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SUBJECT: Forwards BAW-2085, "Submittal in Response to NRC Bulletin 88-011...", as response to Bulletin Action Item 1.b.

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DUKE POWER

May 31, 1989

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Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Justification for Continued Operation
Pressurizer Surge Line Thermal Stratification
NRC Bulletin 88-11, Dated December 20, 1988

Reference: Letter From D. F. Spand (B&WOG) to Charles E. Rossi,
NRC Bulletin 88-11, "Pressurizer Surge Line Thermal
Stratification", Dated May 23, 1989

Gentlemen:

By the above referenced letter, the B&W Owners Group transmitted to the Nuclear Regulatory Commission a report describing investigations made in response to Action Item 1.b of Bulletin 88-11. Action Item 1.b required that plants in operation over 10 years demonstrate by a plant specific or generic bounding analysis that the pressurizer surge line meets the applicable design codes and other FSAR and regulatory commitments for the licensed life of the plant, considering the phenomenon of thermal stratification and thermal striping in the fatigue and stress evaluations. The bulletin requested that actions to address Item 1.b be completed within four months of receipt of the bulletin with written confirmation of these actions within the next 30 days. Furthermore, the bulletin required that a justification for continued operation be provided for those plants where the bounding analysis in response to Item 1.b shows that the surge line licensing requirements could not be achieved for the duration of the operating license.

My letter of February 6, 1989 transmitted to the NRC the results of our visual inspection of the Oconee 1 surge line in response to Item 1.a of the bulletin. The inspection did not identify any gross discernible distress or structural damage in the entire surge line. Also, I indicated that a similar inspection of the Units 2 and 3 surge lines will be performed during their upcoming refueling outages currently scheduled in May 1989 and December 1989, respectively. In addition, my letter of March 9, 1989 advised that I intend to submit the results of a generic bounding analysis for Oconee Nuclear Station including the effects of thermal stratification phenomenon and, if

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needed, a justification for continued operation as required by Item 1.b. I proposed an alternate schedule to submit the results of bounding thermal striping evaluation for Oconee Nuclear Station by October 31, 1989.

The purpose of this letter is to document, as my response to Item 1.b of the bulletin, the referenced B&W Owners Group report (Attached) submitted on behalf of its member utilities on May 23, 1989. This report describes the B&W Owners Group Program for addressing the surge line thermal stratification and thermal striping issue and presents the results of the preliminary work done to justify continued operation until the final program results as required by Item 1.d are available. An applicability review of the B&W Owners Group report has concluded that it does conservatively cover the pressurizer surge line at Oconee Nuclear Station and provides justification for continued operation of the plant.

The B&W Owners Group report provides a detailed description of the investigations to date. Briefly, these investigations justify continued operation of the Oconee Nuclear Station based on the following factors:

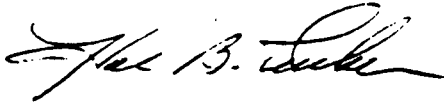
1. The surge line temperature differences assumed in the bounding analyses are conservative relative to the measured temperatures (see Table 5.2 of the report) from the Unit 1 instrumented surge line and applicability to all Oconee Nuclear Station units is demonstrated.
2. Based on evaluation described in Section 7 and summarized in Section 8 of the attached B&W Owners Group bounding analysis, the preliminary indications are that the impact of thermal striping is not significant.
3. Based on the results of the bounding analysis for Oconee Unit 1, as described in Section 5.1 of the report, the most critical part of the surge line affected by thermal stratification has a fatigue life (calculated in terms of heatup-cooldown cycles) of 135 cycles. In comparison, the Oconee Unit 2 with the most actual heatup-cooldown cycles to-date has experienced approximately 96. Thus, the Oconee surge lines can withstand another 39 cycles of heatup-cooldown without exceeding the fatigue life. This is equivalent to 5 years of plant operation before the pressurizer surge line fatigue life will be reached. However, before the calculated fatigue life will be reached, the B&W Owners Group Program to determine the actual surge line fatigue life will be completed by December 31, 1990 as required by Bulletin 88-11.
4. In addition to the above factors no service induced pressurizer surge line degradation, gross discernible distress or structural damage have been found as a result of inservice inspections and our visual inspection of the Unit 1 surge line in response to Item 1.a.

Based on the above discussions and the B&W Owners Group investigations detailed in the referenced report, we believe that continued operation of the Oconee Nuclear Station is justified.

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I declare under penalty of perjury that the statements set forth herein are true and correct to the best of my knowledge.

Very truly yours,



Hal B. Tucker

MAH/

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