

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

July 5, 1989

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

Serial No. 89-006C
PES/AVB R2
Docket No. 50-339
License No. NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT 2
RESPONSE TO NRC BULLETIN NO. 88-11
PRESSURIZER SURGE LINE THERMAL STRATIFICATION
PRESSURIZER NOZZLE LOADS EVALUATION

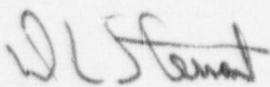
As discussed in our letter (Serial No. 89-006A) dated May 3, 1989, Virginia Electric and Power Company committed to complete a pressurizer nozzle loads evaluation for North Anna Power Station Unit 2. This letter provides the results of the evaluation performed for the Unit 2 pressurizer surge nozzle. The evaluation was necessary because the calculated loads for the pressurizer surge nozzle exceeded the allowable loads specified by the equipment manufacturer when the effects of thermal stratification were factored into the surge line analysis.

A detailed analysis was performed by the equipment manufacturer to determine if the pressurizer surge nozzle and shell will maintain its structural integrity throughout the remaining life of the plant. The analysis results at the worst location of the pressurizer surge nozzle and shell are:

Maximum Stress = 41.0 ksi ($<3S_m$)
Maximum Cumulative Usage Factor = 0.35

These results indicate that the pressurizer surge nozzle and shell meet the stress and fatigue analysis requirements of the ASME Code, Section III, 1968 Edition through Winter '68 Addenda, Article 4. Therefore, the effect of increased nozzle loads due to thermal stratification will not affect the structural integrity of the pressurizer surge line and shell through the remaining life of the plant. The effect of increased loads on the pressurizer supports due to thermal stratification is already enveloped by higher pipe rupture and safety valve discharge loads as indicated in our May 3, 1989, letter.

Very truly yours,


W. L. Stewart
Senior Vice President - Power

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cc: U. S. Nuclear Regulatory Commission
Region II
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Mr. J. L. Caldwell
NRC Senior Resident Inspector
North Anna Power Station

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by W. L. Stewart who is Senior Vice President - Power, of Virginia Electric and Power Company. He is duly authorized to execute and file the foregoing document in behalf of that Company, and the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 5TH day of July, 1989.
My Commission Expires: February 25, 1990.

Vicki L. Null
Notary Public

(SEAL)