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# BALTIMORE GAS AND ELECTRIC COMPANY

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February 26, 1980

ARTHUR E. LUNDVALL, JR.  
VICE PRESIDENT  
SUPPLY

Mr. Boyce H. Grier, Director  
Region One, Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Subject: Calvert Cliffs Nuclear Power Plant  
Units Nos. 1 & 2, Dockets Nos. 50-317 & 50-318  
IE Bulletin 79-27

Reference: NRC letter dated 11/30/79 from B. H. Grier to  
A. E. Lundvall, Jr., same subject.

Dear Mr. Grier:

IE Bulletin No. 79-27, which was forwarded to us by the referenced letter, requested certain information concerning the potential vulnerability of Calvert Cliffs to a loss of a non-Class 1E instrumentation and control power bus during operation.

The following information is provided in response to the Bulletin and follows the format of the Bulletin:

Response to 1a.

Equipment required to achieve a cold shutdown derives power from 4 kV unit buses, 480 Volt unit buses, 480 Volt motor control centers, 120 VAC instrument buses and 125 VDC battery buses. Voltmeters, potential indicators and alarms exist in the control room to alert the operator to the loss of power to any bus.

Response to 1b.

Each piece of equipment (instrument, valve or motor) required to achieve a cold shutdown was reviewed in order to identify sources of power for control, operation and indication. Except as noted in the response to 1c below, loss of any one bus or facility will not impair the ability to achieve cold shutdown.

Response to 1c.

As a result of this review, the following modifications will be made:

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Two hot leg and three cold leg reactor coolant system temperature indicators are provided for each loop on the control panels. Three additional hot leg and three additional cold leg temperature channels are available at a remote location in the control room. Loss of a single inverter causes failure of panel indicators on loop 11 cold leg temperature and loop 22 cold leg temperature, however, remote control room indications are unaffected. Modifications will be made on these loops such that a single inverter loss will leave at least one panel indicator available for each loop temperature. Engineering has been initiated and it is anticipated that installation will be complete by May 30, 1980.

Low pressure safety injection control valve CV-306 must be closed during shutdown cooling. Loss of 120 VAC to this valve causes the valve to open. This is the required position during accident conditions. Provisions will be made for non-electrical operation of the valve during shutdown operations. Engineering has been initiated and installation will be completed during the first cold shutdown on each unit after receipt of equipment.

Shutdown cooling temperature control valve CV-657 must be open to provide a shutdown cooling flow path. Loss of 120 VAC to this valve causes the valve to close. This is the required position during accident conditions. Provisions will be made for non-electrical operation of this valve during shutdown operations. Engineering has been initiated and installation will be completed during the first cold shutdown on each unit after receipt of equipment.

Response to 2.a, b, and c.

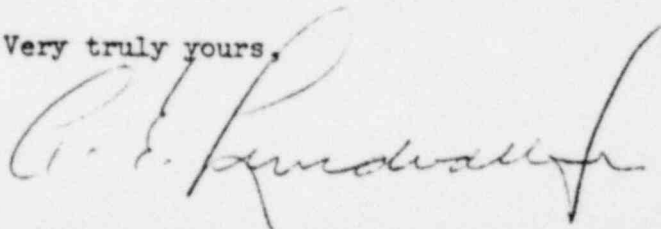
Operating instructions and abnormal and emergency procedures have been reviewed for adequacy, which would be used by operators in the event of a loss of power to a class 1-E or non-class 1-E distribution buses. The review has determined that a new procedure is needed. This procedure, which will be implemented by May 30, 1980 will address loss of power symptoms, equipment that is required for the safe shutdown of the plant that would be affected, alternate indication/equipment that may be used, and methods for restoring power.

Response to 3.

Vital 120 VAC is supplied by four inverter buses on each unit. No automatic change-over is employed. Change-over to an alternate source can be accomplished by a manual switch only. Loss of a single inverter will not impair the ability to achieve a cold shutdown. Each 120 VAC vital bus has a volt meter and a change-over switch position indicator in the control room. Additionally, loss of an inverter results in an alarm to alert the operators. No time delay relays are employed in the inverters, and based on favorable operating experience, no modifications are proposed.

If you require any additional information on this matter, please contact us.

Very truly yours,



cc: J. A. Biddison, Esquire  
G. F. Trowbridge, Esquire  
Mr. E. L. Conner, Jr.

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