BALTIMORE GAS AND ELECTRIC COMPANY

P. O. BOX 1475

BALTIMORE, MARYLAND 21203

August 21, 1980

ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

Mr. Boyce H. Grier, Director
Region I, 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 80-18

Dear Mr. Grier:

IE Bulletin 80-18 addressed a situation where the safety injection pumps could start when the pressure in the Reactor Coolant System (RCS) was above the discharge head of the pumps. If adequate minimum flow is not maintained through the pump, damage might result that could adversely affect the pump's availability prior to safety injection termination criteria being met. The bulletin directed us to perform calculations to determine if this problem could exist at Calvert Cliffs. However, due to the design configuration of the safety injection system at Calvert Cliffs these calculations were not necessary.

Upon initiation of a Safety Injection Actuation Signal (SIAS), two High Pressure Safety Injection (HPSI) pumps and both Low Pressure Safety Injection (LPSI) pumps will start. The SIAS is initiated by either a pressure switch for pressurizer pressure or for containment pressure. A recirculation line is provided for the HPSI and LPSI pumps. There are two valves in this line which are normally open and fail as is. Therefore, if the pressure in the RCS is above the shutoff head of the pump no damage would result because of the recirculation flow.

The safety injection pumps take suction from the Refueling Water Tank (RWT) and will commence discharging to the RCS when reactor coolant pressure drops below the shutoff head of the HPSI pumps. At this point, the minimum flow line for the HPSI pumps is not required because the discharge flow from the pump to the RCS is more than adequate. However, the minimum flow recirculation line valves remain open because the RCS pressure may still be above the shutoff head of the LPSI pumps. When the RWT empties a Recirculation Actuation Signal (RAS) initiates, which stops the LPSI pumps, shuts the minimum flow recirculation line valves, and lines up the HPSI pumps to take suction from the containment sump. With the LPSI pumps secured and the HPSI pumps in the recirculation mode between the containment sump and the RCS the minimum flow recirculation line is no longer required and is isolated at this point so as not to divert HPSI pump flow back to the RWT. Procedures at the plant require the operators to ensure that there is always adequate minimum flow for the safety injection pumps.

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All safety related analyses assumed the presence of this recirculation flow path.

As requested by the bulletin, 17 manhours were spent in conducting this review and 0 manhours for corrective action. Should you have any questions regarding this reply, we will be pleased to discuss them with you.

Very truly yours,

cc: J. A. Biddison, Esquire
G. F. Trowbridge, Esquire
Messrs. E. L. Conner, Jr. - NRC
J. W. Brothers - Bechtel
R. E. Architzel - NRC

Division of Reactor Construction Inspection
Office of Inspection and Enforcement
Washington, D. C. 20555