

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

June 23, 1986

Mr. Harold R. Denton
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. 86-361
NO/FPB
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
ASME SECTION XI RELIEF REQUEST
REACTOR VESSEL NOZZLE SURFACE EXAMINATION

Inservice inspection activities for Surry Units 1 and 2 are being conducted in accordance with the 1980 Edition thru Winter 1980 Addenda of the ASME Boiler and Pressure Vessel Code. Pursuant to 10CFR50.55a(g) (5), we are requesting relief from certain code required exams defined in Table IWB-2500-1. The following basis is provided.

The Code currently specifies in Table IWB-2500-1 (Category B-F Item B5.10 Reactor Vessel Nozzle-to-Safe End Butt Welds) that a volumetric and a surface examination of the outside diameter (OD) be performed. At the beginning of the current Unit 1 outage, average radiation readings taken in the general area of the nozzle dissimilar metal welds were recorded at 1.5 R/hr and loop contact readings of 4.5 to 6 R/hr were also recorded. The OD surface examination would require a significant amount of time for the removal of interference and shielding materials, surface preparation, and examination. High radiation exposures would be expected should this examination be performed. Attachment 1 describes the estimated radiation exposures that would be incurred to complete the ASME Section XI examination requirements.

Alternately it is requested that a full volumetric examination from the inside diameter (ID) be accepted in lieu of the surface examination from the OD. During the current Unit 1 refueling outage, a full volumetric examination from the ID of a Surry calibration block has demonstrated sensitivity adequate to resolve a 5% notch on the OD. Additionally, a flaw, which is an estimated eighty percent of the critical flaw as described in ASME Section XI IWB-3000 Acceptance Standard for Flaw Indications, has been induced into a mocked-up block. This flaw has been satisfactorily detected and distinguished from the bimetallic interface.

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Demonstration of both capabilities at the Westinghouse Waltz Mill Calibration Facility have been found acceptable by the Authorized Nuclear Inservice Inspector.

We submit that the weld integrity has been adequately established by performance of the volumetric examination of the ID. The additional assurance of weld integrity derived from performing the surface examination of the OD is not commensurate with the projected high manrem expenditure. For the above reasons, we request that the full volumetric examination from the ID be accepted in lieu of the OD surface examination of the reactor vessel nozzles.

Very truly yours,



W. L. Stewart

Attachments

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

Mr. Roger D. Walker, Director
Division of Reactor Projects
NRC Region II

Senior NRC 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
ESTIMATED RADIATION EXPOSURES

	<u>MANHOURS</u>	<u>MANREM</u>
Removal of Interference Materials to Gain Access	12	7.2
Weld Preparation Around 100% of Circumference	4.5	6.75
Performance of Examination	4.5	6.75
Replace Interference Materials	12	7.2
TOTAL	<hr/> 33	<hr/> 27.9