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RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director
STOLZ,J.F. Operating Reactors Branch 4

SUBJECT: Supplemental application for amend to License DPR-38, proposing Tech Spec changes to support full-rated power during Cycle 8 & revising BAW-1774, "Cycle 8 Reload Rept," to reflect implementation of NUREG-0630 in LOCA analysis. 586 SUBJ A/E for Rev. BAW 1774

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July 13, 1983

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

Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4

Subject: Oconee Nuclear Station
Docket No. 50-269

Dear Sir:

This submittal provides supplemental information to a Duke Power letter dated May 19, 1983 which transmitted the proposed changes to the Oconee Nuclear Station (ONS) Technical Specifications to support the operation of Oconee Unit 1 at full-rated power during Cycle 8. Specifically, this submittal includes minor revisions to the text of the Babcock and Wilcox report, BAW-1774, "Oconee Unit 1, Cycle 8 Reload Report" and revisions to the figures and text of the proposed Technical Specification changes. These revisions reflect the implementation of NUREG-0630 clad rupture and swelling models into the LOCA analysis, as requested by your staff.

In complying with your staff's request to have the NUREG-0630 models implemented, a bounding analytical assessment approach was undertaken. The results of this assessment were provided in my letters of March 7, 1983 and June 6, 1983.

Attachment 1 provides the proposed changes to the ONS Technical Specifications which are required to support the operation of Oconee Unit 1 at full rated power during Cycle 8. The proposed Technical Specification revision of this submittal supersedes in its entirety the proposed Technical Specification revision of the original submittal dated May 19, 1983. Please note that the following pages of the proposed Technical Specification revision for this submittal are the same as in the May 19, 1983 original submittal: 2.1-2, 2.1-3, 2.1-7, and 2.3-8.

Attachment 2 provides the revised text to the BAW-1774 reload report. This revision updates the reload report to reflect the implementation of the NUREG-0630 model into the LOCA analysis. This revision of the text in the reload report also includes the updated bounding values for allowable LOCA peak Linear Heat Rates (LHRs) for Oconee 1 Cycle 8 fuel (i.e., Table 7-2 of the revised page 7-3).

Table 7-3 on page 7-4 provides the bounding values for allowable LOCA peak Linear Heat Rates for the first 50 effective full power days for Oconee 1 Cycle 8. The LOCA kw/ft limits were reduced for this time period in order to account for mechanistic fuel densification. The reduction was to ensure that conservative limits were maintained while a transition was being made in the performance codes that provide input to the LOCA analysis. The transition to the new performance codes has been completed; thus, page 7-4 (i.e., Table 7-3) should be deleted

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from the text of the BAW-1774 reload report. The figures provided in Attachment 1 of this submittal supersede those provided in Section 8 of the BAW-1774 reload report.

The May 19 letter, transmitting the original submittal, stated that Duke would incorporate the NUREG-0630 models as well as utilize a heat transfer correlation based on the FLECHT-SEASET test data as a compensating model into our LOCA analysis for Oconee 1 Cycle 8. The FLECHT-SEASET correlation for the prediction of reflooding heat transfer rates and quench time for the cosine as well as skewed power shapes have been incorporated into the Babcock and Wilcox (B&W) FLECSET code. A LOCA analysis which incorporates the NUREG-0630 models and utilizes the B&W FLECSET code has been completed. This analysis resulted in larger operating imbalance limits than if only NUREG-0630 models were utilized, thus offering greater operating flexibility. At a June 26, 1983 meeting between your staff and members of the Babcock and Wilcox Owners Group Core Performance Subcommittee, an overview of the justification for the use of the FLECSET code was presented. A brief description of the work scope planned for this justification is provided in this submittal as Attachment 3. At the meeting, it was indicated to the staff that the completed justification report for the use of FLECSET would be submitted by August 1, 1983. However, based on discussions with your staff, if the present schedule for submittal of the justification report is adhered to, then there would be an insufficient amount of time for the staff's review and approval process prior to the desired approval date of the Oconee 1 Cycle 8 reload amendment. Thus, the analysis which incorporates both the NUREG-0630 models and the B&W FLECSET code will not be pursued in this Oconee 1 reload. Duke does intend to continue working with the staff in an attempt to reach a long term resolution of this issue.

Inasmuch as the applicable licensing fees were provided with the May 19, 1983 submittal, no additional fees are enclosed.

Very truly yours,

Hal B. Tucker

Hal B. Tucker

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Attachments

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cc: Mr. J. C. Bryant
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