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VIRGINIA ELECTRIC AND POWER COMPANY, RICHMOND, VIRGINIA 23261

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

Serial No. 234A
PSE&C/CGC:mac:wang

Docket No. 50-339

Dear Mr. O'Reilly:

Pursuant to the provisions of 10CFR50.55(e) and 10CFR21 you were notified on November 5, 1979 and by letter (Serial No. 734) dated November 9, 1979 concerning seismic response spectrum curves in some pipe stress analyses. In our November 9 letter, we stated that this problem applies to 44 MSK's on Unit 1, 18 of which are applicable to Unit 2 as well. We have since taken one (1) of these 18 and created a new separate MSK for Unit 2; therefore, we now have 44 MSK's for Unit 1, 17 of which apply to Unit 2, plus one (1) MSK unique to Unit 2.

A description of the problem follows:

We have discovered inconsistencies in the way in which certain of the seismic amplified response spectrum (ARS) curves were used as input data to pipe stress analyses for North Anna Units 1 and 2. An investigation has shown three types of inconsistencies in the ARS data were present. The first inconsistency was that certain curves had two or more values of acceleration for the same period (i.e. multiple periods). The second was that the peak-spreading of some curves was not exactly ±15 percent of the peak's period as described in FSAR Section 3.7.3. The third discrepancy was that a few of the ARS curves were outdated.

It has been determined, by a complete review of the ARS input to pipe stress calculations, that there are no inconsistencies other than those described above. These discrepancies affect only the dynamic analysis of piping systems; the static analysis involving seismic building movements is not affected.

For North Anna 2, only the second and third types of inconsistencies exist - no multiple periods exist. The use of seismic input with these inconsistencies could potentially result in nonconservative pipe stresses, pipe support loads, and equipment loads in safety-related systems located in the auxiliary building, the service

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water pump house, and the main steam valve house. Systems affected are service water, quench spray, safety injection, component cooling water, and containment hogger. Only portions of these systems are affected. No portions of these systems within the containment or the reactor coolant system pressure boundary are affected.

Corrective action is in progress for this problem. The pipe stress analyses for all 18 MSK's have been rerun using the proper ARS input; these reanalyses identified two overstressed pipes each requiring the addition of one support to bring the pipe stress within the allowable. Also identified by the pipe stress reanalysis is the need for one support to restrict the seismic displacement of the rubber expansion joints for the service water to the component cooling water heat exchanger. Still in progress is the analysis of the effect on existing pipe supports, equipment, and equipment supports of new loads derived from the pipe stress reanalyses. Modifications will be made as required.

We consider this to be an interim report; any information not available at this time will be submitted in a final report. Should you require further information, please contact this office.

Very truly yours,

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

cc: Mr. Victor Stello, Director
Office of Inspection & Enforcement

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation

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