



VIRGINIA ELECTRIC AND POWER COMPANY

September 14, 1979

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Atten: Mr. O. D. Parr, Chief
Light Water Reactors Branch No. 3
Division of Project Management
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial No. 723
PSE&C/CES:adw:mc

Docket Nos. 50-404
50-405

Dear Mr. Denton:

Our letter Serial No. 039 of February 6, 1979 advised you of our intention to inform you continually of Company positions which are not in accordance with individual Regulatory Guides. This letter advises you of the Company position on Regulatory Guide 1.59, Revision 2, "Design Basis Floods for Nuclear Power Plants" for the North Anna 3 and 4 units.

Company Position

North Anna Units 3 and 4 are not in full compliance with Regulatory Guide 1.59, Revision 2. The subject revision to the Regulatory Guide refers to the ANSI Standard N170-1976, "Standards for Determining Design Basis Flooding at Power Reactor Sites," as the document which should be used to develop the Probable Maximum Flood at inland locations. The Combined Events Criteria, Section 9 of the referenced ANSI Standard, is the section to the Regulatory Guide where full compliance is not achieved.

In Section 9.2 of the ANSI Standard, a listing of adequate design basis combinations of flood-causing events is presented. It is our position that both Section 9.2.1, which discusses Inland Streams, and Section 9.2.3, which discusses Enclosed Bodies of Water, are applicable to the North Anna site. Both Section 9.2.1 and 9.2.3 present several alternative combinations of meteorological events and both sections state that several alternatives should be mathematically tested.

The combination of events used in the Revised Analysis - Probable Maximum Flood, Appendix J to the North Anna Units 1 and 2 Final Safety Analysis Report is the only combination among the three alternatives listed in Section 9.2.1 which we consider applicable to North Anna Units 3 and 4. The combination used was:

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1. Mean monthly (base) flow
2. Median soil moisture
3. Antecedent rain = 50 percent of PMP
4. PMP
5. 40 mph wind speed used for critical direction and length of effective fetch.

The combinations of events described in Section 9.2.3. have not been tested. These combinations of events are:

Alternative I

1. One-half PMF
2. Surge and seiche from the worst regional hurricane or windstorm with wind wave activity.
3. 100-year or maximum controlled level of water body, whichever is less.

Alternative II

1. PMF
2. 25-year surge and seiche with wind wave activity.
3. 100-year maximum controlled level of water body, whichever is less.

Alternative III

1. 25-year flood
2. Probable maximum surge and seiche with wind wave activity.
3. 100-year or maximum controlled level of water body, whichever is less.

Initial inspection would indicate that the combination of events used in the Revised Analysis would be chosen as the most severe however, mathematical analyses have not been performed for verification.

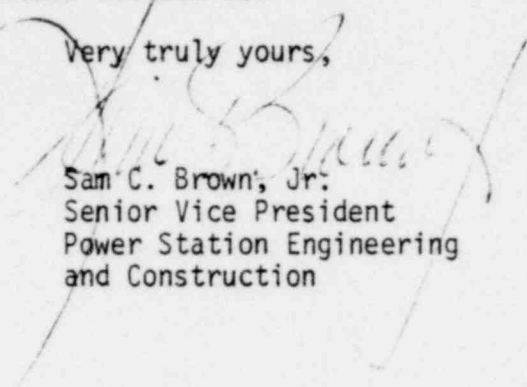
This position will be placed on file and will be included in the Final Safety Analysis Report for these units.

Mr. Harold R. Denton

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We would be pleased to discuss this position with you at your convenience. Should you wish to meet with us to discuss this position, or if you have any questions please contact us.

Very truly yours,


Sam C. Brown, Jr.
Senior Vice President
Power Station Engineering
and Construction

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