

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261



R. H. LEASBURG
VICE PRESIDENT
NUCLEAR OPERATIONS

May 4, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Robert A. Clark, Chief
Operating Reactors Branch No. 3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial No. 274
NO/JHL:acm
License No. 50-339
Docket No. NPF-7

Gentlemen:

Pursuant to License Condition 2.C(15)(d), for North Anna Unit 2, Vepco is to install leakage test connections on the Residual Heat Removal System (RHR) isolation valves prior to resuming power operation following the first refueling outage.

Currently, the leakage test connections have been installed on the RHR isolation valves as per Design Change 81-S40. There are four isolation valves involved in this modification. Two isolation valves are manufactured by Darling Valve and Manufacturing Co. (MOV-2720A and MOV-2720B) and these isolation valves have been installed in parallel on 10" outlet lines which tie into accumulator tanks No. 2 and 3 discharge lines. The test connections on these isolation valves are operational as designed. Two additional isolation valves (MOV-2700 and MOV-2701) are manufactured by Copes-Vulcan, Inc. and these isolation valves have been installed on the 14" inlet line from Loop A hot leg. All four isolation valves are double disc motor operated gate valves.

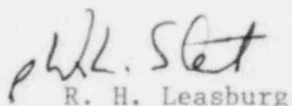
When leakage test connections were installed, it was intended that these isolation valves would be pressurized through a globe valve that was welded on the valve body drain nipple and both discs within these valves would seat properly providing a pressure boundary. The design of these isolation valves results in a problem for the installed modification on isolation valves MOV-2700 and MOV-2701. The problem is that there is a mechanical keeper within each isolation valve between the two discs and both discs can not seat simultaneously. Therefore, since only one disc can seat at a time, no pressure boundary is provided. Vepco contacted Westinghouse and Copes-Vulcan and they acknowledged the design. Vepco continued to pursue the operability of isolation valves MOV-2700 and MOV-2701. The RHR system was partially filled and hydro testing was performed, but no pressure could be developed.

Vepco is fully committed to leak rate testing all RHR isolation valves as stated in the North Anna Unit 2 Technical Specifications. To perform these leak rate tests, a leak rate test procedure was prepared which accounts for the design of MOV-2700 and MOV-2701. Leak rate testing is performed on MOV-2701 by isolating the downstream RHR return lines and by opening MOV-2700 such that the higher RCS pressure is upstream of MOV-2701. This pressure differential will seat MOV-2701 and leakage can be monitored downstream of the valve with a leak rate test rig on the RHR sample line connection. After completing the leak rate test on MOV-2701, the second valve MOV-2700 will be

closed and the leak rate test rig will be connected to the leak test connection of MOV-2701. The pressure between the two valves will be reduced providing a sufficient pressure differential to seat MOV-2700 and complete the leak rate test for that valve.

It is Vepco's intent to satisfy License Condition 2.C(15)(d) for North Anna Unit 2, with the procedure stated above so that Unit 2 may resume power operation following its first refueling outage. In any event, the surveillance required by the Technical Specifications will be completed.

Very truly yours,


R. H. Leasburg

cc: Mr. James P. O'Reilly
Regional Administrator
Region II