

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

April 24, 1986

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

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. 86-226
NO/ETS/vlh
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNIT NOS. 1 AND 2
INSERVICE INSPECTION RELIEF REQUEST

In accordance with 10CFR50.55a(g)(5), we are requesting relief from certain Code requirements defined in the 1980 Edition of ASME Section XI, Winter 1980 Addenda, Subsections IWB-2500 and IWC-2500, for Surry Power Station Unit Nos. 1 and 2.

The 1974 Edition of ASME Section XI required volumetric examination of Category B-D and C-B nozzle to vessel full penetration welds. Surry's steam generators and pressurizer have integrally cast nozzles and therefore we determined that no examination requirements existed for our nozzles. Section XI of the 1980 ASME Code requires volumetric examination of Category B-D and C-B nozzle to vessel welds and nozzle inside radii for welded and integrally cast nozzles on the steam generators and pressurizer.

Several nozzle inside radii examinations are scheduled during the upcoming Unit 1 refueling outage (May 9 - June 26, 1986). In assessing this work, we have determined that these examinations cannot be completed volumetrically due to physical interferences and nozzle cladding. Therefore, we are requesting permanent relief from the volumetric examinations required for Category B-D and C-B nozzle inside radii, on the steam generators and pressurizer for Surry Units 1 and 2. Attachment 1 provides the Code requirements, the technical basis for our relief request, and our proposed alternative examinations.

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\$150.00*

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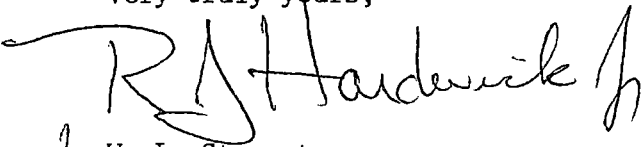
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We would appreciate your expeditious review of this relief request in order to complete the alternative examinations planned for the Category B-D and C-B nozzle inside radii during the upcoming Unit 1 refueling outage. Should you have questions or require additional information concerning this relief request please contact us.

Enclosed is a check for \$150 for the application review fee.

Very truly yours,


W. L. Stewart

Attachment

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

ATTACHMENT 1

Surry Power Station Units 1 and 2

Inservice Inspection Relief Request

The Code requires that the nozzle inside radius section of Category B-D and C-B nozzles on the steam generator and pressurizer must be examined volumetrically in accordance with subsections IWB-2500 and IWC-2500 during each inspection interval. Categories B-D and C-B include nozzles with full penetration welds to the vessel shell (or head) and integrally cast nozzles, but exclude manways and handholes either welded to or integrally cast in the vessel. If the examinations are conducted from inside the component and the nozzle weld is examined by straight beam ultrasonic method from the nozzle bore, the remaining examinations required to be conducted from the shell may be performed at or near the end of each inspection interval.

Code Relief Request

Relief is requested from the volumetric examination requirements of the nozzle inner radii for the steam generator and pressurizer nozzles.

Basis For Requesting Relief

Relief from examining the Code required volume is requested based upon the following criteria:

- 1) Nozzles in the pressurizer and steam generators contain inherent geometric constraints and clad inner surfaces which limit the ability to perform meaningful volumetric (UT) examinations of the inner radii areas. The pressurizer surge line nozzle I.D. is physically restricted by the sparger, the thermal sleeve, and heater bank interferences. The steam generator main steam nozzles are physically restricted by the flow limiting devices.
- 2) Presently, there is no comprehensive inspection technique, or guidance for such in the ASME Code, which would provide a conclusive assessment of the Code required volumetric inspections of these inner radii, particularly since no preservice results are available for review.

- 3) Radiography (RT) is not a viable inspection technique due to the same inherent geometric constraints and accessibility limitations that restrict the effectiveness of the ultrasonic inspection method. In addition, high radiation levels on primary system nozzles would expose radiographic film, causing it to "fog" beyond acceptable standards.

Proposed Alternative Examinations

- 1) All five (5) pressurizer upper head nozzles shall be visually examined from the I.D. using direct or remote techniques when accessible prior to the end of the inspection interval. Two nozzles are scheduled for such inspection this refueling outage.
- 2) The lower pressurizer nozzle shall be visually examined from the O.D. after this refueling when the unit has restarted and reached normal operating pressure and temperature.
- 3) Category B-D, primary inlet and outlet nozzles on one steam generator shall be visually examined from the I.D., using manual or remote techniques during this outage. The other two steam generators will be examined sequentially during upcoming inspection periods, prior to the end of the inspection interval.
- 4) The steam generator feedwater nozzle thermal sleeve restricts access to the inside radius area of the nozzle. A visual inspection of the accessible areas of the inside radius will be performed during this outage for one steam generator and prior to the end of the inspection interval for the other two steam generators.
- 5) The flow limiting device installed in the steam generator main steam nozzle restricts access to the nozzle inside radius area. One main steam nozzle shall be visually inspected from the O.D. after this refueling when the unit has restarted and reaches normal operating pressure and temperature. The remaining two main steam nozzles will be inspected as above prior to the end of the inspection interval.