

PHILADELPHIA ELECTRIC COMPANY

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PHILADELPHIA, PA. 19101

JOHN L. HANKINS
VICE PRESIDENT
ELECTRIC PRODUCTION

(215) 841-5001

October 8, 1976

Re: Docket Nos. 1 50-277
50-278

Mr. Victor Stello, Jr., Director
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, DC 20555

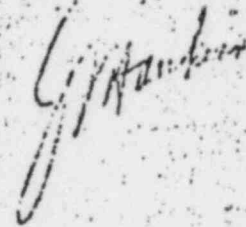
Dear Mr. Stello:

This is in response to your September 1, 1976 letter to
Mr. Edward G. Bauer, Jr. concerning the design of the recirculation
pump trip for Peach Bottom Atomic Station Units 2 and 3.

Attached is information regarding the pump trip circuit
design. Technical specifications for pump trip setpoints and
surveillance requirements are contained in the present Peach Bottom
Technical Specifications (Sections 3.2.5 and 4.2.5.).

If you have any questions or request any additional
information in this matter do not hesitate to contact us.

Very truly yours,



CRE:gbg

Attachment

PHILADELPHIA ELECTRIC COMPANY
Peach Bottom Atomic Power Station

Recirculation Pump ATWS Trip

Information on recirculation pump trip design to limit the consequences of an ATWS event is presented in the Peach Bottom FSAR (Supplement No. 1, Answer to Question 7.1.12). Additional information on the circuit design is presented below.

Automatic recirculation pump trip is initiated by either reactor high pressure or reactor low water level by the use of four pressure switches (PS 2-3-102 A,B,C,&D) and four level switches (LIS 2-3-57A&B and LIS 2-3-58A&B). These switches are connected in a one-out-of-two logic for both level and pressure to trip each recirculation pump MG set drive motor breaker.

The prominent features of the design are:

- 1) Reactor Protection System (RPS) scram for high pressure and low water level is initiated by different sensors, PS 2-3-55A,B,C,&D and LIS 2-3-101 A,B,C,&D respectively.
- 2) Diversity of signal sensing and processing equipment is provided in the design of the recirculation pump trip and RPS scram. The level and pressure sensors and the logic relays for recirculation pump trip were produced by a different manufacturer than those for RPS scram.
- 3) Logic relays for the pump trip and RPS scram are located on different panels.
- 4) The sensors for pump trip and RPS scram are located on the same instrument rack; however, channel separation is maintained so that failure of a rack or of an instrument sensing line will not prevent pump trip.
- 5) Cable separation between the pump trip and RPS scram is provided by the use of conduit.

The pump trip circuit is shown functionally in Figure Q7.1.12.1 in the Peach Bottom FSAR (Supplement No. 1). The schematic diagram for the circuit of one recirculation pump is shown on the attached Drawing E-171 Sheet 1. The circuit for the other pump is identical except that PS 2-3-102B&D and LIS 2-3-57B & 58B are utilized.