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JOSEPH W. GALLAGHER
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March 3, 1982

Re: Docket Nos. 50-277
50-278

Mr. John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Stolz:

This letter transmits a response to questions regarding Nureg 0737, Item II.B.1, Reactor Coolant System High Point Vents, received in correspondence dated January 18, 1982 (J. F. Stolz, NRC to E. G. Bauer, Philadelphia Electric Company). The questions were raised by your contractor, Lawrence Livermore National Laboratory, during their review of our previous response on this subject.

Should you have any questions regarding this matter, please do not hesitate to contact us.

Very truly yours,

Enclosure

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ENCLOSURE

Docket Nos. 50-277
50-278

Subject: Peach Bottom Atomic Power Station
RCS Venting (NUREG-0737, Item II.B.1)
Response to NRC Questions

References: a) J. F. Stolz (NRC) letter to E. G. Bauer (PECo.) dated January 18, 1982
b) S. L. Daltroff (PECo.) letter to D. G. Eisenhut (NRC) dated June 29, 1981

Information contained in this memorandum has been developed in response to the NRC's request for additional information regarding our submittal on compliance with NUREG-0737 requirements for high point vents (reference a). Extensive documentation of PBAPS compliance was transmitted to the NRC in Attachment A to reference b. The following information should be considered to supplement that previously provided.

NRC Question 1 - Identify any systems or equipment containing high points which may need venting (for example, the RHR heat exchanger) to maintain adequate core cooling. Describe the methods and indications used to identify the need to vent, the equipment used to vent, and the vent flow path, and discharge area of each of the above identified vents.

Response - NUREG-0737 and all preceeding TMI Lessons Learned discussions of Reactor Coolant System Vents stated that "... the purpose of the system is to vent noncondensible gases from the RCS which may inhibit core cooling during natural circulation...". Clarification B(2) further required that BWR's address the ability to vent other systems which may be required to maintain adequate core cooling.

The following emergency core cooling systems are available for maintenance of reactor vessel water level at Peach Bottom:

High Pressure Coolant Injection (HPCI)
Reactor Core Isolation Cooling (RCIC)
Low Pressure Coolant Injection (LPCI)
Core Spray (CS)

The use of any of these systems does not involve the need for venting other than from the reactor vessel. Even if the reactor is placed in a closed loop cooling mode (i.e. - RHR shutdown cooling), venting is not required other than from the reactor vessel.

The PBAPS units are not equipped with Isolation Condensers or RCIC/RHR steam condensing modes.

NRC Question 2 - If it were necessary to use the reactor vessel head vents in order to maintain adequate core cooling post-LOCA, discuss the guidelines the operator would follow to use these vents including:

a) When to vent or not vent considering combustible gas concentration in containment.

b) Potential single failures in the vent path, including the failure of a valve to close.

c) The effect of vent discharge on surrounding equipment.

Response - As noted in Attachment A of reference (b), the five (5) ADS safety/relief valves fully satisfy the NUREG-0737 requirements. It was further stated in our previous submittal that other additional means of venting were available (e.g. - non-ADS SRV's, reactor head vent, HPCI and RCIC steam lines). Since the use of the head vent line is only a remote, contingent possibility, it is not deemed to be appropriate to apply design basis type considerations to its use.

Operator guidance for reactor venting is described in our previous response (reference b) to NUREG-0737, Position 2, Clarification A(2), Clarification A(3), and Clarification A(9). Consideration of single failures in the vent paths, including failure of a valve to close, is described in our previous responses to Position 1, Clarification A(2), Clarification A(4), Clarification A(7) and Clarification A(8). Effects of the vent discharge on surrounding equipment are described in the discussions of Clarification A(2) and Clarification A(9).