VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 26, 1980

Mr. H. R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division Of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Serial No. 569
FR/EJL: ceb
Docket Nos. 50-280
50-281
50-338
50-339
License Nos. DPR-32
DPR-37
NPF-4
NPF-7

Dear Mr. Denton:

SURRY AND NORTH ANNA POWER STATIONS
CONTROL ROD BANK REACTIVITY WORTH TESTS

My letter to you, dated May 12, 1980 (Serial No. 384), on this subject transmitted the Vepco Topical Report VEP-FRD-36, "Control Rod Reactivity Worth Determination By the Rod Swap Technique." Since that date, we have had several opportunities to discuss the contents of that report with members of your staff. As a result of these discussions, we would like to confirm the agreement reached with your staff regarding the review criteria that will be used to evaluate the results of rod swap tests, and the administration of the physics test program should deviations occur. This material is enclosed as Attachment I.

Additionally, as indicated to your staff, we would like to modify the contents of Table A.2 of the report. This table outlines the startup physics testing program with rod swap and is enclosed as Attachment II.

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Should there be any additional questions on this subject, please contact Dr. E. J. Lozito (804-771-4375).

Very truly yours,

W. N. Thomas
Vice President
Fuel Resources

Enclosures

cc: Mr. Robert A. Clark, Chief
Operating Reactors Branch No. 3

Mr. B. Joe Youngblood, Chief
Licensing Branch 1
Division of Licensing

ATTACHMENT I

ROD SWAP TEST RESULTS REVIEW CRITERIA

Level I

a) For the reference bank

$$|\Delta\ (\%)\ |^{*} \leq 10\%$$

b) For each test bank

$$|\Delta\ (\%)\ | \leq 15\%$$

or

$$|\Delta\ (\text{pcm})\ |^{*} \leq 100 \text{ pcm whichever is greater}$$

Remedial Action:

Each discrepancy shall be reviewed by the Station Nuclear Safety and Operating Committee. Final resolution shall be based on the composite of plant startup data and an evaluation of the impact of the discrepancy on the results of the analyses of the applicable events considered in the FSAR. Based on the results of this review, the Committee may decide to perform additional testing. This additional testing may be a repeat of the original test or the performance of other appropriate confirmatory tests.

Level II

$$|\Delta(\%)|^{*}_{\text{Total}} \leq 10\%$$

Remedial Action:

The reactivity worth of control rod banks D thru A shall be measured (and also the remainder of the rod banks to N-1 if required) by successive insertion using the dilution/boration technique. This will be done in order to validate the results of the calculational models used to predict the control rod bank reactivity worths.

*As defined in Section 4 of VEP-FRD-36.

ATTACHMENT II

HOT ZERO POWER STARTUP PHYSICS TESTING PROGRAM WITH ROD SWAP

TABLE A.2

HOT ZERO POWER STARTUP PHYSICS TESTING
PROGRAM WITH ROD SWAP

Reactivity Computer Checkout

Boron Endpoint - ARO

Temperature Coefficient - ARO

M/D Flux Map - ARO

Reference Bank Worth

Boron Endpoint - Reference Bank In

Temperature Coefficient - Reference Bank In

M/D Flux Map - Rodded

Control Rod Bank Worths (Control and Shutdown)