



Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

Ref: 10 CFR 50.46

December 12, 2005
3F1205-04

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Crystal River Unit 3 – 10 CFR 50.46 Loss-Of-Coolant Accident Evaluation Model Change and Peak Cladding Temperature Change Report

Reference: Letter from PEF to NRC, dated November 17, 2004 - Crystal River Unit 3 – 10 CFR 50.46 Loss-Of-Coolant Accident Evaluation Model Change and Peak Clad Temperature Change Report

Dear Sir:

Florida Power Corporation, doing business as Progress Energy Florida, Inc. (PEF), is providing the attached information pursuant to 10 CFR 50.46(a)(3)(ii). There have been no changes to the peak cladding temperature (PCT) for Crystal River Unit 3 (CR-3) since the last report was submitted in the above referenced letter. Tables stating the PCT for large break and small break loss-of-coolant accidents (LBLOCA and SBLOCA, respectively) are included in the attachment.

If you have any questions regarding this submittal, please contact Mr. Paul Infanger, Supervisor, Licensing and Regulatory Programs at (352) 563-4796.

Sincerely,

Michael J. Annacone
Manager Engineering

MJA/pei

Attachment: Summary of Changes to Evaluation Models and PCT for LBLOCA and SBLOCA

xc: NRR Project Manager
Regional Administrator, Region II
Senior Resident Inspector

A001

PROGRESS ENERGY FLORIDA

CRYSTAL RIVER UNIT 3

DOCKET NUMBER 50-302/LICENSE NUMBER DPR-72

ATTACHMENT

**Summary of Changes to Evaluation Models and PCT for
LBLOCA and SBLOCA**

Table 1 - Large Break LOCA

Date and Reference	Description	CR/NCR	ΔPCT (°F)		PCT (°F)	
			Mark B10	Mark B-HTP	Mark B10	Mark B-HTP
02/15/05 FANP 47-5058337-00	2004 Draft Annual BWOG 50.46 Letter. (This letter is compiled by the BWOG for member utility use.)	N/A	Mark B10	Mark B-HTP	Mark B10	Mark B-HTP
			0	0	1937	2023
8/2/05, FAB05-715	10 CFR 50.46 LOCA EM Change and PCT Reporting Change – No impact to LBLOCA B-HTP fuel analyses. The LBLOCA analyses were applied to break sizes as small as 0.5 square feet, reduced from 0.75 square feet, due to DNB being predicted at a smaller break size for B-HTP fuel.	FANP CR 2005-2302 AR 164425	Mark B10	Mark B-HTP	Mark B10	Mark B-HTP
			0	0	1937	2023
Cumulative and sum of absolute magnitude of changes since last (11/17/04) Annual Report.			Mark B10	Mark B-HTP	Mark B10	Mark B-HTP
			0	0	1937	2023

Table 2 - Small Break LOCA

Date and Reference	Description	CR/NCR	ΔPCT (°F)		PCT (°F)	
			Mark B10	Mark B-HTP	Mark B10	Mark B-HTP
02/15/05 FANP 47-5058337-00	2004 Draft Annual BWOG 50.46 Letter. (This letter is compiled by the BWOG for member utility use.)	N/A	Mark B10	Mark B-HTP	Mark B10	Mark B-HTP
			0	0	1400	1248
8/2/05, FAB05-715	<p>10 CFR 50.46 LOCA EM Change and PCT Reporting Change – This evaluation concluded that SBLOCA break sizes greater than 0.3 square feet would predict initial DNB for Mark B-HTP fuel. The SBLOCA EM method was modified to include consideration of the two flow-direction dependent terms via an overall multiplier on the B-HTP SBLOCA CHF correlation. After inclusion of the flow-direction terms, early DNB is predicted for break sizes greater than 0.5 square feet, therefore, the transition break size between LBLOCA and SBLOCA analyses was changed from 0.75 square feet to 0.5 square feet.</p> <p>There is a 0 degree F change in the SBLOCA PCT for the Mark B-HTP fuel because the limiting break size did not experience initial clad DNB. The Mark B-10 fuel analysis is unaffected by this change.</p>	FANP CR 2005-2302 AR 164425	Mark B10	Mark B-HTP	Mark B10	Mark B-HTP
			0	0	1400	1248
Cumulative and sum of absolute magnitude of changes since last (11/17/04) Annual Report.			Mark B10	Mark B-HTP	Mark B10	Mark B-HTP
			0	0	1400	1248