

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

April 24, 2000

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

Serial No. 00-215
NL&P/ETS
Docket No. 50-339
License Nos. NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT 2
ASME SECTION XI INSERVICE INSPECTION PROGRAM RELIEF REQUESTS

During the recent refueling outage, North Anna Power Station Unit 2 completed examinations in the third period of the second ten-year interval. Examinations were conducted to the requirements of the 1986 Edition of ASME Section XI. In several instances interferences or weld geometry prohibited the complete examination of the welds.

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 requests NDE-043, NDE-044, and NDE-045, are attached and provide the basis of this request.

These relief requests have been approved by the Station Nuclear Safety and Operating Committee. If you have any additional questions concerning these requests, please contact us.

Very truly yours,



Leslie N. Hartz
Vice President - Nuclear Engineering and Services

Attachment

Commitments made in this letter:

None

A0477/1

cc: U. S. Nuclear Regulatory Commission
Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30303

Mr. M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station

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

Mr. J. A. Reasor
Old Dominion Electric Cooperative
Innsbrook Corporate Center
4210 Dominion Blvd.
Glen Allen, Virginia 23260

Attachment

Relief Requests NDE-43, 44, and 45

**Virginia Power Electric and Power
North Anna Power Station Unit 2**

Virginia Electric and Power Company
North Anna Power Station, Unit 2
Second Ten Year Interval
Request for Relief Number NDE-43

I. IDENTIFICATION OF COMPONENTS

<u>Mark/Weld #</u>	<u>Line #</u>	<u>Drawing #</u>	<u>Class</u>
13	NA	12050-WMKS-RC-E-2	1

II. CODE REQUIREMENTS

The 1986 edition of ASME Section XI, Tables IWB-2500-1, examination Category B-D, Item Number B3.110 does 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 Code required volumetric examination for the identified nozzle-to-head weld.

IV. BASIS FOR RELIEF

Weld 13 has been examined to the extent practical as required by the Code. Due to weld joint geometry the reduction in coverage for the listed components was greater than 10%. The weld geometry is due to the weld configuration and the transition from the nozzle to the pressurizer head. The nozzle is situated on the pressurizer in such a manner that the angle between the nozzle and the pressurizer head is not perpendicular. The intrados of this angle is the major contributor to the reduced coverage experienced because it limits search unit manipulation. The weld was examined to the maximum extent possible by supplementing the examination with ¼", 45° and 60° transducers. Table NDE-43-1, is provided detailing the limitations experienced. An amplified sketch is also provided.

IV. ALTERNATE PROVISIONS

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

1. A visual (VT-2) examination will be performed during the normally scheduled system leakage test each refueling outage;

2. Technical Specifications require that the reactor coolant system leak rate be limited to one gallon per minute unidentified leakage. This value is calculated at least once per 72 hours; and
3. The containment atmosphere particulate radioactivity is monitored every 12 hours.

The proposed alternative examinations stated above will ensure that the overall level of plant quality and safety will not be compromised.

VI. STATUS

Pending

**Table NDE-43-1
North Anna Unit 2
Pressurizer Relief Nozzle to Head Weld
Examination Coverage Estimates
Category B-D, Item B3.110**

Mark/Weld #	Beam Angle	Exam Area	Scan Direction	% Examined	Reason For Partial	Sketch #
13	0	Weld & Base Metal	0	85	Weld joint configuration	1*
	45	Weld & Base Metal	2	99	Weld joint configuration	
	45	Weld & Base Metal	5	76	Weld joint configuration	
	45	Weld & Base Metal	7	100		
	45	Weld & Base Metal	8	100		
	60	Weld & Base Metal	2	99	Weld joint configuration	
	60	Weld & Base Metal	5	50	Weld joint configuration	
	60	Weld & Base Metal	7	100		
	60	Weld & Base Metal	8	100		
			Coverage	89.9%		

UT Scan Direction Definitions

2 - Axial scan head side of weld

5 - Axial scan nozzle side of weld

7 - Circumferential scan, clockwise (when facing the head)

8 - Circumferential scan, counterclockwise (when facing the head)

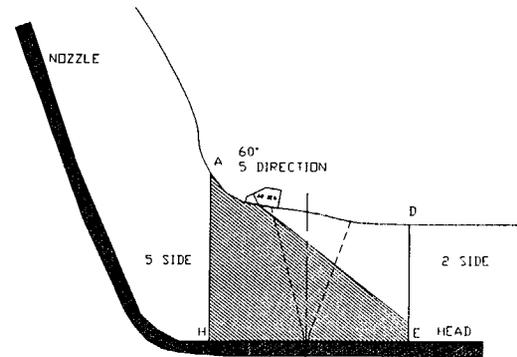
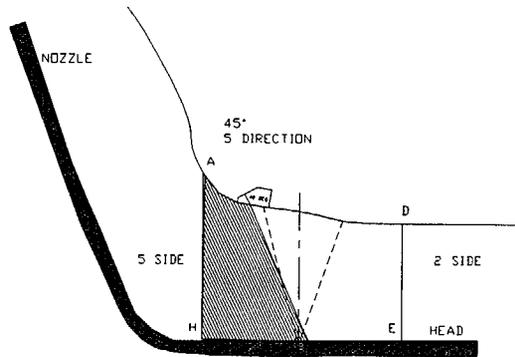
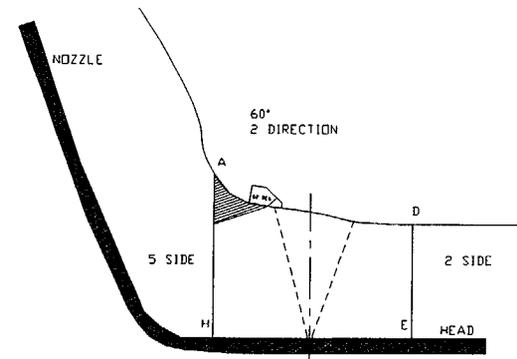
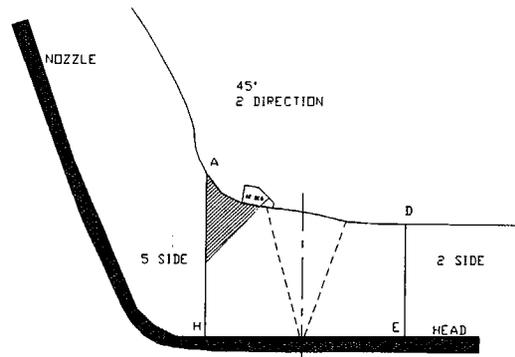
*Note: Sketch 1 is not to scale and is provided for illustration only.

12050-WMKS-RC-E-2

WELD 13

SKETCH 1

▨ EXAMINATION VOLUME NOT EXAMINED



Virginia Electric and Power Company
North Anna Power Station, Unit 2
Second Ten Year Interval
Request for Relief Number NDE-44

I. IDENTIFICATION OF COMPONENTS

<u>Mark/Weld #</u>	<u>Line #</u>	<u>Drawing #</u>	<u>Class</u>
3	NA	12050-WMKS-SI-TK-2	2
4	NA	12050-WMKS-SI-TK-2	2

II. CODE REQUIREMENTS

The 1986 edition of ASME Section XI, Tables IWC-2500-1, examination Category C-B, Item Number C2.21, does 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 Code required volumetric examination for the identified nozzle-to-head welds.

IV. BASIS FOR RELIEF

Welds 3 and 4 have been examined to the extent practical as required by the Code. Due to weld joint geometry the reduction in coverage for the listed components was greater than 10%. Tables NDE-44-1 and 2 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

Pending

Table NDE-44-1
North Anna Unit 2
Boron Injection Tank Inlet Nozzle to Head Weld
Examination Coverage Estimates
Category C-B, Item C2.21

Mark/Weld #	Beam Angle	Exam Area	Scan Direction	% Examined	Reason For Partial	Sketch #
3	0	Weld & Base Metal	-	50	Weld joint configuration	1*
	45	Weld & Base Metal	2	91	Weld joint configuration	
	45	Weld & Base Metal	5	0	Weld joint configuration	
	45	Weld & Base Metal	7	15	Weld joint configuration	
	45	Weld & Base Metal	8	15	Weld joint configuration	
	60	Weld & Base Metal	2	100		
	60	Weld & Base Metal	5	0	Weld joint configuration	
	60	Weld & Base Metal	7	15	Weld joint configuration	
	60	Weld & Base Metal	8	15	Weld joint configuration	
				Coverage	33.4%	

UT Scan Direction Definitions

- 2 - Axial scan head side of weld
- 5 - Axial scan nozzle side of weld
- 7 - Circumferential scan, clockwise (rotation when facing the head)
- 8 - Circumferential scan, counterclockwise (rotation when facing the head)

*Note: Sketch 1 is not to scale and is provided for illustration only.

12050-WMKS-SI-TK-2

Weld 3

Sketch 1

▨ Examination volume not examined

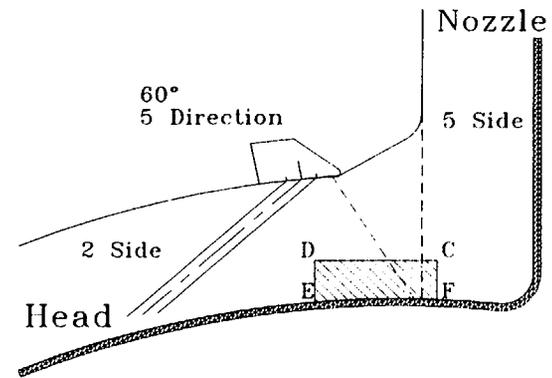
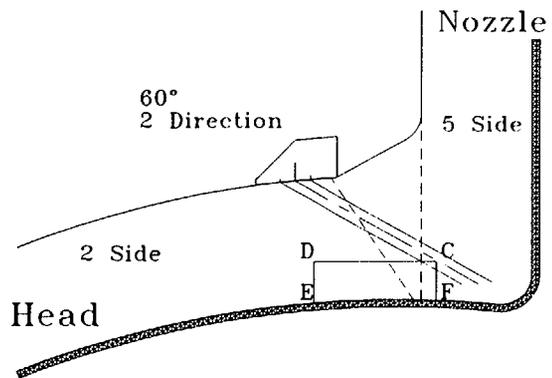
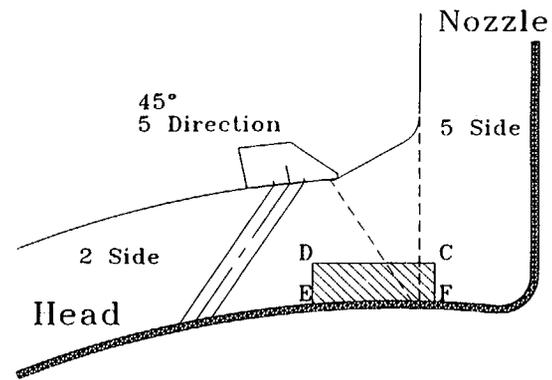
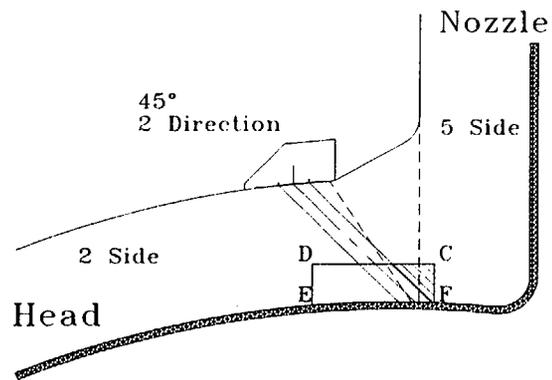


Table NDE-44-2
North Anna Unit 2
Boron Injection Tank Outlet Nozzle to Head Weld
Examination Coverage Estimates
Category C-B, Item C2.21

Mark/Weld #	Beam Angle	Exam Area	Scan Direction	% Examined	Reason For Partial	Sketch #
4	0	Weld & Base Metal	-	50	Weld joint configuration	2*
	45	Weld & Base Metal	2	91	Weld joint configuration	
	45	Weld & Base Metal	5	0	Weld joint configuration	
	45	Weld & Base Metal	7	15	Weld joint configuration	
	45	Weld & Base Metal	8	15	Weld joint configuration	
	60	Weld & Base Metal	2	100		
	60	Weld & Base Metal	5	0	Weld joint configuration	
	60	Weld & Base Metal	7	15	Weld joint configuration	
	60	Weld & Base Metal	8	15	Weld joint configuration	
			Coverage	33.4%		

UT Scan Direction Definitions

2 - Axial scan head side of weld

5 - Axial scan nozzle side of weld

7 - Circumferential scan, clockwise (when facing the head)

8 - Circumferential scan, counterclockwise (when facing the head)

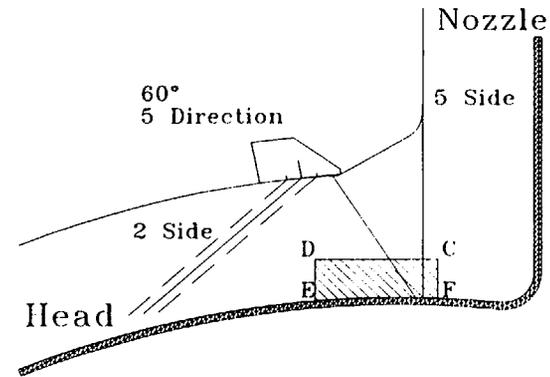
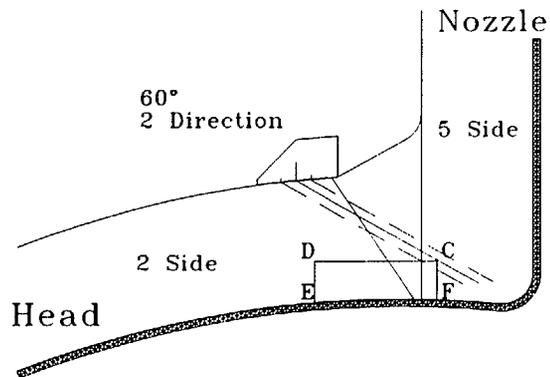
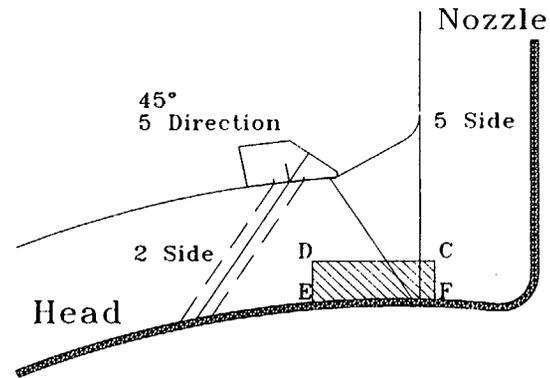
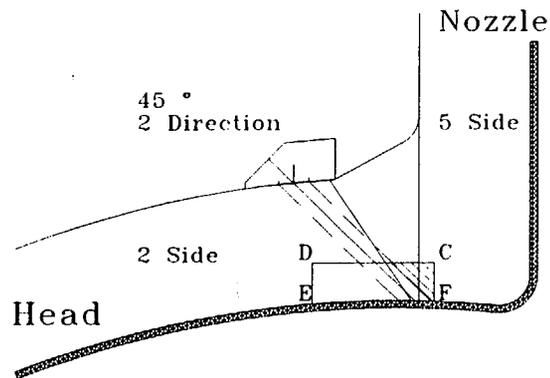
*Note: Sketch 2 is not to scale and is provided for illustration only.

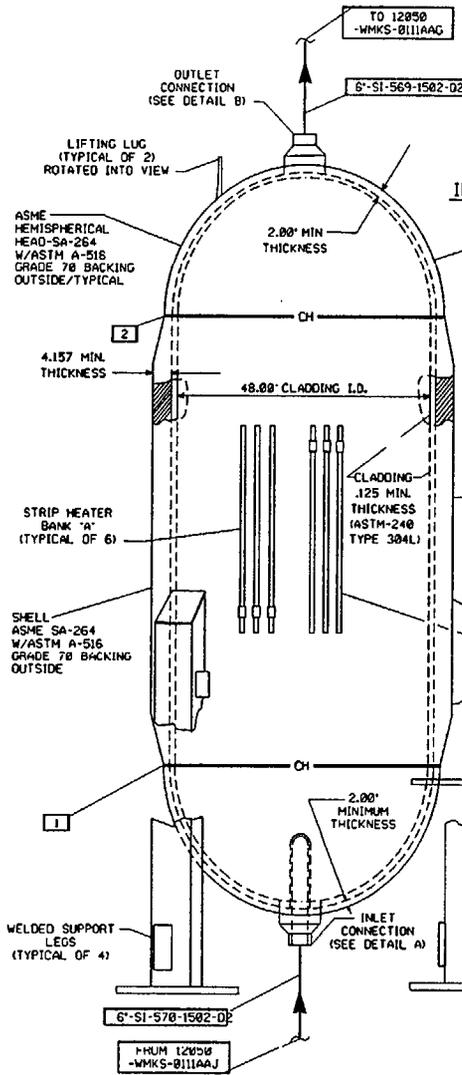
12050-WMKS-SI-TK-2

Weld 4

Sketch 2

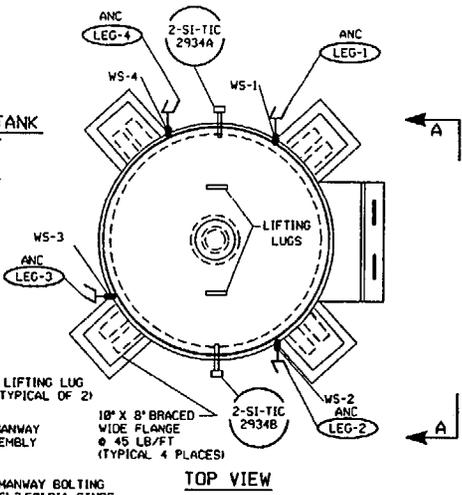
 Examination volume not examined



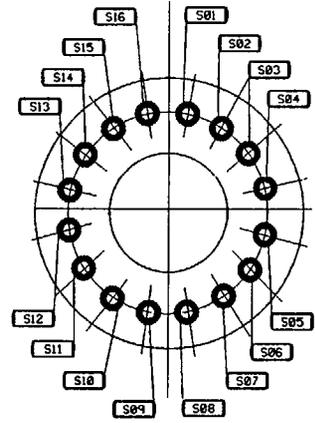


GENERAL ELEVATION

BORON INJECTION TANK

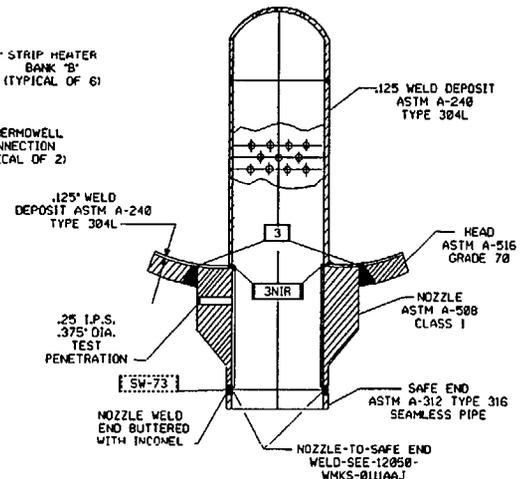


TOP VIEW

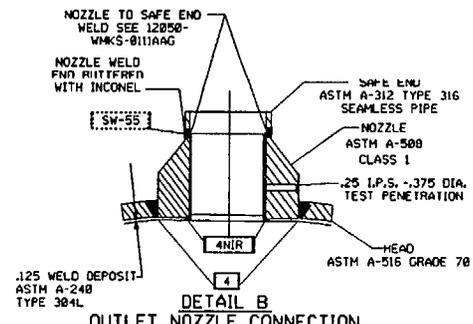


SECTION A-A: MANWAY BOLTING

16 STUDS 2.50" DIA.-ASTM A-193 GRADE B7
16 NUTS 2.50" DIA.-ASTM A-194 GRADE 2H



**DETAIL A
INLET NOZZLE CONNECTION**



**DETAIL B
OUTLET NOZZLE CONNECTION**

Virginia Electric & Power Company
North Anna Power Station Unit 2
Second 10 Year Interval
Request for Relief Number NDE-45

I. IDENTIFICATION OF COMPONENTS

<u>Mark/Weld #</u>	<u>Line #</u>	<u>Drawing #</u>	<u>Class</u>
8	31"-RC-402-2501R-Q1	12050-WMKS-0109E-1	1
21	27½"-RC-406-2501R-Q1	12050-WMKS-0109F-1	1

II. IMPRACTICABLE CODE REQUIREMENTS

The 1986 edition of ASME Section XI, Table IWB-2500-1, examination Category B-J, Item Number B9.11 does not allow any limitations to the required volumetric or 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 REQUIREMENT FROM WHICH RELIEF IS REQUESTED

Relief is requested from examining the Code required volume for the identified pipe-to-pump welds.

IV. BASIS FOR RELIEF

Welds 8 and 21 have been examined to the extent practical as required by the Code. The Code required volumetric examination coverage is reduced due to weld joint geometry, and the material type from which the components are constructed. The scope of volumetric examination coverage completed for the above listed welds is listed in Tables NDE-45-1 and 2. Sketches 1 and 2 are provided detailing the limitations experienced. These welds are classified as terminal ends and are required to be examined by the ISI Program.

V. ALTERNATE PROVISIONS

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

1. A visual (VT-2) examination will be performed during the normally scheduled system leakage test each refueling outage;

2. Technical Specifications require that the reactor coolant system leak rate be limited to one gallon per minute unidentified leakage. This value is calculated at least once per 72 hours; and
3. The containment atmosphere particulate radioactivity is monitored every 12 hours.

The proposed alternative examinations stated above will ensure that the overall level of plant quality and safety will not be compromised.

VI. STATUS

Pending

Table NDE-45-1
North Anna Unit 2
Inlet Pipe to Reactor Coolant Pump Weld
Examination Coverage Estimates
Category B-J, Item B9.11

Mark/Weld #	Beam Angle	Exam Area	Scan Direction	% Examined	Reason For Partial	Sketch #
8	45	Weld & Base Metal	2	0	Weld joint configuration	1*
	45	Weld & Base Metal	5	100		
	45	Weld & Base Metal	7	100		
	45	Weld & Base Metal	8	100		
			Coverage	75%		

UT Scan Direction Definitions

2 - Axial scan, 180° from isometric flow direction (Weld count)

5 - Axial scan, the same direction as the isometric flow (Weld count)

7 - Circumferential scan, clockwise rotation when viewing in the direction of isometric flow

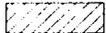
8 - Circumferential scan, counterclockwise rotation when viewing in the direction of isometric flow

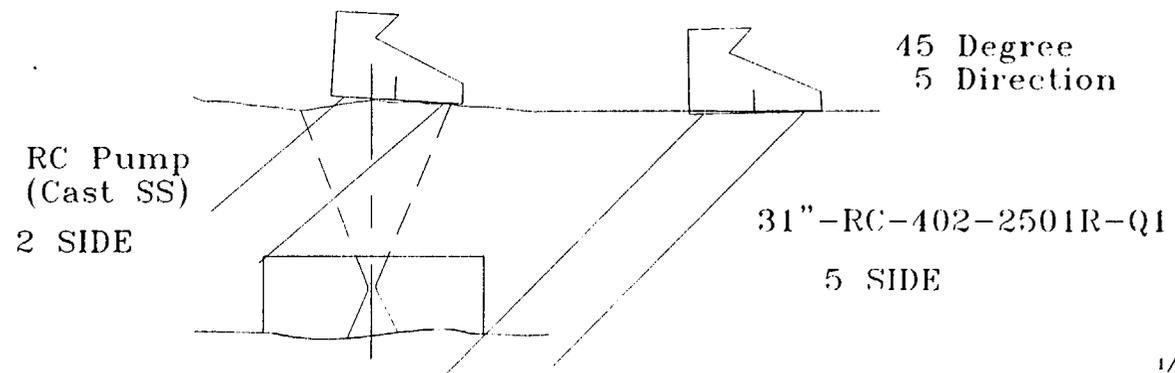
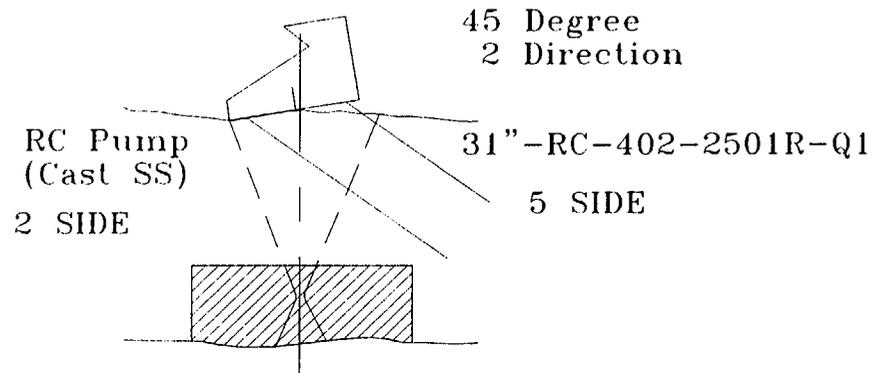
*Note: Sketch 1 is not to scale and is provided for illustration only.

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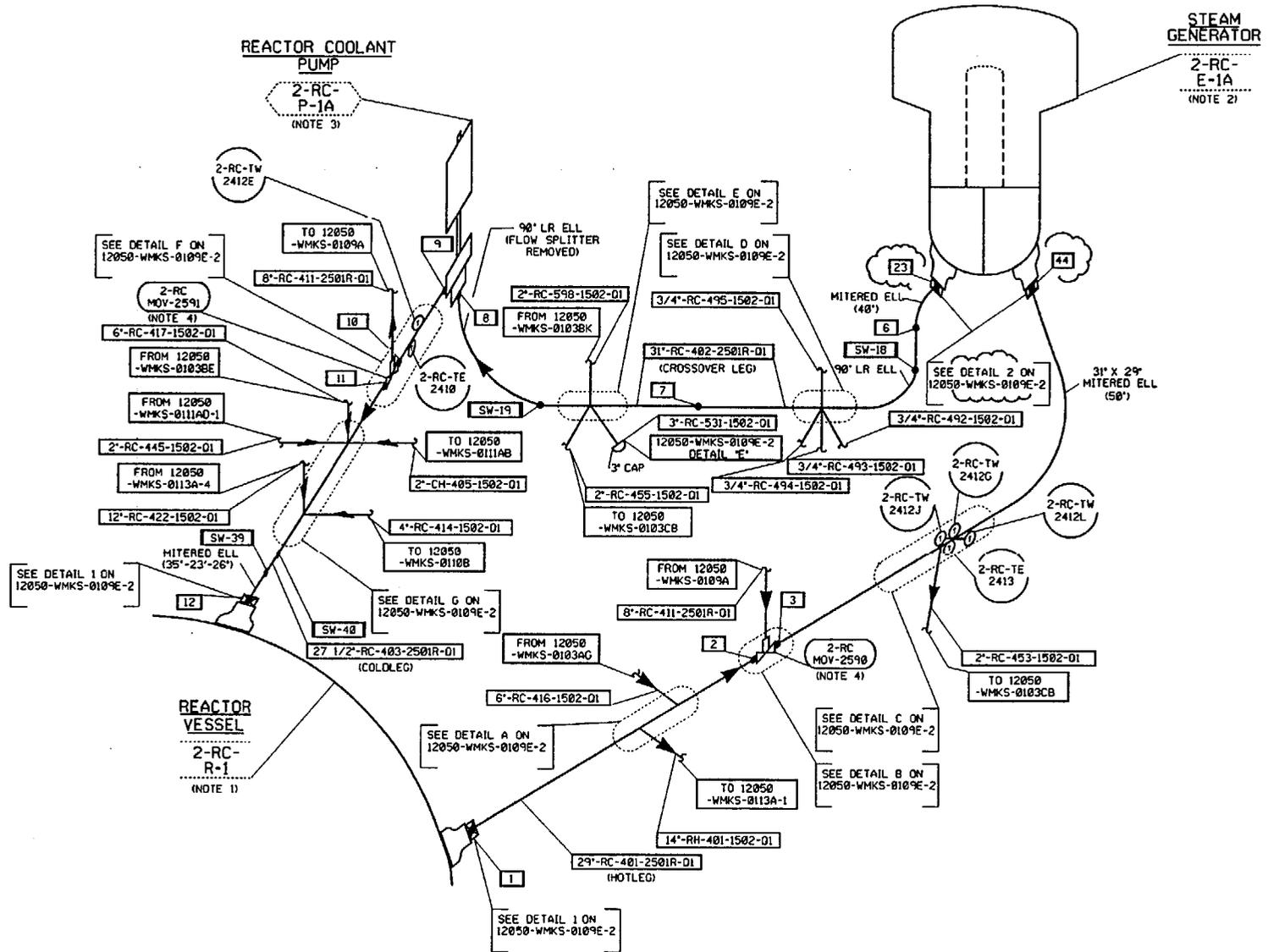
Weld 8

Sketch 1

 Examination volume not examined



1/2 Scale



**Table NDE-45-2
North Anna Unit 2
Reactor Coolant Pump to Discharge Pipe Weld
Examination Coverage Estimates
Category B-J, Item B9.11**

Mark/Weld #	Beam Angle	Exam Area	Scan Direction	% Examined	Reason For Partial	Sketch #
21	45	Weld & Base Metal	2	100		2*
	45	Weld & Base Metal	5	0	Weld joint configuration	
	45	Weld & Base Metal	7	50	Weld joint configuration	
	45	Weld & Base Metal	8	100		
			Coverage	62.5%		

UT Scan Direction Definitions

2 - Axial scan, 180° from isometric flow direction (Weld count)

5 - Axial scan, the same direction as the isometric flow (Weld count)

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

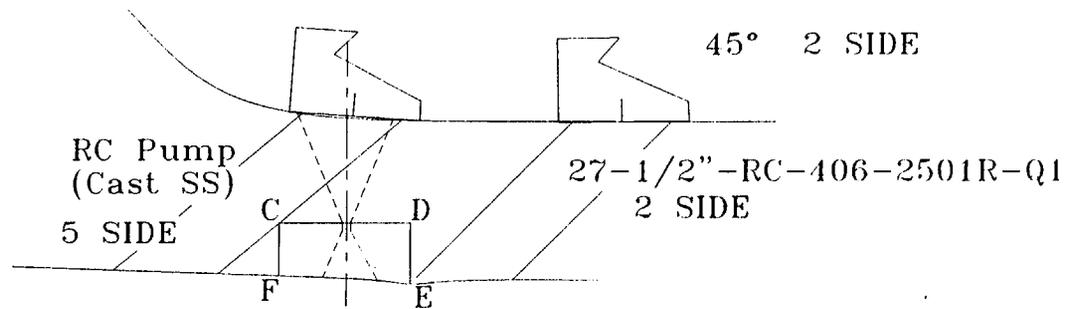
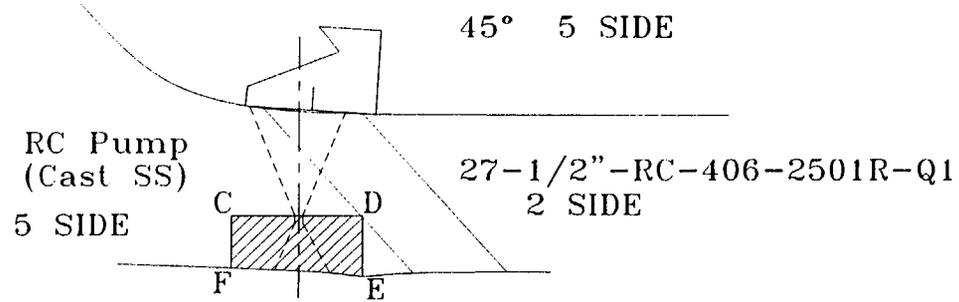
*Note: Sketch 2 is not to scale and is provided for illustration only.

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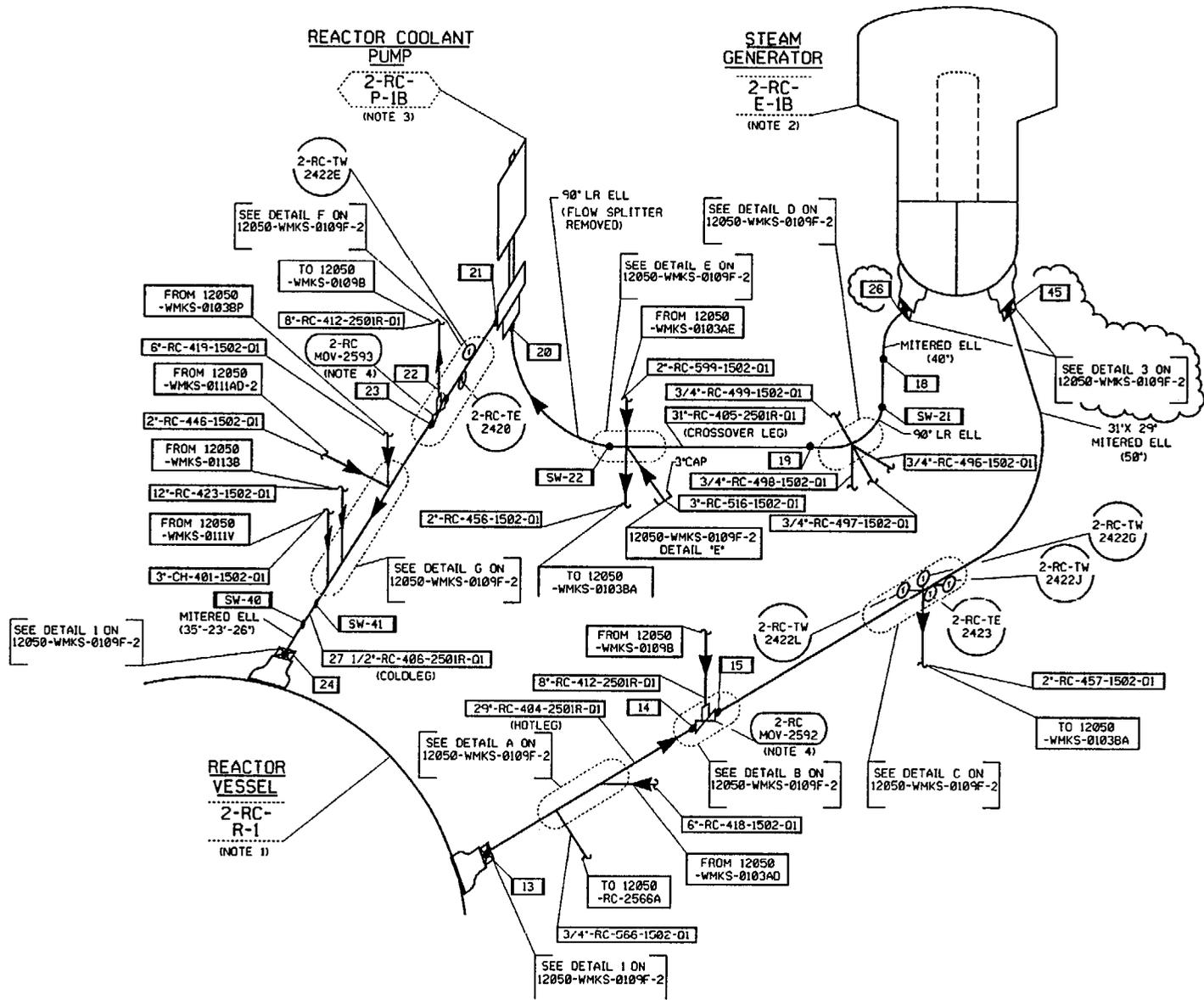
Weld 21

Sketch 2

 Examination volume not examined



1/2 Scale



VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

April 24, 2000

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

Serial No. 00-217
NLOS/ETS:R0
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
PARTICIPATION IN DEPARTMENT OF ENERGY'S PLUTONIUM DISPOSITION
PROJECT

On May 18, 1999 Duke Energy Corporation, Virginia Electric and Power Company (Virginia Power), Framatome Cogema Fuel, and Duke Comega Stone and Webster met with the NRC to discuss their involvement in the Department of Energy's Plutonium Disposition Program. Recently, Virginia Power has decided not to continue its participation in this program.

This letter serves to formally notify the Commission of our decision to discontinue involvement in the Plutonium Disposition Project and to request that any associated reviews or TAC numbers that may be open and assigned to the North Anna dockets be closed.

If you have any questions or require additional information on this, please contact us.

Very truly yours,



Leslie N. Hartz
Vice President - Nuclear Engineering and Services

Commitments made in this letter:

1. None.

cc: Regional Administrator
U. S. Nuclear Regulatory Commission, Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303

Mr. M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station

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