

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

W. L. STEWART  
VICE PRESIDENT  
NUCLEAR OPERATIONS

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U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D. C. 20555

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Docket Nos. 50-280  
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Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION UNITS 1 AND 2  
INSIDE RECIRCULATION SPRAY PUMP ASME SECTION XI TESTING

In recent telephone conversations between our office and members of the NRC Staff, the question has been raised concerning the method and adequacy of testing of Surry Units 1 and 2 inside recirculation spray pumps.

As part of the design criteria for Surry as stated in our original FSAR, Section 6.3 and Response to NRC Question 6.19, the physical arrangement of these pumps precludes flow testing. Specifically, there is no provision in the existing design to recirculate discharge flow for testing or to establish a temporary source of water. Consequently, the testing and acceptance criteria outlined in Section 4.5 of our Technical Specifications require these pumps be dry tested on a frequency of at least once per month. As noted in the Bases of the Technical Specifications, these tests are designed to ensure pump readiness by verifying shaft rotation and comparing motor current readings with those obtained during preoperational testing. To date, our monthly dry tests have consistently been successful.

In 1979, we submitted our Inservice Testing (IST) program for Surry which included a relief request to continue to perform a monthly dry test of these pumps consistent with our design although ASME Section XI requires that a hydraulic test be performed. In later revisions to the IST program (including our present program), we have continued to request relief to dry test these pumps in lieu of hydraulic testing because of the physical configuration of the inside recirculation pumps.

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Other plants with similarly designed inside recirculation spray pumps have hydraulically tested their pumps without indication of pump performance degradation. Recently, North Anna Unit 2 performed a hydraulic test of their inside recirculation spray pumps which demonstrated no degradation in the head curve. As expected, the results of the hydraulic test showed that the pump performance was well within the original manufacturer's tolerances. North Anna has also been successfully performing a dry test of their inside pumps since the units were operational.

Also, the outside recirculation spray pumps at Surry are similar in general design to the inside recirculation spray pumps except that the motor-to-pump shaft length on the outside pumps is significantly longer than that of the inside pumps. These outside pumps are hydraulically tested on a monthly basis. This periodic hydraulic testing has not identified pump performance concerns other than those related to alignment problems.

Based on our successful dry testing in accordance with Technical Specifications, monthly hydraulic testing of the similar outside recirculation spray pumps at Surry, and the successful testing of similar inside recirculation spray pumps at other plants, we conclude that our inside recirculation spray pumps are operable. However, we are presently evaluating the plant modifications necessary to facilitate hydraulic testing of the inside recirculation spray pumps on a frequency of every refueling outage. By January 29, 1988 we will provide you with the results of this evaluation and a proposed schedule for installation of the modifications.

Should you require additional information, please contact us.

Very truly yours,



W. L. Stewart

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Mr. W. E. Holland  
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