

PART 21 IDENTIFICATION NO. 80-239-000 COMPANY NAME Stone & Webster

DATE OF LETTER 7/1/80 DOCKET NO. 50-339

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ACTION:

PRELIMINARY EVALUATION OF THE ATTACHED REPORT INDICATES LEAD RESPONSIBILITY FOR FOLLOW-UP AS SHOWN BELOW:

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OTHER ☐

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STONE & WEBSTER ENGINEERING CORPORATION



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80-239-000

July 1, 1980

Mr. Victor Stello, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Sir:

NOTIFICATION OF DEFECT, 10CFR21
NORTH ANNA UNIT 2
VIRGINIA ELECTRIC AND POWER COMPANY

Stone & Webster Engineering Corporation (S&W), pursuant to the provisions of 10CFR21, hereby provides notification of a "defect" concerning the North Anna Nuclear Power Station, Unit 2, owned by Virginia Electric and Power Company (VEPCO) and for which S&W provided both engineering and construction services.

In accordance with the reporting requirements of Section 21.21(b)(3), the following information is submitted:

(i) Name and address of the individual informing the Commission:

Mr. P. A. Wild, Director of Engineering
Stone & Webster Engineering Corporation
P.O. Box 2325
Boston, MA 02107

(ii) Identification of the facility, or the basic component supplied for such facility, which contains a defect:

North Anna Nuclear Power Station, Unit 2
Containment Electrical Penetrations Fault Current
Protection Devices

(iii) Identification of firm constructing facility or supplying basic component which contains a defect:

Basic component supplied by Stone & Webster Engineering Corporation.

- (iv) Nature of the defect and the safety hazard which could be created by such defect:

Review of the containment electrical penetration overcurrent protection design indicated that General Design Criterion 50, as set forth in Appendix A to 10CFR50, may not have been fully met.

Analyses indicated that the design of the devices which protect the electrical circuits passing through the containment electrical penetrations would not limit the current in individual circuits to values below the thermal limit of the penetrations for all available values of currents. A test conducted by the penetration manufacturer indicated that exceeding the penetration thermal limit for extended periods could result in a degradation of the seals and hence diminish the ability of the penetration to seal against design basis event pressures. This would represent a major reduction in the protection provided to the public health and safety and could create a substantial safety hazard.

- (v) Date on which information of such defect was obtained:

July 1, 1980

- (vi) In the case of a basic component which contains a defect, the number and location of all such components in use at, supplied for, or being supplied for facilities subject to the regulations:

North Anna Unit 2 - 113 power circuits and 5 control circuits

North Anna Unit 1 - 113 power circuits and 5 control circuits

- (vii) Corrective action which has been taken; name of individual or organization responsible; and length of time taken to complete the action:

Corrective action was taken by Virginia Electric Power Company and Stone & Webster Engineering Corporation and completed by March 13, 1980.

Penetration limit curves were compared to the protection device curves, and the protection devices were changed or adjusted so that the penetrations are protected.

(viii) Advice related to the defect that has been given to purchasers or licensees:

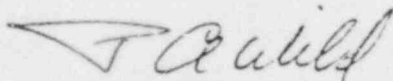
No other actions, apart from the specified modifications as detailed in the corrective action, were necessary to protect the penetrations.

Identification of this defect and the filing of this report are results of review of 10CFR50.55(e) reports and Licensee Event Reports filed by S&W clients since January 6, 1978. This review, committed to in our letter to NRC of September 6, 1979, resulted from the NRC special inspection of May 1-4, 1979. NRC has been previously advised of the problem with the containment electrical penetrations fault current protection devices by the following notifications and reports made by VEPCO:

1. Twenty-four hour Reportable Event Follow-up Report received by NRC on August 27, 1979, for North Anna Unit 1.
2. Notification to NRC under 10CFR50.55(e) on August 28, 1979, for North Anna Unit 2.
3. 10CFR21 report contained in VEPCO letter Serial No. 717 dated August 31, 1979, on North Anna Unit 2, indicating similar components on North Anna Unit 1.
4. Licensee Event Report No. LER 79-104/01T-0 contained in VEPCO letter Serial No. 730 dated September 10, 1979, for North Anna Unit 1.
5. Written report under 10CFR50.55(e) contained in VEPCO letter Serial No. 717A dated September 27, 1979, for North Anna Unit 2.

If you require any further information, please contact Mr. S. B. Jacobs at 617-973-5264.

Very truly yours,



P. A. Wild
Director of Engineering

JBS:mra