Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

MAR 25 1993

O. J. "Ike" Zeringue
Vice President, Browns Ferry Nuclear Plant

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

Gentlemen:

In the Matter Of) Docket Nos. 50-259
Tennessee Valley Authority) 50-260
50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - UNIT 2 REVISED REACTOR PRESSURE VESSEL (RPV) EXAMINATION SCHEDULE AND EXAMINATION COVERAGE OF THE UNITS 1, 2, AND 3 REACTOR VESSEL WELDS

Reference:

1. Letter from TVA to NRC dated September 27, 1991, "BFN 10 CFR 50.55 Proposed Rules for Units 1, 2, and 3 Reactor Pressure Vessel (RPV) Examinations"

2. Letter from NRC to TVA dated August 5, 1992, "Summary of the July 15, 1992, Meeting with the Tennessee Valley Authority Regarding the Reactor Vessel Inspections at the Browns Ferry Nuclear Plant, Units 1, 2, and 3"

3. Letter from TVA to NRC dated March 1, 1988, "BFN - Extension of Ten-Year Inservice Inspection Interval"

The purpose of this letter is to inform the staff of the RPV examination schedule for BFN Unit 2. This schedule revises the commitment provided in Reference 1. In addition this letter provides information on the calculated examination coverage for the BFN Units 1, 2, and 3 reactor vessel welds which is required per American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME) Section XI and 10 CFR 50.55a(g)(6)(ii)(A) as stated in Reference 2.

Enclosure 1 is a summary description of the inspection requirements as defined in ASME Section XI and 10 CFR 50.55a(g)(6)(ii)(A). Enclosure 2 contains tables and sketches which describe the calculated examination coverage for each unit's vessel welds. These coverages are based on accessibility surveys conducted on each unit along with a review of the vessel's fabrication drawings. This information was then combined with the expected capability of General Electric's Internal Diameter (ID) inspection equipment and expected accessible areas from the vessel Outside Diameter (OD). In addition, a summary for each unit is provided that lists the welds with less than 90 percent ASME coverage along with a description of the cause for limitation. Each of the BFN units has a biological shield wall and installed vessel insulation which restrict access to the vessel OD. The physical arrangement is shown on Enclosure 3.

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Both Units 1 and 3 are in the last period of their first inspection interval. The code of record is the 1974 Edition with Addenda through Summer 1975 of ASME Section XI. Nondestructive Examination (NDE) techniques and evaluation criteria were upgraded to the 1986 edition of ASME Section XI on June 11, 1992. Units 1 and 3 will be upgraded to the second inspection interval one year after startup as stated in Reference 3. The code of record will be the Edition and Addenda of ASME Section XI in effect on its respective startup date.

TVA's plans for performing RPV weld examinations are in accordance with the requirements of 10 CFR 50.55a(g)(6)(ii)(A). The schedule for Units 1 and 3 is as stated in Reference 1. BFN Unit 2 RPV welds examination will be performed during the second inspection interval.

The Unit 2 second inspection interval began on May 24, 1992. The code of record is the 1986 Edition of ASME Section XI. This is the Code Edition that was in effect at the startup of BFN Unit 2 on May 24, 1991.

Enclosure 4 contains a summary of the commitment made in this submittal. If you have any questions, please contact G. D. Pierce, Interim Site Licensing Manager, at 205-729-7566.

Sincerely,

O. J. Zeringue

Enclosure
cc (Enclosure):
NRC Resident Inspector
Browns Ferry Nuclear Plant
Route 12, Box 637
Athens, Alabama 35611

Mr. Thierry M. Ross, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

Mr. B. A. Wilson, Project Chief
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

ENCLOSURE 1
BROWNS FERRY UNITS 1,2 AND 3
RPV EXAMINATION PLAN SUMMARY

Browns Ferry, Units 1,2 & 3 - *RPV Examination Plan Summary*

ASME Section XI, and 10 CFR 50.55a requires that ultrasonic examination of all reactor pressure vessel welds be performed during each inservice inspection interval. The requirements state that each weld shall be examined along its entire length and the effective volume which must be examined is as illustrated in *Figure 1* below. An NRC accepted ASME, Section XI Code Case N-460 relaxes these requirements and basically states that a reduction of 10% is permissible.

The 1986 edition of the ASME Code, Section XI, IWA-2232 states that the RPV weld required volume shall be examined per ASME, Section V, Article 4 requirements. Article 4 specifies the examination angles and scan directions for examining RPV welds. It also specifies how the examinations are to be performed. If examinations are performed from the clad side of the component, the 1989 edition of the ASME Code, Section-V, provides guidance for a supplemental 70° examination of the clad-basemetal interface.

The Section XI required examination volume for each type of RPV weld is shown in the IWB-2600 figures. The volume incorporates the weld and 1/2 t (1/2 plate thickness) of base metal each side of the weld as shown in *figure 1*. The weld volume must be scanned with two angle beams from two directions, where adjacent base metal must be completely scanned by two angle beams, but need not be completely scanned by both angles from both directions. (Any combination of two angle beams will satisfy the requirements.)

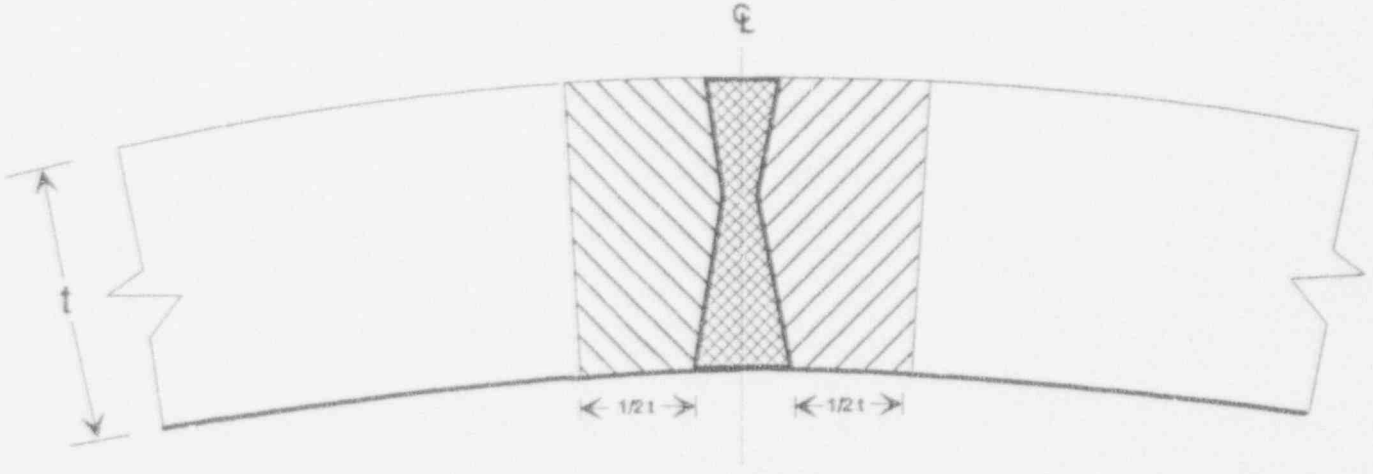


Figure 1

These seam welds must be examined by three or four beam angles, depending on which surface the exam is conducted from. For examinations conducted from the vessel ID surface, four different beams are utilized to interrogate the examination volume. Examination volume coverage from the inside surface is tabulated using 0° L-wave, 45°, 60° shear-waves for volumetric interrogation and 70° refracted longitudinal-wave (RL) for underclad detection. The examination coverage from the outside surface is calculated using 0° L-wave, 45°, 60° shear-wave search units.

The examination coverage for the three (3) Browns Ferry units was calculated based on a thorough review of the dimensions and configurations as shown on the B & W fabrication drawings. The external mirror insulation layouts were reviewed for access to the vessel exterior. Internal and external obstructions were identified and listed for each seam weld. The coverage calculation for each weld is based on an automated examination from the Vessel interior with General Electric's GERIS 2000 and the PIONEER manipulator. The coverage calculations from the exterior of the vessel are based on manual examination of the accessible areas.

Enclosure 2 provides vessel rollout maps illustrating limitation areas with complementing tables describing ASME coverage for each weld from the inside and outside surface. As a supplement, an additional table is being provided listing, welds with less than 90% volume coverage describing cause for the limitation.

ENCLOSURE 2
BROWNS FERRY UNITS 1 ,2 AND 3
RPV WELDS EXAMINATION COVERAGE

RPV Examination Coverage for Browns Ferry - Unit 1

Weld Number	Weld Type	ID ASME Coverage %	OD Access /Coverage %	Total ASME Coverage %	Comments
C-BH-1	Circ	0	18	18	ID exam : No Access OD exam: Access limited to area beneath the N1 & N8 nozzles.
C-1-2	Circ	93	No Access	93	ID exam: Limited by surveillance specimen holders @ 30, 120 & 300 degrees. OD exam: No Access.
C-2-3	Circ	63	No Access	63	ID exam: Limited by Guide Rods @ 0 & 180 degrees, Core Spray Downcomers @ 172.5, 187.5, 352.5 & 7.5 degrees, and Surveillance Specimen Holders @ 30, 120, & 300 degrees. OD exam: No Access.
C-3-4	Circ	90	2	92	ID exam: Limited by Guide Rods @ 0 & 180 degrees, Nozzle N11 A @ 40 degrees and N11 B @ 220 degrees. OD exam: Requires removal of "Q" panels adjacent to the N11 A & B Nozzles.
C-4-5	Circ	93	*	93	ID exam: Limited by Guide Rods @ 0 & 180 degrees. OD exam: * No additional coverage can be obtained.
C-5-FLG	Circ	93	*	93	ID exam: Limited by Guide Rods @ 0 & 180 degrees OD exam: * No additional coverage can be obtained.
V-1-A	Vert @ 20°	76	19	95	ID exam: Limited by Nozzle N2 A @ 30 degrees, and vertical travel mechanism limitation. OD exam: Removal of RIP E-2 & G-2 required for coverage.
V-1-B	Vert @ 140°	82	*	82	ID exam: Limited by Nozzle N2 E @ 150 degrees, and vertical travel mechanism limitation. OD exam: * No additional coverage can be obtained.
V-1-C	Vert @ 260°	76	6	82	ID exam: Limited by Nozzle N2 H @ 270 Degrees, and vertical travel mechanism limitation. OD exam: Additional Coverage can be obtained adjacent to the N2H Nozzle.
V-2-A	Vert @ 45°	91	No Access	91	ID exam: Limited by Nozzle N16 A @ 40 degrees OD exam: No Access.

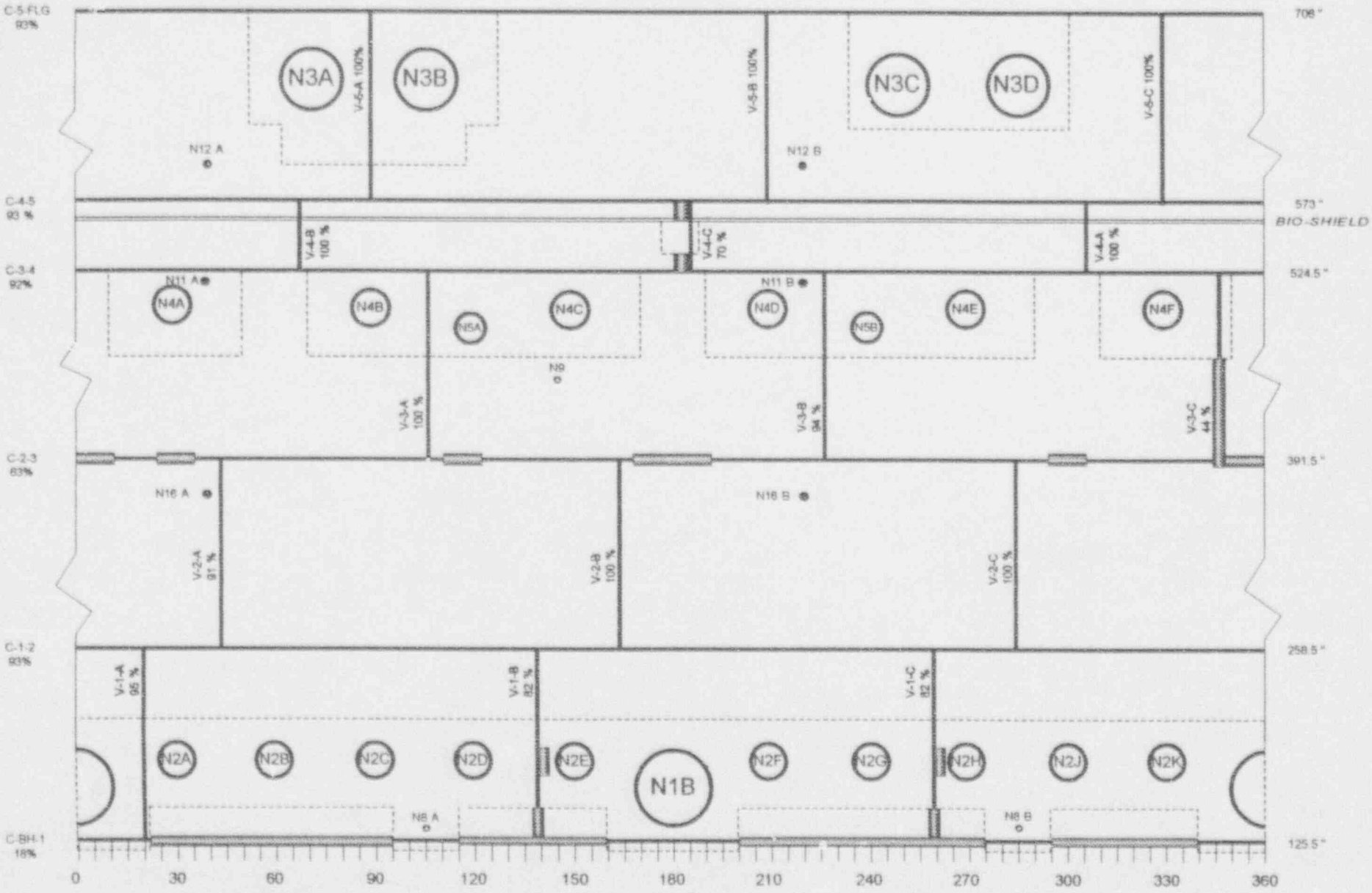
RPV Examination Coverage for Browns Ferry - Unit 1

Weld Number	Weld Type	ID ASME Coverage %	OD Access /Coverage %	Total ASME Coverage %	Comments
V-2-B	Vert @ 165°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-2-C	Vert @ 285°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-3-A	Vert @ 107°	73	27	100	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** Removal of RIP P10 & Q11 required for coverage.
V-3-B	Vert @ 227°	68	26	94	**ID exam:** Limited by Feedwater Sparger, Core Spray piping, N11 B @ 220 Degrees. **OD exam:** Limited due to proximity of N11B nozzle @ 220 Degrees. Removal of RIP P21, Q22 & Q23 are required for 94% coverage.
V-3-C	Vert @ 347°	26	18	44	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** Removal of RIP P32 & Q34 is required for coverage.
V-4-A	Vert @ 306°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-4-B	Vert @ 68°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-4-C	Vert @ 186°	50	20	70	**ID exam:** Guide Rod @ 180 Degrees. **OD exam:** Requires removal of SBC-12-13 panel.
V-5-A	Vert @ 90°	86	14	100	**ID exam:** Steam Dryer Support Bracket @ 94 Degrees. **OD exam:** Removal of RIP T-5 will permit 100% coverage.
V-5-B	Vert @ 210°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-5-C	Vert @ 330°	100	Not Needed	100	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** No Exam Needed.

Limitation Summary for Browns Ferry, Unit 1 - RPV Seam Welds with < 90% ASME Coverage

Weld Number	Weld Type	Total ASME Coverage %	Cause for Limitations
C-BH-1	Circ	18	ID exam : The Pioneer manipulator design will not allow belt extension to reach the examination area for this weld. OD exam: Access limited to area beneath the N1 & N8 nozzles. Additional weld coverage is restricted due to non-removable "D" & "E" insulation panels.
C-2-3	Circ	63	ID exam: Resricted by Guide Rods @ 0 & 180 degrees, Core Spray Downcomers @ 172.5, 187.5, 352.5 & 7.5 degrees, and Surveillance Specimen Holders @ 30, 120, & 300 degrees. OD exam: Restricted by non-re:novable "M" Insulation panels, proximity of the Bio-shield.
V-1-B	Vert @ 140°	82	ID exam: Restricted by proximity of Nozzle N2 E @ 150 degrees, and Pioneer vertical extension design. OD exam: Restricted by non-removable Insulation Panel (E8 panel), and proximity of Nozzle N2 E.
V-1-C	Vert @ 260°	82	ID exam: Restricted by proximity of Nozzle N2 H @ 270 Degrees, and Pioneer vertical extension design. OD exam: Restricted by non-removable Insulation Panel (E 16 panel), and proximity of Nozzle N2 H.
V-3-C	Vert @ 347°	44	exam: Restricted by Feedwater Sparger & Core Spray piping adjacent to the weld OD exam: Restricted by non-removable insulation panels M18, N18 & O18.
V-4-C	Vert @ 186°	70	ID exam: Restricted by Guide Rod @ 180 Degrees. Partial coverage is obtained for the entire length of weld. OD exam: Restricted by non-removable R-13 Insulation Panel , and proximity of Bio-shield.

Browns Ferry, Unit 1 - ASME Coverage - RPV Seam Welds



Key:

- Weld Location
- Areas Accessible from OD
- No or Limited Examination for Welds < 90% ASME Coverage

RPV Examination Coverage for Browns Ferry - Unit 2

Weld Number	Weld Type	ID ASME Coverage %	OD Access /Coverage %	Total ASME Coverage %	Comments
C-BH-1	Circ	0	18	18	**ID exam :** No Access **OD exam:** Access limited to area beneath the N1 & N8 nozzles.
C-1-2	Circ	93	No Access	93	**ID exam:** Limited by surveillance specimen holders @ 30, 120 & 300 degrees. **OD exam:** No Access.
C-2-3	Circ	63	No Access	63	**ID exam:** Limited by Guide Rods @ 0 & 180 degrees, Core Spray Downcomers @ 172.5, 187.5, 352.5 & 7.5 degrees, and Surveillance Specimen Holders @ 30, 120, & 300 degrees. **OD exam:** No Access.
C-3-4	Circ	90	2	92	**ID exam:** Limited by Guide Rods @ 0 & 180 degrees, Nozzle N11 A @ 40 degrees and N11 B @ 220 degrees. **OD exam:** Requires removal of "Q" panels adjacent to the N 11 A & B Nozzles.
C-4-5	Circ	93	*	93	**ID exam:** Limited by Guide Rods @ 0 & 180 degrees. **OD exam:** * No additional coverage can be obtained.
C-5-FLG	Circ	93	*	93	**ID exam:** Limited by Guide Rods @ 0 & 180 degrees **OD exam:** * No additional coverage can be obtained.
V-1-A	Vert @ 20°	76	19	95	**ID exam:** Limited by Nozzle N2 A @ 30 degrees, and vertical travel mechanism limitation. **OD exam:** Removal of RIP E-2 & G-2 required for coverage
V-1-B	Vert @ 140°	76	6	82	**ID exam:** Limited by Nozzle N2 E @ 150 degrees, and vertical travel mechanism limitation. **OD exam:** Additoinal Coverage adjacent to N2E nozzle.
V-1-C	Vert @ 260°	76	6	82	**ID exam:** Limited by Nozzle N2 H @ 270 Degrees, and vertical travel mechanism limitation. **OD exam:** Additoinal Coverage adjacent to N2H nozzle.
V-2-A	Vert @ 45°	91	No Access	91	**ID exam:** Limited by Nozzle N16 A @ 40 degrees **OD exam:** No Access.

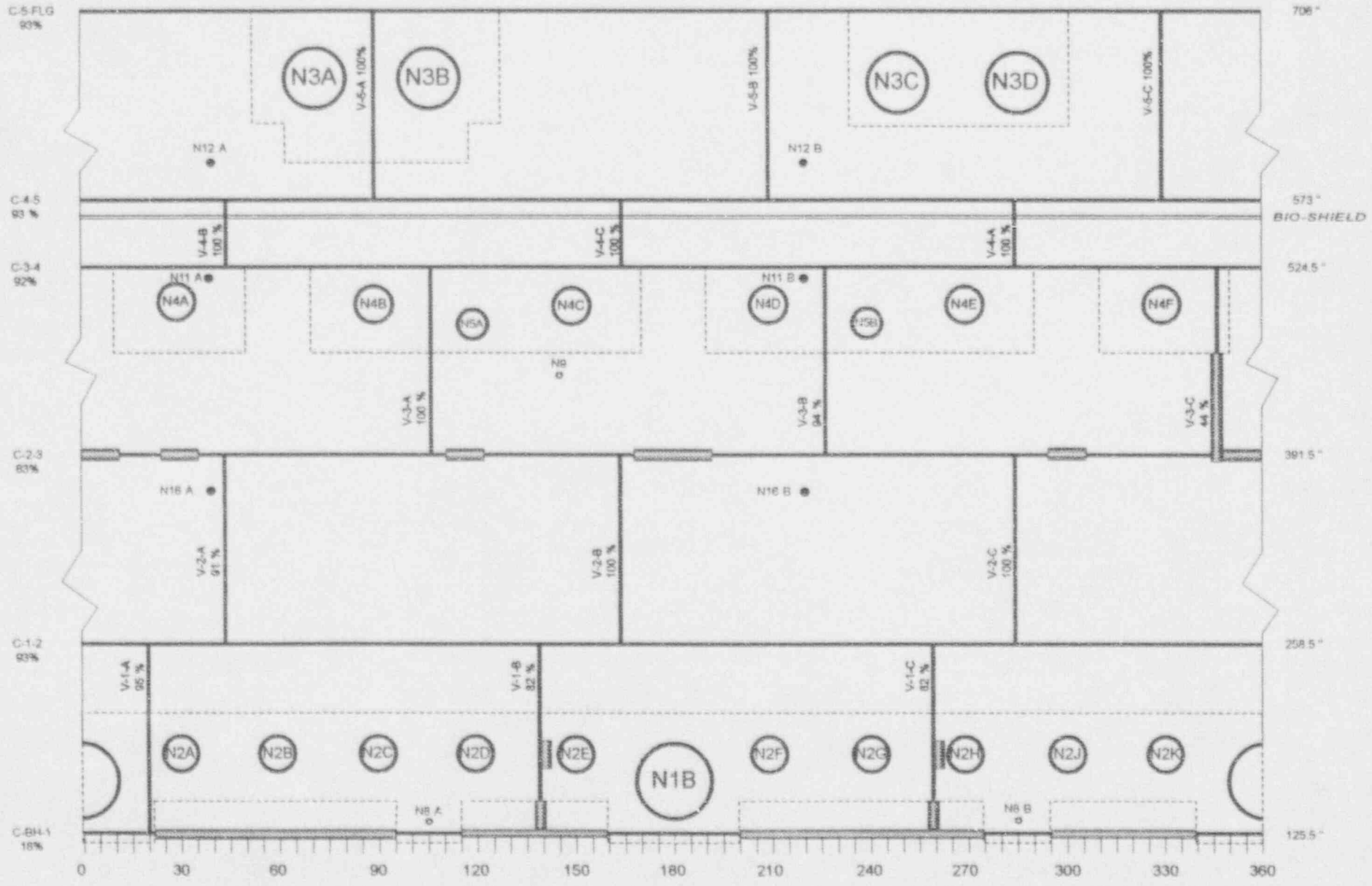
RPV Examination Coverage for Browns Ferry - Unit 2

Weld Number	Weld Type	ID ASME Coverage %	OD Access /Coverage %	Total ASME Coverage %	Comments
V-2-B	Vert @ 165°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-2-C	Vert @ 285°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-3-A	Vert @ 107°	70	30	100	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** Removal of RIP P10 & Q11 required for coverage.
V-3-B	Vert @ 227°	65	29	94	**ID exam:** Limited by Feedwater Sparger, Core Spray piping, N11 B @ 220 Degrees. **OD exam:** Limited due to proximity of N11B nozzle @ 220 Degrees. Removal of RIP P21, Q22 & Q23 are required for coverage.
V-3-C	Vert @ 347°	26	18	44	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** Removal of RIP P32 & Q34 is required for coverage.
V-4-A	Vert @ 45°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-4-B	Vert @ 165°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-4-C	Vert @ 285°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-5-A	Vert @ 90°	86	14	100	**ID exam:** Steam Dryer Support Bracket @ 94 Degrees. **OD exam:** Removal of RIP T-5 required for coverage.
V-5-B	Vert @ 210°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-5-C	Vert @ 330°	100	Not Needed	100	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** No Exam Needed

Limitation Summary for Browns Ferry, Unit 2 - RPV Seam Welds with < 90% ASME Coverage

Weld Number	Weld Type	Total ASME Coverage %	Cause for Limitations
C-BH-1	Circ	18	**ID exam :** The Pioneer manipulator design will not allow belt extension to reach the examination area for this weld. **OD exam:** Access limited to area beneath the N1 & N8 nozzles. Additional weld coverage is restricted due to non-removable "D" & "E" insulation panels.
C-2-3	Circ	63	**ID exam:** Restricted by Guide Rods @ 0 & 180 degrees, Core Spray Downcomers @ 172.5, 187.5, 352.5 & 7.5 degrees, and Surveillance Specimen Holders @ 30, 120, & 300 degrees. **OD exam:** Restricted by non-removable "M" Insulation panels, and proximity of the Bio-shield.
V-1-B	Vert @ 140°	82	**ID exam:** Resricted by proximity of Nozzle N2 E @ 150 degrees, and Pioneer vertical extension design. **OD exam:** Restricted by non-removable Insulation Panel (E8 panel), and proximity of Nozzle N2 E.
V-1-C	Vert @ 260°	82	**ID exam:** Restricted by proximity of Nozzle N2 H @ 270 Degrees, and Pioneer vertical extension design. **OD exam:** Restricted by non-removable Insulation Panel (E 16 panel), and proximity of Nozzle N2 H.
V-3-C	Vert @ 347°	44	**ID exam:** Restricted by Feedwater Sparger & Core Spray piping adjacent to the weld **OD exam:** Restricted by non-removable insulation panels M18, N18 & O18.

Browns Ferry, Unit 2 - ASME Coverage - RPV Seam Welds



Key:
- Weld Location
- Areas Accessible from OD
- No or Limited Examination for Welds < 90% ASME Coverage

RPV Examination Coverage for Browns Ferry - Unit 3

Weld Number	Weld Type	ID ASME Coverage %	OD Access /Coverage %	Total ASME Coverage %	Comments
C-BH-1	Circ	0	18	18	ID exam : No Access OD exam: Access limited to area beneath the N1 & N8 nozzles.
C-1-2	Circ	93	No Access	93	ID exam: Limited by surveillance specimen holders @ 30, 120 & 300 degrees. OD exam: No Access.
C-2-3	Circ	63	No Access	63	ID exam: Limited by Guide Rods @ 0 & 180 degrees, Core Spray Downcomers @ 172.5, 187.5, 352.5 & 7.5 degrees, and Surveillance Specimen Holders @ 30, 120, & 300 degrees. OD exam: No Access.
C-3-4	Circ	90	2	92	ID exam: Limited by Guide Rods @ 0 & 180 degrees, Nozzle N11 A @ 40 degrees and N11 B @ 220 degrees. OD exam: Requires removal of "Q" panels adjacent to the N 11 A & B Nozzles.
C-4-5	Circ	93	*	93	ID exam: L ited by Guide Rods @ 0 & 180 degrees. OD exam: * No additional coverage can be obtained.
C-5-FLG	Circ	93	*	93	ID exam: Limited by Guide Rods @ 0 & 180 degrees OD exam: * No additional coverage can be obtained.
V-1-A	Vert @ 20°	76	19	95	ID exam: Limited by Nozzle N2 A @ 30 degrees, and vertical travel mechanism limitation. OD exam: Removal of RIP E-2 & G-2 required for coverage.
V-1-B	Vert @ 140°	76	6	82	ID exam: Limited by Nozzle N2 E @ 150 degrees, and vertical travel mechanism limitation. OD exam: Additional Coverage adjacent to N2E nozzle.
V-1-C	Vert @ 260°	76	6I	82	ID exam: Limited by Nozzle N2 H @ 270 Degrees, and vertical travel mechanism limitation. OD exam: Additional Coverage adjacent to N2H nozzle.
V-2-A	Vert @ 45°	91	No Access	91	ID exam: Limited by Nozzle N16 A @ 40 degrees OD exam: No Access.
Weld Number	Weld Type	ID ASME Coverage %	OD Access /Coverage %	Total ASME Coverage %	Comments

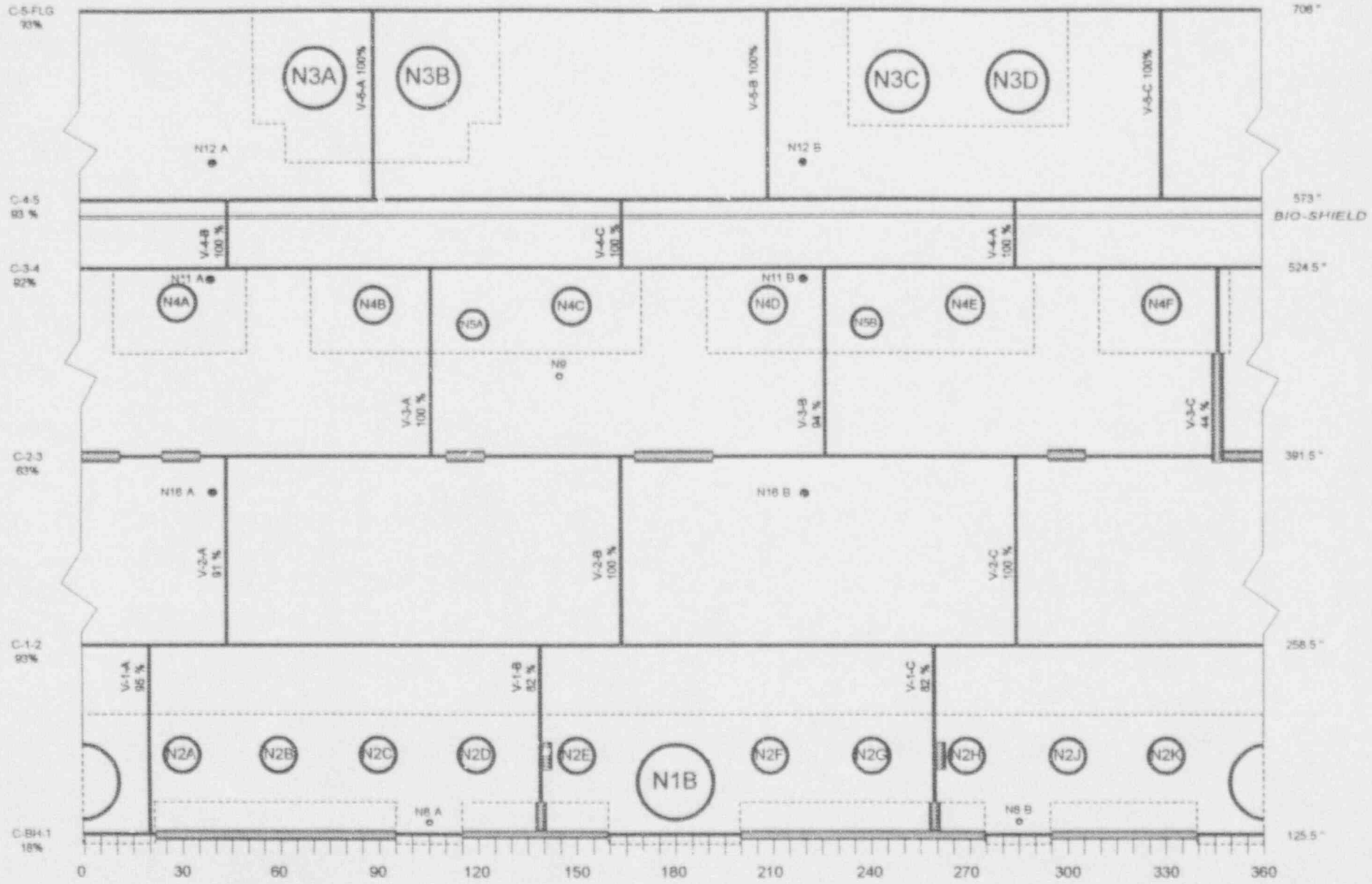
RPV Examination Coverage for Browns Ferry - Unit 3

V-2-B	Vert @ 165°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-2-C	Vert @ 285°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-3-A	Vert @ 107°	70	Yes	100	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** Removal of RIP P10 & Q11 required for coverage.
V-3-B	Vert @ 227°	65	Yes	94	**ID exam:** Limited by Feedwater Sparger, Core Spray piping, N11 B @ 220 Degrees. **OD exam:** Limited due to proximity of N11B nozzle @ 220 Degrees. Removal of RIP P21, Q22 & Q23 are required for coverage.
V-3-C	Vert @ 347°	26	18	44	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** Removal of RIP P32 & Q34 is required for coverage.
V-4-A	Vert @ 285°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-4-B	Vert @ 45°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-4-C	Vert @ 165°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-5-A	Vert @ 90°	86	14	100	**ID exam:** Steam Dryer Support Bracket @ 94 Degrees. **OD exam:** Removal of RIP T-5 required for coverage.
V-5-B	Vert @ 210°	100	Not Needed	100	**ID exam:** No Limitations. **OD exam:** No Exam Needed.
V-5-C	Vert @ 330°	100	Not Needed	100	**ID exam:** Limited by Feedwater Sparger & Core Spray piping. **OD exam:** No Exam Needed.

Limitation Summary for Browns Ferry, Unit 3 - RPV Seam Welds with < 90% ASME Coverage

Weld Number	Weld Type	Total ASME Coverage %	Cause for Limitations
C-BH-1	Circ	18	**ID exam :** The Pioneer manipulator design will not allow belt extension to reach the examination area for this weld. **OD exam:** Access limited to area beneath the N1 & N8 nozzles. Additional weld coverage is restricted due to non-removable "D" & "E" insulation panels.
C-2-3	Circ	63	**ID exam:** Restricted by Guide Rods @ 0 & 180 degrees, Core Spray Downcomers @ 172.5, 187.5, 352.5 & 7.5 degrees, and Surveillance Specimen Holders @ 30, 120, & 300 degrees. **OD exam:** Restricted by non-removable "M" Insulation panels, and proximity of the Bio-shield.
V-1-B	Vert @ 140°	82	**ID exam:** Resricted by proximity of Nozzle N2 E @ 150 degrees, and Pioneer vertical extension design. **OD exam:** Restricted by non-removable Insulation Panel (E8 panel), and proximity of Nozzle N2 E.
V-1-C	Vert @ 260°	82	**ID exam:** Restricted by proximity of Nozzle N2 H @ 270 Degrees, and Pioneer vertical extension design. **OD exam:** Restricted by non-removable Insulation Panel (E 16 panel), and proximity of Nozzle N2 H.
V-3-C	Vert @ 347°	44	**ID exam:** Restricted by Feedwater Sparger & Core Spray piping adjacent to the weld **OD exam:** Restricted by non-removable insulation panels M18, N18 & O18.

Browns Ferry, Unit 3 - ASME Coverage - RPV Seam Welds



Key: Weld Location

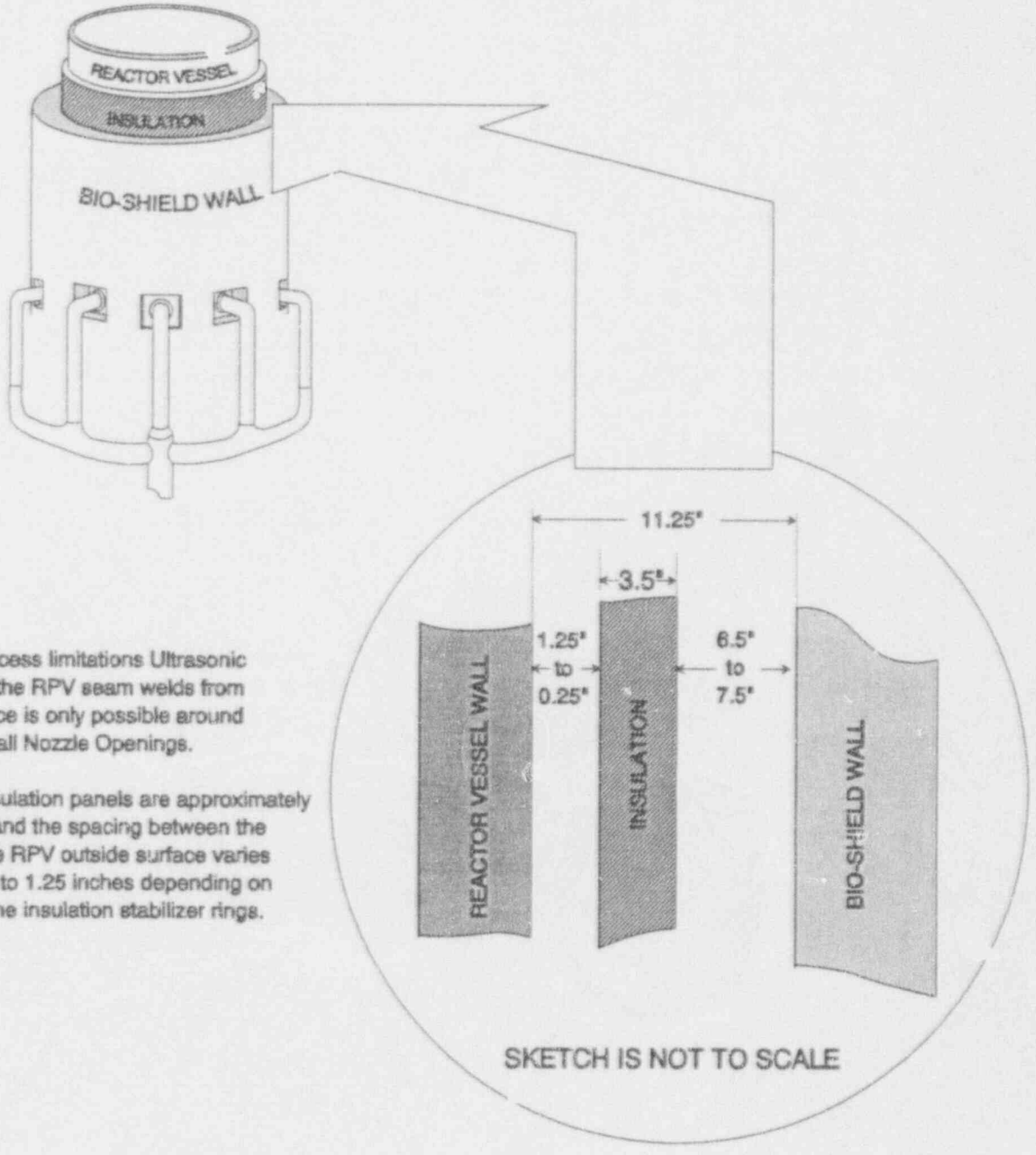
Areas Accessible from OD

No or Limited Examination for Welds < 90% ASME Coverage

ENCLOSURE 3
BROWNS FERRY UNITS 1, 2, AND 3
REACTOR VESSEL SKETCH

REACTOR VESSEL WELD INSPECTION OUTSIDE INTERFERENCES FROM BIO-SHIELD WALL & INSULATION

3/1/93



Note1: Due to access limitations Ultrasonic Examinations of the RPV seam welds from the outside surface is only possible around the Bio-Shield Wall Nozzle Openings.

Note 2: Mirror insulation panels are approximately 3.5 inches thick and the spacing between the insulation and the RPV outside surface varies from 0.25 inches to 1.25 inches depending on the proximity of the insulation stabilizer rings.

ENCLOSURE 4
COMMITMENT SUMMARY

ENCLOSURE 4

COMMITMENT SUMMARY

BFN Unit 2 Reactor Pressure Vessel welds examination will be performed during the second inspection interval.