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ELECTRIC ENGINEERING  
DEPARTMENT

June 16, 1981

Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Attn: Mr. Robert A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing



Subject: Calvert Cliffs Nuclear Power Plant  
Units Nos. 1 & 2; Dockets Nos. 50-317 & 50-318  
NRC Requirements for Auxiliary Feedwater System

Reference: Ltr from R. A. Clark to A. E. Lundvall, Issuance  
of Amendments Nos. 54 & 37, dated 8 May 1981

Gentlemen:

In the safety evaluation contained in the above referenced letter  
the following statement is made for the Evaluation of GL3 (page 16):

"Evaluation-GL3 - The licensee responded by letter dated December 13, 1979, that the motor operated auxiliary feedwater pump turbine steam supply valves represent the only feature of the syst. that depends on alternating current power. BG&E has installed the circuitry to automatically initiate AFWS flow by starting both steam-driven pumps. In order to satisfy the long-term requirement on AC independence the existing steam supply AC motor-operated valves will be replaced with AC controlled fail-open air-operated valves. Therefore, loss of AC will cause these steam supply valves to fail open starting the turbine driven AFWS pumps. We find the response to this recommendation, with the pending modifications, acceptable."

We have determined that the use of solenoid valves which are constantly energized leads to maintenance problems. The valves must be replaced much more frequently than those which are only energized when the function is required. We feel that constantly energized solenoid valves are not as reliable for the above reason.

In light of the above information, we have decided to use DC controlled air-operated valves. The valves would be held shut by air, which is supplied by a normally de-energized solenoid valve. Energization of the solenoid would vent the diaphragm and cause the valve to open.

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We feel this arrangement is acceptable for the following reasons:

- (1) The system is single-failure proof. There is one valve per steam generator and only one is required to open to adequately supply the pumps.
- (2) The solenoid valves are powered from 125 volt dc off the batteries.
- (3) The valve can be opened by manually venting the diaphragm or one can totally avoid operating the valve by opening the full flow bypass instead.

In a phone discussion with your E. J. Sullivan and E. L. Conner on 15 June 1981, it was determined that this change does not alter the intent of the evaluation of GL3 contained in the above referenced License Amendment and the item remains resolved.

Should you have any questions, feel free to contact us.

Very truly yours,

  
R. F. Ash  
Chief Nuclear Engineer

cc: J. A. Biddison, Esquire  
G. F. Trowbridge, Esquire  
Messrs. E. L. Conner, Jr. - NRC  
J. C. Ventura - Bechtel  
P. W. Kruse - CE

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