

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

W. L. STEWART  
VICE PRESIDENT  
NUCLEAR OPERATIONS

May 22, 1986

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
Attn: Mr. Lester S. Rubenstein, Director  
PWR Project Directorate No. 2  
Division of PWR Licensing-A  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Serial No. 85-779B  
NO/DJF:jmj  
Docket No. 50-280  
License No. DPR-32

Gentlemen:

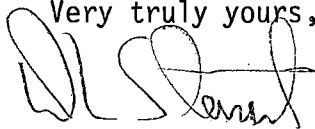
VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION UNIT NO. 1  
INSERVICE INSPECTION PROGRAM

On May 7, 1986 a telephone conversation was held between Mr. David J. Fortin, Mr. David A. Sommers, and Mr. Richard F. Tegethoff of Virginia Electric and Power Company and Mr. Chandu P. Patel and Mr. Samson S. Lee of the NRC concerning the November 26, 1985, Revision 2 submittal of our program for inservice inspection and testing of ASME Code Systems during the second ten year interval for Surry Power Station Unit 1.

As a result of this telephone conversation, we agreed to send additional information concerning relief requests associated with our November 26, 1985 submittal. This information is enclosed as requested, and should be placed in section 2 of the program report.

If you have any further questions or require further information, please contact us.

Very truly yours,



W. L. Stewart

Enclosure

cc: Dr. J. Nelson Grace  
Regional Administrator  
NRC Region II

NRC Senior Resident Inspector  
Surry Power Station

Mr. Chandu P. Patel  
NRC Surry Project Manager  
PWR Project Directorate No. 2  
Division of PWR Licensing-A

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## RELIEF REQUEST NO. SR-1

### I. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

In Class 1 systems, valves which are greater than four inches nominal pipe size are subject to visual examination. These valves vary in size, design and manufacturer but are all manufactured from either cast stainless steel or carbon steel. None of the valve bodies are welded.

Section XI of the ASME Code, 1980 Edition through the Winter 1980 Addenda requires that a visual examination of the internal pressure boundary surfaces of one valve in each group of valves of the same constructional design and manufacturing method that perform similar functions in the system. (Category B-M-2).

Since these examinations must be met whether or not the valves have to be disassembled for maintenance, this requirement is considered impractical.

### II. BASIS FOR RELIEF

The requirement to disassemble primary system valves for the sole purpose of performing a visual examination of the internal pressure boundary surfaces has only a very small potential of increasing plant safety margins and a very disproportionate impact on expenditures of plant manpower and radiation exposure.

Performing these visual examinations, under such adverse conditions as high dose rates and poor as-cast surface condition, realistically, provides little additional information as to the valve casing integrity.

The performance of both carbon and stainless cast valve bodies has been excellent in PWR applications. Based on this experience and both industry and regulatory acceptance of these alloys, continued excellent service performance is anticipated.

A more practical approach that would essentially provide an equivalent sampling program and significantly reduced radiation exposure to plant personnel is to inspect the internal pressure boundary of only those valves that require disassembly for maintenance purposes. This would still provide a reasonable sampling of primary system valves and give adequate assurance that the integrity of these components is being maintained.

### III. ALTERNATE PROVISIONS

A visual examination of the internal pressure boundary surfaces will be performed, to the extent practical, each time a valve is disassembled for maintenance purposes. Additionally, a valve wall thickness examination will be performed on any valves that are not disassembled for maintenance.

Note: Relief granted as modified per NRC letter dated 1-24-84.

RELIEF REQUEST NO. SR-2

I. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The design of the Residual Heat Removal Heat Exchanger nozzle to vessel welds calls for the use of a reinforcement pad. These pads are fillet welded and completely encase the nozzle to vessel weld.

Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1980 Addenda requires a volumetric and surface examination of the nozzle inside radius section (Category C-B).

Relief from this requirement is requested due to the physical inaccessibility of the subject weld.

II. BASIS FOR RELIEF

The fabrication of these welds precludes any type of surface or volumetric examination. Additional assurance of the continued integrity of these welds is afforded by the fact that the reinforcement pads strengthen the welds and reduce stresses on the internal welds.

III. ALTERNATE PROVISIONS

A surface examination on the fillet weld of the reinforcement pad will be performed to the extent practical.

Note: Relief granted as modified per NRC letter dated 1-24-84.

RELIEF REQUEST NO. SR-3

I. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The configuration of the Reactor Coolant branch nozzle connection welds precluded complete examination.

Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1980 Addenda requires a volumetric and surface examination of branch pipe connection welds on piping having a nominal pipe size of four inches or greater. In particular, paragraph III-4430 requires an angle beam examination of the weld root from the weld crown.

Relief is requested from the requirements of paragraph III-4430 due to physical configuration of these branch nozzle connection welds.

II. BASIS FOR RELIEF

Due to the configuration of the weld crown, transducer contact cannot be maintained on the weld. The slope of the weld crown precludes examination of the weld root when scanning from the weld crown.

III. ALTERNATE PROVISIONS

Note: Relief granted per NRC letter dated 1-24-84.

RELIEF REQUEST NO. SR-4

I. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The Reactor Coolant Filter has three circumferential welds subject to examination.

Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1980 Addenda, requires a volumetric examination of circumferential shell welds (Category C-A).

II. BASIS FOR RELIEF

The stainless steel material and thickness (0.188") preclude any type of meaningful examination by ultrasonic examination.

III. ALTERNATE PROVISIONS

Note: Relief granted per NRC letter dated 1-24-84

RELIEF REQUEST NO. SR-5

I. IDENTIFICATION OF COMPONENTS AND IMPRACTICAL CODE REQUIREMENTS

The shell to top head circumferential weld on the Surry 1 Pressurizer is not accessible for examination.

Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1980 Addenda requires a volumetric examination of the pressurizer head to shell weld (Category B-B).

Relief is requested from this requirement due to the physical inaccessibility of this weld.

II. BASIS FOR RELIEF

The shell to top head circumferential weld is not accessible for volumetric or surface examination due to interference from the insulation support ring.

III. ALTERNATE PROVISIONS

A visual examination for evidence of leakage will be performed during system pressure tests. Drawings to further substantiate relief will be provided at the end of the 1986 refueling outage.

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*                               VIRGINIA ELECTRIC AND POWER COMPANY
*                               SURRY      POWER STATION UNIT 1P
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*                               2.0 INSERVICE INSPECTION PLAN SUMMARY
*                               INTERVAL 2, 12/22/82 TO 12/22/92
*                               ASME SECTION XI EDITION 80W80
*
*                               *****
*                               * PAGE:      2-11 *
*                               * REVISION  0002 *
*                               * DATE    85/11/25 *
*                               *****
* CATEGORY B-B      PRESSURE RETAINING WELDS IN VESSELS OTHER THAN THE RV
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ITEM NUMBER : B2.11

ITEM DESCRIPTION : PZR CIRCUMFERENTIAL SHELL-TO-HEAD WELDS

	FLOW	FLOW				
SYSTEM/ COMPONENT	DIAGRAM (11715)	DIAGRAM COORD	LINE NUMBER	EXAM METHOD	RELIEF REQUEST	PROGRAM NOTES
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RC	FM-86B	6-6	PZR	VOL	SR-005	