

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

January 29, 2001

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 01-023
NLOS/ETS
Docket No. 50-338
License No. NPF-4

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT 1
ASME SECTION XI INSERVICE INSPECTION PROGRAM RELIEF REQUEST
NDE PARTIAL-2

During the spring refueling outage, North Anna Power Station Unit 1 completed examinations in the first period of the third ten-year interval. Examinations were conducted to the requirements of the 1989 Edition of ASME Section XI. Due to interferences and weld geometry complete examination of several welds was not achieved.

Pursuant to 10 CFR 50.55a(g)(5), relief is requested from certain requirements of ASME Section XI Code associated with examinations where only partial coverage could be obtained. Relief request NDE Partial-2 is attached and provides the basis of this request.

This relief request has been approved by the Station Nuclear Safety and Operating Committee. If you have any additional questions concerning this request, please contact us.

Very truly yours,



Leslie N. Hartz
Vice President - Nuclear Engineering and Services

Attachment

Commitments made in this letter:

None

AD47

cc: U. S. Nuclear Regulatory Commission
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North Anna Power Station

Mr. M. Grace
Authorized Nuclear Inspector
North Anna Power Station

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Attachment

Relief Request NDE Partial-2

**Virginia Power Electric and Power
(Dominion)
North Anna Power Station Unit 1**

Virginia Electric and Power Company (Dominion)
North Anna Power Station, Unit 1
Third Ten Year Interval
Request for Relief Number NDE-Partial-2

I. IDENTIFICATION OF COMPONENTS

<u>Mark/Weld #</u>	<u>Line #</u>	<u>Drawing #</u>	<u>Class</u>
1	1-SI-TK-2	11715-WMKS-SI-TK-2	2
72H	14"-RH-2-602-Q2	11715-WMKS-0113A-1	2
WS-03	1-CH-P-1A	11715-WMKS-CH-P-1A	2
WS-04	1-CH-P-1A	11715-WMKS-CH-P-1A	2
11	3"-CH-81-1502-Q2	11715-WMKS-0111XA	2
64	14"-RH-3-602-Q2	11715-WMKS-0113A-2	2

II. CODE REQUIREMENTS

The 1989 Edition of ASME Section XI, Table IWC-2500-1, Examination C-A, Item Number C1.20, Examination C-C, Item Numbers C3.20 and C3.30, and Examination C-F-1, Item Number C5.11 and C5.21 do not allow any limitations to the required volumetric and surface examinations. Code Case N-460, Alternative Examination Coverage for Class 1 and Class 2 Welds, allows a reduction in coverage if it is less than 10%.

III. CODE REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

Relief is requested from examining the third-interval Code required volumetric and surface examinations for the identified head-to-shell, circumferential and tee valve welds, and welded supports. Relief is also requested for the pre-service examination of Weld 11.

IV. BASIS FOR RELIEF

Welds 1, 72H, WS-03, WS-04, 11, and 64 have been examined to the extent practical as required by the Code. Due to weld joint geometry and obstructions the reduction in coverage for the listed components was greater than 10%. Tables NDE-Partial-2-1, 2, 3 and 4 are provided detailing the limitations experienced. Amplifying sketches are also provided.

V. ALTERNATE PROVISIONS

It is proposed that the examinations already completed at the reduced coverage be counted as meeting the Code requirements.

VI. STATUS

N1-003, Partial-2

**Table NDE-Partial-2-1
North Anna Unit 1
Examination Coverage Estimates**

Mark/Weld Number	Category	Item Number	Scan Coverage %	Surface Coverage %	Reason for Partial	Sketch
1	C-A	C1.20	78		Support Legs 3 and 4	1
72H	C-C	C3.20		50	Support and Ceiling Interference	2 and 3
WS-03	C-C	C3.30		78	Unable to Access Bottom of Welded Support and Basemetal Due to Flange Connection	4
WS-04	C-C	C3.30		78	Unable to Access Bottom of Support at Flange Radius Area	4
11	C-F-1	C5.21	87		Weld joint configuration and the short distance between the weld and the branch of the Tee	5
64	C-F-1	C5.11	72		Valve to elbow configuration	6

**Table NDE-Partial-2-2
North Anna Unit 1
Examination Scan Coverage Estimates (Boron Injection Tank)
Weld 1**

Beam Angle (degrees)	Exam Area	Scan Direction	Scan %
0	Base and Weld	0	82
45 and 60	Base	2	96
45 and 60	Base	5	97
45	Weld	2	58
45	Weld	5	76
45	Weld	7 & 8	77
60	Weld	2	61
60	Weld	5	76
60	Weld	7 & 8	77
			Avg. 78

**Table NDE-Partial-2-3
North Anna Unit 1
Examination Scan Coverage Estimates (1-CH-279)
Weld 11**

Scan Direction	Scan %
2	75
5	75
7	100
8	100
	Avg. 87

UT Scan Direction Definitions

- 2 - Axial scan, 180 degrees from isometric flow direction.
- 5 - Axial scan, the same direction as the isometric flow direction.
- 7 - Circumferential scan, clockwise rotation when viewing in the direction of isometric flow.
- 8 - Circumferential scan, counterclockwise rotation when viewing in the direction of isometric flow.

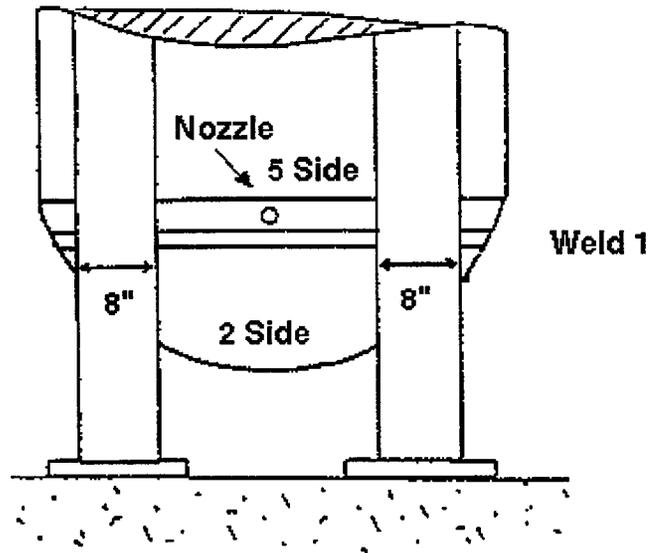
Table NDE-Partial-2-4
North Anna Unit 1
Examination Scan Coverage Estimates (1-RH-1)
Weld 64

Scan Direction	Scan %
2	45.5
5	40.5
7	100
8	100
Average	71.5

UT Scan Direction Definitions

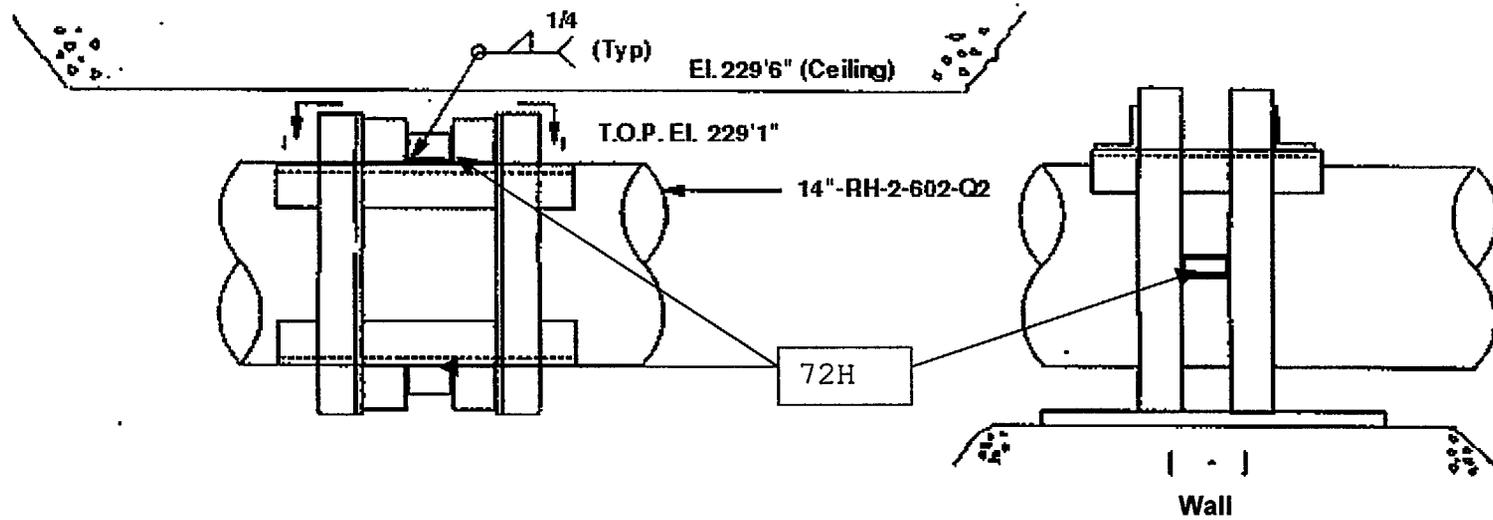
- 2 - Axial scan, 180 degrees from isometric flow direction.
- 5 - Axial scan, the same direction as the isometric flow direction.
- 7 - Circumferential scan, clockwise rotation when viewing in the direction of isometric flow.
- 8 - Circumferential scan, counterclockwise rotation when viewing in the direction of isometric flow.

Sketch NDE-Partial-2-1
North Anna Unit 1
1-SI-TK-2
Weld 1



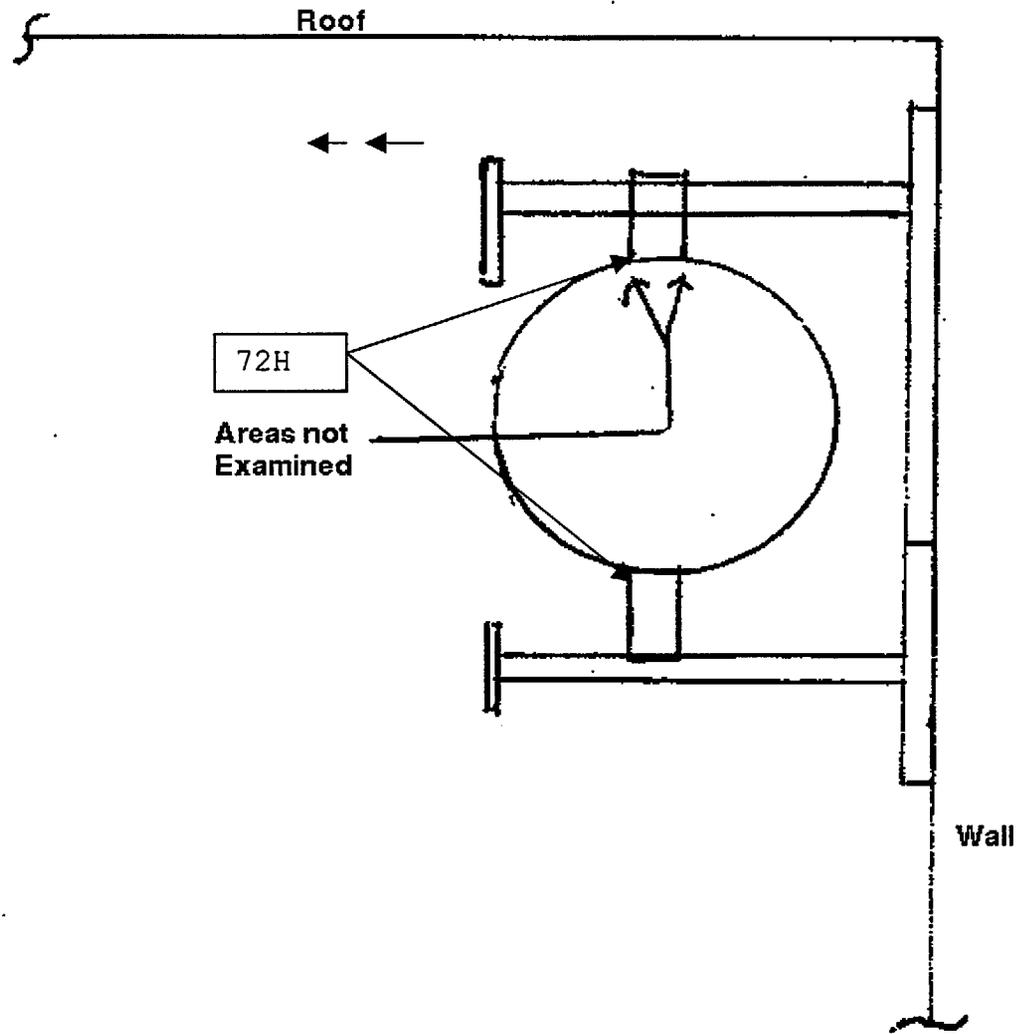
Sketch NDE-Partial-2-2
North Anna Unit 1
14"-RH-2-602-Q2
Weld 72H

Top Lug of Integral Attachment is
Inaccessible for PT Examination

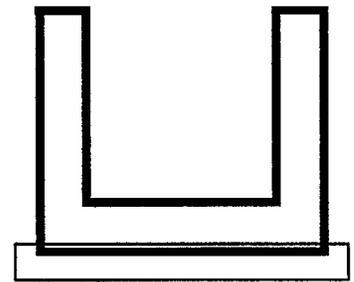
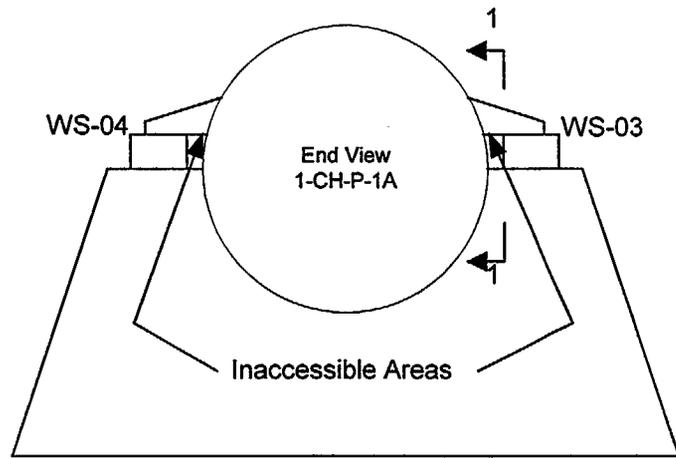


See page 7 for end detail

Sketch NDE-Partial-2-3
North Anna Unit 1
Weld 72H



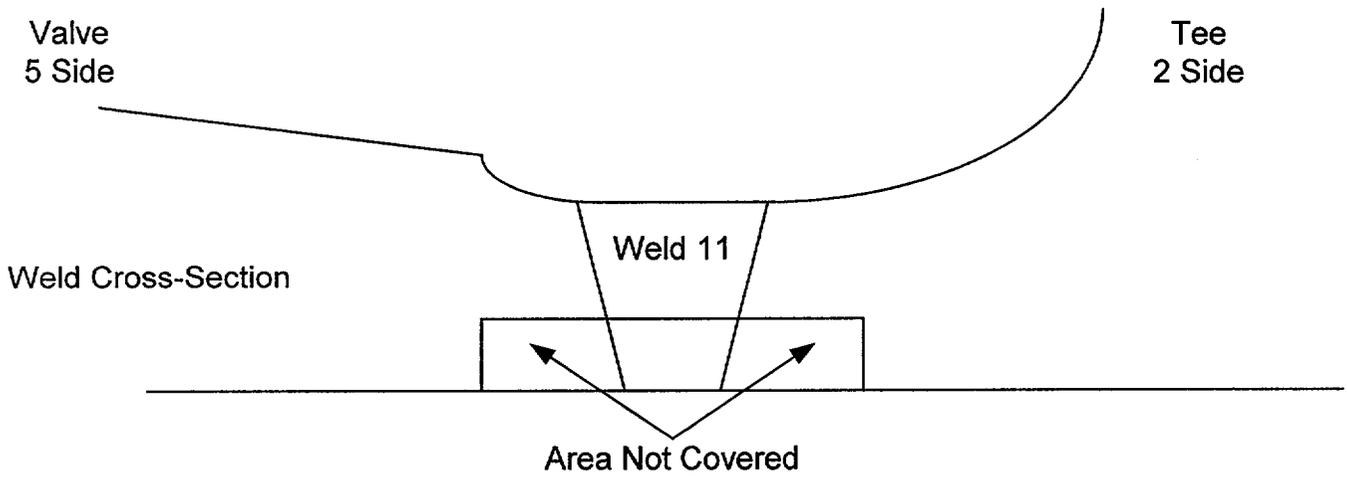
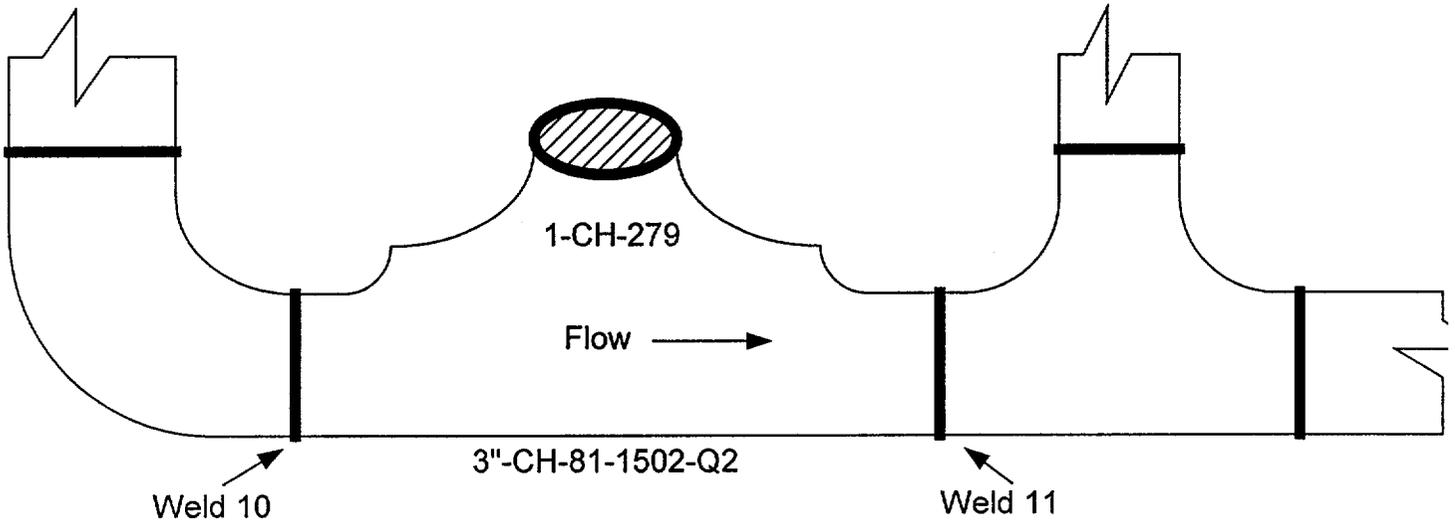
Sketch NDE-Partial-2-4
North Anna Unit 1
1-CH-P-1A
WS-03 and WS-04



Inaccessible Area is the area
inside the box

1 - 1

Sketch NDE-Partial-2-5
North Anna Unit 1
1-CH-279
Weld 11



Sketch NDE-Partial-2-6
 North Anna Unit 1
 14-RH-3-602-Q2
 Weld 64

Valve

Elbow

Typical configuration
 45° to 135° (Extradose)
 100% Coverage

45°

Flow →

Typical configuration
 225° to 315° (Intradose)
 Scan 2 - 14%
 Scan 5 - 12%

Typical configuration
 315° to 0° to 45°
 135° to 225°
 Scan 2 - 68%
 Scan 5 - 50%

Weld Cross-Sections



Areas not examined (not to scale)