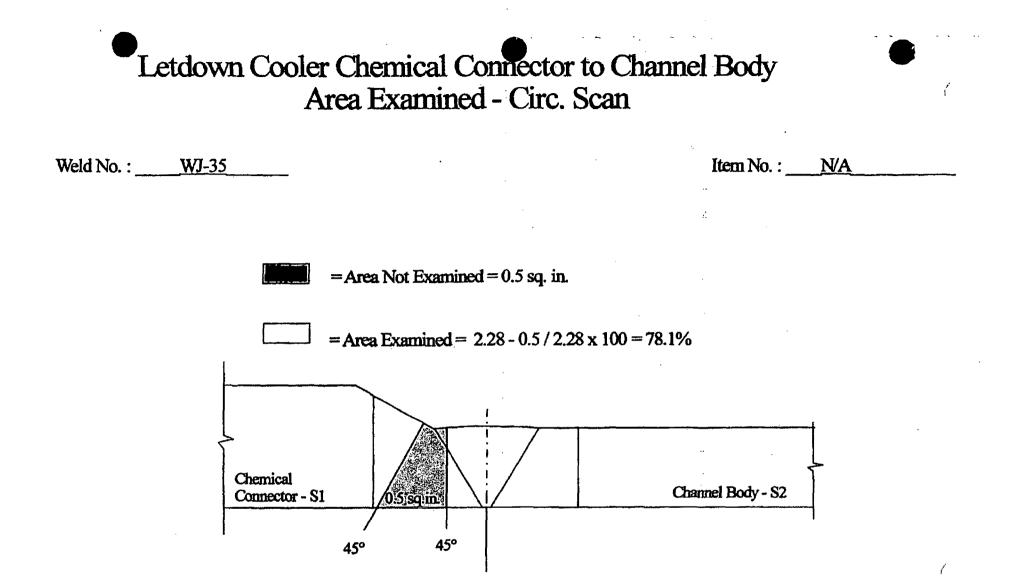
ATTACHMENTA Page 151 1 162 3075

Letdown Cooler Chemical Connector to Channel Body Area Examined @ Nozzle - Axial Scans



Scale: 1'' = 1''

ATTACHMENTA Page 152. 1/62 4045



Scale: 1'' = 1''

ATTACHMENTA page 153 of 162 5075

| Atata |
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| |

UT Vessel Examination

| Si | te/Unit: | Ocone | <u> </u> | 0 | | | Procedure: | NDE-363 | 0 | o | utage No.: | | N/A | |
|--|----------|----------|---------------------|----------|---------------|---------------------------------------|-----------------------------|----------------|----------|------------|-------------|-------------|--------------|--------|
| Summa | iry No.: | | WJ | 36 | | | Procedure Rev.; | 1 | | F | Report No.: | BO | 2.UT-0 | 9-120 |
| Wort | scope; | | P\$ | | | | Work Order No.: | 0188935 | 7 | | Page: | 1 | of | 2 |
| Code: | • | 1998/20 | ADDO | | | Cat./ilem | : B-D/B3.160 | Location: | | | N/A | | | |
| Drawing No.: | <u> </u> | N | U-D-114 | 19-1 Rev | /. A | | Description: Nozzle to | channel body | | | | | | |
| System ID: | NA | | | · | | | | | | | | | | |
| Component ID: | WJ-38 | | | | | | | Size/Length: | N/A | Thick | ness/Diam | eter: | .875/: | .0/99 |
| Limitations: | Yes - S | See supp | lement | al shee | t | | | Ste | rt Time: | 1012 | Finish T | ime: | 10 | 34 |
| Examination S | lurface: | Insia | je | O | , tside | , | Surface Condition: AS | GROUND | | | | | | |
| Lo Location: | | 9.1. | .1.1 | | Woi | ocation: | Centerline of Weld | Couplant: | ULTRAG | EL 11 | Batch No |).: | 091 | 25 |
| Temp. Tool M | 9.: | Ft | SHER_ | | _ 8 | oriel No.: | MCNDE32770 | Surface Temp.: | 70 | ٩• | | | | |
| Cal. Report No |).; | | | 0 MB 1 | 602 | 9 CAL- | 09-458, 459, 460, 461 & 462 | | | | | | | |
| Angle Used | 0 | 45 | 45T | -60- | -80T | 70L | | | | | | | | |
| Scenning d8 | | 43.0 | 61.7 | 50.2 | 55.0 | 46.0 | | | | | | | | |
| Indication(a): | Yes | I No | | | | · · · · · · · · · · · · · · · · · · · | Scan Coverage: Upstream 🗸 | Downstream 🗸 | cw 🗸 | CCW V | | | | |
| Comments: | | | | | | | • • | | | | - | | | |
| Scanning db l | owered | from +1 | 4db to | maintai | n 2:1 ei | inal to no | isa ratio | | | | | | | |
| - | | | | | | | | | | | | | | |
| Results: | Acce | ept 🔛 | Raja | ict 😰 | Inf | o ' | PSI examination | SIN - | 32.38 | 39-1 | FC (| <u>م</u> ـم |) , (| 9-05 |
| Percent Of Cov | verage C | btained | > 90%: | | lo - 14 | <u>K</u> | Reviewed Previous Data: | No | _ | | | | 11/11 | |
| Examiner Li Dean, Steven | evel U-l | N | | t. | Signatur | , | Date Reviewe | AM | | Signati | ute | | | Date |
| and the second | PHI IOVO | N | $\overline{\gamma}$ | | Signalo | ₽ | Date Site Review | | わ | Signati | UIA. | | 2.8.1 | Data |
| Griebel, David I | . | Δ |)/- | -1. | \mathcal{I} | _ | 11/4/2009 | r (| | - | | | | |
| Other Lo N/A | oval N// | A | | (| Signatur | 3 | Date ANU Revie | CRitchel | Jong | the Signat | 110/27/ | /// | •••• | Date |
| | | | | | | | (| J | | | | À | TTA | CAMENT |
| | | | | | | | | | | | | P | AGE, | 5401 |
| | | | | | | | | | | | | | ,. | - () |

| | DUKE POWER COMPANY ISI LIMITATION REPORT | |
|---|---|---------------------------------------|
| , • · · · | Component/Weld ID: WJ-36 Item No: BOP-UT-09-120 | remarks: |
| | NO SCAN BEAM DIRECTION | Due to nozzie. |
| | ☐ LIMITED SCAN | |
| | FROM L N/A to N/A INCHES FROM WO Toe to Beyond | |
| | ANGLE: 0 0 45 0 60 other 70 FROM 0 DEG to 360 DEG | |
| Marine and | NO SCAN | |
| | | · · · · · · · · · · · · · · · · · · · |
| • | 1. "你们的你们的,我们们的你们就是你们的你能能的你不能能了,你们们就是你会了,你们就是你们的你们,你们就不知道,你们不知道,你们不知道,你们不知道你?" | |
| | FROM L to L- | 4 |
| 1. S. | ANGLE: 10 45 60 Fother FROM DEG to DEG | |
| | | |
| | □ LIMITED SCAN | |
| | FROM L to to | |
| | ANGLE: 0 45 80 tother FROM DEG to DEG | |
| | | |
| 1 | □ LIMITED SCAN | |
| | FROM L to | Sketch(s) attached |
| | ANGLE: 0 0 5 0 60 other FROM DEG to DEG | 🗌 yes 🔲 No |
| | ANGLE: 0 5 60 Comer PROM DEG Prepared By: Steve Dean III Date: 11/04/09 Sheet | |
| | Prepared By: Steve Dean Mile Level: II Date: 11/04/09 Shee Reviewed By: Authorized Inspector | |
| | Lon // // one 1. 19 E-19 Wrig Chither | Stought 4737/11 ATTACHMENT |
| | | PAGE/55 OF |
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A. 62.

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| | Letdown Cooler Noz | zle to Channel Body | | | | |
|----------------------------------|----------------------------------|--|---|--|--|--|
| | Weld N | o. WJ-36 | | | | |
| | Base Materi | al Coverage | | | | |
| Scan | 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 Mater | ial Coverage | | | | |
| Scan Radius View Non-Radius View | | | | | | |
| Axial-S1 | 45.9% | 26.0% | | | | |
| Axial-S2 | 0.0% | 0.0% | | | | |
| <u> </u> | 94.1% | 66.3% | | | | |
| Circ-S2 | | 66.3% | | | | |
| Circ-S2 Circ-S2 | 94.1% | 00.370 | | | | |
| | | 1.1 + 66.3 + 94.1 + 66.3 = 392.7/8 = 49.1% | ~ | | | |

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Level III Rod Sheffild Date 11-4-09

