

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

January 17, 1992

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

Serial No. 92-017
NL&P/MPW:JDH R5
Docket No. 50-338
50-339
License No. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
NRC BULLETIN 88-04, POTENTIAL SAFETY RELATED PUMP LOSS
UPDATE TO AFW PUMP INSPECTION INTERVAL

On August 8, 1988 (Serial No. 88-275B), Virginia Electric and Power Company submitted the North Anna Power Station response to NRC Bulletin 88-04 regarding potential safety-related pump loss. Attachment 1 of that letter identified the following long-term corrective actions we had committed to implement for the Auxiliary Feedwater (AFW) system:

- a. One or more auxiliary feedwater pumps will be disassembled and inspected for degradation during each refueling outage for each unit so that all three pumps are inspected at least once every 3 years. If any inspection results indicate pump degradation, all of the affected unit's pumps will be inspected during the same outage.
- b. Based on the results of the pump inspections and recommendations of the manufacturer, modifications to the minimum flow recirculation lines or an augmented pump inspection program will be considered.

Disassembly and inspection of the three AFW pumps on each North Anna unit took place in 1989. The 1989 inspections revealed some pump degradation. As a result, appropriate repairs were made to restore pump performance capabilities. One AFW pump was subsequently inspected in 1990 on Unit 2 and in 1991 on Unit 1. No indications of degraded pump performance were identified as a result of those inspections.

Modifications to install the full-flow recirculation lines on the AFW system have been completed for both units. A technical specification change permitting the use of the full-flow recirculation lines during monthly surveillance tests was approved by NRC on July 15, 1991. This modification should eliminate the cause of the previously identified degradation.

As part of our efforts to improve equipment performance, we have conducted a reliability-centered maintenance study on the AFW system. The study concluded that the frequency of disassembly and inspection of the AFW pumps should be conducted based upon performance indications.

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In implementing our program, we have identified one aspect of the long-term corrective action that is overly restrictive. Specifically, the commitment to inspect one pump per unit each refueling outage is inconsistent with conducting three inspections on the same unit in 3 years. Because our units operate on 18 month cycles, an inspection frequency of one pump each refueling outage would require a total of 54 months, or roughly 5 years, to complete one unit's inspections. Disassembly and inspection of an AFW pump is a major evolution requiring substantial resources. To meet both aspects of the current commitment would require us to conduct two such evolutions during the same refueling outage. That level of effort is judged to be an undue burden which would adversely impact resources needed to support the refueling outage.

Therefore, based on the results of the inspections to date on the AFW pumps, the installation of the full-flow recirculation lines on both units, our 18 month operating cycles, and the recommendations of the reliability centered maintenance study, we are extending the interval for completing the AFW pump inspections from three to five years. As part of our maintenance program, it is our intent to periodically reevaluate both the revised inspection interval and the need for continuing disassembly and inspection, and modify our program accordingly.

Finally, as stated in our August 8, 1988 response, a justification for continued operation had been developed and approved to justify continued operation pending final implementation of the long-term corrective actions. We have reviewed that JCO and have confirmed that the JCO is not adversely impacted as a result of the schedule change described above.

Should you have any questions or require additional information, please contact us.

Very truly yours,



W. L. Stewart
Senior Vice President - Nuclear

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