

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

R. H. LEASBURG
VICE PRESIDENT
NUCLEAR OPERATIONS

August 13, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Serial No. 484
NO/JTS/ms
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Gentlemen:

SEISMIC QUALIFICATION OF AUXILIARY FEEDWATER SYSTEM
SURRY POWER STATION UNITS 1 AND 2

Vepco originally responded to NRC Generic Letter 81-14 with Vepco letter Serial No. 443, dated July 16, 1981, and subsequent letter Serial No. 075, dated February 12, 1982 with an attached sketch (12846.01-MKS-3). To provide the additional information you requested, reference will be made to this sketch. A revised edition of the sketch, with only minor changes, will be forwarded to you when it is made available. The basic content of the sketch will remain the same.

The response to the questions raised by Mr. J. T. Beard and Mr. Don Neighbors of your staff will appear directly following the statement of the specific request, as follows:

Request 1(a)

Provide a schematic sketch of the auxiliary feedwater (AFW) system from suction to discharge including water source(s), heat sinks, piping, and all major mechanical equipment.

Response 1(a)

As noted above, revised sketch 12846.01-MKS-3 will be provided when it is made available. This sketch details a schematic view of the entire auxiliary feedwater (AFW) system from suction to discharge, including all water sources, heat sinks, and major mechanical equipment. The sketch also includes all piping except that covered by the items in parts 1(b) and 1(c) below.

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Request 1(b)

Provide a schematic sketch of the AFW system from suction to discharge including connected branch piping up to and including the second valve which is normally closed or capable of automatic closure when safety function is required.

Response 1(b)

Sketch 12846.01-MKS-3 encompasses, without exception, all connected branch piping up to and including the second valve which is normally closed or capable of automatic closure when the safety function is required. As identified by the sketch, all 3/4 inch vent and drain lines are not shown as branch piping. These vent and drain lines consist of a normally closed 3/4 inch isolation valve and a short run of piping. These lines are supported such that they maintain the seismic integrity of the AFW system.

Request 1(c)

Provide a schematic sketch of the AFW system from suction to discharge including any branch piping outside the AFW system boundary to a point of three orthogonal restraints if any portion of the branch piping is structurally coupled to the AFW system boundary such that the seismic response of the branch line transmits loads to the AFW system.

Response 1(c)

The main feedwater system constitutes the only system that has branch piping, outside the AFW system boundary, which is structurally coupled to the AFW system. The seismic response of these lines would transmit loads to the AFW system in the case of a seismic event. Since the main feedwater system is a Seismic Class 1 system, it fully meets the requirement of being supported up to a point of three orthogonal restraints.

In addition, sketch 12846.01-MKS-3 identified cross connect piping to and from the two 300,000 gallon condensate storage tanks as being non-seismic. This part of the system is considered non-seismic up to but not including the valve which isolates this portion of the system from the seismically qualified boundary of the AFW system. This non-seismic section of piping is not used in any Station Accident or Emergency Procedure and is normally isolated by manual valves from the seismic AFW system. The cross connect section of piping is only used as a means to transfer water from tank to tank under normal operating conditions.

Request 1(d)

Provide a schematic sketch of the AFW system from suction to discharge including all structures supporting or housing the AFW system components.

Response 1(d)

All structures supporting or housing the AFW system components are identified by sketch 12846.01-MKS-3.

Request 2

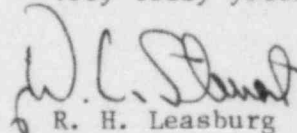
Identify any connected branch piping associated with the AFW system that does not fully meet the boundary requirements specified in items (b) and (c) above. Indicate the Seismic Category 1 items and boundaries on the sketch. Justify the acceptability of any deviations.

Response 2

Included in items (b) and (c) above is all the connected branch piping associated with the AFW system. All the piping identified above fully meets the boundary requirements set forth by that particular section. In addition, sketch 12846.01-MKS-3 identifies all Seismic Category 1 items and boundaries associated with the AFW system. Since there are no deviations from the requirements identified above, acceptability justification is not applicable to this response.

In summary, Vepco feels that the above responses will satisfactorily answer the questions raised by Mr. Beard and Mr. Neighbors. As previously mentioned, a revised sketch 12846.01-MKS-3 will be forwarded to the NRC as soon as possible. If you have any questions or require additional information, please contact Vepco.

Very truly yours,


R. H. Leasburg

cc: Mr. James P. O'Reilly, Regional Administrator
Office of Inspection and Enforcement
Region II
Atlanta, Georgia 30303

Mr. Richard C. DeYoung, Director
Office of Inspection and Enforcement
Washington, D.C. 20555