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

SUBJECT: Responds to 850729 request for confirmatory response to issues re NUREG-0737,Item II.K.3.30 & use of CRAFT2 code. Concurs w/B&W position that source of noncondensible gas does not alter NUREG-0565 conclusion.

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September 6, 1985

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

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

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

Re: 1. Letter, J. F. Stolz to H. B. Tucker, "NUREG-0737 Item II.K.3.30, Small Break LOCA Methods", dated July 29, 1985
2. Letter, R. H. Bryan to P. Kadambi, "BWOG IST Code Verification Plans", July 6, 1984
3. Letter, F. R. Miller to P. Kadambi, "IST Code Verification Plans", January 3, 1985

Dear Mr. Stolz:

The referenced letter (reference 1) requested a confirmatory response to issues relating to NUREG-0737 Item II.K.3.30 and the use of the CRAFT2 code. B&W and the B&W Owners Group endorse the conclusion in NUREG-0565 concerning the amount of noncondensible gases which could accumulate in the primary system. The Duke Power Company also concurs with the B&W position regarding the radiolitic decomposition of injected water, that the source of noncondensible gas does not alter the conclusion of NUREG-0565.

The IST Program is designed to obtain data relative to SBLOCA phenomena on B&W designed PWR's. The IST Program is not intended to provide integral test data for verification of the CRAFT2 SBLOCA-EM computer program. This was first stated in the B&W Owners Group Code Verification Plans letter (reference 2) and restated in the NRC Safety Evaluation Report letter (reference 1, Section III.5.g). It is the intention of the B&W Owners Group to use the RELAP5/MOD2 code for best estimate long term transient predictions. The RELAP5 code is undergoing benchmarking to the IST test data and use of this code will form the basis for future ATOG guidance. It is realized that present ATOG guidance in the area of SBLOCA is based on experience gained through CRAFT2 licensing analyses. In order to affirm the validity of present guidance in light of new best estimate codes and availability of IST data, the B&WOG has examined the merits of three alternatives to confirm the CRAFT2 modeling capabilities. These alternatives were presented in reference 3 as (1) benchmark of CRAFT2 to an OTIS test, (2) comparison between predictions of the same transient performed in a best estimate mode using CRAFT2 and a verified RELAP5/MOD2 or (3) comparison between predictions of the same transient performed in an Appendix K type calculation using CRAFT2 and a verified RELAP5/MOD2. The B&W Owners Group plans to perform a comparison between CRAFT2 and RELAP5/MOD2 to affirm validity of SBLOCA ATOG guidance. This comparison will be performed after the benchmarking of RELAP5/MOD2 to MIST data is completed. The intention of the B&W Owners Group is to perform a comparison between predictions of the same plant transient

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(as opposed to a MIST test transient) performed in a "best estimate" mode using CRAFT2 and a verified RELAP5/MOD2. The purpose of the comparison is to demonstrate that CRAFT2 does provide a conservative representation of SBLOCA behavior in a B&W PWR. The Duke Power Company, as a member of the B&W Owners Group, commits to participation in this program.

The Duke Power Company also commits to the use of the approved Small Break LOCA Evaluation Model, currently utilizing CRAFT2, for SBLOCA analyses performed for Oconee Nuclear Station to resolve NUREG-0737 Item II.K.3.31, which is planned to be submitted through a B&WOG program in July, 1986. The intent of the analysis to be performed to resolve NUREG-0737 Item II.K.3.31 will be to affirm the validity of previously submitted SBLOCA analyses performed with the SBLOCA-EM.

Very truly yours,

Hal B. Tucker

Hal B. Tucker

MAH:slb

cc: Dr. J. Nelson Grace, Regional Administrator
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