

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

July 16, 1992

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

Serial No. 92-467
NAPS/RMN
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
PROPOSED TECHNICAL SPECIFICATION CHANGES

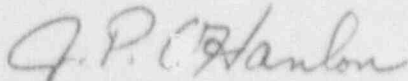
Pursuant to 10 CFR 50.90, the Virginia Electric and Power Company requests amendments, in the form of changes to the Technical Specifications, to Operating License Numbers NPF-4 and NPF-7 for North Anna Power Station Units 1 and 2, respectively. The proposed changes will revise the wording of the reactor coolant system volume in the design features section and eliminate reference to an exact volume in the bases section.

A discussion of the proposed changes is provided in Attachment 1. The proposed changes are presented in Attachment 2.

This request has been reviewed by the Station Nuclear Safety and Operating Committee and the Management Safety Review Committee. It has been determined that this request does not involve an unreviewed safety question as defined in 10 CFR 50.59 or a significant hazards consideration as defined in 10 CFR 50.92. The basis for our determination that no significant hazards consideration is involved is presented in Attachment 3.

Should you have any questions or require additional information, please contact us at your earliest convenience.

Very truly yours,



for W. L. Stewart
Senior Vice President - Nuclear

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Attachments

1. Discussion of Proposed Changes
2. Proposed Technical Specification Changes for North Anna Units 1 and 2
3. 10 CFR 50.92 Significant Hazards Consideration

cc: U.S. Nuclear Regulatory Commission
Region II
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Mr. M. S. Lesser
NRC Senior Resident Inspector
North Anna Power Station

Commissioner
Department of Health
Room 400
109 Governor Street
Richmond, Virginia 23219

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by J. P. O'Hanion, who is Vice President - Nuclear Operations, for W. L. Stewart who is Senior Vice President - Nuclear, 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 16TH day of July, 1992.
My Commission Expires: May 31, 1994.

Vicki L. Huee
Notary Public

(SEAL)

Attachment 1

Discussion of Proposed Changes

North Anna Units 1 and 2

Virginia Electric and Power Company

INTRODUCTION

The proposed change to Technical Specification 5.4.2 revises the wording for the Reactor Coolant System (RCS) volume in the design features. The proposed change would revise the description of the RCS volume from "...9957 \pm 10 cubic feet at a nominal T_{avg} of 525°F" to "...approximately 10,000 cubic feet at nominal operating conditions." The proposed change to the bases for Technical Specification 3/4.1.1.3 would change the phrase "will circulate an equivalent Reactor Coolant System volume of 9957 cubic feet" to "will circulate the Reactor Coolant System volume."

BACKGROUND

10 CFR 50.36 describes the purpose of the design features in the Technical Specifications. Design features in the Technical Specifications are those features of the facility which, if altered or modified, would have a significant effect on safety. Technical Specification 5.4.2 does not meet this criterion as it is currently written.

NUREG 0452, "Standard Technical Specifications for Westinghouse PWRs," Revision 4, (STS) provides guidance to licensees when preparing Technical Specifications. One design feature specified in the STS is the RCS volume. A calculated RCS volume was obtained from the reactor vendor and included in the North Anna Technical Specifications consistent with STS guidance. However, that calculated volume is not used in accident analyses. Rather, the transient system models used to perform accident analyses divide the RCS into component mass-energy cells for which volumes are specified. The definition and volume of these mass-energy cells vary depending on the model used and the accident being analyzed. Thus, the methodology does not require that a single total RCS volume be specified as an accident analysis basis and revising the current description would have no significant effect on safety.

Technical Specification 5.4.2, as currently worded, also may be somewhat confusing. It refers to a T_{avg} that is significantly lower than normal operating conditions. Also, citing an RCS volume at a T_{avg} of 525°F provides insufficient information for meeting a tolerance of plus or minus ten cubic feet. Other parameters, such as system pressure and pressurizer temperature, are also required to calculate the volume to within ten cubic feet. Those parameters are not clearly defined since the cited T_{avg} is not based on normal operating conditions.

DESCRIPTION OF CHANGES

The proposed changes apply to both North Anna Units 1 and 2.

The description of the RCS volume in Technical Specification 5.4.2 is changed from "...9957 \pm 10 cubic feet at a nominal T_{avg} of 525°F" to "...approximately 10,000 cubic feet at nominal operating conditions." This is the RCS volume at nominal operating conditions rounded off to the nearest 1000 cubic feet. The proposed revision states a nominal volume (i.e., to within 1.5%) and does not misrepresent the accuracy nor the operating temperature. The change is consistent with the definition of design features in 10 CFR 50.36.

Technical Specification 3/4.1.1.3 requires the flow rate of reactor coolant through the RCS to be \geq 3000 gpm when a reduction in RCS boron concentration is being made. The bases for Technical Specification 3/4.1.1.3 state that the minimum flow rate of at least 3000 gpm provides adequate mixing, prevents stratification and ensures that reactivity changes will be gradual during boron concentration reductions in the RCS. It then states that "a flow rate of at least 3000 gpm will circulate an equivalent RCS volume of 9957 cubic feet in approximately 30 minutes." This statement is changed to "a flow rate of at least 3000 gpm will circulate the Reactor Coolant System volume in approximately 30 minutes."

SAFETY SIGNIFICANCE

The proposed change to Technical Specification 5.4.2 does not have any adverse effect on safety. It specifies the RCS volume commensurate with the accuracy required for describing a design feature. However, the proposed change preserves the intent of the design feature by assuring that a significant RCS volume change would be identified and evaluated for potential safety significance.

The proposed change to the bases of Technical Specification 3/4.1.1.3 does not have any adverse effect on safety. Deleting the phrase does not alter the meaning of the bases and eliminates a potential conflict with the revised design features.