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ARTHUR E. LUNDVALL, JR.  
VICE PRESIDENT  
SUPPLY

March 1, 1983

Director of Nuclear Reactor Regulation  
Attention: Mr. R. A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: Calvert Cliffs Nuclear Power Plant  
Units Nos. 1 & 2; Dockets Nos. 50-317 and 50-318  
NUREG-0737, Item II.D.1 - PORV Block Valve Testing

Gentlemen:

In Action Item II.D.1 of NUREG-0737, the NRC stated that block valves located between the pressurizer and the power-operated relief valves (PORV) must be qualified to ensure that a stuck-open PORV can be isolated, thereby terminating the small loss-of-coolant accident resulting from the stuck-open PORV. Although the NRC recognizes that PORV isolation is not required to ensure safe shutdown of the plant, a stuck-open PORV would challenge the safety injection system. The position of the NRC is that such challenges are undesirable and that the frequency of their occurrence should be kept to a minimum by providing assurance that PORV isolation capability will exist under all fluid conditions that could be experienced under operating and accident conditions.

Since the issuance of NUREG-0737, which included specific implementation schedules for the NUREG-0660 requirement to qualify PWR block valves by test, it has been the expressed position of this Company, the Combustion Engineering Owners Group, and other industry groups that these block valves have historically demonstrated their reliability during operational experiences and that qualification testing was thus unnecessary. As an example of this fact, we refer you to an abnormal occurrence at Davis Besse Unit No. 1 on September 24, 1977, during which a PORV stuck in the open position, thus requiring operator reliance on the block valve for isolation. Since the block valve functioned normally and because the valve was of a design similar to those installed at Calvert Cliffs, we conclude that this occurrence is a good data point for demonstrating the reliability of our block valves.

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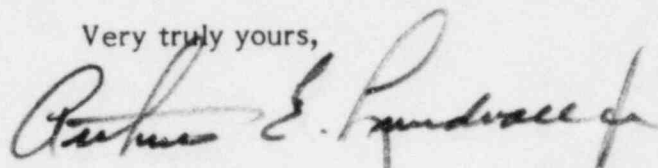
Nevertheless, to satisfy the requirements of NUREG-0737, we have reviewed EPRI-Marshall Electric Motor Operated Valve (Block Valve) Interim Test Data Report, NP-2514-LD, dated July 1982, to determine whether the functionality of our block valves could be demonstrated by a correlation with the design of those valves tested by EPRI. Based on this review and upon information received from the manufacturer of our block valves (Velan Engineering Co.), we feel that the EPRI test program successfully verifies the ability of the Calvert Cliffs block valves to function properly under all postulated conditions. Although there are differences between our valves and those that were tested by EPRI, we believe that these differences are minor and are not of a nature that would have adversely impacted the EPRI test results had our valves been the actual subjects of EPRI testing.

We have been assured by Velan that our valves will open and shut against a design maximum differential pressure of 2485 psi with the presently installed Limitorque operators. According to Velan, some valve seat leakage may occur after closing against a differential pressure greater than 2052 psi; however, it is unlikely that pressures in excess of 2052 psi would exist under any accident conditions during which the block valves would be required to operate. Nevertheless, Velan recommends that for continued use of these particular block valves, the valve operator shutting torque be increased to preclude the possibility of seat leakage at very high closing pressures. We have taken this recommendation under consideration for possible action during a future outage.

In conclusion, the functional adequacy of the PORV block valves currently installed at Calvert Cliffs has been demonstrated by tests of similar valves conducted by EPRI. This satisfies the requirements contained in Item II.D.1 of NUREG-0737.

If there are any questions concerning this subject, please contact us.

Very truly yours,



AEL/BSM/gvg

cc: J. A. Biddison, Jr., Esq.  
G. F. Trowbridge, Esq.  
Mr. D. H. Jaffe, NRC  
Mr. R. E. Architzel, NRC