Exelon Generation

4300 Winfield Road
Warrenville, IL 60555
630 657 2000 Office

RS-12-153

10 CFR 50.55a

October 8, 2012

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-001

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN-50-456 and STN-50-457

Subject: Relief Request Associated with the Third 10-Year Inservice Inspection Program Interval

In accordance with 10 CFR 50.55a, "Codes and standards," paragraph (g)(5)(iii), Exelon Generation Company, LLC, (EGC) hereby requests NRC approval of the attached relief request associated with the Third 10-year Inservice Inspection (ISI) Program Interval for Braidwood Station, Units 1 and 2. The third interval of the Braidwood Station ISI program complies with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," 2001 Edition with 2003 Addenda.

NRC approval of the attached relief is requested on the basis that 100% examination coverage of required surfaces and volumes of Class 1 components has been determined to be impractical. Due to the original design and/or the base metal materials associated with the specified welds, it is not feasible to effectively perform examinations of 100% of the volume of these welds.

The details of the 10 CFR 50.55a request are enclosed. EGC requests approval of this relief request by October 8, 2013.

There are no regulatory commitments contained within this letter. Should you have any questions concerning this letter, please contact Ms. Dwi Murray at (630) 657-3695.

Respectfully,

David M. Gullott
Manager – Licensing
Exelon Generation Company, LLC

Attachment: 10 CFR 50.55a Relief Request I3R-10

cc: NRC Regional Administrator, Region III
NRC Senior Resident Inspector, Braidwood Station
NRR Project Manager, Braidwood Station
Illinois Emergency Management Agency – Division of Nuclear Safety

1.0 ASME CODE COMPONENTS AFFECTED:

Code Class:	1
Reference:	IWB-2500, Table IWB-2500-1, Code Case N-460
Examination Category:	B-D
Item Number:	B3.110
Description:	Limited Examination Coverage
Component Number:	See Tables 1 and 2
Drawing Number:	See Attachments 1-1, 1-2, 2-1, and 2-3

2.0 APPLICABLE CODE EDITION AND ADDENDA:

The Third Interval Inservice Inspection program is based on the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, 2001 Edition with 2003 Addenda.

3.0 APPLICABLE CODE REQUIREMENT:

ASME Section XI, 2001 Edition with 2003 Addenda requires a volumetric and/or surface examination, which includes essentially 100% of the weld and the applicable base metal, for the affected examination categories of Class 1 components.

Table IWB-2500-1, Examination Category B-D requires volumetric examination of Item B3.110 (Pressurizer Nozzle-to-Vessel welds). Figure IWB-2500-7(b) depicts the required examination volume (A-B-C-D-E-F-G-H) which includes the actual circumferential weld and adjacent base metal on either side of the weld extending to a distance of one-half the thickness of the wall from the extremities of the weld crown.

ASME Section XI, Mandatory Appendix I requires ultrasonic examination of vessel welds greater than 2 inches thick to be conducted in accordance with ASME Section V, Article 4. ASME Section V, Article 4 requires:

T-472.1.1 Beam Angle: The search unit and beam angle selected shall be appropriate for the configuration being examined and shall be capable of detecting the calibration reflectors, over the required angle beam path.

T-472.1.2 Reflectors Parallel to the Weld Seam: The angle beam shall be directed at approximate right angles to the weld axis from both sides of the weld (i.e., from two directions) on the same surface when possible. The search unit shall be manipulated so that the ultrasonic energy passes through the required volume of weld and adjacent base metal material.

T-472.1.3 Reflectors Transverse to the Weld Seam: The angle beam shall be directed essentially parallel to the weld axis. The search unit shall be manipulated so that the ultrasonic energy passes through the required volume of weld and adjacent base material. The search unit shall be rotated 180 deg and the examination repeated.

Braidwood Station has adopted ASME Section XI Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 welds, Section XI Division 1." Code Case N-460 states in part, "...when the entire examination volume or area cannot be examined...a reduction in examination coverage...may be accepted provided the reduction in coverage for that weld is less than 10%."

NRC Information Notice 98-42, "Implementation of 10 CFR 50.55a(g) Inservice Inspection Requirements," termed the reduction in coverage of less than 10% to be "essentially 100 percent." Information Notice 98-42 states in part, "The NRC has adopted and further refined the definition of "essentially 100 percent" to mean "greater than 90 percent"... which has been applied to all examinations of welds or other areas required by ASME Section XI."

4.0 IMPRACTICALITY OF COMPLIANCE:

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief is requested on the basis that conformance with the specified Code requirement has been determined to be impractical. Due to the original design and/or the base metal materials associated with these welds, it is not feasible to effectively perform examinations of 100% of the volume of these welds. Therefore, relief is requested on the basis that the Code requirements to examine essentially 100% of the welds' volume are impractical due to physical obstructions and geometric interference. Attaining the geometry required to achieve the Code required examination coverage would require major modifications to existing components without providing a corresponding increase in the level of quality and safety.

Tables 1 and 2 identify the limitations for examination coverage of the welds encountered at Braidwood Station, Unit 1 and Unit 2, respectively during the first period examinations.

Table 1 – Unit 1 Nozzle-to-Vessel Weld				
Component ID Code Category Code Item	**Outage Examined Month/ Year**	**Cumulative Examination Coverage Achieved**	**Reference Sketch/Coverage Plot**	**Remarks**
1PZR-01-N2 Category B-D Item B3.110	A1R15 (10/2010)	56.56%	Attachment 1-1	Pressurizer Spray Nozzle-to-Shell Weld. No recordable indications noted in any of the ultrasonic scans performed.
1PZR-01-N3 Category B-D Item B3.110	A1R15 (10/2010)	60.92%	Attachment 1-2	Pressurizer Relief Nozzle-to-Shell Weld. No recordable indications noted in any of the ultrasonic scans performed.

Table 2 – Unit 2 Nozzle-to-Vessel Weld				
Component ID Code Category Code Item	**Outage Examined Month/ Year**	**Cumulative Examination Coverage Achieved**	**Reference Sketch/Coverage Plot**	**Remarks**
2PZR-01-N2 Category B-D Item B3.110	A2R15 (4/2011)	88.5%	Attachment 2-1	Pressurizer Spray Nozzle-to-Shell Weld. No recordable indications noted in any of the ultrasonic scans performed.
2PZR-01-N3 Category B-D Item B3.110	A2R15 (4/2011)	88.5%	Attachment 2-2	Pressurizer Relief Nozzle-to-Shell Weld. No recordable indications noted in any of the ultrasonic scans performed.

5.0 BURDEN CAUSED BY COMPLIANCE:

Compliance with the examination requirements of ASME Section XI would require significant modification of plant components to remove obstructions, redesign of plant systems/components, and/or replacement of components where geometry is inherent to the component design.

The pressurizer vessel spray nozzle-to-vessel weld is approximately 2.7 inches thick. The pressurizer nozzle and vessel are clad with stainless steel on the inside diameter surface. The geometry of the nozzle along with the presence of the cladding on the inside diameter of the pressurizer resulted in limited access to the entire examination volume. The propagation for the ultrasonic beam was in the shear mode. Normally, this mode would allow the ultrasonic beam to reflect off the inside surfaces and create a two-beam axis at right angles to each other, however, the presence of the stainless steel cladding precludes the ultrasound beams from reflecting at the inside diameter from the shell/cladding interface.

The nozzle geometry tapers away from the weld resulted in limited scanning surfaces available for the transducer coupling on the nozzle side of the weld, which resulted in additional examination limitations. These factors resulted in limited examination coverage from the scan directions required by ASME Section V and Section XI. These limitations are inherent to the original design of the pressurizer vessel. Conformance with the ASME Section XI requirements for essentially 100% of the volumetric coverage would require extensive structural modifications to the pressurizer vessel.

Attachments 1-1, 1-2, 2-1, and 2-2 provide the basis for the limited examination coverage, which include drawings/sketches, as applicable. The differences between the aggregate examination coverage achieved and the coverage previously attained during the Second 10-Year ISI Program Interval examination are due to changes in ASME Section V requirements. While it may be possible to increase the overall coverage using alternative or additional angles, it would not necessarily increase the level of quality and safety in detecting flaws or relevant conditions, and would increase the radiation dose received by the examiners due to additional time spent to scan the welds.

In addition to the completion of required volumetric examination performed to the extent practical, numerous system leakage tests (Section XI Category B-P and Generic Letter 88-05) at nominal system operating pressure (2235 psig) and temperature (557°F) have been performed with no evidence of leakage associated with the pressurizer spray nozzle-to-vessel welds. The system leakage tests will continue to be performed throughout the remainder of the interval.

Radiography as an alternative is not feasible because access is not available for film placement. No alternative examinations are planned for the weld during the current inspection interval. No additional ultrasonic examinations will be completed during the inspection interval for these welds since the examination was performed to the extent

practical. The results of this examination along with the results of the pressure tests and plant monitoring provide reasonable assurance that pressure boundary integrity has been and will be maintained for the components throughout the interval.

6.0 PROPOSED ALTERNATIVE AND BASIS FOR USE:

Braidwood Station proposes to perform the Code required volumetric examinations to the maximum extent possible. Due to the original design of these welds, there are no alternative examination techniques currently available to increase the examination volume. There were no cases in any of the listed examination components where outside diameter surface features (i.e., weld crowns, weld shrinkage, surface roughness, etc.) could have been conditioned to maximize the coverage attained without major modification to the components.

As a minimum, all components received the required volumetric examination to the extent practical due to limited or lack of access availability. There were no recordable indications requiring further evaluation noted in any of the volumetric examinations performed. The examinations were conducted, and satisfactory results were confirmed, even though essentially 100% coverage was not attained. Additionally, multiple VT-2 examinations were and will continue to be performed on the subject components throughout the interval through the required system pressure tests (examinations required by ASME Section XI and Generic Letter 88-05). No evidence of leakage was observed at these components, providing additional assurance that the structural integrity of the subject components will be maintained throughout the remainder of the interval.

In addition to the periodic visual inspections performed under ASME Section XI and Generic Letter 88-05, reactor coolant pressure boundary leakage is monitored through a number of other activities, which provide a high level of confidence that in the unlikely event that leakage did occur, it would be detected and proper action taken. Specifically, system leak rate limitations imposed by Technical Specifications Section 3.4.13, "RCS Operational Leakage," as well as the reactor makeup control system, reactor cavity and containment floor drain sump monitoring, containment radiation monitoring, and containment atmospheric monitoring, provide additional assurance that any leakage would be detected prior to gross failure of these components.

7.0 DURATION OF PROPOSED ALTERNATIVE:

Relief is requested for the Third 10-Year Inservice Inspection (ISI) Program Interval for Braidwood Station Units 1 and 2. For the examination categories under this relief, the Third Interval for Braidwood Unit 1 began on July 29, 2008 and is currently scheduled to end on July 28, 2018. The Third Interval for Braidwood Unit 2 began on October 17, 2008 and is currently scheduled to end on October 16, 2018.

8.0 PRECEDENTS:

A similar relief request was approved for North Anna Power Station, Unit 1 for limited examination coverage for Examination Categories B-A, B-D, B-K, R-A, C-B, C-C, and C-F-1 (NRC Safety Evaluation Report dated January 7, 2011 - ADAMS Accession Number ML110060011).

For Braidwood Station, limited coverage for these components was identified during the previous inspection interval and relief from Code requirements under Relief Request I2R-50 which was approved by NRC Safety Evaluation Report dated March 8, 2010 (ADAMS Accession Number ML100480699).

9.0 ATTACHMENTS:

Attachment 1-1: Weld 1PZR-01-N2 (6 pages total)

Attachment 1-2: Weld 1PZR-01-N3 (6 pages total)

Attachment 2-1: Weld 2PZR-01-N2 (3 pages total)

Attachment 2-2: Weld 2PZR-01-N3 (3 pages total)

ATTACHMENT 1-1

Weld 1PZR-01-N2

WESDYNE INTERNATIONAL
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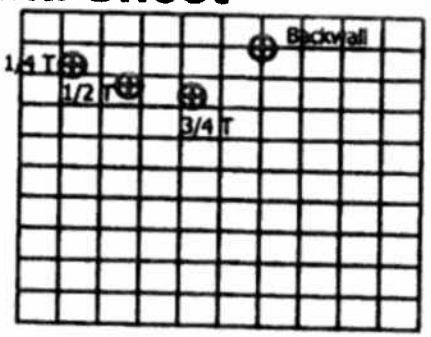
Calibration Data Sheet

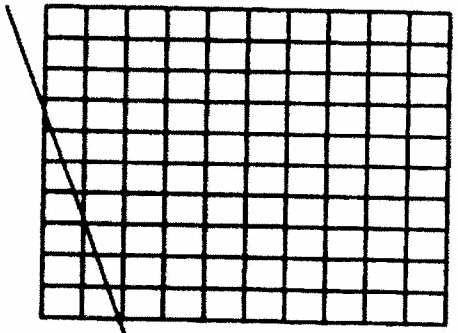
Plant / Unit: Braidwood / 1
Company: Exelon
Comp / System: N2 / RY
Procedure No: EXE-ISI-210
Rev / Chng. No.: 3 / 0
Cal. Block No: BWD 071
Cal. Block Temp.: 74°F
Thermometer S/N: SAP 105230
Size: 4" Sch.: N/A / 2.0625" "T"
Ref. Block: SAP 105220
[X] Ferritic [ ] Austenitic
Each Major CRT Div. = 0.5"
Cal. Direction: [X] Axial [ ] Circ. [ ] Both
Scan Area: | to Weld [X]; || to Weld [X]
Code Category: B-D Code Item: B03.110

Data Sheet # A1R15-UT-022
Page 1 of 6

Cal. Checks	Time
Initial Calib.	08:34
Initial Calib. Date	10/12/10
Intermediate	12:21
Intermediate	N/A
Final Calib.	15:46
Final Calib. Date	10/12/10

Couplant
Type: ULTRAGEL II
Batch: 09225





Examination Area / Weld	ACCESS	INDICATIONS FLAW YES	INDICATIONS FLAW NO	INDICATIONS NON RELEVANT YES (>50% Ref.)	INDICATIONS NON RELEVANT NO	EXAM SENS. (dB)
1RY01S / 1PZR-01-N2	Single Sided		X		X	24 dB

Remarks / Reason for Incomplete Scan(s) COMPONENT TEMP:78°F
No recordable indications. Approximately 56.56% coverage achieved due to nozzle configuration. See attached pages 3 thru 6 for coverage calculations.
* Cal Check: 1st BW: 2.0 div @ 80% @ 0 dB; 2nd BW: 4.0 div @ 50% @ 0 dB

Examiners: Paul Blecha Paul S Blecha Level III Date 10/12/10
N/A Level N/A Date N/A
WesDyne Reviewer / Date: Philip Moore Lv. III 10-5-10
Further Evaluation Required? [ ] Yes [X] No

EXELON LEVEL III REVIEW / DATE: Trial III 10-16-10
AIB REVIEW / DATE:

Search Unit #1
Manufacture: KBA
Serial No.: 01BTJW
No. of Elements: 1
Size: 1.0" Shape: Round
Freq. 2.25 MHz Style: Gamma
Exam Angle: 0° Mode: Long
Measured Angle: N/A
Wedge Style: Integral

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Instrument Settings
Make / Model: Krautkramer / USN 58L SW
Serial No.: SAP 104391
Probe Delay: 0.9456 Range: 5.0"
M'tl Cal / Vel: 0.2301 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 10.0 dB Circ: N/A
1st BW: *

Search Unit #2
Manufacture:
Serial No.:
No. of Elements:
Size: Shape
Freq. Style:
Exam Angle: Mode:
Measured Angle:
Wedge Style:
N/A

Search Unit Cable
Type:
Length: No. of Con.:

Instrument Settings
Make / Model:
Serial No.:
Probe Delay: Range:
M'tl Cal / Vel: Pulser:
Damping: Reject:
PRF: Freq:
Filter: Mode:
Rectify: Voltage:
Pulse Width:
Display Delay:
Reference Sensitivity (dB)
Axial: Circ:
FSDH Sensitivity:

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Calibration Data Sheet

Plant / Unit: Braidwood / 1
Company: Exelon
Comp / System: N2 / RY
Procedure No.: EXE-ISI-210
Rev / Chng. No.: 3 / 0
Cal. Block No.: BWD 071
Cal. Block Temp.: 74°F
Thermometer S/N: SAP 105230
Size: 4" Sch.: N/A / 2.0625" "T"

Ref. Block: SAP 105220

[X] Ferritic [ ] Austenitic

Each Major CRT Div. = 0.8" / 1.0"

Cal. Direction: [X] Axial [ ] Circ. [ ] Both

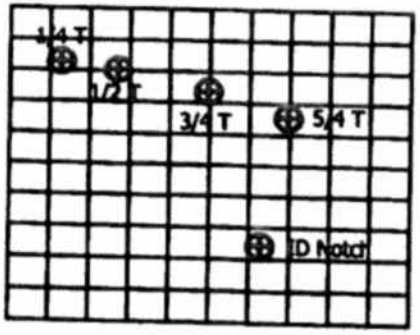
Scan Area: | to Weld [X]
|| to Weld [X]

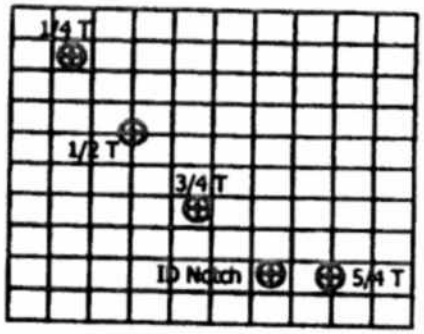
Code Category: B-D Code Item: B03.110

Data Sheet #: A1R15-UT-022
Page 2 of 6

Cal. Checks	Time
Initial Calib.	09:22 / 09:23
Initial Calib. Date	10/12/10
Intermediate	12:19 / 12:20
Intermediate	13:57 / 14:39
Final Calib.	15:52 / 15:53
Final Calib. Date	10/12/10

Couplant
Type: ULTRAGEL II
Batch: 09225





Search Unit #1
Manufacture: KBA
Serial No.: 008954
No. of Elements: 1
Size: 0.5" x 1.0" Shape: Rect.
Freq. 2.25 MHz Style: Gamma
Exam Angle: 45° Mode: Shear
Measured Angle: 45°
Wedge Style: SWS

Search Unit #2
Manufacture: KBA
Serial No.: 009XBK
No. of Elements: 1
Size: 0.5" x 1.0" Shape: Rect.
Freq. 2.25 MHz Style: Gamma
Exam Angle: 60° Mode: Shear
Measured Angle: 60°
Wedge Style: SWS

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Instrument Settings
Make / Model: Krautkramer / USN 58L SW
Serial No.: SAP 104391
Probe Delay: 12.925 Range: 8.0"
M'tl Ca 0.1272 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 37.0 dB Circ: N/A
FSDH Sensitivity: *

Instrument Settings
Make / Model: Krautkramer / USN 58L SW
Serial No.: SAP 104391
Probe Delay: 16.0784 Range: 10.0"
M'tl Cal / Vel: 0.1272 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 42.9 dB Circ: N/A
FSDH Sensitivity: **

Examination Area / Weld	ACCESS	INDICATIONS FLAW YES	INDICATIONS FLAW NO	INDICATIONS NON RELEVANT YES (>50% Ref.)	INDICATIONS NON RELEVANT NO	EXAM SENS. (dB)
1RY01S / 1PZR-01-N2	Single Sided		X		X	60 dB 65 dB

Remarks / Reason for Incomplete Scan(s) COMPONENT TEMP:78°F
No recordable indications. Approximately 56.56% coverage achieved due to nozzle configuration. See attached pages 3 thru 6 for coverage calculations.
* 45° Cal Check: 1.0" Radius @ 1.25 div @ 70% @ 22.5 dB; 2.0" Radius @ 2.5 div @ 25% @ 22.5 dB
** 60° Cal Check: 1.0" Radius @ 1.0 div @ 90% @ 26 dB; 2.0" Radius @ 2.0 div @ 50% @ 26 dB.

Examiners: Paul Blecha [signature] Level III Date 10/12/10
N/A Level N/A Date N/A

WesDyne Reviewer / Date: [signature] Lo. III 10-15-10

Further Evaluation Required? [ ] Yes [X] No

EXELON LEVEL III REVIEW / DATE: [signature] III 10-16-10

ANI REVIEW / DATE: [signature]

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A Westinghouse Electric Company

LIMITATION TO EXAMINATION

PLANT: Braidwood UNIT: 1 SKETCH: 1PZR-01

SYST./COMP.: RY / N2 PROCEDURE: EXE-ISI-210, Rev. 3

EXAMINER: Paul S Blecha, Level III DATE: 10/12/2010

RELATED TO: UT X PT ____ MT ____ VT ____ IDENT. NO. 1PZR-01-N2

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.

45°, 60° and 70° Axial Upstream / Downstream Scans

Total Exam Volume = Length x Width x Height
Length = 40"
Width = 4.1"
Height = 2.52"
(40" x 4.1" x 2.52") = 413.28"³

Missed Volume = Length x Width x Height (in cross hatched area)

Area 1: (40" x 1.0" x 0.8") / 2 = 16"³

Area 2: (40" x 1.8" x 0.7") / 2 = 25.2 "³

Area 3: (40" x 2.52" x 2.52") / 2 = 127"³

Area 4: (40" x 1.8" x 2.52") = 181.44"³

Total missed volume (Upstream scan) = Area 1 + Area 2
16"³ + 252"³ = 41.2"³

Total missed volume (Downstream scan) = Area 1 + Area 3 + Area 4
16"³ + 127"³ + 181.44"³ = 324.44"³

Total Achieved coverage (per scan) = T.E.V. - T.M.V. / T.E.V.
413.28"³ - 41.2"³ / 413.28"³ = 90% (Upstream Scan)
413.28"³ - 324.44"³ / 413.28"³ = 21.5% (Downstream Scan)

REFERENCE REPORT A1R15-UT-020, PAGE 3 OF 6 FOR INNER RADIUS DATA.

10/22/10

NOTE: 70° coverage achieved during Inner Radius Exam prior to Nozzle Exam.

WESDYNE REVIEW / DATE: Philip Stanoli Lv. III 10-15-10

EXELON LEVEL III REVIEW / DATE: III 10-16-10

ANII REVIEW / DATE: 10/16/10

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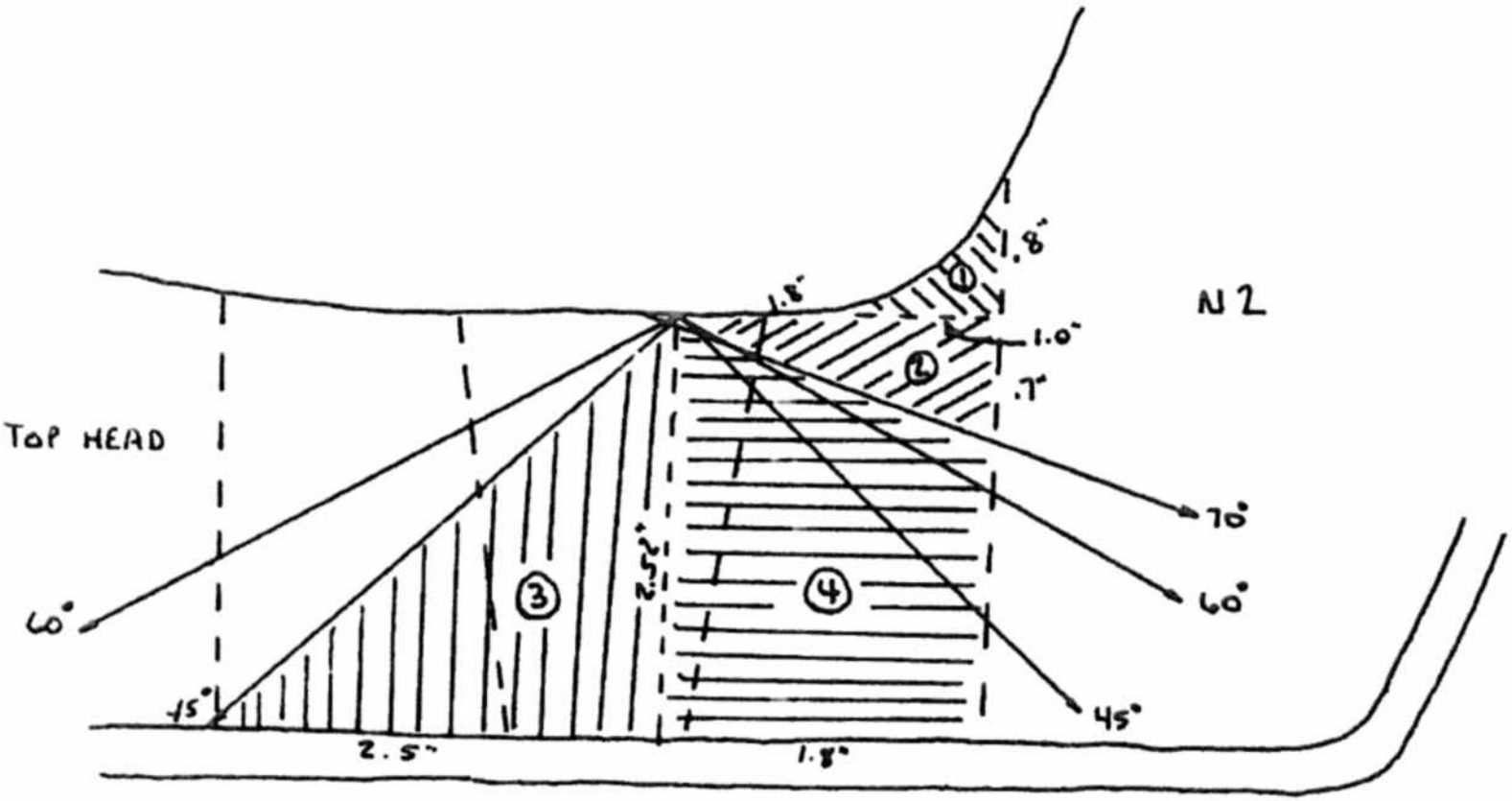
A Westinghouse Electric Company

NUCLEAR SERVICES
INSPECTION SERVICES

PROFILE OF THE EXAMINATION VOLUME/ DATA

PLANT	Braidwood	UNIT	1	SKETCH	1PZR-01
SYST./COMP.	RY / N2			PROCEDURE	EXE-ISI-210, Rev. 3
EXAMINER	Paul Blecha, Level III	DATE	10/12/2010	IDENT.	1PZR-01-N2

45°, 60° & 70°
Axial Scans



WESDYNE REVIEW / DATE: Philip Shanks Lv. III 10-15-10

EXELON LEVEL III REVIEW / DATE: III 10-16-10

ANI REVIEW / DATE: 10/16/10

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LIMITATION TO EXAMINATION

PLANT: Braidwood | UNIT: 1 | SKETCH: 1PZR-01

SYST./COMP.: RY / N2 | PROCEDURE: EXE-ISI-210, Rev. 3

EXAMINER: Paul Blecha, Level III | DATE: 10/12/2010

RELATED TO: UT X PT ____ MT ____ VT ____ IDENT. NO. 1PZR-01-N2

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.

45° & 60° CW/CCW Exam & 0°

Total Exam Volume = Length x Width x Height
Length = 40"
Width = 4.1"
Height = 2.52"
(40" x 4.1" x 2.52") = 413.28"³

Missed Volume = Length x Width x Height (in cross hatched area)

Area 1: (40" x 1.0" x 0.8") / 2 = 16"³

Area 2: (40" x 1.6" x 2.52") = 161.28 "³

Area 1 + Area 2: (16"³ + 161.28"³) = 177.28"³
Total missed volume = **177.28"³**

Total Achieved coverage (per scan) = T.E.V. - T.M.V. / T.E.V.
413.28"³ - 177.28"³ / 413.28"³ = 57.1%
Total Achieved coverage = **57.1%**

Total Achieved coverage (per examination) = (Upstream scan + Downstream scan + CW scan + CCW scan + 0° scan) / 5
(90% + 21.5% + 57.1% + 57.1% + 57.1%) / 5 = **56.56%**

NOTE: 70° coverage achieved during Inner Radius Exam prior to Nozzle Exam.

WESDYNE REVIEW / DATE	ANI REVIEW / DATE
Philip Mandai Lv. III 10-15-10	10/16/10
EXELON LEVEL III REVIEW / DATE	
III 10-16-10	

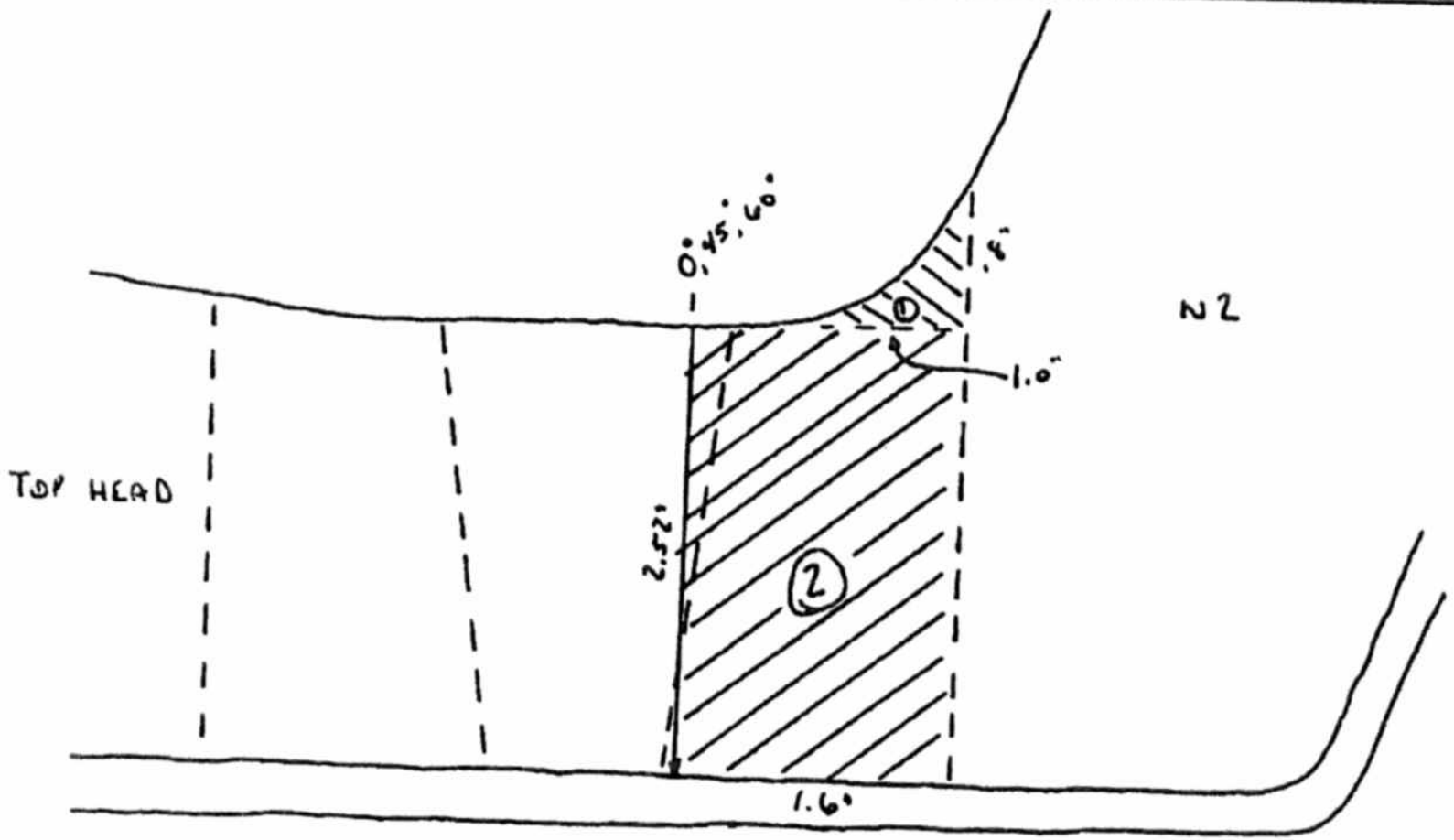
WESDYNE INTERNATIONAL
A Westinghouse Electric Company

NUCLEAR SERVICES
INSPECTION SERVICES

PROFILE OF THE EXAMINATION VOLUME/ DATA

PLANT	Braidwood	UNIT	1	SKETCH	1PZR-01
SYST./COMP.	RY / N2			PROCEDURE	EXE-ISI-210, Rev. 3
EXAMINER	Paul S Blecha, Level III	DATE	10/12/2010	IDENT.	1PZR-01-N2

45°, 60°& 0°
Circ Scans



WESDYNE REVIEW / DATE
Philip Shumaci Lv. III 10-15-10

EXELON LEVEL III REVIEW / DATE
10-16-10

ANI REVIEW / DATE
10/16/10

ATTACHMENT 1-2

Weld 1PZR-01-N3

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

Calibration Data Sheet

Plant / Unit: Braidwood / 1
Company: Exelon
Comp / System: N3 / RY
Procedure No.: EXE-ISI-210
Rev / Chng. No.: 3 / 0
Cal. Block No.: BWD 071
Cal. Block Temp.: 74°F
Thermometer S/N: SAP 105230
Size: 6" Sch.: N/A / 2.0625" "T"

Ref. Block: SAP 105220

[X] Ferritic [ ] Austenitic

Each Major CRT Div. = 0.5"

Cal. Direction: [X] Axial [ ] Circ. [ ] Both

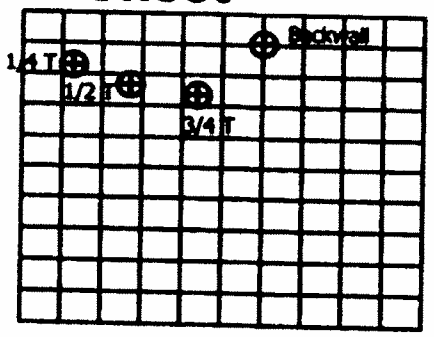
Scan Area: | to Weld [X]
|| to Weld [X]

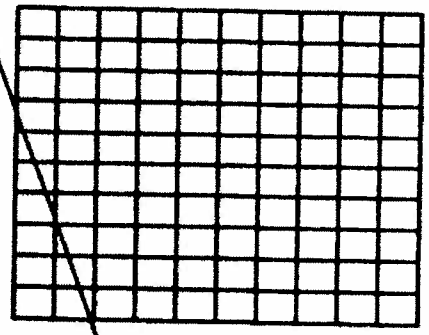
Code Category: B-D Code Item: B03.110

Data Sheet #: A1R15-UT-023
Page 1 of 6

Cal. Checks	Time
Initial Calib.	08:34
Initial Calib. Date	10/12/10
Intermediate	12:21
Intermediate	N/A
Final Calib.	15:46
Final Calib. Date	10/12/10

Couplant
Type: ULTRAGEL II
Batch: 09225





Search Unit #1
Manufacture: KBA
Serial No.: 01BTJW
No. of Elements: 1
Size: 1.0" Shape: Round
Freq. 2.25 MHz Style: Gamma
Exam Angle: 0° Mode: Long
Measured Angle: N/A
Wedge Style: Integral

Search Unit #2
Manufacture:
Serial No.:
No. of Elements:
Size: Shape
Freq. Style:
Exam Angle: Mode:
Measured Angle:
Wedge Style:
N/A

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Search Unit Cable
Type:
Length: No. of Con.:

Instrument Settings
Make / Model: Krautkramer / USN 58L SW
Serial No.: SAP 104391
Probe Delay: 0.9456 Range: 5.0"
M'tl Cal / Vel: 0.2301 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 10.0 dB Circ: N/A
1st BW: *

Instrument Settings
Make / Model:
Serial No.:
Probe Delay: Range:
M'tl Cal / Vel: Pulser:
Damping: Reject:
PRF: Freq:
Filter: Mode:
Rectify: Voltage:
Pulse Width:
Display Delay:
Reference Sensitivity (dB)
Axial: Circ:
FSDH Sensitivity:

Examination Area / Weld	ACCESS	INDICATIONS: FLAW YES	FLAW NO	NON RELEVANT YES (>50% Ref.)	NON RELEVANT NO	EXAM SENS. (dB)
1RY01S / 1PZR-01-N3	Single Sided		X		X	24 dB

Remarks / Reason for Incomplete Scan(s) COMPONENT TEMP:78°F
No recordable indications. Approximately 60.92% coverage achieved due to nozzle configuration. See attached pages 3 thru 6 for coverage calculations.
* Cal Check: 1st BW: 2.0 div @ 80% @ 0 dB; 2nd BW: 4.0 div @ 50% @ 0 dB

Examiners: Paul Blecha Level III Date 10/12/10
N/A Level N/A Date N/A

WesDyne Reviewer / Date: 10-15-10

Further Evaluation Required? [ ] Yes [X] No

EXELON LEVEL III REVIEW / DATE: III 10-16-10

ANI REVIEW / DATE

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

Calibration Data Sheet

Plant / Unit: Braidwood / 1
Company: Exelon
Comp / System: N3 / RY
Procedure No.: EXE-ISI-210
Rev / Chng. No.: 3 / 0
Cal. Block No.: BWD 071
Cal. Block Temp.: 74°F
Thermometer S/N: SAP 105230
Size: 6" Sch.: N/A / 2.0625" "T"

Ref. Block: SAP 105220

[X] Ferritic [ ] Austenitic

Each Major CRT Div. = 0.8" / 1.0"

Cal. Direction: [X] Axial [ ] Circ. [ ] Both

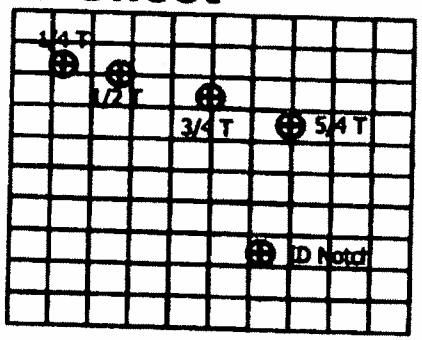
Scan Area: | to Weld [X]
|| to Weld [X]

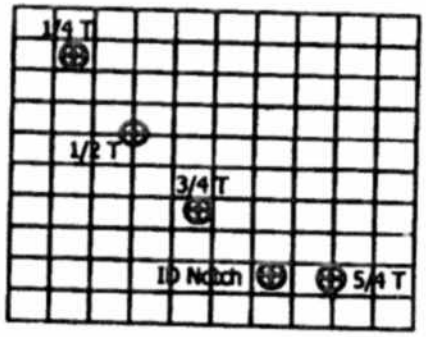
Code Category: B-D Code Item: B03.110

Data Sheet #: A1R15-UT-023
Page 2 of 6

Cal. Checks	Time
Initial Calib.	09:22 / 09:23
Initial Calib. Date	10/12/10
Intermediate	12:19 / 12:20
Intermediate	13:57 / 14:39
Final Calib.	15:52 / 15:53
Final Calib. Date	10/12/10

Couplant
Type: ULTRAGEL II
Batch: 09225





Search Unit #1
Manufacture: KBA
Serial No.: 008954
No. of Elements: 1
Size: 0.5" x 1.0" Shape: Rect.
Freq. 2.25 MHz Style: Gamma
Exam Angle: 45° Mode: Shear
Measured Angle: 45°
Wedge Style: SWS

Search Unit #2
Manufacture: KBA
Serial No.: 009XBK
No. of Elements: 1
Size: 0.5" x 1.0" Shape: Rect.
Freq. 2.25 MHz Style: Gamma
Exam Angle: 60° Mode: Shear
Measured Angle: 60°
Wedge Style: SWS

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Instrument Settings
Make / Model: Krautkramer / USN 58L SW
Serial No.: SAP 104391
Probe Delay: 12.9250 Range: 8.0"
M'tl Cal / Vel: 0.1272 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 37.0 dB Circ: N/A
FSDH Sensitivity: *

Instrument Settings
Make / Model: Krautkramer / USN 58L SW
Serial No.: SAP 104391
Probe Delay: 16.0784 Range: 10.0"
M'tl Cal / Vel: 0.1272 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 42.9 dB Circ: N/A
FSDH Sensitivity: **

Examination Area / Weld	ACCESS	INDICATIONS: FLAW YES	FLAW NO	NON RELEVANT YES (>50% Ref.)	NON RELEVANT NO	EXAM SENS. (dB)
1RY01S / 1PZR-01-N3	Single Sided		X		X	60 dB 65 dB

Remarks / Reason for Incomplete Scan(s) COMPONENT TEMP:78°F
No recordable indications. Approximately 60.92% coverage achieved due to nozzle configuration. See attached pages 3 thru 6 for coverage calculations.
* 45° Cal Check: 1.0" Radius @ 1.25 div @ 70% @ 22.5 dB; 2.0" Radius @ 2.5 div @ 25% @ 22.5 dB
** 60° Cal Check: 1.0" Radius @ 1.0 div @ 90% @ 26 dB; 2.0" Radius @ 2.0 div @ 50% @ 26 dB.

Examiners: Paul Blecha [signature] Level III Date 10/12/10
N/A Level N/A Date N/A

WesDyne Reviewer / Date: [signature] L-III 10-15-10

Further Evaluation Required? [ ] Yes [X] No

EXELON LEVEL III REVIEW / DATE [signature] 10-16-10

ANI REVIEW / DATE

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

LIMITATION TO EXAMINATION

PLANT: Braidwood — UNIT: 1 — SKETCH: 1PZR-01

SYST./COMP.: RY / N3 — PROCEDURE: EXE-ISI-210, Rev. 3

EXAMINER: Paul S Blecha, Level III — DATE: 10/12/2010

RELATED TO: UT X PT ____ MT ____ VT ____ IDENT. NO. 1PZR-01-N3

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.

45°, 60° and 70° Axial Upstream / Downstream Scans

Total Exam Volume = Length x Width x Height
Length = 47.10"
Width = 4.1" (1.7" weld crown and 1.2" on each side)
Height = 2.5"
(47.10" x 4.1" x 2.5") = 482.8"³

Missed Volume = Length x Width x Height (in cross hatched area)

Area 1: (47.10" x 1.0" x 0.6") / 2 = 14.13"³

Area 2: (47.10" x 1.7" x 0.8") / 2 = 32.0"³

Area 3: (47.10" x 2.5" x 2.5") / 2 = 147.2"³

Area 4: (47.10" x 1.7" x 2.5") = 200.2"³

Total missed volume (Upstream scan) = Area 1 + Area 2
14.13"³ + 32"³ = 46.13"³

Total missed volume (Downstream scan) = Area 1 + Area 3 + Area 4
14.13"³ + 147.2"³ + 200.2"³ = 361.53"³

Total Achieved coverage (per scan) = T.E.V. - T.M.V. / T.E.V.
482.8"³ - 46.13"³ / 482.8"³ = **90.4%** (Upstream Scan)
482.8"³ - 361.53"³ / 482.8"³ = **25.2%** (Downstream Scan)

REFERENCE REPORT A1R15-UT-021, PAGE 3 OF 3 FOR INNER RADIUS DATA.
[signature] 10/22/10

NOTE: 70° coverage achieved during Inner Radius Exam prior to Nozzle Exam.

WESDYNE REVIEW / DATE: [signature] Lv. III 10-15-10

EXELON LEVEL III REVIEW / DATE: [signature] III 10-16-10

ANI REVIEW / DATE: [signature] 10/16/10

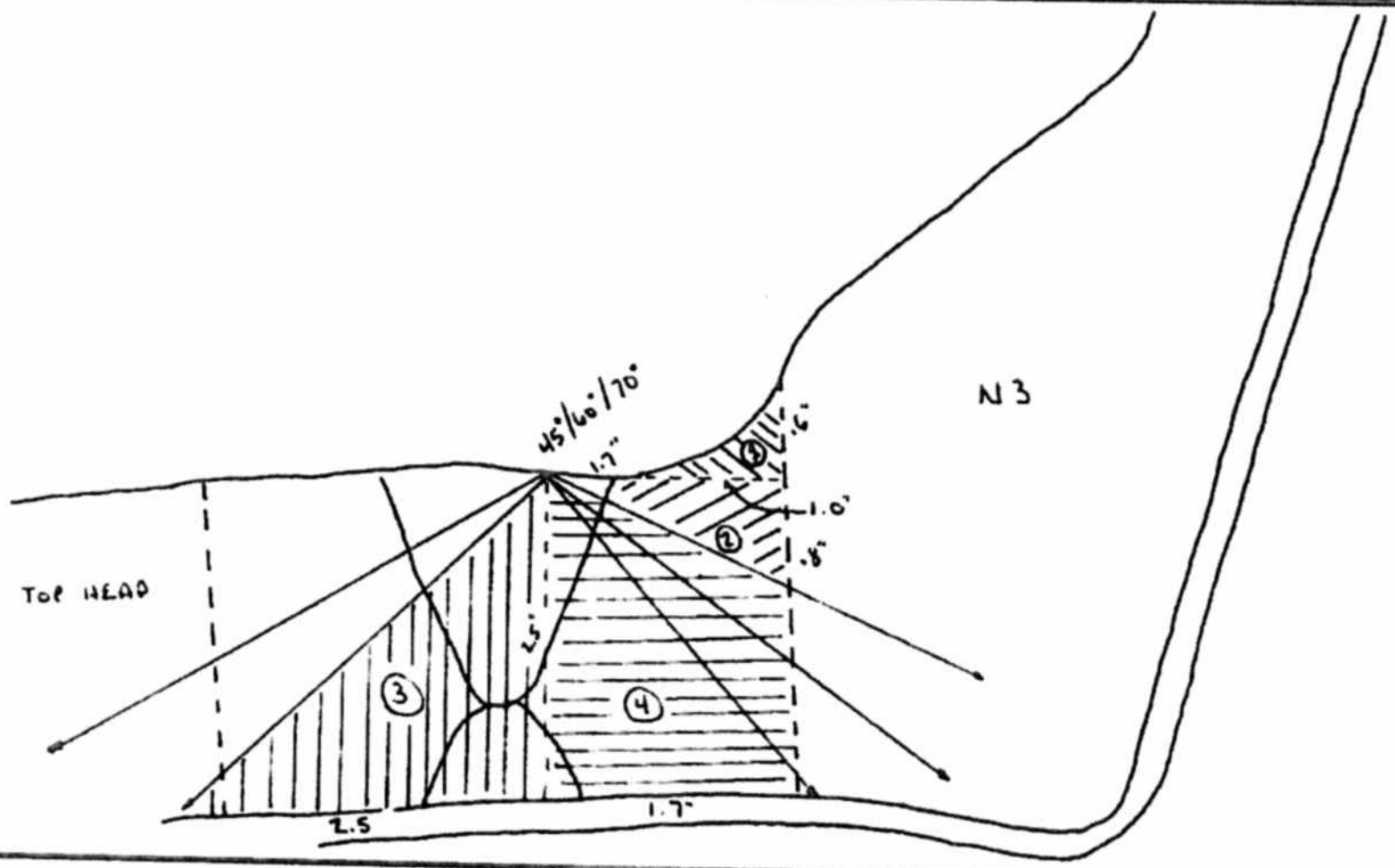
WESDYNE INTERNATIONAL
A Westinghouse Electric Company

NUCLEAR SERVICES
INSPECTION SERVICES

PROFILE OF THE EXAMINATION VOLUME/ DATA

PLANT	Braidwood	UNIT	1	SKETCH	1PZR-01
SYST./COMP.	RY / N3			PROCEDURE	EXE-ISI-210, Rev. 3
EXAMINER	Paul S Blecha, Level III	DATE	10/12/2010	IDENT.	1PZR-01-N3

45°, 60° & 70°
Axial Scans



WESDYNE REVIEW / DATE
Philip [illegible] Lv. III 10-15-10

EXELON LEVEL III REVIEW / DATE
[illegible] III 10/14/10

ANI REVIEW / DATE
[illegible] 10/14/10

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

LIMITATION TO EXAMINATION

PLANT: Braidwood | UNIT: 1 | SKETCH: 1PZR-01

SYST./COMP.: RY / N3 | PROCEDURE: EXE-ISI-210, Rev. 3

EXAMINER: Paul S Blecha, Level III | DATE: 10/12/2010

RELATED TO: UT X PT ____ MT ____ VT ____ IDENT. NO. 1PZR-01-N3

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.

45° & 60° CW/CCW Exam & 0°

Total Exam Volume = Length x Width x Height
Length = 47.1"
Width = 4.1" (1.7" weld crown and 1.2" on each side)
Height = 2.5"
(47.10" x 4.1" x 2.5") = 482.8"³

Missed Volume = Length x Width x Height (in cross hatched area)

Area 1: (47.10" x 1.0" x 0.6") / 2 = 14.13"³

Area 2: (47.10" x 1.4" x 2.5") = 164.85 "³

Area 1 + Area 2: (14.13"³ + 164.85"³) = 179"³
Total missed volume = 179"³

Total Achieved coverage (per scan) = T.E.V. - T.M.V. / T.E.V.
482.8"³ - 179"³ / 482.8"³ = 63%
Total Achieved coverage = 63%

Total Achieved coverage (per examination) = (Upstream scan + Downstream scan + CW scan + CCW scan + 0° scan) / 5
(90.4% + 25.2% + 63% + 63% + 63%) / 5 = 60.92%

NOTE: 70° coverage achieved during Inner Radius Exam prior to Nozzle Exam.

WESDYNE REVIEW / DATE: Philip Ohanesian Lv. III 10-15-10

EXELON LEVEL III REVIEW / DATE: III 10-16-10

ANI REVIEW / DATE: 10/16/10

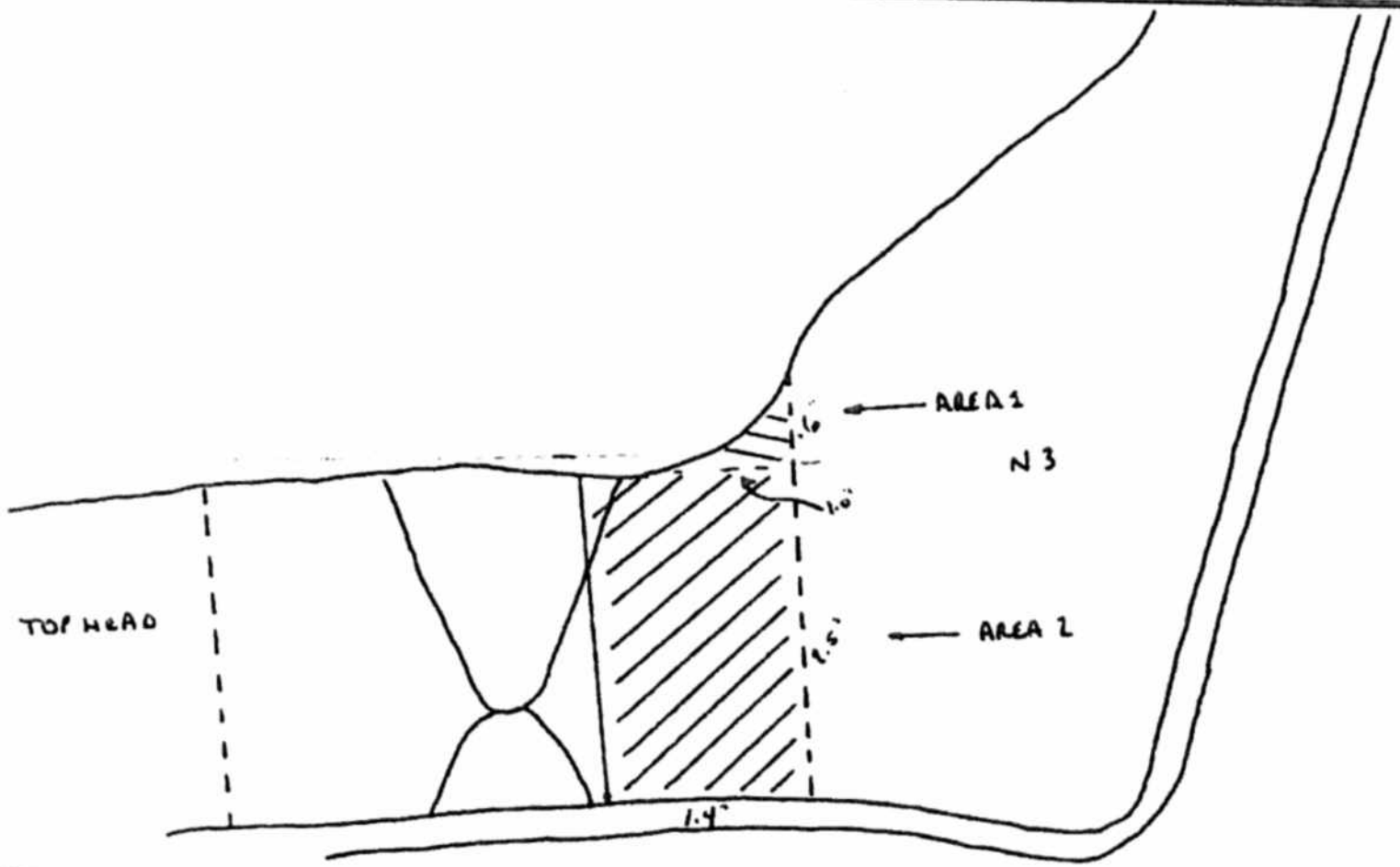
WESDYNE INTERNATIONAL
A Westinghouse Electric Company

NUCLEAR SERVICES
INSPECTION SERVICES

PROFILE OF THE EXAMINATION VOLUME/ DATA

PLANT	Braidwood	UNIT	1	SKETCH	1PZR-01
SYST./COMP.	RY / N3			PROCEDURE	EXE-ISI-210, Rev. 3
EXAMINER	Paul Biecha, Level III	DATE	10/12/2010	IDENT.	1PZR-01-N3

45°, 60°& 0°
Circ Scans



WESDYNE REVIEW / DATE: Philip Shawa Lv. III 10-16-10

EXELON LEVEL III REVIEW / DATE: 10-16-10

ANI REVIEW / DATE: 10/16/10

ATTACHMENT 2-1

Weld 2PZR-01-N2

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

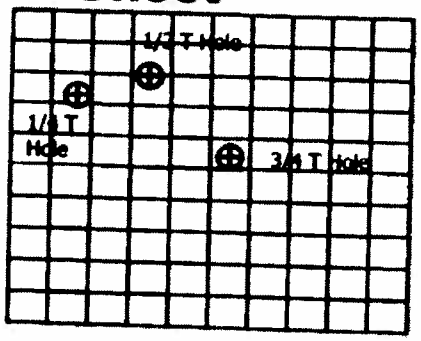
Calibration Data Sheet

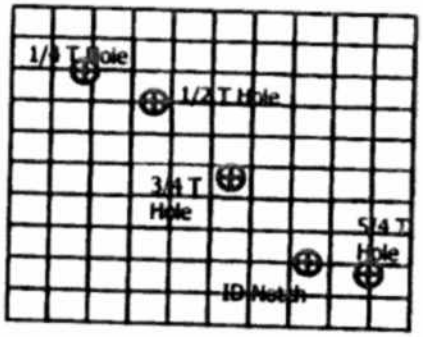
Plant / Unit: Braidwood / 2
Company: Exelon
Comp / System: N2 / RY
Procedure No.: EXE-ISI-210
Rev / Chng. No.: 3 / 1
Cal. Block No.: BWD 71
Cal. Block Temp.: 70°F
Thermometer S/N: SAP 106888
Size: 91.5" Sch.: N/A / 2.0625" "T"
Ref. Block: SAP 103480
[X] Ferritic [ ] Austenitic
Each Major CRT Div. = 0.40" / 0.60"
Cal. Direction: [ ] Axial [ ] Circ. [X] Both
Scan Area: | to Weld [X]; || to Weld [X]
Code Category: B-D Code Item: B03.110

Data Sheet # A2R15-UT-034
Page 1 of 3

Cal. Checks	Time
Initial Calib.	08:12 / 08:21
Initial Calib. Date	4/27/2011
Intermediate	09:25 / 10:39
Intermediate	N/A
Final Calib.	10:45 / 10:50
Final Calib. Date	4/27/2011

Couplant
Type: ULTRAGEL II
Batch: 09225E





Search Unit #1
Manufacture: KBA
Serial No.: 01BTJV
No. of Elements: 1
Size: 1.0" Shape: Round
Freq. 2.25 MHz Style: Gamma
Exam Angle: 0° Mode: Long
Measured Angle: N/A
Wedge Style: Integral

Search Unit #2
Manufacture: KBA
Serial No.: 00B954
No. of Elements: 1
Size: 0.5" x 1.0" Shape: Rect.
Freq. 2.25 MHz Style: Gamma
Exam Angle: 45° Mode: Shear
Measured Angle: 45°
Wedge Style: SWS

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Examination Area / Weld	ACCESS	INDICATIONS: FLAW YES	FLAW NO	NON RELEVANT YES (>50% Ref.)	NON RELEVANT NO	EXAM SENS. (dB)
2RY01S / 2PZR-01-N2	Single Sided		X		X	21.0 45.4

Remarks / Reason for Incomplete Scan(s)
NRI. 88.5% Coverage achieved.
COMPONENT TEMP:79°F

Instrument Settings
Make / Model: KBA / USN 58L SW
Serial No.: SAP 106947
Probe Delay: 0.9688 Range: 4.0"
M'tl Cal / Vel: 0.2300 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 9.0 dB Circ: 9.0 dB
1" Rompas BW: 2.5 @ 80% @ 2.0 dB

Instrument Settings
Make / Model: KBA / USN 58L SW
Serial No.: SAP 106947
Probe Delay: 12.4162 Range: 6.0"
M'tl Cal / Vel: 0.1254 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 33.4 dB Circ: 33.4 dB
FSDH Sensitivity: 1.8 @ 50% @ 33.4 dB

Examiners: Tommy Jackson Level II Date 4/27/2011
N/A Level N/A Date N/A

WesDyne Reviewer / Date: Philip Hanna Lv. III 4-30-11

Further Evaluation Required? [ ] Yes [X] No

EXELON LEVEL III REVIEW / DATE: III 4-30-11

ANI REVIEW / DATE: 4/30/11

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

LIMITATION TO EXAMINATION

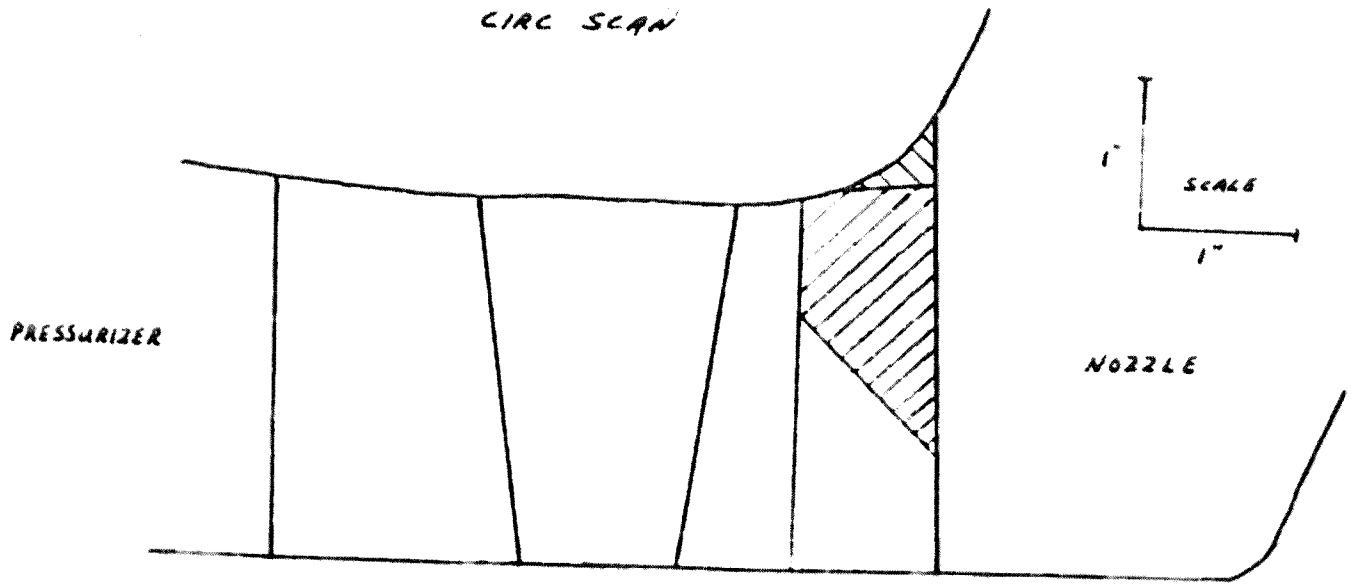
PLANT: BRAIDWOOD | UNIT: 2 | SKETCH: N/A

SYST./COMP.: RY / N2 | PROCEDURE: EXE-ISI-210, Rev. 3 / 1

EXAMINER: Tommy E. Jackson, Tommy Jackson, Level II | DATE: 4/27/2011

RELATED TO: UT X PT ____ MT ____ VT ____ IDENT. NO. 2PZR-01-N2

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.



TOTAL EXAM AREA: 4.3" X 2.4" = 10.32" + .175" = 10.5"

AREA NOT EXAMINED: 1.5" x .9" ÷ 2 = .675" + .175" = .850

$\frac{.850}{10.5} = \frac{x}{100}$ = 8% NOT EXAMINED

4-30-11

EXELON REVIEW / DATE: Philip Stanbo Lv. III 4-30-11

4-30-11

ANII REVIEW DATE

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

LIMITATION TO EXAMINATION

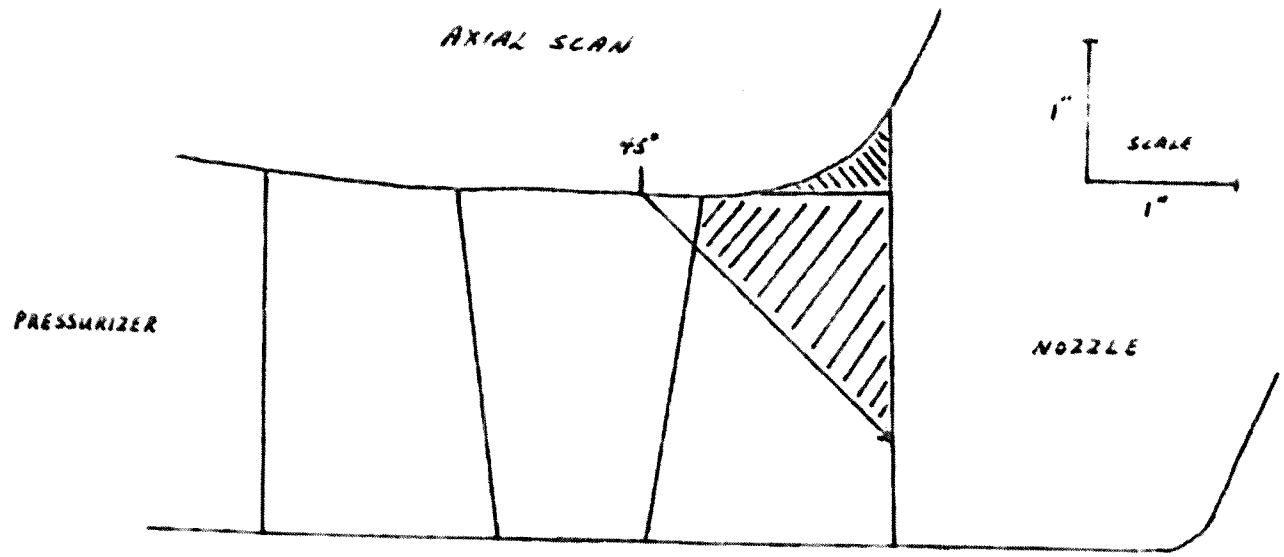
PLANT: BRAIDWOOD UNIT: 2 SKETCH: N/A

SYST./COMP.: RY / N2 PROCEDURE: EXE-ISI-210, Rev. 3 / 1

EXAMINER: Tommy E. Jackson, Tommy Jackson, Level II DATE: 4/27/2011

RELATED TO: UT X PT ___ MT ___ VT ___ IDENT. NO. 2PZR-01-N2

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.



TOTAL EXAM AREA: 4.3" x 2.4" = 10.32" + .175" = 10.5

AREA NOT EXAMINED: 1.7" x 1.7" x .5" = 1.445" + .175" = 1.6"

$\frac{1.6}{10.5} = \frac{x}{100}$ = 15% NOT EXAMINED

45° AXIAL SCAN = 85% COVERAGE

4-30-11

EXELON REVIEW / DATE: Philip Shandra Lv. III 4-30-11

ANII REVIEW DATE: [illegible] 4-30-11

ATTACHMENT 2-2

Weld 2PZR-01-N3

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

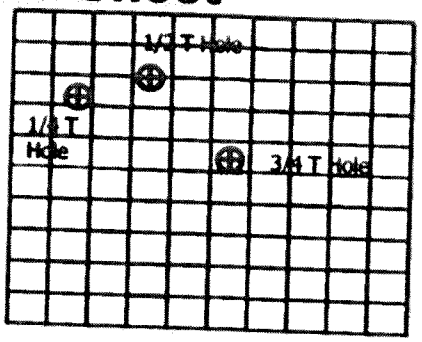
Calibration Data Sheet

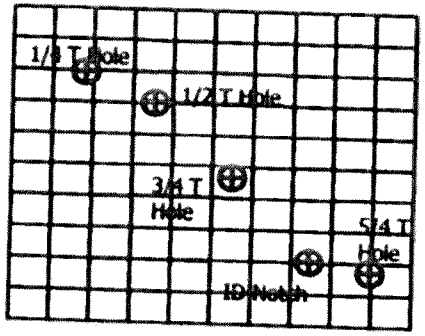
Plant / Unit: Braidwood / 2
Company: Exelon
Comp / System: N3 / RY
Procedure No.: EXE-ISI-210
Rev / Chng. No.: 3 / 1
Cal. Block No.: BWD 71
Cal. Block Temp.: 70°F
Thermometer S/N: SAP 106888
Size: 91.5" Sch.: N/A / 2.0625" "T"
Ref. Block: SAP 103480
[X] Ferritic [ ] Austenitic
Each Major CRT Div. = 0.40" / 0.60"
Cal. Direction: [ ] Axial [ ] Circ. [X] Both
Scan Area: | to Weld [X]; || to Weld [X]
Code Category: B-D Code Item: B03.110

Data Sheet # A2R15-UT-033
Page 1 of 3

Cal. Checks	Time
Initial Calib.	08:12 / 08:21
Initial Calib. Date	4/27/2011
Intermediate	09:25 / 10:39
Intermediate	N/A
Final Calib.	10:45 / 10:50
Final Calib. Date	4/27/2011

Couplant
Type: ULTRAGEL II
Batch: 09225E





Search Unit #1
Manufacture: KBA
Serial No.: 01BTJV
No. of Elements: 1
Size: 1.0' Shape: Round
Freq. 2.25 MHz Style: Gamma
Exam Angle: 0° Mode: Long
Measured Angle: N/A
Wedge Style: Integral

Search Unit #2
Manufacture: KBA
Serial No.: 00B954
No. of Elements: 1
Size: 0.5" x 1.0" Shape: Rect.
Freq. 2.25 MHz Style: Gamma
Exam Angle: 45° Mode: Shear
Measured Angle: 45°
Wedge Style: SWS

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Search Unit Cable
Type: RG-174
Length: 12' No. of Con.: 0

Examination Area / Weld	ACCESS	INDICATIONS: FLAW YES	FLAW NO	NON RELEVANT YES (>50% Ref.)	NON RELEVANT NO	EXAM SENS. (dB)
2RY01S / 2PZR-01-N3	Single Sided		X		X	21.0 45.4

Remarks / Reason for Incomplete Scan(s)
NRI. 88.5% Coverage achieved.
COMPONENT TEMP:79°F

Instrument Settings
Make / Model: KBA / USN 58L SW
Serial No.: SAP 106947
Probe Delay: 0.9688 Range: 4.0"
M'tl Cal / Vel: 0.2300 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 9.0 dB Circ: 9.0 dB
1" Rompas BW: 2.5 @ 80% @ 2.0 dB

Instrument Settings
Make / Model: KBA / USN 58L SW
Serial No.: SAP 106947
Probe Delay: 12.4162 Range: 6.0"
M'tl Cal / Vel: 0.1254 Pulser: Square
Damping: 500 Reject: 0%
PRF: Auto High Freq: 2.25 MHz
Filter: Fixed Mode: Dual Off
Rectify: Fullwave Voltage: 450
Pulse Width: 220 ns
Display Delay: 0
Reference Sensitivity (dB)
Axial: 33.4 dB Circ: 33.4 dB
FSDH Sensitivity: 1.8 @ 50% @ 33.4 dB

Examiners: Tommy Jackson — Level II — Date 4/27/2011
N/A — Level N/A — Date N/A

WesDyne Reviewer / Date: Level III 4-30-11

Further Evaluation Required? [ ] Yes [X] No

EXELON LEVEL III REVIEW / DATE: Level III 4-30-11

ANII REVIEW / DATE: 4/30/11

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

LIMITATION TO EXAMINATION

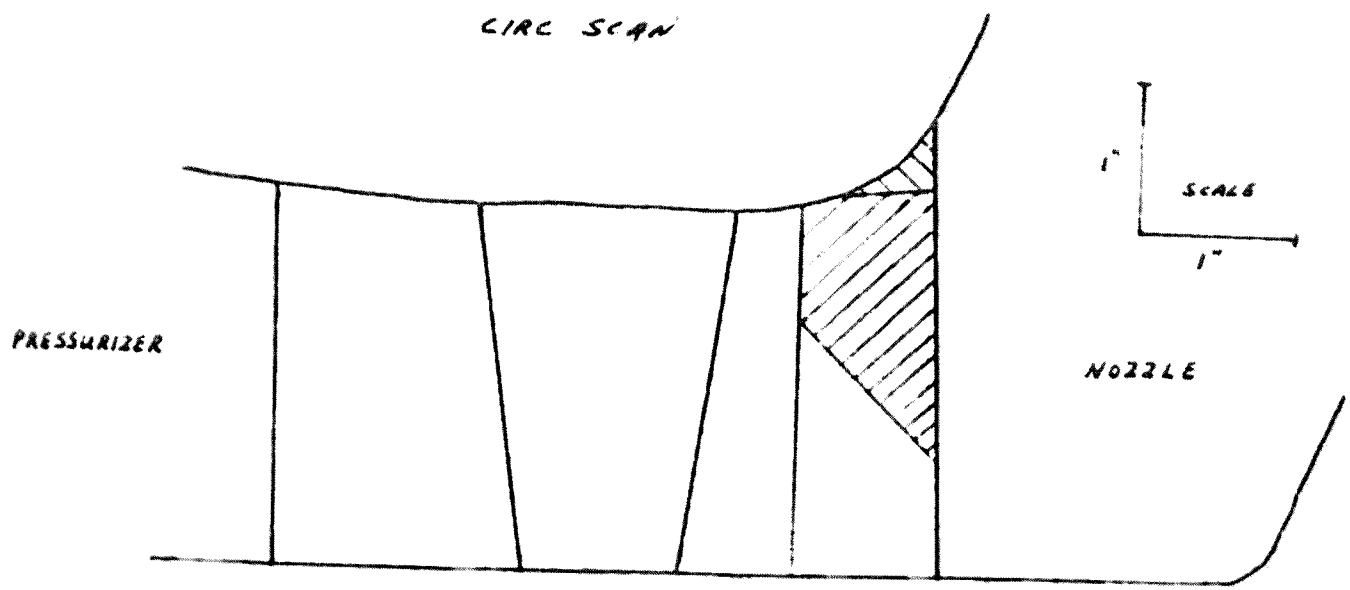
PLANT: BRAIDWOOD | UNIT: 2 | SKETCH: N/A

SYST./COMP.: RY / N3 | PROCEDURE: EXE-ISI-210, Rev. 3 / 1

EXAMINER: Tommy E. Jackson, Level II | DATE: 4/27/2011

RELATED TO: UT X PT ____ MT ____ VT ____ IDENT. NO. 2PZR-01-N3

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.



TOTAL EXAM AREA: 4.3" x 2.4" = 10.32" + .175" = 10.5"

AREA NOT EXAMINED: 1.5" x .9" ÷ 2 = .675" + .175" = .850

$\frac{.850}{10.5} = \frac{x}{100} = 8\%$ NOT EXAMINED

4-30-11

EXELON REVIEW / DATE: Philip Ahasa Lv. III 4-30-11

ANII REVIEW DATE: 4/30/11

WESDYNE INTERNATIONAL
A Westinghouse Electric Company

LIMITATION TO EXAMINATION

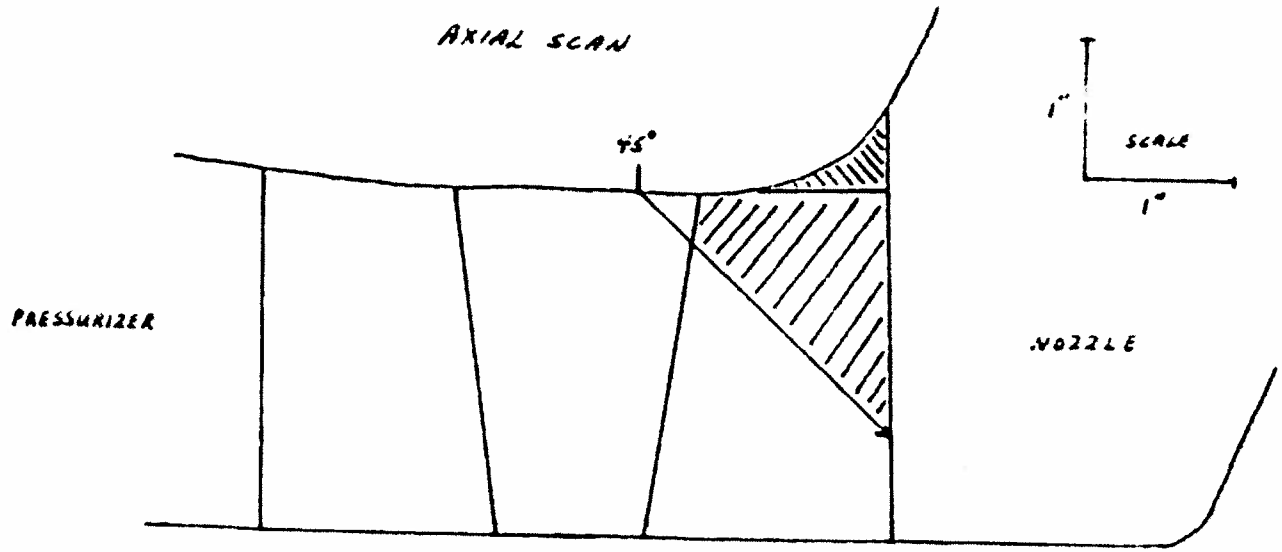
PLANT: BRAIDWOOD | UNIT: 2 | SKETCH: N/A

SYST./COMP.: RY / N3 | PROCEDURE: EXE-ISI-210, Rev. 3 / 1

EXAMINER: Tommy E. Jackson, Tommy Jackson, Level II | DATE: 4/27/2011

RELATED TO: UT X PT ___ MT ___ VT ___ IDENT. NO. 2PZR-01-N3

PROVIDE GENERAL INFORMATION TO DESCRIBE APPROXIMATE SIZE, LOCATION AND TYPE OF LIMITATION.



TOTAL EXAM AREA: 4.3" x 2.4" = 10.32" + .175" = 10.5

AREA NOT EXAMINED: 1.7" x 1.7" x .5" = 1.445" + .175" = 1.6"

$\frac{1.6}{10.5} = \frac{x}{100}$ = 15% NOT EXAMINED

45° AXIAL SCAN = 85% COVERAGE

AM 4-30-11

EXELON REVIEW / DATE: Philip Hanson Lv. III 4-30-11

ANII REVIEW DATE: [illegible] III 4-30-11