

Duke Power Company
Catawba Nuclear Generation Department
4800 Concord Road
York, SC 29745

D. L. REHN
Vice President
(803)831-3205 Office
(803)831-3426 Fax



DUKE POWER

May 16, 1995

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Catawba Nuclear Station, Unit 1
Docket No. 50-413
Request for Relief Serial Number 95-01

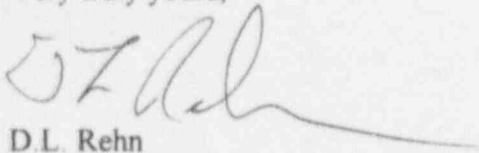
Gentlemen:

Please find attached Request for Relief Serial Number 95-01. Submittal of this relief request is necessary because during the Unit 1 end-of-cycle 8 refueling outage, complete coverage of the subject welds could not be obtained.

For weld number 1RHRB-W3, radiography will be used as an alternate volumetric examination method. This examination will be performed during the Unit 1 end-of-cycle 9 refueling outage, which is the first refueling outage in the second ten-year inspection interval. Hence, approval of this relief request is requested by June 29, 1995, which is the end of the first ten-year inspection interval.

Should you have any questions concerning this relief request, please call L.J. Rudy at (803) 831-3084.

Very truly yours,


D.L. Rehn

LJR/s

Attachment

9505310593 950516
PDR ADDCK 05000413
P PDR

A047
1/1

Document Control Desk

Page 2

May 16, 1995

xc (with attachment):

S.D. Ebnetter, Regional Administrator
Region II

R.J. Freudenberger, Senior Resident Inspector

R.E. Martin, Senior Project Manager
ONRR

Document Control Desk

Page 3

May 16, 1995

bxc (with attachment):

Z.L. Taylor

L.J. Rudy

J.E. Cherry

Document Control File 801.01

Group File 801.01

ELL-EC050

NCMPA-1

NCEMC

PMPA

SREC

DUKE POWER COMPANY

STATION CATAWBA

UNIT 1

10-YEAR INTERVAL REQUEST FOR RELIEF NO. 95-01

I. System/Component(s) for Which Relief is Requested:

ASME Section XI Code Class: 1
Examination Category: B-M-1
Valve - Residual Heat Removal System(ND) - Valve
Body To Bonnet Weld

<u>Weld Number</u>	<u>Item Number</u>
1ND-37A	B12.040.002D

ASME Section XI Code Class: 2
Examination Category: C-A
Steam Generator - Lower Shell To Transition Cone
Weld

<u>Weld Number</u>	<u>Item Number</u>
1SGC-04B-05	C01.010.002

ASME Section XI Code Class: 2
Examination Category: C-A
Residual Heat Removal (ND) Heat Exchanger - Flange To
Shell Weld

<u>Weld Number</u>	<u>Item Number</u>
1RHRB-W3	C01.010.050

II. Code Requirement:

ASME Section XI, Examination Category B-M-1,
Pressure Retaining Welds In Pump Casings And Valve
Bodies, Table IWB-2500-1, Item No. B12.40 requires a

volumetric examination of essentially 100% of the weld length and adjacent base material on all Valve Body Welds greater than or equal to 4 inch nominal pipe size as defined by Figure No. IWB-2500-17. Examinations are limited to one valve within each group of valves that are of the same constructional design, manufacturing method, and that perform similar functions in the system.

ASME Section XI, Examination Category C-A, Pressure Retaining Welds In Pressure Vessels, Table IWC-2500-1, Item No. C1.10 requires a volumetric examination of essentially 100% of the weld length and adjacent base material on Pressure Vessel Shell Circumferential Welds at gross structural discontinuities as defined by Figure No. IWC-2500-1.

III. Code Requirement from which Relief is Requested:

Relief is requested for the above identified Class 1 Valve Body Weld from meeting the coverage requirements as defined in ASME Section XI, Appendix III, Article III-4000, III-4420.

Relief is requested for the above identified Class 2 Pressure Vessel Shell Circumferential Welds from meeting the coverage requirements of ASME Section XI, IWA-2232(a) as defined in ASME Section V, Article 4, T-441.4.4; T-441.5.

IV. Basis for Relief:

During the ultrasonic examination of the welds shown in Attachment 1, two directional coverage as required by ASME Section XI, Appendix III and Section V, Article IV as modified by Code Case N-460 could not be obtained. Causes of these limitations are part geometry, physical barriers, and component/weld material. Where possible, a combination of angles and wave modes were used to maximize the coverage obtained. The weld and base metal at the component inside surface was covered from at least one direction with a minimum of one angle.

V. Alternate Examinations or Testing:

No additional examinations are planned for Weld ID Numbers, 1ND-37A and 1SGC-04B-05. In addition to the ultrasonic examination, radiography will be performed on Weld ID Number 1RHRB-W3.

For Weld ID Numbers 1ND-37A and 1SGC-04B-05, the use of radiography as an alternate volumetric examination method is not practical due to component thicknesses and geometric configurations. Other restrictions making radiography impractical are the necessity to use double wall techniques due to inaccessibility of the ID surface and physical barriers prohibiting access for placement of source, film, number bands, etc. We will continue to use the most current ultrasonic techniques available to obtain maximum coverage for future examinations of these weld numbers.

For Weld ID Number 1RHRB-W3, radiography will be used as an alternate volumetric examination method upon completion of a modification to the heat exchanger to allow access to the ID surface for source positioning and the qualification of an acceptable radiographic technique. This radiographic examination will be performed during Unit 1 EOC9, which is the first refueling outage in the Second Ten Year Inspection Interval.

VI. Justification for the Granting of Relief:

Limitations are permanent obstructions and cannot be removed for the components/welds listed in Section I above. Although the coverage requirements of ASME Section XI, as defined in Section V, Article 4 and Section XI, Appendix III could not be met, the amount of coverage obtained for these examinations provides an acceptable level of quality and integrity. Based on these evaluations, it is Duke Power Company's opinion that the limited coverage will not endanger the health and safety of the general public.

Duke Power Company will perform UT examinations to the extent practical in accordance with ASME Section V, Article 4 and ASME Section XI, Appendix III.

VII. Implementation Schedule:

These examinations will continue to be scheduled in accordance with the requirements of ASME Section XI for future Inspection Intervals at Catawba Nuclear Station, Unit 1.

Evaluated By: J. E. Cherry Date 5/9/95

Reviewed By: J. Barlow Date 5/10/95

Attachment 1	Description Table
Attachment 2	Component Drawings
Attachment 3	UT Examination Data

ASME Class 1 And 2 Inservice Inspection Request For Relief No. 95-01
For Catawba Unit 1 Based On ASME Section XI - 1980 Code Through Winter 1981 Addenda

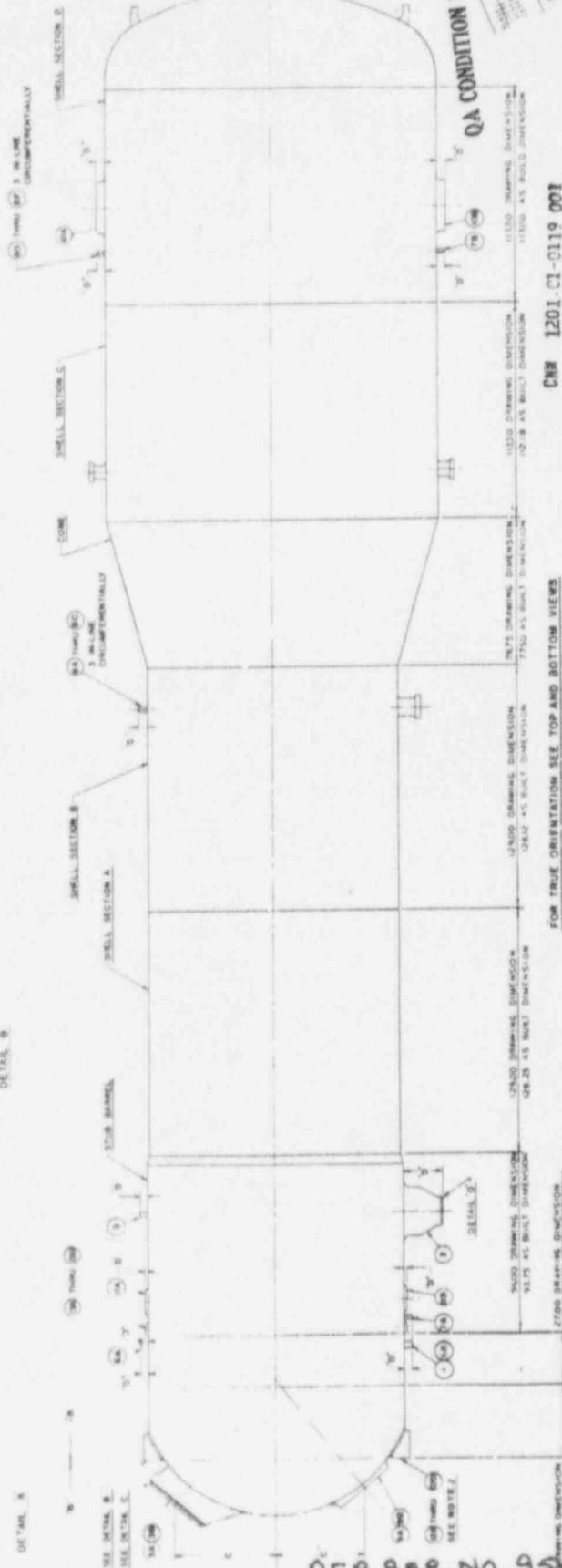
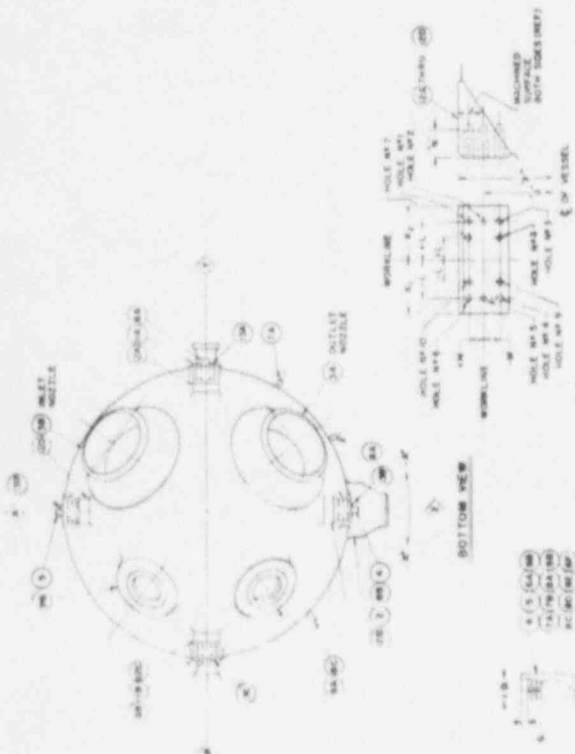
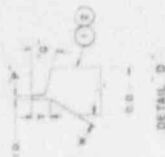
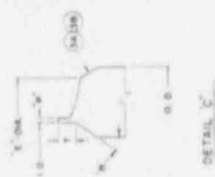
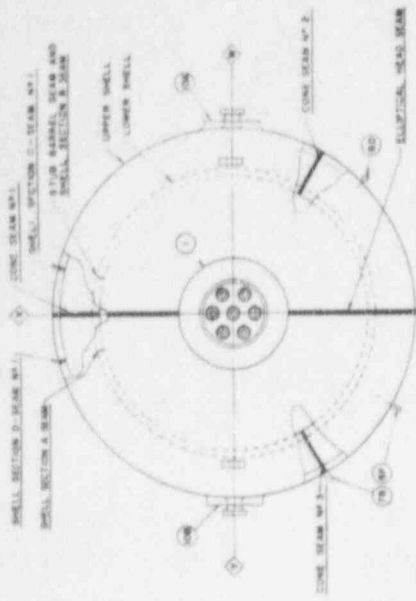
Attachment 1
 Page 1 of 1

Item No.	Exam Category /Figure No.	System Or Component	Area To Be Examined	Reason For Request	Licensee Proposed Alternate Examination
B12.040.002D	B-M-1 IWB-2500-1	Class 1 Valve Residual Heat Removal System (ND)	Valve Body To Bonnet	Limited scan due to geometric configuration. Actual coverage obtained = 84.1%	None
C01.010.002	C-A IWC-2500-1	Steam Generator 1C	SG1C Lower Shell To Transition Cone	Limited scan due to geometric configuration. Actual coverage obtained = 52.1%	None
C01.010.050	C-A IWC-2500-1	RHR Heat Exchanger 1B	RHR HX 1B Flange To Shell	Limited scan due to geometric configuration. Actual coverage obtained = 22.2%	Radiography

[illegible]

RFR SER. NO. 95-01
ATTACHMENT 2
PAGE 1 OF 3

ITEM NO. B12.040.00288-7-9



QA CONDITION I

CNW 1201 CI-0119 001

FOR TRUE ORIENTATION SEE TOP AND BOTTOM VIEWS

DUKE LOOP C

NUCLEAR SAFETY RELATED

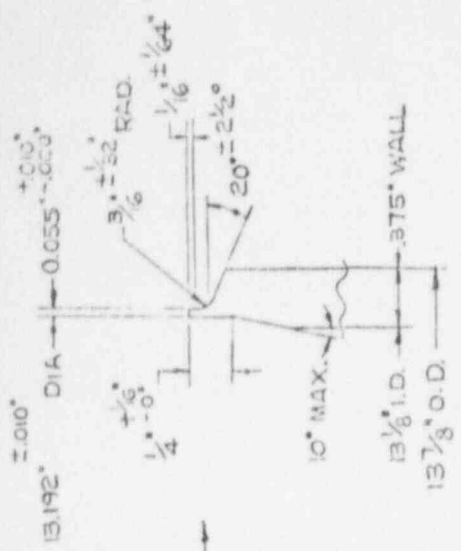
RFR SER. NO. 9501
ATTACHMENT 2
PAGE 2 OF 3

THIS DRAWING APPLIES TO WESTINGHOUSE SHOP ORDER NO. 15014

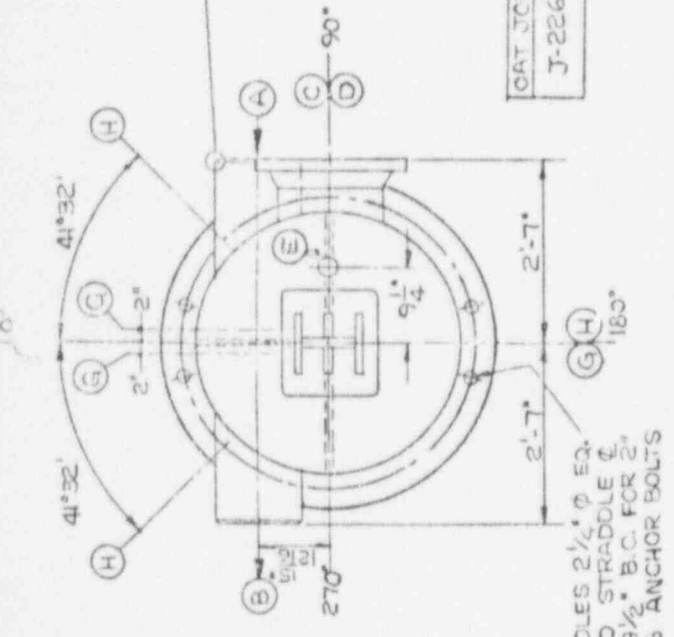
NO.	REV.	DATE	DESCRIPTION
1	1	11/10/79	ISSUED FOR CONSTRUCTION

Westinghouse Electric Corporation
GENERAL ORDER NO. 1201 CI-0119 001
CUSTOMER'S NAME: DUKE POWER COMPANY
STATION: COLUMBIA, MD.
1103 J19

ITEM NO. 201.010.002

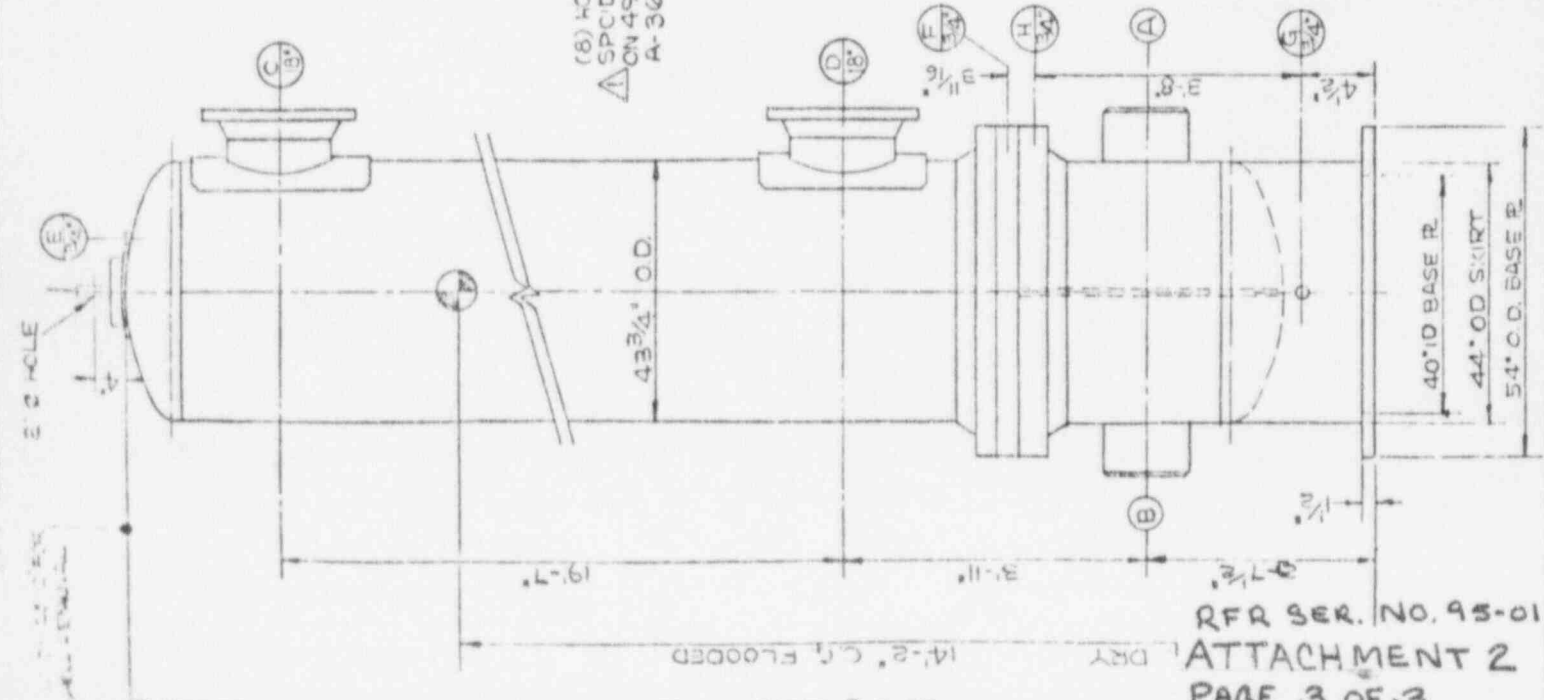


CAT	JOB NO.	ITEM NO.	SPIN NO.	PLANT	NC REQ'D
J-2267-3	RS-707	RHAHRS	DCP	DCP	(2) EA PLANT



(8) HOLES 2 1/2\"/>

LOADING MODE	VERT ACCN	HORIZ. ACCN	BASE MOMENT x 10 ⁻⁶ INCH	BASE REACTION	BASE SHEAR x 10 ⁻⁶ # INCH	BASE TORQUE x 10 ⁻⁶ # INCH	TOP REACTION
FAULTED	1.0	1.5	5.79	118480	61515	1.777	66755
UPSET	0.5	0.75	2.90	81740	30757	.888	33378
NORMAL	0	0	.727	52120	10148	.443	5045



TUBESIDE DESIGNED PER NC-3200 ALTERNATE RULES
TUBESIDE HYDRO TEST-803 PSIG
SHELL SIDE HYDRO TEST-225 PSIG

NOTE: TUBESIDE FLOW MAY BE REVERSED

CLASSIFICATION
ASME CODE SECTION III
CLASS 3 SHELL SIDE
CLASS 2 TUBE SIDE

WEIGHTS
EMPTY - 27,000 #
FLOODED - 45,000 #
BUNDLE - 14,500 #

MARK	SIZE	SCH	RATING	PURPOSE
H	2 1/4"	3000	SW	SIZE 16 ELG
G	3 1/4"	3000	SW	SIZE 16 ELG
F	3 1/4"	---	NPT	---
E	3 1/4"	3000	THRD	CPG
D	18"	3	WALL	150" WNR
C	18"	3	WALL	150" WNR
B	18"	3	WALL	150" WNR
A	18"	3	WALL	150" WNR

ITEM NO. C01.010.050

6-376 ADDED ANCHOR BOLT INFO. BY J. A. C. 11/1/80

DATE REVISION BY

JOSEPH CAT CORP.

CHEMICAL ENGINEERS/DESIGNERS/ESTIMATORS

ESTIMATES CINDEN, NEW JERSEY 0804

OUTLINE DWG. RESIDUAL H.X.

FOR: WESTINGHOUSE ELEC. CORP.

PWRSD

PITTSBURGH PA.

REF. NO. JOB NO. J-2267-3

PO NO. 59-6-AZ-215350

DRAWING FIN. DATE 10/1/80

CHECKED DATE 10/1/80

APPROVED DATE 10/1/80

DRAWING NO. 5742

REV 1

DUKE POWER COMPANY ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS										Exam Start: <u>1105</u>		Form NDE-UT-2A	
										Exam Finish: <u>1114</u>		Revision 4	
Station: <u>CATAWBA</u>				Unit: <u>1</u>		Component/Weld ID: <u>IND-37A</u>				Date: <u>2-28-95</u>			
Weld Length (in.): <u>60.0"</u>				Surface Condition: <u>FLUSH</u>				Lo: <u>11.2.3</u>		Surface Temperature: <u>64° F</u>			
Examiner: <u>Marion T. Weaver</u> Level: <u>II</u>				Scans: 45 <input type="checkbox"/> _____ dB 70 <input type="checkbox"/> _____ dB 45T <input type="checkbox"/> _____ dB 70T <input type="checkbox"/> _____ dB 60 <input type="checkbox"/> _____ dB 60T <input type="checkbox"/> _____ dB Other: <u>0° 32.5</u> dB				Pyrometer S/N: <u>MENDE 27025</u>		Cal Due: <u>95 1101</u>			
Examiner: _____ Level: _____								Configuration: <u>CIRC WELD</u>		<u>SC</u> Flow <u>SI</u> <u>BONNETT</u> to <u>VALVE BODY</u>			
Procedure: <u>NDE 640</u> Rev: <u>1</u>								FC: <u>No ruc</u>		Scan Surface: <u>OD</u>		Applies to NDE-680 only	
Calibration Sheet No: <u>9501027</u>										Skew Angle: <u>N/A</u>			

IND #	Max % Ref	Mp Max	W Max	L Max	L1	L2	W1	Mp1	W2	Mp2	Beam Dir	Exam surf.	Scan	Damps
					20% dac HMA	20% dac HMA	20% dac HMA	20% dac HMA	20% dac HMA	20% dac HMA				
					50% dac	50% dac	50% dac	50% dac	50% dac	50% dac				
					100% dac	100% dac	100% dac	100% dac	100% dac	100% dac				

Remarks: 0° NO RECORDABLE INDICATIONS

Sheet 1 of 6

Limitations: (see NDE-UT-4) <input checked="" type="checkbox"/> 90% or greater coverage obtained: yes <input checked="" type="checkbox"/> no <input type="checkbox"/>			
Reviewed By: <u>Larry Mauldin</u>	Level: <u>II</u>	Date: <u>3-2-95</u>	Authorized Inspector: <u>Robert M. Scott</u> Date: <u>2-27-95</u>
Item No: <u>B12.040.002D</u>			

ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS

Form NDE-UT-2A

Revision 4

Component/Weld ID: 1ND-37A

Date: 2.28.95

Surface Condition: flush

Lo: 11.23

Surface Temperature: 64 ° F

Pyrometer S/N: MCNDE 27025

Cal Due: 951101

Examiner: Marion T. Weaver Level: II

Scans:

45 ☒ 37 dB 70 ☐ _____ dB

Examiner:

Level:

45T ☒ 53 dB 70T ☐ _____ dB

Procedure: NDE 1030 Rev:1

FC:

60 ☒ 59 dB

Calibration Sheet No: 9501017
9501018
9501019
9501020
9501021

95-02

60T ☐ _____ dB

Other: 45° - 78 dB / 60° - 79 dB

Scan Surface: OD

Applies to NDE-680 only

Skew Angle: *N/A*Remarks:

Limitations: (see NDE-UT-4) ☒

90% or greater coverage obtained: yes ☒ / 10 no ☐ 1

Sheet 2 of 6

Reviewed By:

Level:

Date:

Authorized Inspector,

Date _____

Item No:

By: Larry Trautner

7

3295

Authorized Inspector
Robert M. Del

22795

B 12.040.002D

ATTACHMENT 3
PAGE 2 OF 31

REF. NO. 95-01

DUKE POWER COMPANY

ISI LIMITATION REPORT

FORM NDE- UT-4

Revision 1

Component/Weld ID: LNP 37A Item No: B12.040.002D

remarks:

☒ NO SCAN SURFACE BEAM DIRECTION
☐ LIMITED SCAN ☒ 1 ☒ 2 ☒ 1 ☒ 2 ☐ cw ☐ ccw
 FROM L _____ to L _____ INCHES FROM WO 1.8 to 3.0
 ANGLE: ☐ 0 ☒ 45 ☒ 60 other 45° & 60° FROM 0 DEG to 360 DEG

DUE to VALVE body
configuration

☒ NO SCAN SURFACE BEAM DIRECTION
☐ LIMITED SCAN ☒ 1 ☒ 2 ☒ 1 ☒ 2 ☐ cw ☐ ccw
 FROM L _____ to L _____ INCHES FROM WO 1.15 to Beyond
 ANGLE: ☐ 0 ☒ 45 ☒ 60 other 45° & 60° FROM 0 DEG to 360 DEG

DUE to VALVE BONNET
configuration

☐ NO SCAN SURFACE BEAM DIRECTION
☐ LIMITED SCAN ☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ cw ☐ ccw
 FROM L _____ to L _____ INCHES FROM WO _____ to _____
 ANGLE: ☐ 0 ☐ 45 ☐ 60 other _____ FROM _____ DEG to _____ DEG

☐ NO SCAN SURFACE BEAM DIRECTION
☐ LIMITED SCAN ☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ cw ☐ ccw
 FROM L _____ to L _____ INCHES FROM WO _____ to _____
 ANGLE: ☐ 0 ☐ 45 ☐ 60 other _____ FROM _____ DEG to _____ DEG

Sketch(s) attached
☒ yes ☐ no

Prepared By: Marion T. Weaver Level: II Date: 2-25-95

Sheet 3 of 6

Reviewed By: Larry Thaulden Date: 3-2-95

Authorized Inspector: Robert M. Sell Date: 2-27-95

REF SER. NO. 95-01

4/4/95

ATTACHMENT 3
 PAGE 3 OF 31

Limited Exam Data Sheet

Station CATAWBA Unit 1 I.D. # 1A1D37A
By Larry Mauldin Date 3-18-95 Item # 312.040.0020
Checked By W.C. Leeper Date 3-20-95 Page Of

DETERMINING THE CUMULATIVE TOTAL OF WELD VOLUME INSPECTED
(in percentage)

Total Cross Sectional Area $\frac{756}{1000}$ x (Number of Scans) $\frac{4}{1000}$ = $\frac{30.24}{1000}$ (% Factor)

Vessels:

Area Loss : Zone #1 _____
 Zone #2 _____
 Zone #3 _____

Total Zone Loss _____ / (% Factor) _____ x 100 = _____ % of Loss

Lump Sum Loss From Other Limitations + %

Total Loss _____%

100% - (Total Loss) _____ = _____ % of Coverage

(Additional _____% of Partial Coverage)

Qualifies for Request for Relief ☐ Yes ☐ No

Piping: VALVE

AXIAL SCAN 45°S & RL / 160°S & RL ^{COVERAGE} (Loss) 10.315 / 30.24 (% Factor) x 100 = 34.1 % of ^{COVERAGE} Loss

~~Circumferential Scan Over Root Area ☐ Yes ☐ No ____ % of Loss~~

Axial Loss 34.1 + Circ. Loss 50 = 84.1 / 2 = 42.05 % Loss

Additional Losses (Due to hangers, restraints, etc.)	% Loss

Explain: Circ. Coverage CW 7.56 841 Total % Loss

+ CCW 7.56

$$15.12 \div 30.24 \times 100 = 50\%$$

100% - (Total ^{Coverage} Loss) 84.1 = 15.9 % of Coverage

Qualifies for Request for Relief ☒ Yes ☐ No

Disposition:

By: _____ Date: _____

Station CATAWBA Unit 1 Rev. _____ File No. IND 37A Sheet _____ Of _____
 Subject LIMITED EXAM DATA
 By Larry Menden Date 3-18-95
 Prob No. 312.040.002D Checked By W. C. Leaper Date 3-20-95

SUMMARY:

CROSS SECTIONAL AREA

$$2.4" \times 3.15" = 7.56 \text{ sq.in} \times 4 \text{ SCANS} = \underline{30.24}$$

COVERAGE:

(AXIAL) 2 DIRECTIONAL COVERAGE =

$$\frac{2.4 \times 2.4}{2} - \frac{.6 \times .15}{2} = 2.835 \text{ sq.in} \times 2 \text{ SCANS} = \underline{5.67 \text{ sq.in}}$$

(AXIAL) AREA COVERED BY 45° RL AND/OR 60° RL IN 1 DIRECTION

$$\frac{2.4 \times 2.4}{2} + 1.9 \times .8 + \frac{.8 \times .5}{2} + \frac{.6 \times .15}{2} = \underline{4.645 \text{ sq.in}}$$

(CIRC.) CW (45°)

7.56 sq.in

CCW (45°)

7.56 sq.in

AXIAL COVERAGE

10.315

CIRC. COVERAGE

15.12

25.435

$$25.435 \div 30.24 \times 100 = 84.1$$

$$\underline{\underline{COVERAGE = 84.1\%}}$$

CATAWBA

Sheet

1

Rev.

File

IND-37A

Sheet

Of

Direct

By

Larry Mauldin

Date

3-18-95

OF NO. B12.040.002D

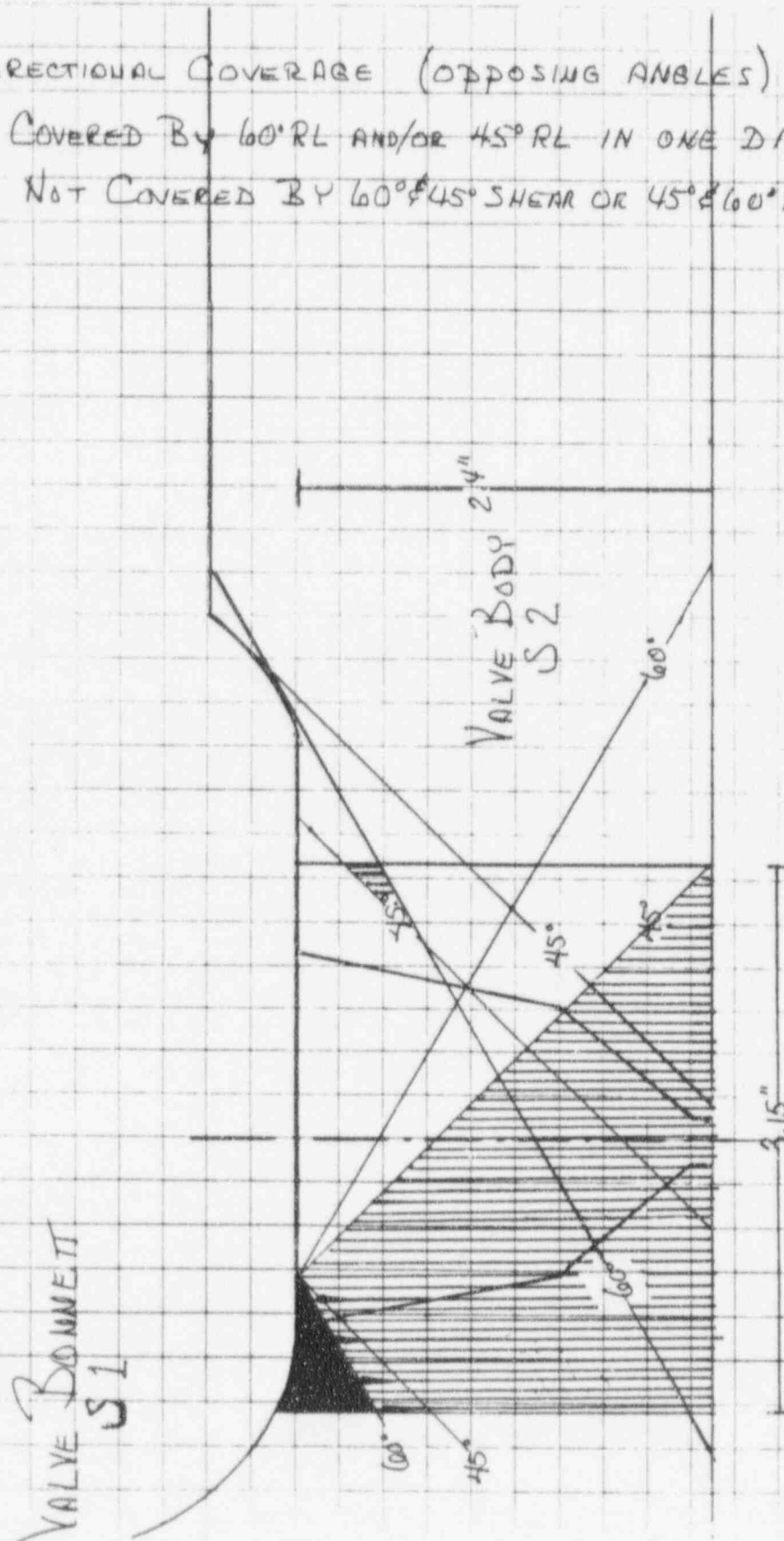
Checked By

W. C. Leeper

Date

3-20-95

- - 2 DIRECTIONAL COVERAGE (OPPOSING ANGLES)
▨ - AREA COVERED BY 60° RL AND/OR 45° RL IN ONE DIRECTION
■ - AREA NOT COVERED BY 60° & 45° SHEAR OR 45° & 60° RL (AXIAL DIRECTION)



DUKE POWER COMPANY

ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS

Exam Start: 1151

NDE UT-

Exam Finish: 1225

Revision 2

Station: CATAWBA

Unit: 1

Component/weld ID: 15GC-04B-05

Date: 2-15-95

Nominal Material Thickness (in.): 3.06

Weld Length (in.): 426"

Surface Temperature: 94 Deg F

Measured Material Thickness (in.): 4.02"

Lo: W AXIS

Pyrometer S/N: MCNDE 27020

cal due: 11-1-95

Surface Condition: AS MACHINED

Calibration sheet No:

Configuration: CIRC WELD

Examiner: J. B. B. Level: II

9501005

1 Flow 2

Examiner: M. T. Weaver Level: II

TRANSITION CONE to LOWER SHELL

Procedure no: NDE 640 Rev: 1 FIC: None

IND NO.	Ampl	L1	W1	Mp1	W2	Mp2	L2	W1	Mp1	W2	Mp2	Exam Surf.	Damps
	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB		
		NO RECORDABLE INDICATIONS											
		L	W1	Mp1	W2	Mp2	L	W1	Mp1	W2	Mp2		
		L	W1	Mp1	W2	Mp2	L	W1	Mp1	W2	Mp2		
		L	W1	Mp1	W2	Mp2	L	W1	Mp1	W2	Mp2		
		L	W1	Mp1	W2	Mp2	L	W1	Mp1	W2	Mp2		

Remarks:

Limitations: see NDE-UT-4

☒ None: ☐

sheet 1 of 17

Reviewed By:

Level: II

Date: 2/16/95

Authorized Inspector:

Date: 2-27-95

Item No:

C01.010.002

ATTACHMENT 3
PAGE 7 OF 31

RFR SER. NO. 9501005

DUKE POWER COMPANY

ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS

Exam Start: 1204

Form NDE-UT-2A

Exam Finish: 1443

Revision 4

Station: Catonsville

Unit: 1

Component/Weld ID: 15BC-04B-05

Date: 2-15-95

Weld Length (in.): 426"

Surface Condition: Q Ground

Lo: Axis

Surface Temperature: 94 ° F

Pyrometer S/N: MRNDE 27020

Cal Due: 9/1/01

Examiner: J. B. Babb

Level: II

Scans:

45 ☐ _____ dB 70 ☒ 70 dB

Examiner: M. V. Weaver

Level: II

45T ☒ 64.2 dB 70T ☐ _____ dB

Configuration: Circ Weld

Flow: 2

Transition Plane to Lower Shell

Procedure: NDE 620

Rev: 2

FC:

95-1

60 ☒ 30.4 dB 70°

60T ☒ 80.4 dB

Other: 13° 44.5 dB

Scan Surface: OD

Applies to NDE-680 only

Skew Angle: N/A

IND #	Max % Ref	Mp Max	W Max	L Max	L1	L2	W1	Mp1	W2	Mp2	Beam Dir	Exam surf.	Scan	Damps
					20% dac HMA	20% dac HMA	20% dac HMA	20% dac HMA	20% dac HMA	20% dac HMA				
					50% dac	50% dac	50% dac	50% dac	50% dac	50% dac				
					100% dac	100% dac	100% dac	100% dac	100% dac	100% dac				
1	60	20	6.75	5.5	0"	360°					2	1	AX	NO
	No other Recordable Indications 45/60°													
	No Recordable Indications 13°, 45°, 70° & 70° Near Surface													

Remarks: THIS INSPECTION WAS WITNESSED BY NRC (JIM COLEY)

Limitations: (see NDE-UT-4) ☒ 90% or greater coverage obtained: yes ☐ no ☒

Sheet 2 of 17

Reviewed By: [Signature]

Level: II

Date: 2/16/95

Authorized Inspector: [Signature]

Date: 2-27-95

Item No: Col 010 002

ATTACHMENT 3
PAGE 8 OF 31

RFR SER. NO. 95-01

DUKE POWER COMPANY

ISI LIMITATION REPORT

FORM NDE- UT-4

Revision 1

Component/Weld ID: 156C-04B-05 Item No: C01.010.00Z

remarks:

☒ NO SCAN

SURFACE

BEAM DIRECTION

☐ LIMITED SCAN

☐ 1 ☒ 2

☒ 1 ☐ 2 ☒ cw ☒ ccw

FROM L₀ + 0" to L₀ + 426" INCHES FROM WO ¢ to BEYOND

ANGLE: ☒ 0 ☒ 45 ☒ 60 other 13° & 70° FROM 0° DEG to 360° DEG

← PERMAJEST SUPPORT
STRUCTURE

☐ NO SCAN

SURFACE

BEAM DIRECTION

☐ LIMITED SCAN

☐ 1 ☐ 2

☐ 1 ☐ 2 ☐ cw ☐ ccw

FROM L _____ to L _____ INCHES FROM WO ¢ ^{ASD} to 1. Q 2/16/95

ANGLE: ☐ 0 ☐ 45 ☐ 60 other FROM _____ DEG to _____ DEG

☐ NO SCAN

SURFACE

BEAM DIRECTION

☐ LIMITED SCAN

☐ 1 ☐ 2

☐ 1 ☐ 2 ☐ cw ☐ ccw

FROM L _____ to L _____ INCHES FROM WO _____ to _____

ANGLE: ☐ 0 ☐ 45 ☐ 60 other FROM _____ DEG to _____ DEG

☐ NO SCAN

SURFACE

BEAM DIRECTION

☐ LIMITED SCAN

☐ 1 ☐ 2

☐ 1 ☐ 2 ☐ cw ☐ ccw

FROM L _____ to L _____ INCHES FROM WO _____ to _____

ANGLE: ☐ 0 ☐ 45 ☐ 60 other FROM _____ DEG to _____ DEG

Sketch(s) attached

☒ yes

☐ no

Prepared By: [Signature]

Level: II

Date: 2/16/95

Sheet 3 of 17

Reviewed By: Larry Mauldin

Date: 2-20-95

Authorized Inspector: [Signature]

Date: 2-27-95

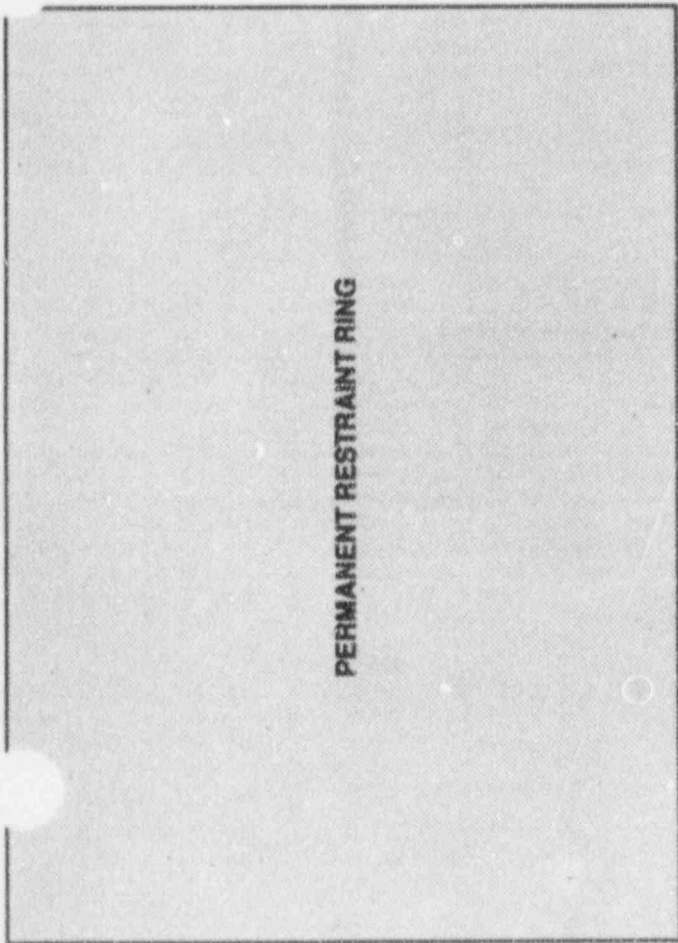
RFR SER. NO. 95-01

4/5/95

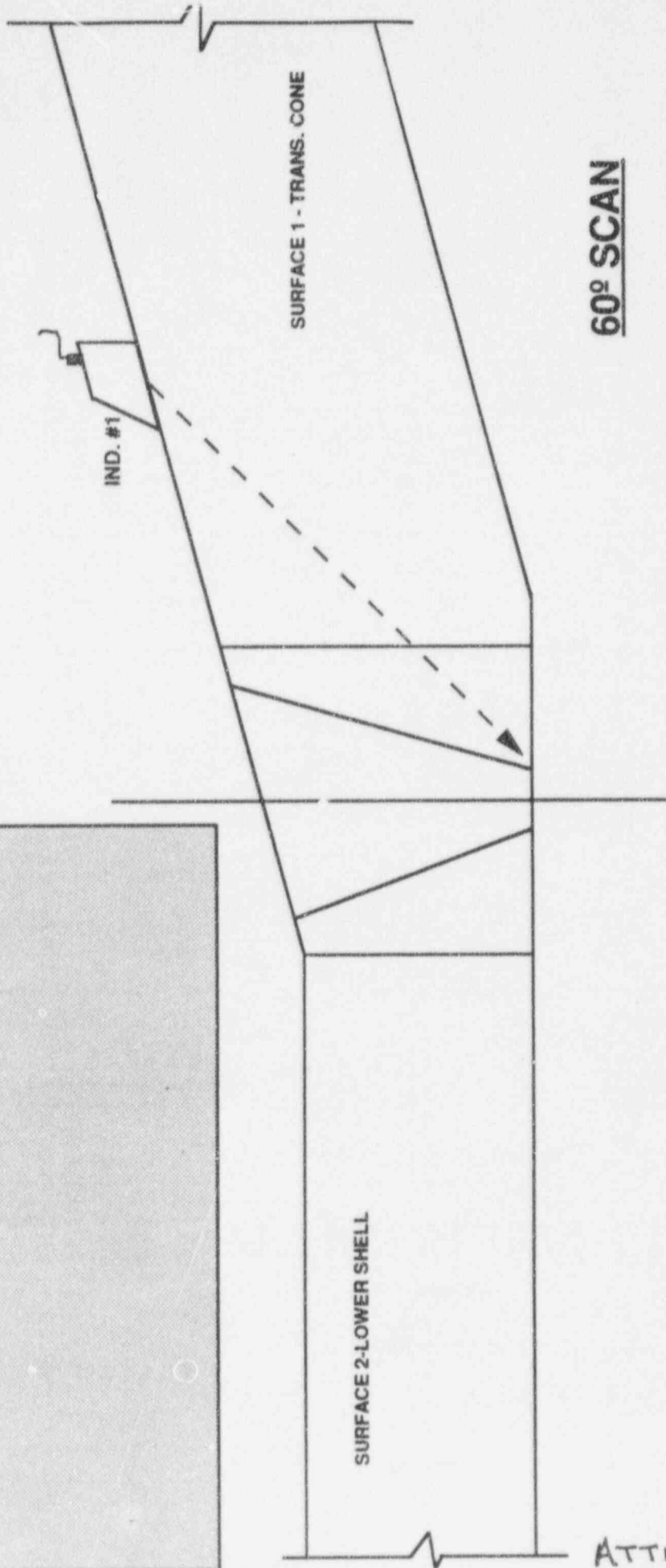
ATTACHMENT 3
PAGE 9 OF 31

5/6/95
JF

4 of 17



PERMANENT RESTRAINT RING



60° SCAN

STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

Limited Exam Data Sheet

Station CATAWBA Unit 1 I.D. # ISGC-04B-05
 By _____ Date _____ Item # COL.010.002
 Checked By _____ Date _____ Page 5 Of 17

DETERMINING THE CUMULATIVE TOTAL OF WELD VOLUME INSPECTED
 (in percentage)

Total Cross Sectional Area _____ x (Number of Scans) _____ = _____ (% Factor)

Vessels:

Area Loss : Zone #1 _____
 Zone #2 _____
 Zone #3 _____

Total Zone Loss _____ / (% Factor) _____ x 100 = _____ % of Loss

Lump Sum Loss From Other Limitations + _____ %

Total Loss _____ %

100% - (Total Loss) _____ = _____ % of Coverage

(Additional _____ % of Partial Coverage)

Qualifies for Request for Relief ☐ Yes ☐ No

Piping:

Axial Scan _____ (Loss) _____ / _____ (% Factor) x 100 = _____ % of Loss

Circumferential Scan Over Root Area ☐ Yes ☐ No _____ % of Loss

Axial Loss _____ + Circ. Loss _____ = _____ / 2 = _____ % Loss

Additional Losses (Due to hangers, restraints, etc.) + _____ % Loss

Explain: _____ Total % Loss

100% - (Total Loss) _____ = _____ % of Coverage

Qualifies for Request for Relief ☐ Yes ☐ No

Disposition: _____

By: _____ Date: _____

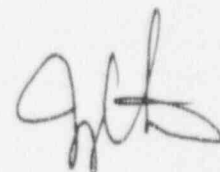
COI. 010.002WELD # 156C-04B-05

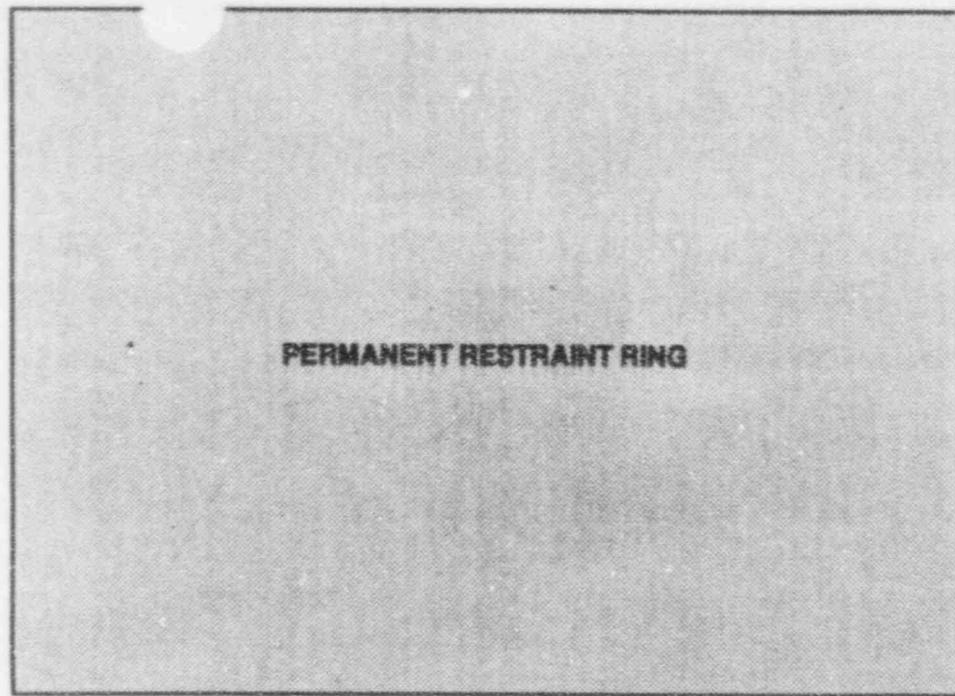
LIMITED SCAN CALCULATIONS

70° NEAR SURFACE

WELD AREA =	<u>SCAN SURFACE</u>	<u>% COVERAGE</u>
	S1	87.5%
	S2	0%
46.9 % COVERAGE	CW	50%
	CCW	50%
		187.5
		$187.5 \div 4 = 46.9\%$

BASE METAL =	<u>SCAN SURFACE</u>	<u>% COVERAGE</u>
	S1	62.7
	S2	0%
40.7 % COVERAGE	CW	50%
	CCW	50%
		162.7
		$162.7 \div 4 = 40.7\%$

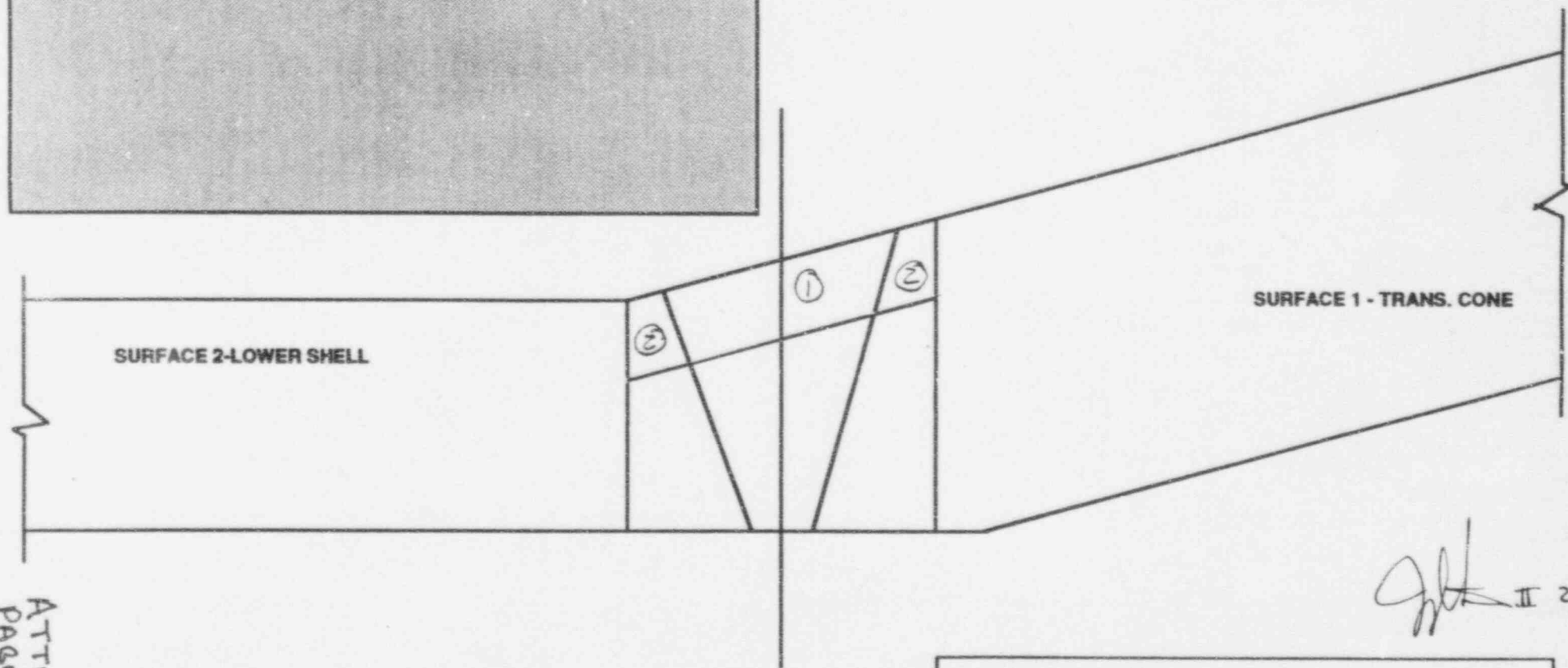
 II 2/2/05



TOTAL INSPECTION AREA 70° : SURFACE

① WELD = $3" \times 1" = 3 \text{ in}^2$

② BASE METAL = $1.5" \times 1" = 1.5 \text{ in}^2$



glt II 2/20/9

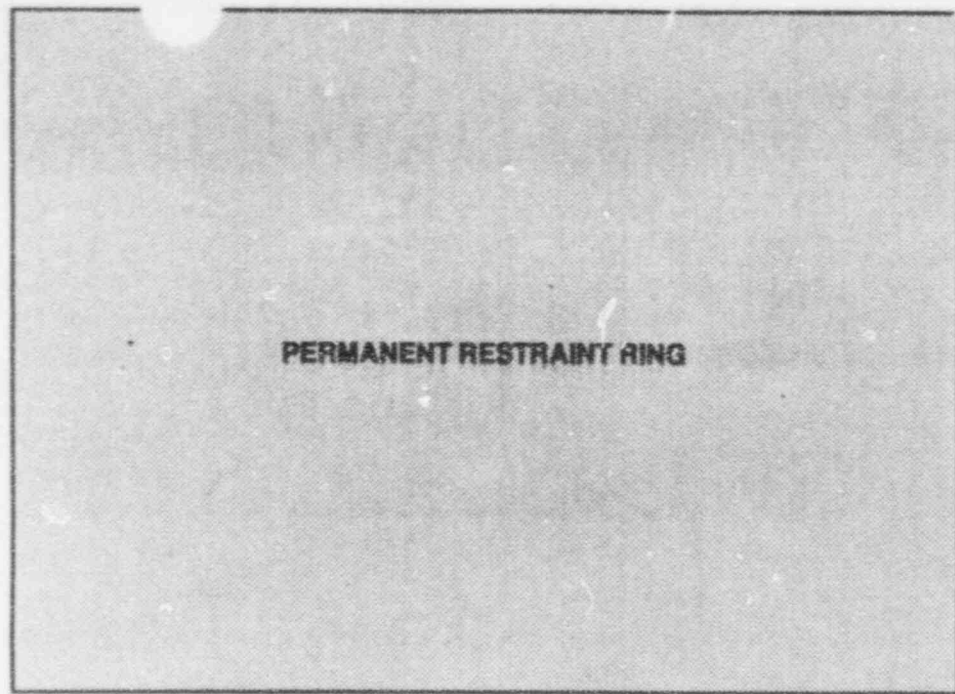
STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

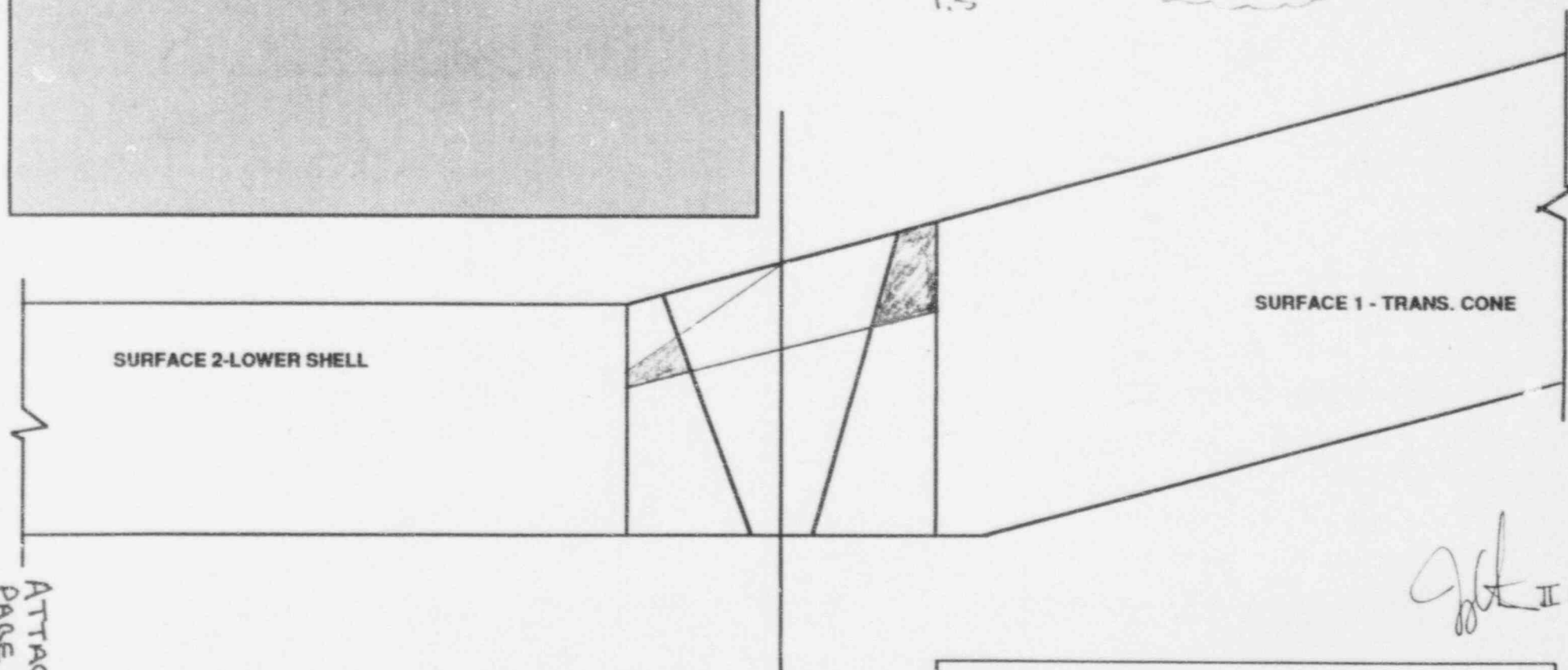


SCAN FROM SURFACE 1
 0% COVERAGE 75° NEAR SURFACE
 OF BASE METAL

$$1.5 \text{ } 10^2 - .75' \times .75' = \text{AREA COVERED}$$

$$1.5 \text{ } 10^2 - .5625 \text{ } 10^2 = .94 \text{ } 10^2$$

$$\frac{.94}{1.5} \times 100 = 62.7\%$$



II 2/2/17

STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

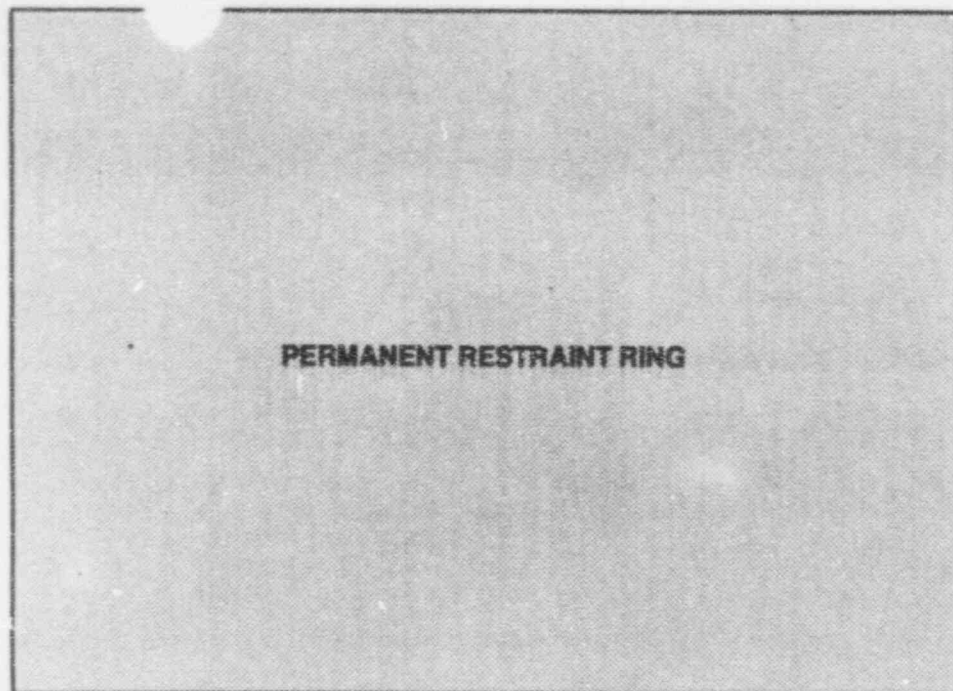
LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

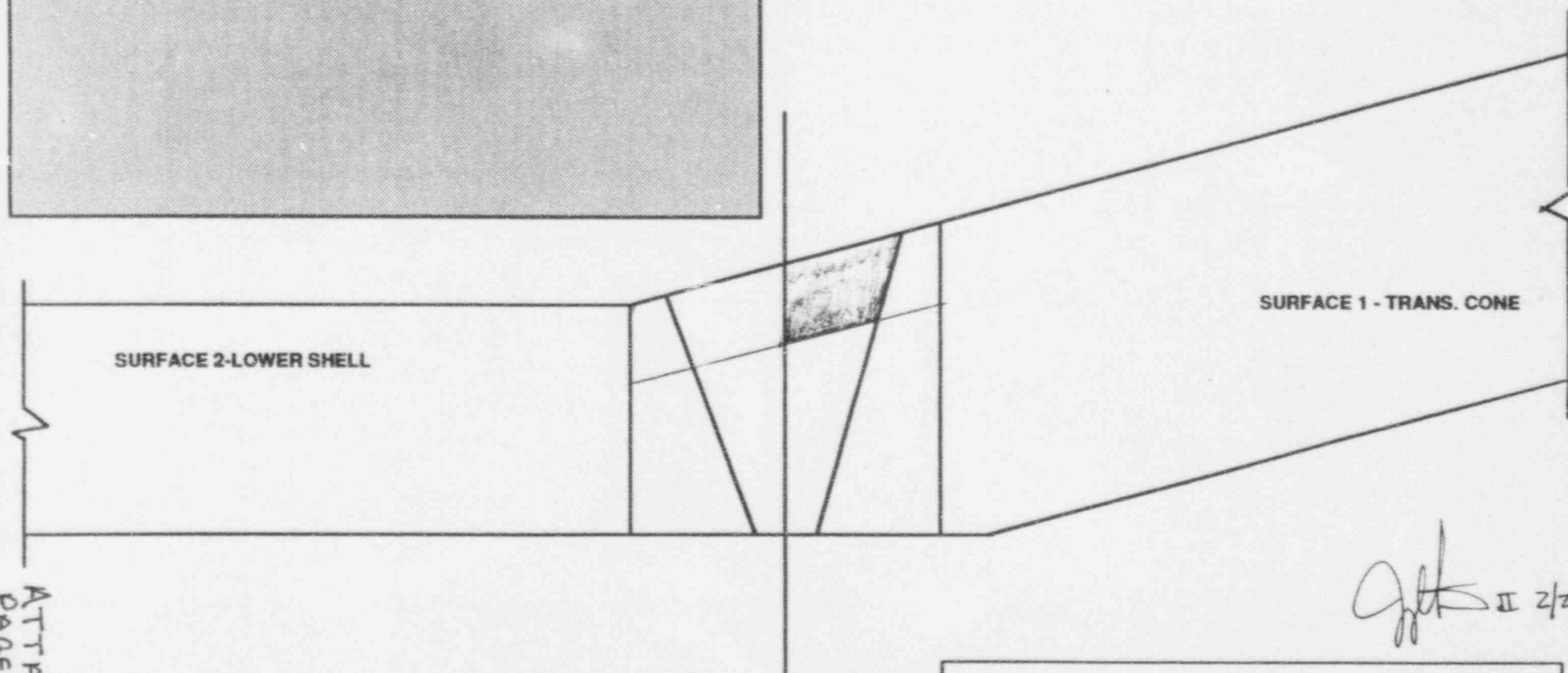
RFR SER. NO. 95204



CW & CCW
 % COVERAGE 70° NENE SURF. 2
 OF WELD

$$1.5" \times 1" = 1.5 \text{ } \text{sq} \text{ } \text{in}^2$$

$$\frac{1.5 \text{ } \text{sq} \text{ } \text{in}^2}{3.0 \text{ } \text{sq} \text{ } \text{in}^2} \times 100 = 50\%$$



ATTACHMENT 3
 PAGE 15 OF 31

STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

gfk II 2/2/85

REF SER. NO. 95-015

9/21/81

CLW FROM SURFACE 1

0% COVERAGE TO³ NEAR SURFACE
OF WELD

$$3.12^2 - \frac{15'' \times 1.5''}{2} = \text{AREA COVERED}$$

$$3.12^2 - .375 \text{ IN}^2 = 2.625 \text{ IN}^2$$

$$\frac{2.625}{3} \times 100 = 87.5\%$$

PERMANENT RESTRAINT RING

SURFACE 2-LOWER SHELL

SURFACE 1 - TRANS. CONE

STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

21.0.2.002WELD # 1SGC-04B-05.

LIMITED

SCAN

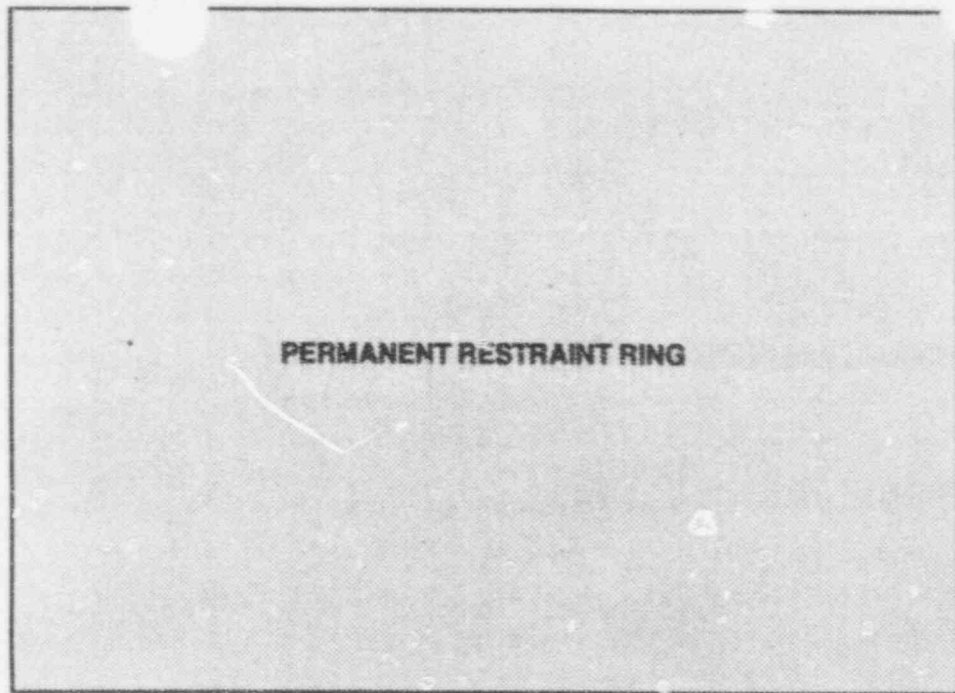
CALCULATIONS

WELD AREA

<u>°</u>	<u>SCAN SURFACE</u>	<u>% COVERAGE</u>
13°		50%
60°	S1	92%
60°	S2	0%
45°	CW	50%
45°	CCW	50%
60°	CW	50%
60°	CCW	50%
70°	S1	44.6%
70°	S2	0%
		<u>436.6</u>
		48.5% = 436.6 ÷ 9

BASE METAL

<u>°</u>	<u>SCAN SURFACE</u>	<u>% COVERAGE</u>
13°		50%
45°	CW	50%
45°	CCW	50%
60°	CW	50%
60°	CCW	50%
60°	S1	88.4%
70°	S1	88.4%
		<u>426.8</u>
		61% = 426.8 ÷ 7



TOTAL INSPECTION AREA

$$3.5" \times 4.0" = 14.0 \text{ in}^2$$

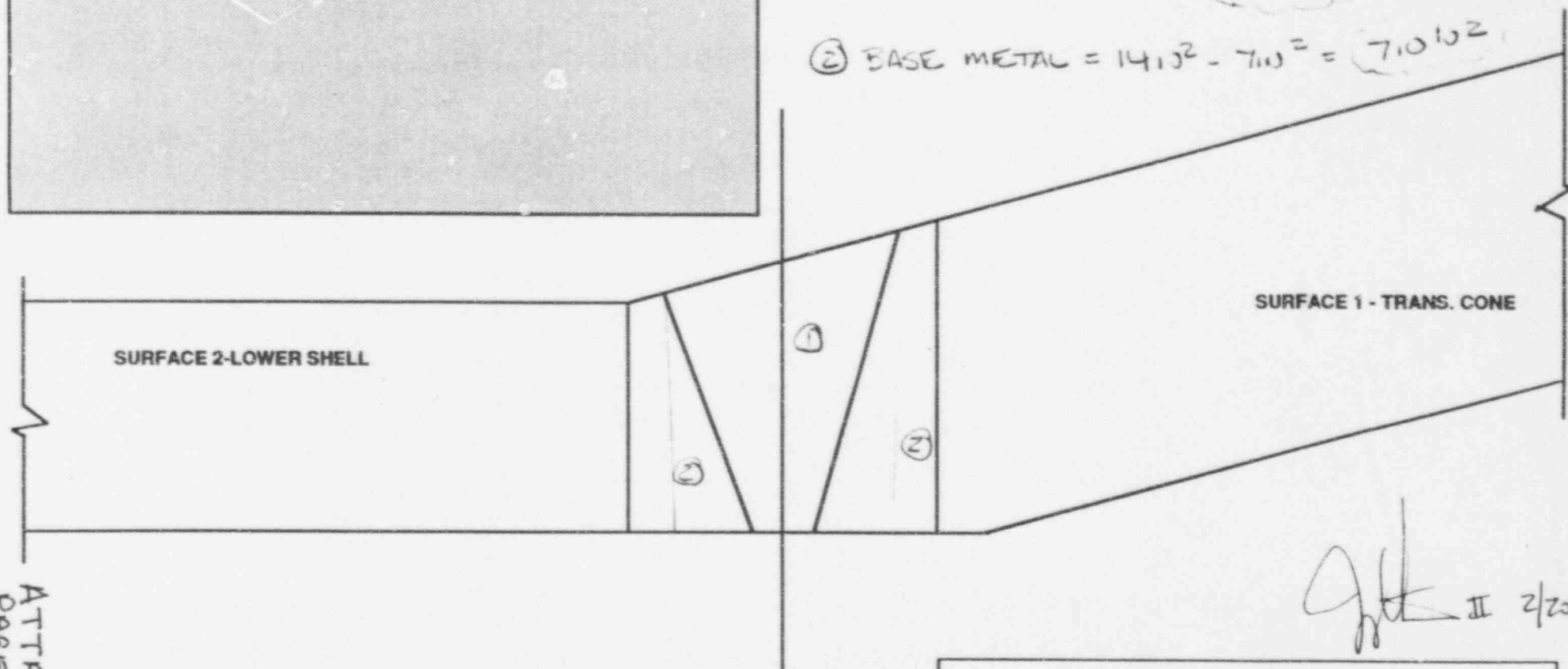
$$\text{① WELD} = 3.5" \times 3.0" = 10.5 \text{ in}^2$$

$$- \frac{3.0" \times 1.0"}{2} = -1.5 \text{ in}^2$$

$$- \frac{4.0" \times 1.0"}{2} = -2.0 \text{ in}^2$$

$$\underline{7.0 \text{ in}^2}$$

$$\text{② BASE METAL} = 14.0 \text{ in}^2 - 7.0 \text{ in}^2 = 7.0 \text{ in}^2$$



gjk II 2/20/98
RFR SER. NO. 98501
2/20/98

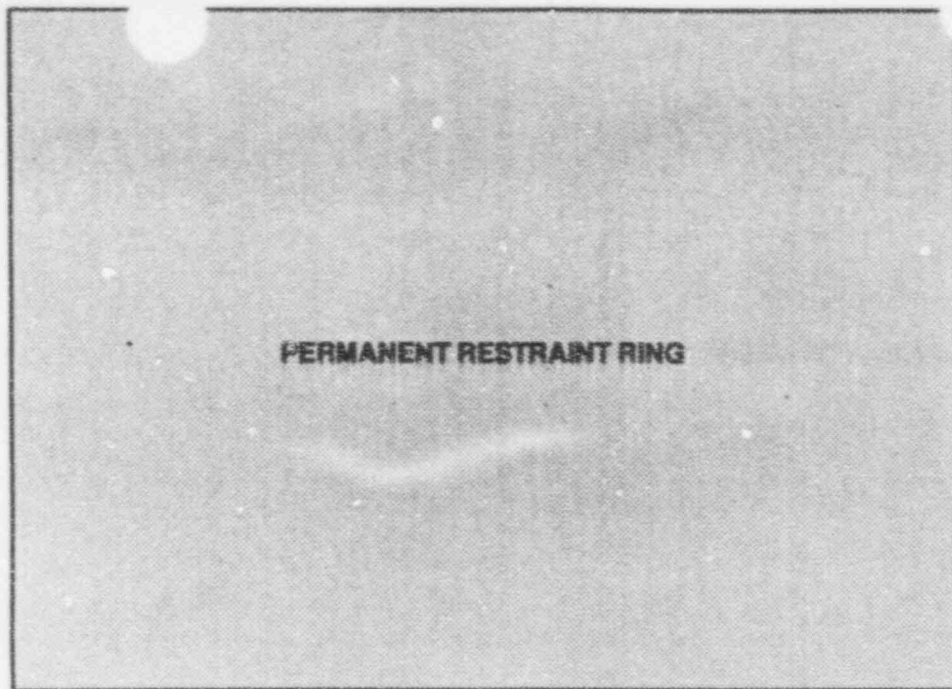
STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

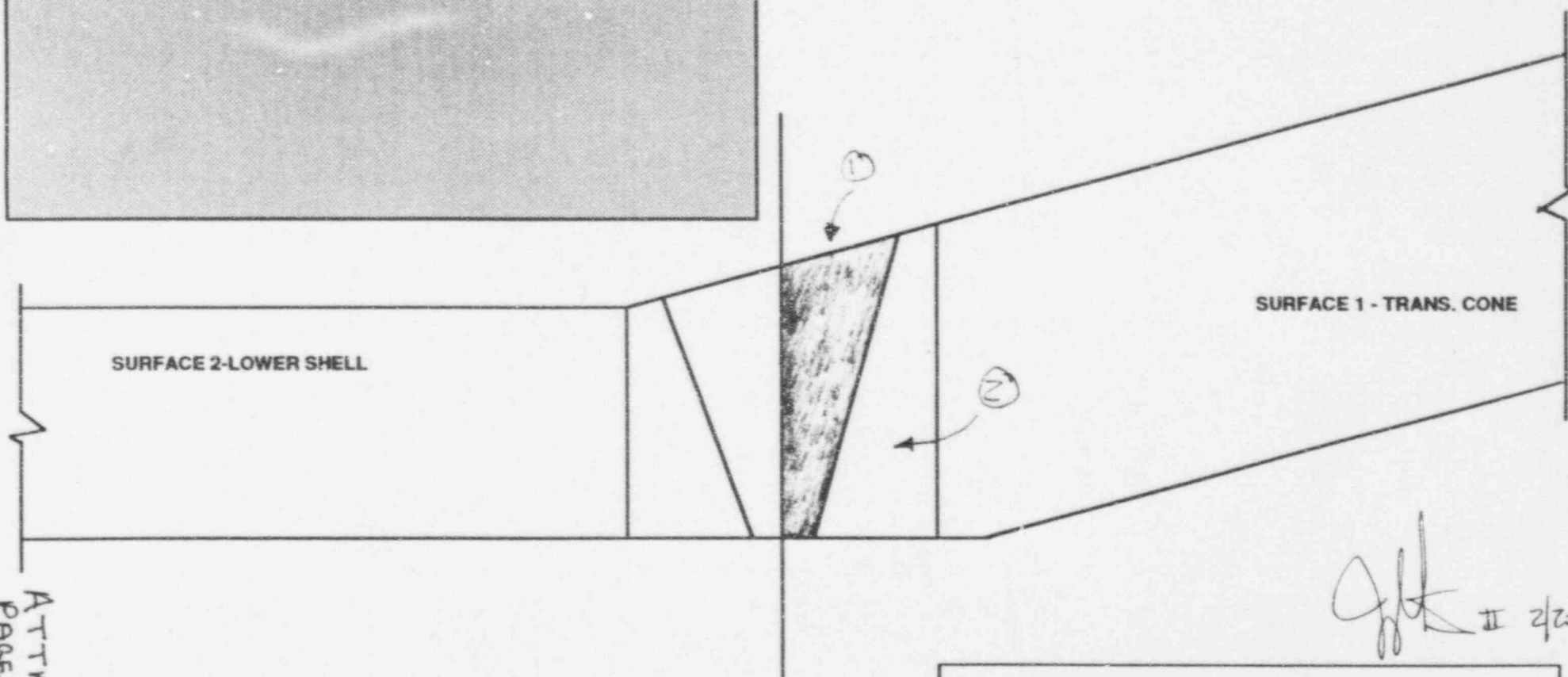


13°, 45° & 60° CW & CCW
 ① % COVERAGE OF WELD ACE

$$\frac{3.5}{7.0} \times 100 = 50\%$$

② % COVERAGE OF BASE METAL

$$\frac{3.5}{7.0} \times 100 = 50\%$$



[Signature] II 2/2/2012
 RFR 562.110.9-01

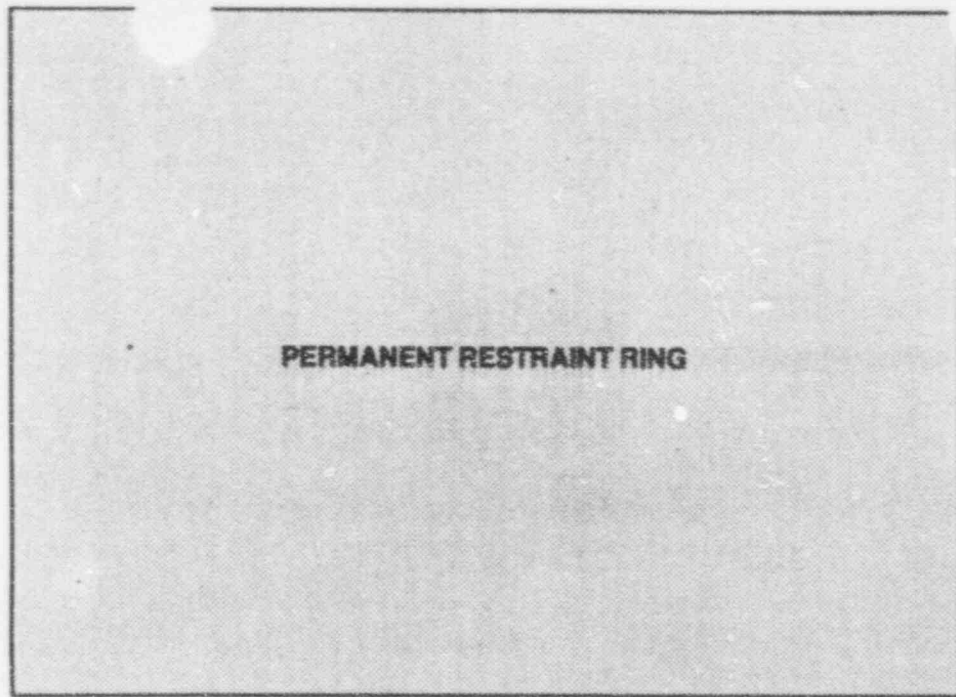
STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

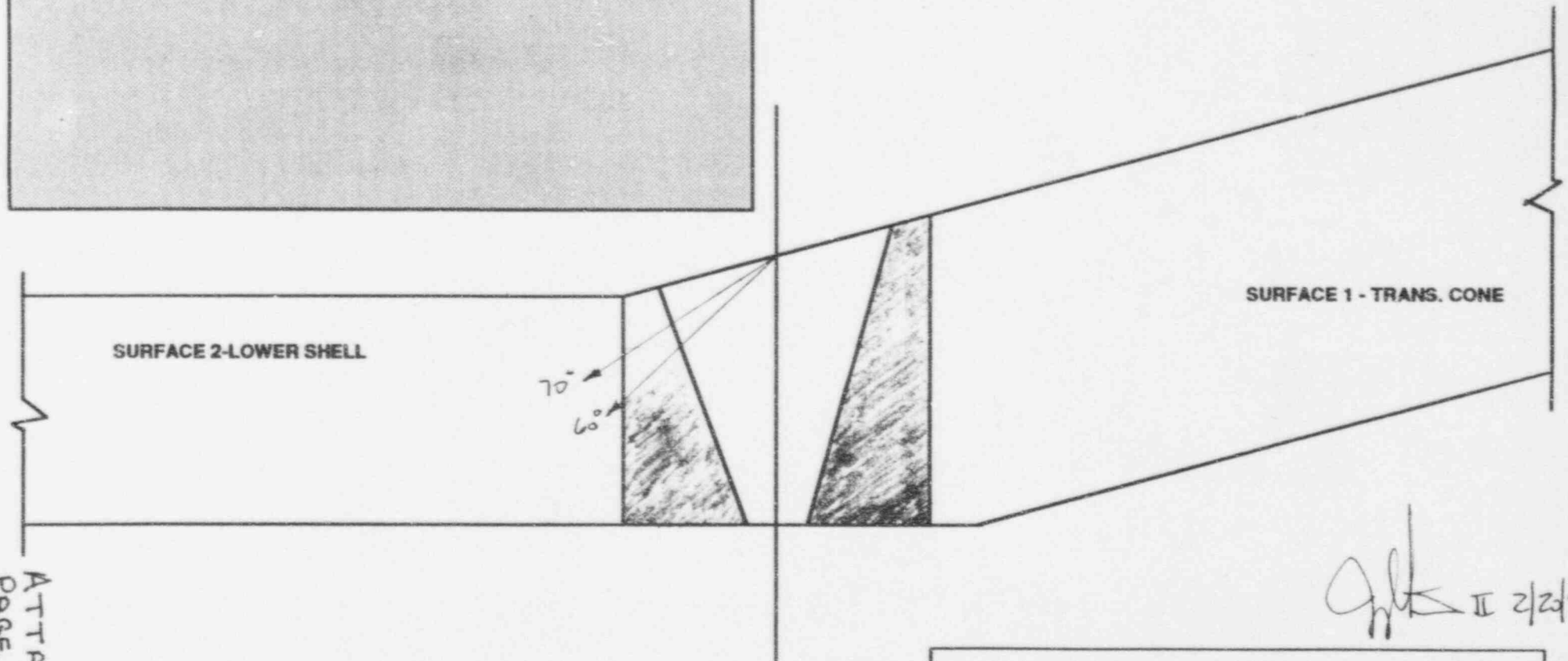


% COVERAGE OF BASE TAIL
WITH 60° & 70° FROM SL

$$7.010^2 - \frac{.75 \times .75}{2} - .75 \times .7 =$$

$$7.010^2 - .2810^2 - .5310^2 = 6.1910^2$$

$$\frac{6.19}{7.0} \times 100 = 88.4\%$$



Handwritten signature and date: 2/2/17

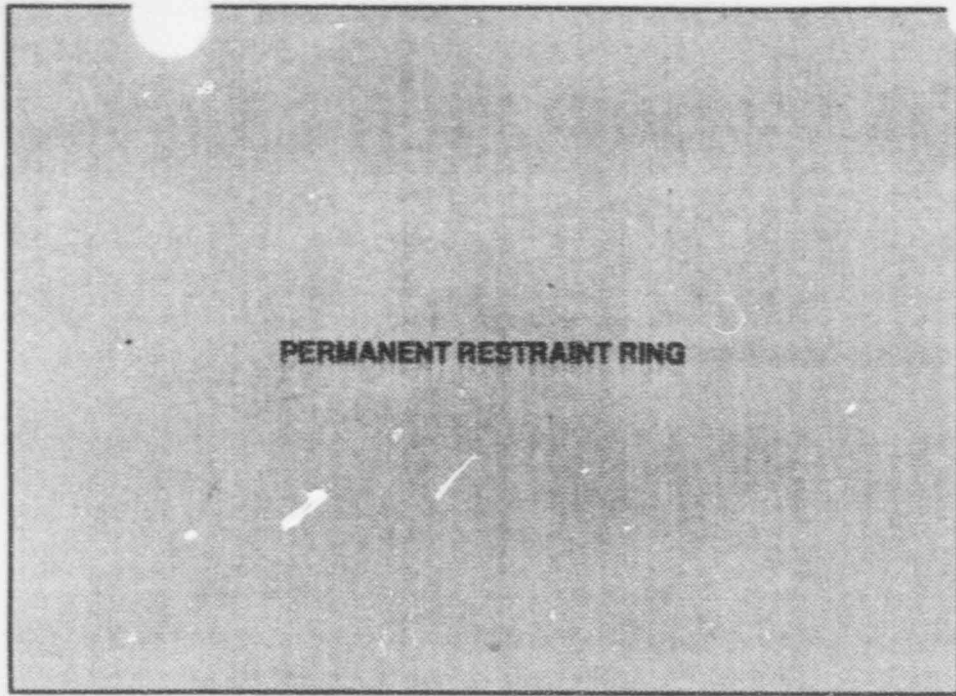
STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

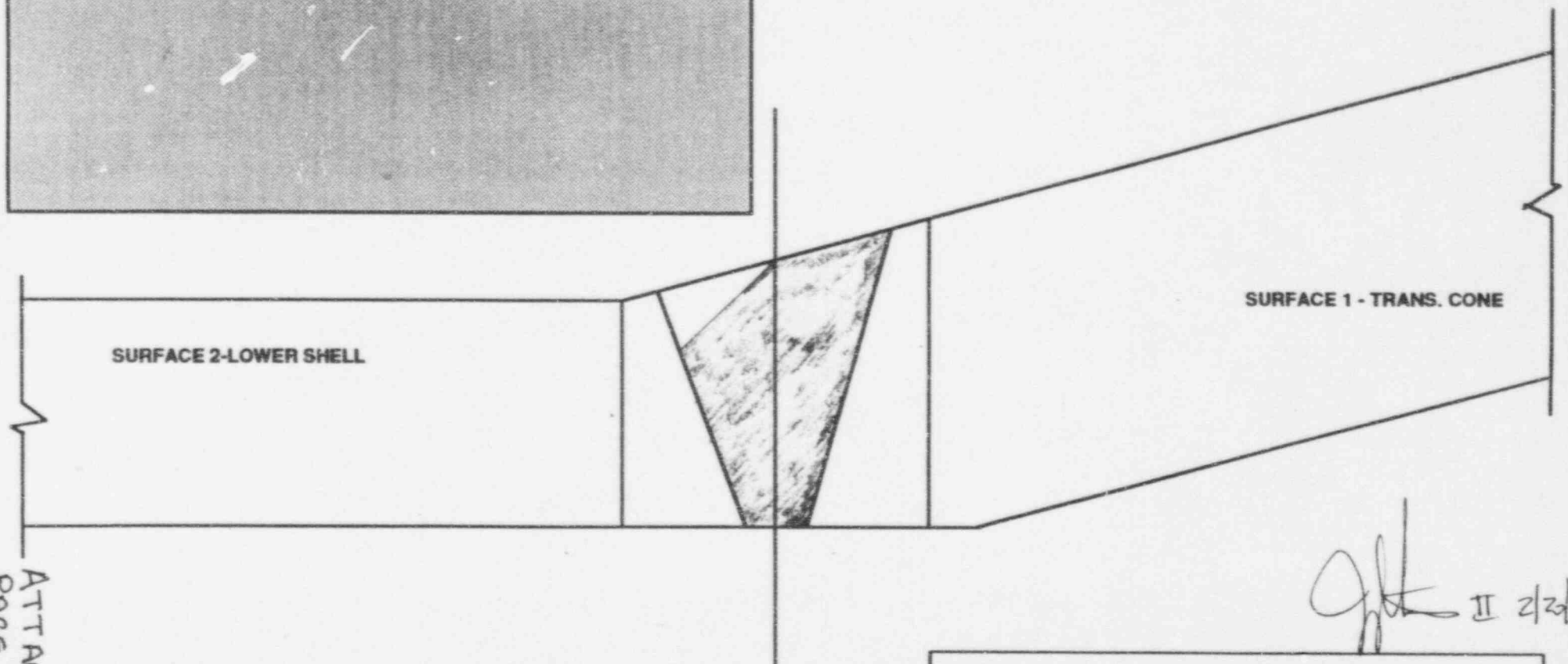


% COVERAGE OF WELD SI 60°

$$7.010^2 - \frac{1.5' \times .75'}{2} =$$

$$7.010^2 - .5610^2 = 6.44$$

$$\frac{6.44}{7.0} \times 100 = 92\%$$



STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

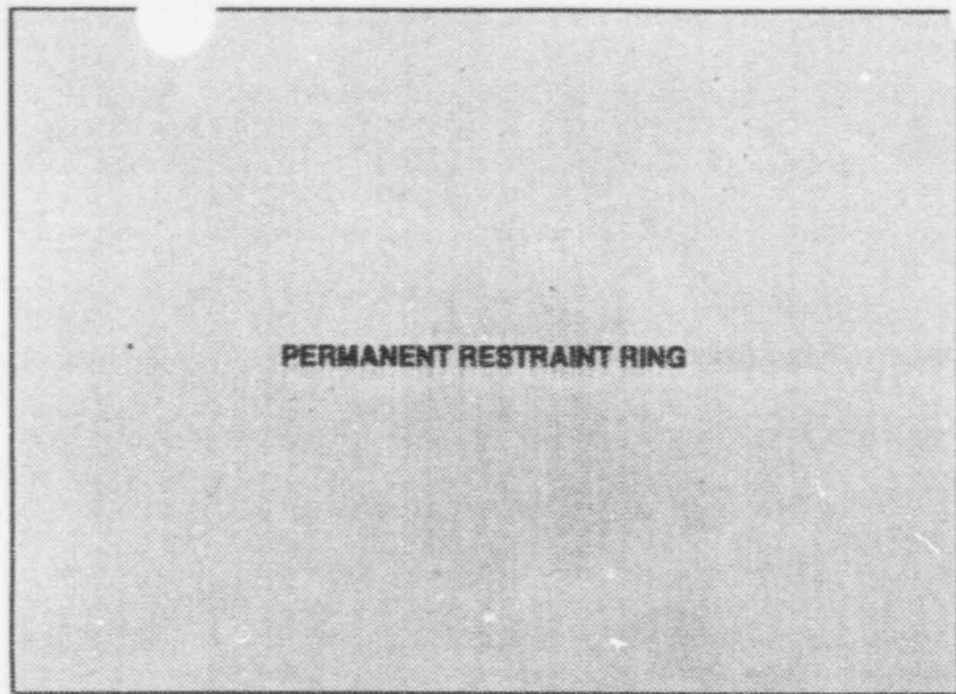
LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

gfk II 2/2/98
 REF SER. NO. 95-01
 15 of 17



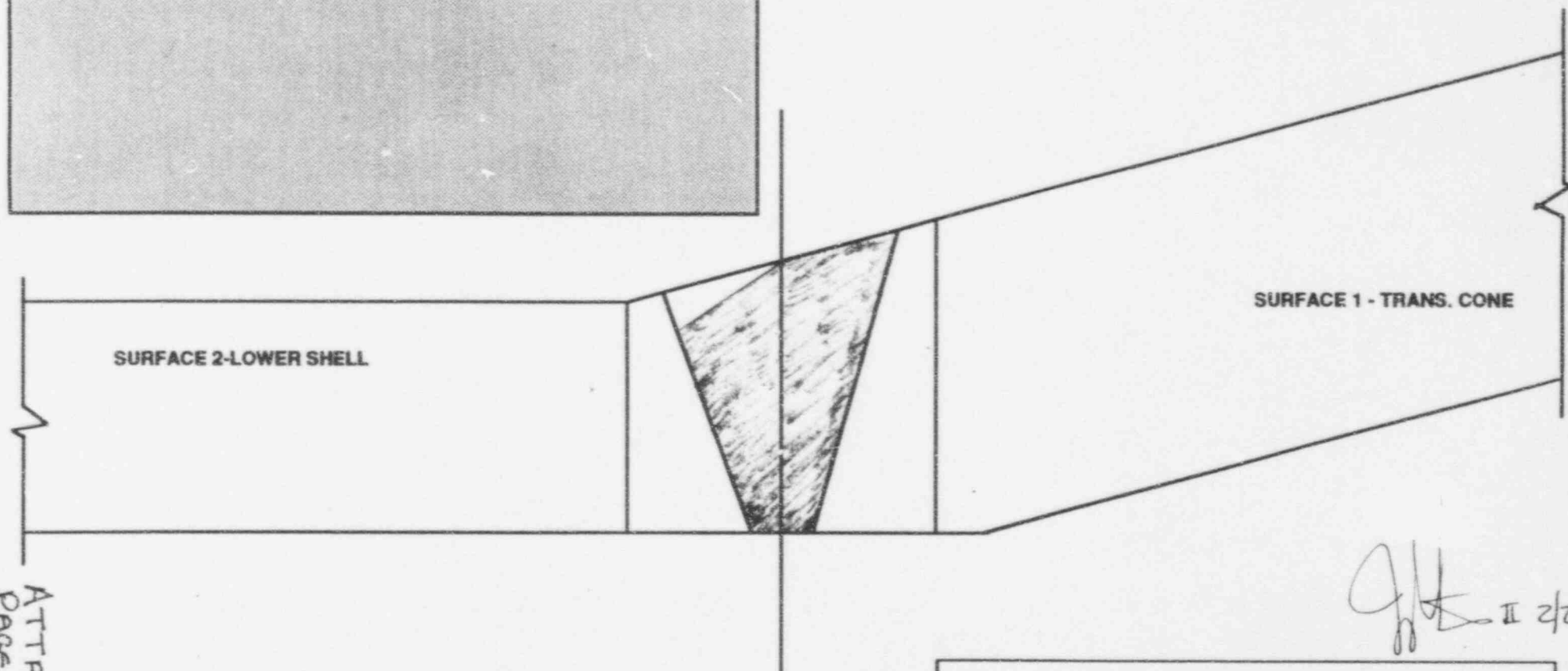
PERMANENT RESTRAINT RING

% COVERAGE OF WELD 70°

$$7.0 W^2 = \frac{.5'' \times 1.5''}{2} =$$

$$7.0 W^2 = .33125 = 6.62 W^2$$

$$\frac{6.62}{7.0} \times 100 = 94.6\%$$



SURFACE 2-LOWER SHELL

SURFACE 1 - TRANS. CONE

Handwritten signature and date: 2/2/17

STEAM GEN. C - UNIT 1 CATAWBA NUCLEAR STA.

LOWER SHELL TO TRANSITION CONE

WELD # 1SGC-04B-05

ITEM # C01.010.002

SCALE: 1/2" = 1"

DUKE POWER COMPANY
ULTRASONIC INDICATION RESOLUTION SHEET

Form NDE-UT-8

Revision 1

Acceptance Standard:

① Indication is due to root geometry

Item # Col. 010 002, Id # ISGC-04B-05

Acceptable Indications: IOD. # 1

Rejectable Indications:

These indications have been compared with previous ultrasonic data ☒ yes ☐ No previous data available

Examiner: *[Signature]* Level: II Date: 2-15-95

Sheet 17 of 17

Reviewer: *[Signature]* Level: II Date: 2-20-95

Authorized Inspector: *[Signature]*

Date: 2-27-95

ATTACHMENT 3
PAGE 23 OF 31

RFR SER. NO. 95-01-5454

DUKE POWER COMPANY

ULTRASONIC EXAMINATION DATA SHEET FOR LAMINAR REFLECTORS

Exam Start: 1115

NDE UT-3A

Exam Finish: 1125

Revision 2

Station: Catawba

Unit: 1

Component/weld ID: 1RARB-W3 2m
1RARB-W3

Date: 3-17-95

Nominal Material Thickness (in.): 875

Weld Length (in.): 138"

Surface Temperature: 83 Deg F

Measured Material Thickness (in.): 920

Lo: 0° of Vessel

Pyrometer S/N: NK-DE 27022

Surface Condition: As Manufactured

Calibration sheet No:

cal due: 951101

Examiner: NDE Hansen Level: II

Examiner: James H. Bess Level: I

Procedure no: NDE 640 Rev: 1 F/C: N/A

Configuration: Circ Weld

2 Flow 1

VESSEL to FLANGE

IND NO.	Ampl	L1	W1	Mp1	W2	Mp2	L2	W1	Mp1	W2	Mp2	Exam Surf.	Dumps
	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB	≥ rem BW LOB		
<u>0°</u>	<u>No Recordable Indications</u>												
	L	W1	Mp1	W2	Mp2	L	W1	Mp1	W2	Mp2			
	L	W1	Mp1	W2	Mp2	L	W1	Mp1	W2	Mp2			
	L	W1	Mp1	W2	Mp2	L	W1	Mp1	W2	Mp2			

Remarks:

Limitations: see NDE-UT-4

☒ None: ☐

sheet 1 of 8

Reviewed By: Larry Mauldin Level: II

Date: 3-18-95

Authorized Inspector: [Signature]

Date: 3-22-95

Item No:

COL 010.050

REFSER. NO. 95-01

[Signature]
4/4/95

ATTACHMENT 3
PAGE 24 OF 31

DUKE POWER COMPANY

ULTRASONIC EXAMINATION DATA SHEET FOR PLANAR REFLECTORS

Exam Start: 1130

Form NDE-UT-2A

Exam Finish: 1330

Revision 4

Station: Cateau Bar

Unit: 1

Component/Weld ID: 12HRB-WB 2m

Date: 3-17-95

Weld Length (in.): 138"

Surface Condition: As Manufactured

0° CF
LO: Vessel

Surface Temperature: 82 °F

Pyrometer S/N: MIDE 27022

Cal Due: 951101

Examiner: JF Hewitt

Level: II

Scans:

45 ☒ 59 dB 70 ☐ dB

Examiner: James H. Pearson

Level: I

45T ☒ 59.8 dB 70T ☐ dB

Procedure: NDE 630 Rev: 1

FC: 95-02

60L ☒ 70 dB

Configuration: Circumferential

2 Flow 1

Vessel to Flange

Calibration Sheet No:

9501047
9501048
9501049

N/A
2m


60T ☐ dB

Other: _____ dB

Scan Surface: OD

Applies to NDE-680 only

Skew Angle: N/A

IND #		Max % Ref	Mp Max	W Max	L Max	L1	L2	W1	Mp1	W2	Mp2	Beam Dir	Exam surf.	Scan	Damps
						20%dac HMA 50%dac 100% dac	20%dac HMA 50%dac 100% dac	20%dac HMA 50%dac 100% dac	20%dac HMA 50%dac 100% dac	20%dac HMA 50%dac 100% dac	20%dac HMA 50%dac 100% dac				
		DO NOT WRITE IN THIS SPACE										DO IN	NOT THIS	WRITE SPACE	
1	60+	316	1.75	1.3	69"	360°		N/A	N/A	N/A	N/A	1	2	AX	NO
2	45	1000	1.26	1.2	69"	360°		N/A	N/A	N/A	N/A	1	2	AX	NO
3	45	316	1.40	1.0	69"	360°		N/A	N/A	N/A	N/A	1	2	AX	NO
4	45	141	1.19	1.18"	1.2	TOE	1.4	116.4	N/A	120.2	N/A	1	2	CRC	NO

Remarks: Welded Attachments noted at 90°, 120° & 270°

Limitations: (see NDE-UT-4) ☒ 90% or greater coverage obtained: yes ☐ no ☒

Sheet 2 of 8

Reviewed By:

Level:

Date:

Authorized Inspector

Date

Item No:

Larry Mauldin

II

3-18-95

Robert McMill

3-22-95

Col. 010 050

RFER SER. NO. 95-01

REC 4/4/95

DUKE POWER COMPANY

ISI LIMITATION REPORT

FORM NDE- UT-4

Revision 1

Component/Weld ID: ADD HK 13 IRHRB-W3 Item No: C01.010.050

remarks:

☒ NO SCAN SURFACE BEAM DIRECTION
☐ LIMITED SCAN ☒ 1 ☐ 2 ☐ 1 ☒ 2 ☐ cw ☐ ccw
 FROM L _____ to L _____ INCHES FROM WO E to BEYOND
 ANGLE: ☐ 0 ☒ 45 ☒ 60 other _____ FROM 0° DEG to 360° DEG

DUE TO FLANGE CONFIGURATION

☒ NO SCAN SURFACE BEAM DIRECTION
☐ LIMITED SCAN ☐ 1 ☒ 2 ☒ 1 ☐ 2 ☐ cw ☐ ccw
 FROM L * to L _____ INCHES FROM WO E to BEYOND
 ANGLE: ☐ 0 ☒ 45 ☒ 60 other _____ FROM _____ DEG to _____ DEG

* DUE TO 52 BOLTS
1.8" PER BOLT (WIDTH)
APPROX 3.25" LONG

☐ NO SCAN SURFACE BEAM DIRECTION
☒ LIMITED SCAN ☐ 1 ☒ 2 ☒ 1 ☐ 2 ☐ cw ☐ ccw
 FROM L _____ to L _____ INCHES FROM WO E to 1.0"
 ANGLE: ☐ 0 ☒ 45 ☒ 60 other _____ FROM 0 DEG to 360 DEG

DUE TO WELD CAP

☐ NO SCAN SURFACE BEAM DIRECTION
☐ LIMITED SCAN ☐ 1 ☐ 2 ☐ 1 ☐ 2 ☐ cw ☐ ccw
 FROM L _____ to L _____ INCHES FROM WO _____ to _____
 ANGLE: ☐ 0 ☐ 45 ☐ 60 other _____ FROM _____ DEG to _____ DEG

Sketch(s) attached
☐ yes ☒ no

Prepared By: James H. Ben

Level: I Date: 3-17-95

Sheet 3 of 8

Reviewed By: Lang Mauldin

Date: 3-18-95

Authorized Inspector: [Signature]

Date: 3-22-95

ATTACHMENT 3
 PAGE 26 OF 31

REF. SER. No. 95-01

DUKE POWER COMPANY
UT PROFILE/PLOT SHEET

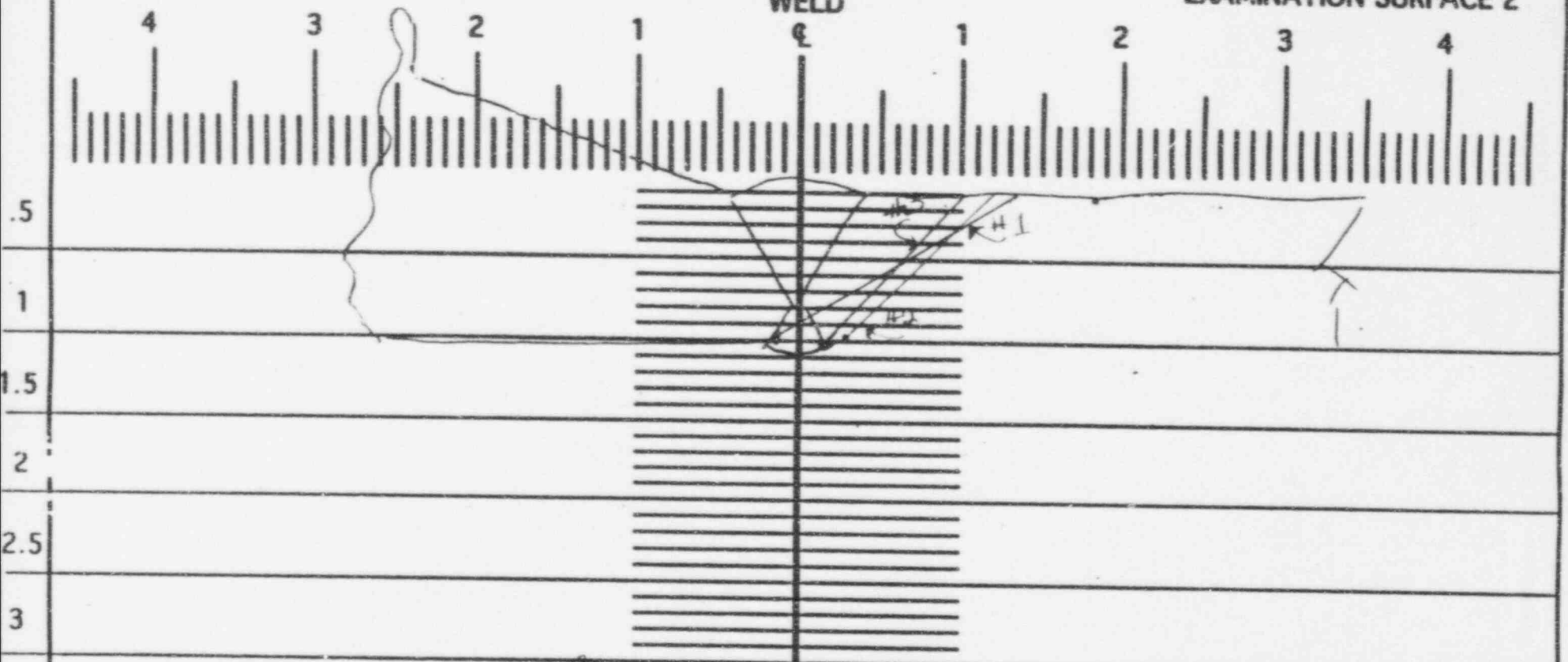
NDE-UT-5

Revision 1

EXAMINATION SURFACE 1

WELD

EXAMINATION SURFACE 2



Component ID/Weld No. ~~1R#1A W3~~ ^{2nd} 1RHRB-W3

Remarks:

Item No: 601010 050

Examiner: J.E. Hesser

Level: II

Date: 3-17-95

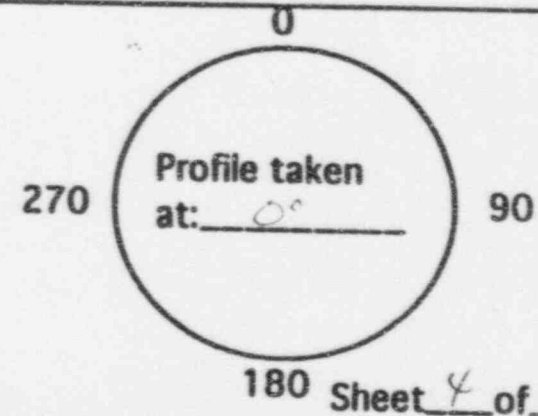
Reviewed By: Larry Maulder

Level: II

Date: 3-18-95

Authorized Inspector: Robert M. Miller

Date: 3-22-95



RRR SER. NO. 95-01

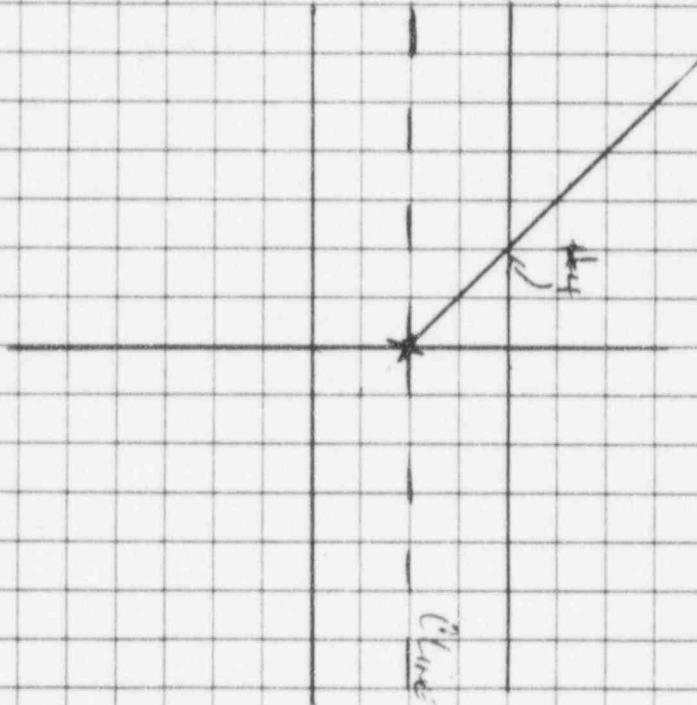
4/4/95

ATTACHMENT
PAGE 27 OF 31

Station CATWBA Unit 1 Rev. _____ File No. 1RHRB-W3 Sheet 5 of 8
Subject _____

By _____ Date _____
Prob No. COL 010.050 Checked By Larry Mauldin Date 3-18-95

Plot for Transverse Reflector



Line width (top) = 1" wide

Station # COL 010.050
Component # 1RHRB-W3

ME/Power II 3-17-95

3/18/95

Limited Exam Data Sheet

1RHRB-W3

Station CATAWBA Unit 1 LD. # 1RHRB-W3 2nd
 By Larry Mauldin Date 3-18-95 Item # COI 010.050
 Checked By W.C. Leaper Date 3-20-95 Page 6 Of 8

DETERMINING THE CUMULATIVE TOTAL OF WELD VOLUME INSPECTED
 (in percentage)

Total Cross Sectional Area 1.7125 x (Number of Scans) 4 = 6.85 (% Factor)

Vessels:

Area Loss : Zone #1 _____
 Zone #2 _____
 Zone #3 _____

Total Zone Loss _____ / (% Factor) _____ x 100 = _____ % of Loss

Lump Sum Loss From Other Limitations + _____ %

Total Loss _____ %

100% - (Total Loss) _____ = _____ % of Coverage

(Additional _____ % of Partial Coverage)

Qualifies for Request for Relief ☐ Yes ☐ No

Piping: THIN WALL VESSEL

Axial Scan 45°S & 60°RL ^{COVERAGE} (Loss) 1.3025 / 6.85 (% Factor) x 100 = 19 % of Loss ^{COVERAGE}

Circumferential Scan Over Root Area ☐ Yes ☐ No _____ % of Loss

Axial Loss ^{COVERAGE} 19 + Circ. Loss ^{COVERAGE} 50 = 69 / 2 = _____ % Loss

Additional Losses (Due to hangers, restraints, etc.) + _____ % Loss

Explain: CIRC. COVERAGE 69 Total % Loss

CW 1.7125 + CCW 1.7125 = 3.425 ÷ 6.85 X 100 = 50%

Loss DUE to Bolts (52) 67.8% 100-67.8 = 32.2% X 69% = 22.2%

100% - (Total Loss) ^{COVERAGE} 22.2 = 77.8 % of Coverage ^{LOSS}

Qualifies for Request for Relief ☒ Yes ☐ No

Disposition: _____

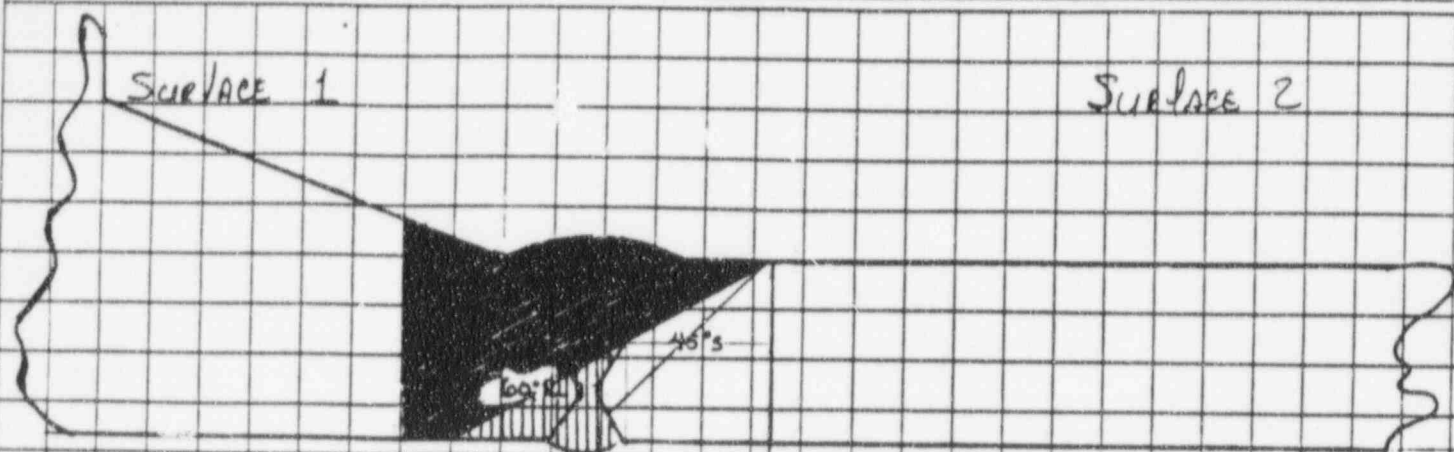
By: _____ Date: _____

Station CATWBO Unit 1 Rev. _____ File No. 1RHRB-W3 Sheet 7 Of 8
 Subject LIMITED EXAM DATA

Prob No. CO1.010.050

By Larry Mauldin Date 3-18-95

Checked By W. C. Leeper Date 3-20-95



- 2 DIRECTIONAL COVERAGE (45°s WERE CALIBRATED TO 10/8 NIDE + 60° RL)
- 60° RL COVERAGE IN 1 DIRECTION ONLY
- NO COVERAGE

$$\text{CROSS SECTIONAL AREA} = 1.9" \times .875" + \frac{.5" \times .4}{2} = 1.7125 \text{ sq in} \times 4 \text{ SCANS} = 6.85$$

AXIAL COVERAGE:

$$2 \text{ DIRECTIONAL COVERAGE} = .5 \times .75 + \frac{.5 \times .15}{2} + \frac{.75 \times .4}{2} = .5625 \times 2 \text{ DIRECTIONS} = 1.125$$

$$60^\circ \text{ RL COVERAGE IN 1 DIRECTION} = \frac{.75 \times .4}{2} + \frac{.3 \times .1}{2} + \frac{.25 \times .1}{2} = .1775$$

CIRC. COVERAGE:

$$\text{CW DIRECTION (45°s)} = 1.7125 \quad \text{CCW DIRECTION (45°s)} = 1.7125$$

$$\text{TOTAL COVERAGE} = 4.725 \div 6.85 \times 100 = 69\%$$

OTHER LIMITATIONS: 52 BOLTS, 1.8" LOSS PER BOLT = 93.6"

$$93.6" \div 138" (\text{WELD LENGTH}) \times 100 = 67.8\% \text{ LOSS}$$

$$100\% - 67.8\% = 32.2\%$$

$$\text{TOTAL COVERAGE} = 32.2\% \text{ of } 69\% = 22.2\%$$

56/4/95
RFR

DUKE POWER COMPANY		Form NDE-UT-8	
ULTRASONIC INDICATION RESOLUTION SHEET		Revision 1	
Acceptance Standard:			
Indications 1, 2 & 3 are 360° Scramatic			
reflector due to old weld cap			
Indication #4 is due to old weld cap			
Acceptable Indications: <i>Item # Col. 010.050</i>			
<i>Component Id #: HRRAW3</i>			
<i>IRHRB-W3</i>			
Rejectable Indications:			
These indications have been compared with previous ultrasonic data <input type="checkbox"/> yes <input checked="" type="checkbox"/> No previous data available			
Examiner <i>YE Hower</i>	Level: <i>II</i>	Date: <i>3-17-95</i>	Sheet <i>8</i> of <i>8</i>
Reviewer: <i>Larry Maulder</i>	Level: <i>II</i>	Date: <i>3-18-95</i>	Date: <i>3-22-95</i>
Authorized Inspector: <i>Robert M. Seld</i>			