

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

February 20, 1986

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. Lester S. Rubenstein, Director
PWR Project Directorate #2
Division of PWR Licensing-A
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Serial No. 86-099
E&C/JOE:acm
Docket No. 50-339
License No. NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT NO. 2
RELOAD INFORMATION FOR CYCLE 5

North Anna Unit No. 2 is scheduled to complete its fourth cycle of operation on March 14, 1986, and will go into an outage for refueling. The purpose of this letter is to advise you of our plans for the Cycle 5 reload core and to transmit to you the Core Surveillance Report containing specific power distribution limits applicable for Cycle 5 operation.

The Cycle 5 reload core was analyzed in accordance with the methodology documented in Vepco topical VEP-FRD-42, Rev. 1, "Reload Nuclear Design Methodology", using NRC approved codes as referenced in the topical. This methodology is consistent with that documented in Westinghouse Topical Report WCAP-9272, entitled "Westinghouse Reload Safety Evaluation Methodology." These analyses were performed and reviewed by our technical staff. The results of these analyses indicated that no key analysis parameters would become more limiting during Cycle 5 operations than the values assumed in the currently applicable safety analyses. Further, the analyses demonstrated that the Current Technical Specifications, as approved through Operating License Amendment No. 61 are appropriate and require no additional changes.

For the control rod reactivity worth determination using the rod swap technique for previous North Anna cycles, the NRC has required a comparison of the Vepco prediction "with the prediction by the organization performing the safety analysis", as stated in the NRC letter of November 7, 1980, R. L. Tedesco (NRC) to W. N. Thomas (Vepco), subject "Acceptance for Referencing of Topical Report VEP-FRD-36 'Control Rod Reactivity Worth Determination by Rod Swap Technique'." Since NRC approved Vepco codes were used for both the reload analyses and the analyses supporting control rod reactivity worth determination with the rod swap technique, this comparison is not required for Cycle 5 and future cycles using the Vepco methodology.

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VIRGINIA ELECTRIC AND POWER COMPANY TO Mr. Harold R. Denton

A review has been performed by both the Station Nuclear Safety and Operating Committee and the Safety Evaluation and Control Staff. It has been determined that no unreviewed safety question as defined in 10 CFR 50.59 will exist as a result of the Cycle 5 reload core.

Attachment 1 provides the Core Surveillance Report containing the specific Cycle 5 values for F_{xy} and the axial power distribution surveillance limit, P_m . This report is being provided as required by North Anna Unit No. 2 Technical Specification 6.9.1.7 and is based on the current total peaking factor (F_Q) limit of 2.20.

This letter provided for your information and planning. However, should you have questions, please contact us at your earliest convenience.

Very truly yours,


W. L. Stewart

Attachment

1. Core Surveillance Report for North Anna 2, Cycle 5

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

Mr. Morris W. Branch
NRC Resident Inspector
North Anna Power Station

Mr. Leon B. Engle
NRC North Anna Project Manager
PWR Project Directorate #2
Division of PWR Licensing-A

ATTACHMENT 1

NORTH ANNA UNIT 2, CYCLE 5

CAOC CORE SURVEILLANCE REPORT

FOR FQ = 2.20

TABLE 1

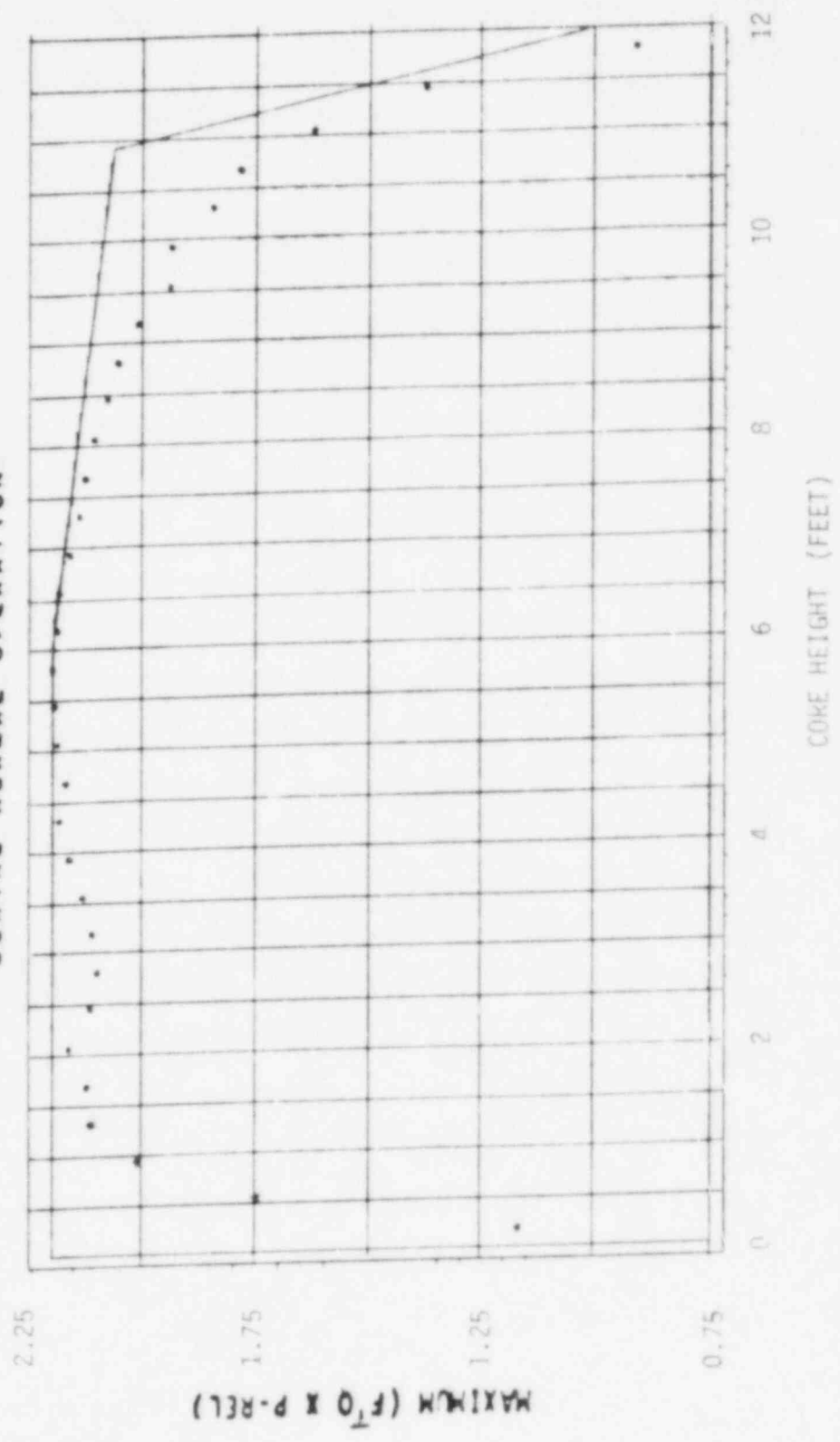
NORTH ANNA UNIT 2, CYCLE 5 CORE SURVEILLANCE LIMITS, FQ = 2.20

- I. The F-xy limits for RATED THERMAL POWER within specific core planes shall be:
 1. $F_{xy-RTP} \leq 1.71$ for all core planes containing bank "D" control rods, and
 2. $F_{xy-RTP} \leq 1.65$ for all unrodded core planes between 15% and 36% of core height, or
 3. $F_{xy-RTP} \leq 1.62$ for all unrodded core planes between 36% and 85% of core height.

- II. The axial power distribution surveillance threshold power level shall be:
 1. $P_m = 100\%$ of RATED THERMAL POWER.

NORTH ANNA UNIT 2, CYCLE 5

MAXIMUM (F¹O X P-REL) VS. AXIAL CORE HEIGHT
DURING NORMAL OPERATION



LINE - TECH. SPEC. LIMIT
STAR - CALCULATED FQ