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August 22, 1975

Mr. Benard C. Rusche, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Oconee Nuclear Station
Docket Nos. 50-269, 50-270 and 50-287

Dear Mr. Rusche:

Mr. Frank Schroeder's letter of June 10, 1975 to Mr. Kenneth E. Suhrke of the Babcock and Wilcox Company (B&W) requested information concerning reactor vessel repressurization following a large steam line break incident. Certain information requested is non-generic in nature and, in the case of the Oconee units, all of the pertinent equipment is not in the B&W scope of supply. Accordingly, B&W has referred Mr. Schroeder's request to Duke, and this letter provides information relevant thereto.

As stated in Mr. Suhrke's response to Mr. Schroeder, dated August 12, 1975, all B&W units include two design features which help limit the overall rate of Reactor Coolant System cooling following a postulated large steam line break event. These are (1) the amount of secondary water inventory in the depressurized steam generator and (2) the sizing of the auxiliary (emergency) feedwater system. B&W units utilize once-through steam generators which have significantly less secondary water inventory than comparable natural circulation steam generators and also utilize auxiliary feedwater systems which are sized to closely match expected decay heat levels and, therefore, result in increased time available to the operator to perform manual actions.

For the Oconee units, it has been determined that for operation in the interval from zero to ten effective full power years that the minimum allowable reactor coolant temperature during an incident involving uncontrolled reactor vessel repressurization is approximately 300°F. (Current approximate accumulated effective full power years of operation are 1.2 for Oconee 1, 0.7 for Oconee 2 and 0.5 for Oconee 3). Initial evaluation, based on the information provided in the answer to Question 14.3.5, Supplement 3 to the Oconee FSAR, indicates that approximately 300 seconds are available, without operator action, before the 300°F limit is reached.

A postulated large steam line break incident results in a rapid depressurization of the affected steam generator and a decrease in the reactor coolant temperature. The transient can be promptly identified by a control room operator as these indications are readily observable by the operator. Upon identification of the event, the initial, and primary, manual action required by the applicable emergency procedure is closure of main and auxiliary feedwater valves. This action significantly reduces the rate of Reactor Coolant System cooling and allows the operator adequate time in which to initiate other appropriate control measures.

Considering the information available to the operator, the limited manual action required, and the amount of time available for operator action, no actions are considered necessary at the present time with regard to effects of a large steam line break incident on the Oconee units.

Very truly yours,

William O. Parker Jr.

William O. Parker, Jr. by WAH

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