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April 24, 1984

Docket No. 50-277
50-278

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

SUBJECT: Peach Bottom Atomic Power Station, Units 2 and 3, Request for Relief of Operating Restrictions on the Purge and Vent Valves

REFERENCE: (1) Letter from S. L. Daltroff (PECO) to J. F. Stolz (NRC), dated August 26, 1983
(2) Letter from J. F. Stolz (NRC) to E. G. Bauer, Jr. (PECo), dated December 12, 1983

Dear Mr. Stolz:

This letter requests a change in the maximum allowable open position for the large containment purge and vent valves (6 and 18-inch valves) at the Peach Bottom Atomic Power Station, Units 2 and 3. Currently, these valves are limited to a maximum of 40 degrees open. This limitation was established to ensure that the valves will close against the pressures associated with the design basis loss-of-coolant accident. The results of a stress analysis used to establish this limit were provided in the "Summary Report" attached to Reference 1. The limiting stresses are experienced in the area of the shaft-to-disc connection.

In Enclosure 3 to Reference 2, the NRC safety evaluation concluded that the operability of the Peach Bottom purge and vent valves meet the staff's acceptance criteria, provided the valves are limited to 40 degrees open. Consequently, NRC approval is necessary to increase the valves' maximum allowable open position.

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Modifications are planned to replace the 316 SST valve shaft and disc-to-shaft taper pins with high strength steel (17-4 PH) components on each valve listed below. Additionally, three valves will be reoriented so that the flow out of containment will impact the flat side of the valve disc. A re-analysis by the valve manufacturer indicates that the modified valves will close against the maximum accident pressure from the revised maximum open positions identified below. This re-analysis uses the same methodology used to justify the original 40 degree limit. The proposed maximum allowable opening for each of the purge and vent valves is as follows:

		Maximum Allowable Valve Opening Angle
1.	6" (flow into hub side of valve disc)	70 degrees
	AO-2519 AO-3519	
2.	18" (flow into hub side of valve disc)	55 degrees
	AO-2505 AO-3505	
	AO-2511 AO-3511	
	AO-2512 AO-3512	
	AO-2520 AO-3520	
3.	18" (flow into flat side of valve disc)	65 degrees
	AO-2506 AO-3506*	
	AO-2507 AO-3507*	
	AO-2521A AO-3521A	
	AO-2521B AO-3521B*	

*These valves will be reoriented to to maximize the purging and venting flow rates.

The current 40 degree limitation has increased the time required for inerting and deinerting containment from six hours to approximately eighteen hours. The longer purge times increase the possibility that the 90 hour per year limit on purging operations will be attained prior to the last plant outage in a calendar year. In this situation, the large purge and vent valves would be prohibited from being opened to establish drywell habitability unless technical specification relief could be obtained. Consequently, a visual inspection of the primary coolant system integrity would be precluded during subsequent plant startups and shutdowns for that year. Following the

planned modifications, the time required for inerting and deinerting primary containment should be reduced to approximately nine hours, provided the NRC staff approves the maximum allowable valve open positions proposed above. A reduction in purge times will enhance the capability of monitoring and maintaining primary coolant integrity.

Additionally, measures will be taken to permanently fix the maximum opening limit of these valves by securing the stop limit adjustment nut in order to prevent readjustments.

We are requesting your timely review of this request to extend the maximum allowable open position, contingent on completion of the modifications described, as shown on the list above to permit a reduction in the time required for inerting and deinerting primary containment.

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

Very truly yours,

Attachment

cc: A. R. Blough, Site Inspector