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March 3, 1980

Docket Nos. 50-277
50-278

Mr. Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors
US Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Ippolito:

This letter is in response to your letter to E. G. Bauer, Jr., dated January 2, 1980, concerning containment purging and venting during normal plant operation at Peach Bottom. Each item of concern is restated followed by our response.

Item

a. Discuss the provisions made to ensure that isolation valve closure will not be prevented by debris which could potentially become entrained in the escaping air and steam.

Response

Design features are currently not provided at Peach Bottom to ensure that purge and vent valve closure will not be prevented by debris which could potentially become entrained in the escaping air and steam. While the probability of encountering difficulties due to debris entrainment is quite low, the design requirements for such protective features are currently being developed by the valve manufacturer (Fisher) and our Architect-Engineer (Bechtel).

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Item

b. Discuss the provisions made for testing the availability of the isolation function and the leakage rate of the isolation valves, individually, during reactor operation.

Response

Local leak rate tests of the purge and vent valves are currently performed during refueling outages in accordance with the requirements of 10 CFR 50, Appendix J and the Plant Technical Specifications.

The capability to leak rate test the purge and vent valves during reactor operation currently exis s. Such testing would have to be performed by pressurizing between the inner and outer valves. The validity of testing the inner valve in its non-accident direction is currently being reviewed by the valve manufacturer (Fisher).

Item

c. Provide an analysis to demonstrate the acceptability of the provisions made to protect structures and safety-related equipment, e.g., fans, filters and ductwork located beyond the purge system isolation valves against loss of function from the environment created by the escaping air and steam.

Response

Gases being vented from the Peach Bottom primary containment are transported through ductwork to the Standby Gas Treatment System (SGTS) for filtration prior to release. Our Architect-Engineer (Bechtel) has recently completed an analysis of the pressure surge that the SGTS filters could be exposed to if a DBA-LOCA were to occur while the vent valves were open. The pressure differential across the filters is calculated to exceed the differential for which the filters have been designed if the large diameter (18") vent valves were in an open position. As described in our January 2, 1979 letter to the NRC, these valves are opened only for deinerting during shutdowns, ventilation during outages, and inerting during startups. The above letter further addresses limitations on the total time that inerting and deinerting may be performed. In conjunction with our Architect-Engineer (Bechtel) and several manufacturers, we are currently evaluating methods of preventing filter damage.

Item

d. For the containment purge isolation valves, specify the differential pressure across the valve for which the maximum leak rate occurs. Provide test results (e.g., from vendor tests of leakage rate versus valve differential pressure) which support your conclusion.

Response

As discussed in b., above, the valve manufacturer (Fisher) is currently reviewing the subject of leak rate testing. This report will include an assessment of leakage vs. differential pressure.

Our review of the containment purging and venting system is currently in progress. We anticipate completion of this review by April 30, 1980, for items a,b,d and item c by June 1, 1980.

Should you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,