August 30, 1985

DMB 01b

Docket No. 50-302

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Mr. Walter S. Wilgus
Vice President, Nuclear Operations
Florida Power Corporation
ATTN: Manager, Nuclear Licensing
& Fuel Management
P. O. Box 14042; M.A.C. H-3
St. Petersburg, Florida 33733

Dear Mr. Wilgus:

SUBJECT: NUREG-0737 ITEM II.K.3.30, SMALL BREAK LOCA METHODS

On June 27, 1985 the NRC approved the Babcock and Wilcox (B&W) small break LOCA model, CRAFT2, for use in satisfying the NUREG-0737 Item II.K.3.30. The B&W model was documented in the two Topical Reports BAW-10092P, Rev. 3 and BAW-10154. The B&W Owners Group (BWOG) references these reports and CRAFT2 as their new licensing small break LOCA model to satisfy the requirements of II.K.3.30.

Our Safety Evaluation of II.K.3.30 for the members of BWOG is enclosed. However, we have identified two confirmatory issues related to the CRAFT2 computer program.

B&W endorses the conclusion in NUREG-0565 concerning the amount of noncondensable gases which could accumulate in the primary system. This evaluation conservatively estimated the maximum volume of noncondensable gases from all potential sources, with the exception of the radiolytic decomposition of the safety injection water. The result of this evaluation was that the amount of noncondensable gases is not sufficient to block natural circulation in the hot leg U-bend if all the noncondensable gases were conservatively assumed to accumulate at that location. In addition, the B&W position regarding the radiolytical decomposition of the injected water is that this additional source of noncondensable gas does not alter the conclusion in NUREG-0565. We assume that the B&W and the B&WOG position is indeed your position on this matter. However, we request that you confirm this in writing within 45 days from receipt of this letter.

The second confirmatory issue concerns the verification benchmark program for CRAFT2 against experimental, scaled test data for a B&W prototypical design facility. The B&W Integral System Test (IST) program is oriented at obtaining the necessary data. These data will be available in 1986. It is B&W's conclusion that the benchmark program will demonstrate that CRAFT2-Evaluation Model (EM) is conservative to licensing calculations. B&W also concludes that the models currently available in CRAFT2-EM are capable of adequately representing the expected SBLOCA phenomena in a B&W PWR, and that the IST tests will not identify any new phenomena for concern.

We concur with B&W's conclusions and consider the benchmark program to be confirmatory with respect to CRAFT2-EM.

B&W has made a long standing commitment to continually review experimental data and code predictions of these data by both B&W and other organizations, as they apply to the CRAFT2 evaluation model or portions of it (see Section 7 of BAW-10154). The MIST program (MIST) is one such source of new information.

We assume that as a member of the B&WOG you endorse the B&WOG commitment as your commitment with other members of the B&WOG to perform a suitable comparison to the MIST data, as identified in Section III.5.g of our SER, to demonstrate that CRAFT2 does provide a conservative representation of the SBLOCA behavior in a B&W PWR. We request within 45 days from receipt of this letter, that you provide, in writing, your commitment to the B&WOG program to perform such comparison.

It is our understanding that as a member of the B&WOG you will use the CRAFT2 in the small break LOCA analysis for Crystal River Unit 3. Please confirm in writing within 45 days from receipt of this letter that you endorse this position. Upon receipt of your confirming letter, we will consider NUREG-0737 ITEM II.K.3.30 complete for your plant. In accordance with NUREG-0737 ITEM II.K.3.31, your plant specific analysis is due within one year from receipt of this letter.

On November 2, 1983 in Generic Letter No. 83-35, the NRC provided clarification and proposed a generic resolution of TMI Action Item II.K.3.31. That is, resolution of II.K.3.31 may be accomplished by generic analysis to demonstrate that the previous analyses performed with SBLOCA-EM were conservative. Future plant specific analysis performed for your plant by Babock and Wilcox for reloads or Technical Specification amendments (those beyond 90 days of the date of this letter) should be calculated with the new code, CRAFT2.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

"ORIGINAL SIGNED BY
JOHN F. STOLZ"

John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosure: As Stated

cc w/enclosure:
See next page

ORB#4:DL	ORB#4:DL
HSilver;cf	JStolz
8/8/85	8/12/85

Mr. W. S. Wilgus
Florida Power Corporation

Crystal River Unit No. 3 Nuclear
Generating Plant

cc:
Mr. R. W. Neiser
Senior Vice President
and General Counsel
Florida Power Corporation
P. O. Box 14042
St Petersburg, Florida 33733

Nuclear Plant Manager
Florida Power Corporation
P. O. Box 219
Crystal River, Florida 32629

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 220, 7910 Woodmont Avenue
Bethesda, Maryland 20814

Resident Inspector
U.S. Nuclear Regulatory Commission
Route #3, Box 717
Crystal River, Florida 32629

Regional Administrator, Revion II
U.S. Nuclear Regulatory Commission
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Mr. Ulray Clark, Administrator
Radiological Health Services
Department of Health and
Rehabilitative Services
1323 Winewood Blvd.
Tallahassee, Florida 32301

Administrator
Department of Environmental Regulation
Power Plant Siting Section
State of Florida
2600 Blair Stone Road
Tallahassee, Florida 32301

Attorney General
Department of Legal Affairs
The Capitol
Tallahassee, Florida 32304

Bureau of Intergovernmental Relations
660 Apalachee Parkway
Tallahassee, Florida 32304

Mr. Wilbur Langely, Chairman
Board of County Commissioners
Citrus County
Inverness, Florida 36250