

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 28, 1979

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Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Serial No. 948
PO/RMT:baw
Docket No. 50-338
License No. NPF-4

Dear Mr. O'Reilly:

Under the provisions of 10CFR21, NRC Region II was notified on November 14, 1979, that a potential significant deficiency or substantial safety hazard existed at North Anna Power Station, Unit 1.

In accordance with the reporting requirements of the above regulations, the following information is submitted:

A. Name and address of reporting individual:

C. M. Stallings
Virginia Electric and Power Company
P. O. Box 26666
Richmond, Virginia 23261

B. Facility, activity and/or component affected: North Anna, Unit 1

C. Name of firm supplying the component, activity or service:
Westinghouse Electric Corporation

D. Description of defect, deficiency, or failure to comply:

Veeco was notified of an unreviewed safety question by Westinghouse Electric Corporation which concerned a potential non-conservative feature of the Westinghouse large break LOCA-ECCS evaluation model which could affect the peak clad temperature (PCT) calculated for the LOCA transient.

The unreviewed safety question involved the portion of the Westinghouse LOCA-ECCS evaluation model related to the fuel rod burst calculation. Upon review of the current LOCA-ECCS analyses for operating plants, Westinghouse determined that calculated heat-up rates could be less than 25°F/second which was the basis for the fuel rod burst curve currently in the Westinghouse LOCA-ECCS evaluation model. Further investigation indicated that the use of fuel rod burst curves based on lower heat-up rates resulted in earlier predicted clad burst times. A shift in clad burst time can potentially affect the peak clad temperature (PCT) calculated for the LOCA transient. The current North Anna LOCA-ECCS analysis may not have sufficient PCT margin to the Appendix K limit of 2200°F to offset the potential impact resulting from the use of a more appropriate fuel rod burst curve.

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- E. Date of determination of reportability: November 14, 1979
- F. Similar components, activities or services: North Anna, Unit 2
Corrective actions which has been, is being, or will be taken, the individual responsible and the length of time to complete the action. An analysis is currently underway using the Westinghouse February 1978 LOCA-ECCS evaluation model in conjunction with an appropriate fuel rod burst curve calculation procedure. This analysis will be completed in early December 1979 and should indicate sufficient margin to the Appendix K PCT limit.

H. Other information:

Any additional information regarding the above topic will be submitted as a follow-up report.

Should you require further information, please contact this office.

Very truly yours,

C. M. Stallings

C. M. Stallings
Vice President-Power Supply
and Production Operations

cc: Director, Office of Inspection
and Enforcement

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