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AUTH. NAME AUTHOR AFFILIATION  
 PARKER, W.O. Duke Power Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 DENTON, H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Comments on encl B&W rept "Ltr Rept on Reactor Vessel  
 Brittle Fracture Concerns in B&W Operating Plants." Addl  
 plant specific info in support of subj rept provided. Util  
 will complete analysis to resolve generic concerns.

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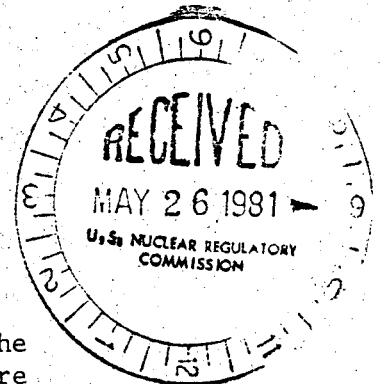
May 22, 1981

TELEPHONE: AREA 704  
373-4083

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Attn: J. F. Stolz, Chief  
Operating Reactors Branch No. 4

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



Dear Sir:

By letter dated April 20, 1981, the NRC advised Duke Power of the generic concern associated with thermal shock to reactor pressure vessels. A letter report summarizing the status of the B & W Owners Group efforts in this regard was submitted by John Mattimoe, SMUD, on May 15, 1981. Duke Power has reviewed that report (copy attached) and concurs with its contents. Based on evaluations that have been conducted thus far, continued unrestricted operation of the three Oconee units is justified through 1982 (5.95 EFPY), at a minimum. Currently, Oconee 1 has 4.9 EFPY, Oconee 2 has 4.4 EFPY, and Oconee 2 has 4.2 EFPY.

The following statements provide additional plant specific information in support of generic statements provided in the attached report:

1. By letter dated January 2, 1981, Duke Power submitted BAW-1648 and provided several comments related to the conservations present in the analysis. First, the analysis assumed total loss of all feedwater for an extended period of time, which is unrealistic considering the recent improvements in the Oconee emergency feedwater system. Secondly, the HPI flow assumed in the evaluation cannot be physically obtained at Oconee. With HPI flow lower, the temperature response would be expected to be less severe. Four vent valves, rather than eight vent valves as is the design of Oconee, were used. Greater vent valve flow results in a warmer downcomer temperature. BWST was assumed to be 40°F in the evaluation. In fact, the Oconee BWST nominal temperature is 50-60°F which would create an even warmer downcomer temperature. At that time, it was stated that any further evaluations of the concern would require the use of more realistic assumptions appropriate to the plant design. It should also be noted that the analyzed condition was beyond the design basis of Oconee.

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May 22, 1981

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2. Babcock & Wilcox Topical BAW-1511P, submitted by B&W to the NRC by letter dated March 12, 1981 was incorporated by reference on the Oconee dockets by Duke letter dated March 23, 1981. This report is the culmination of several Owners Group activities related to reactor vessel integrity. As noted in the attached report, many activities of The Owners Group Reactor Vessel Material subcommittee are ongoing and fully supported by Duke.

3. The appropriate Station Procedure has been revised to reflect the generic guidance for operator action as described BAW-1648 shift operating personnel have been advised of the procedural changes.

4. Several plant modifications have been completed in the past two years which tend to reduce the probability of a secondary side transient causing an overcooling event and the probability of a small break loss of coolant event due to a failed open power operated relief valve. Discussions of these were provided by my letters of July 23, 1980 (W.O. Parker to H.R. Denton, NUREG-0667) January 2, 1981 (W.O. Parker to H.R. Denton, NUREG-0737), and May 11, 1981 (W.O. Parker to J.P. O'Reilly, IE RII, IEB 81-02).

5. An ongoing Owners Group Transient Assessment Program systematically reviews all plant transient to confirm expected plant response, make appropriate corrective actions, and distribute the results to the operating plants of the B&W NSSS design. Through this program, B&W NSSS design operating experience is fed back in a coordinated manner to all the participating units.

In order to address the concern further, Duke Power will have certain transients analyzed on a plant specific basis. Currently, our plans include reanalysis of the limiting small break loss of coolant event, which had been performed generically and analysis of appropriate secondary system overcooling transients. The concern of repressurization will be addressed. Further, Duke will continue to support ongoing EPRI programs and Owners' Group programs which relate to reactor vessel materials in an effort to demonstrate vessel strength throughout the service life.

In summation, Duke Power intends to be responsive in addressing this issue and to complete the necessary analysis to fully resolve the concern for of Oconee Nuclear Station.

Very truly yours,

*William O. Parker, Jr.*  
William O. Parker, Jr.

WOP/djs  
Attachment