



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

Ref: 10CFR50.46

December 30, 2009  
3F1209-13

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

Subject: Crystal River Unit 3 – 10 CFR 50.46 Notification of Change in Peak Cladding Temperature for Small Break Loss Of Coolant Accident Analyses

Reference: Crystal River Unit 3 to NRC letter, dated December 16, 2009, "Crystal River Unit 3 – 10 CFR 50.46 Loss-of-Coolant Accident Evaluation Model Change and Peak Cladding Temperature Change Report"

Dear Sir:

Pursuant to 10 CFR 50.46(a)(3), Florida Power Corporation (FPC), doing business as Progress Energy Florida, Inc., hereby provides notification of a change in peak clad temperature (PCT) of greater than 50 degrees Fahrenheit (°F) in the Crystal River Unit 3 (CR-3) Small Break Loss of Coolant Accident (SBLOCA) analysis.

During Refueling Outage 16, the CR-3 Once Through Steam Generators (OTSGs) were replaced. The new model OTSGs change the amount of Emergency Feedwater (EFW) reaching the OTSG tubes, reducing the cooling capacity during a SBLOCA. This increases the SBLOCA PCT by less than 62°F, with a new PCT of approximately 1310°F. The OTSG replacement has no impact on the Large Break Loss of Coolant Accident (LBLOCA) PCT. The attachment to this letter provides additional details. The resulting maximum PCT remains within the 2200°F limit of 10 CFR 50.46.

No new regulatory commitments are made in this letter.

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

Sincerely,

Stephen J. Cahill  
Manager Engineering  
Crystal River Nuclear Plant

SJC/pdk

Attachment: Summary of Changes to Evaluation Models and Peak Cladding Temperature for Large Break Loss of Coolant Analysis and Small Break Loss of Coolant Analysis

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

Progress Energy Florida, Inc.  
Crystal River Nuclear Plant  
15760 W. Power Line Street  
Crystal River, FL 34428

ADDI  
NRR

**Progress Energy Florida, INC.**

**Crystal River Unit 3**

**DOCKET NUMBER 50-302/LICENSE NUMBER DPR-72**

**Attachment**

**Summary of Changes to Evaluation Models and Peak Cladding  
Temperature for Large Break Loss of Coolant Analysis and Small  
Break Loss of Coolant Analysis**

**Summary of Changes to Evaluation Models and Peak Cladding Temperature for  
Large Break Loss of Coolant Analysis and Small Break Loss of Coolant Analysis**

Florida Power Corporation (FPC), doing business as Progress Energy Florida, Inc., is providing the following information pursuant to 10 CFR 50.46(a)(3). Changes to the Evaluation Model or Peak Cladding Temperature (PCT) have occurred since FPC provided the last report by letter dated December 16, 2009. Current PCT results for Small Break (SB) and Large Break (LB) Loss of Coolant Accidents (LOCAs) are provided in the following Tables.

<b>CR-3 LB LOCA PCT Change Summary Cycle 17 Full Core of Mark-B-HTP Assemblies</b>		
	<b>Delta PCT</b>	<b>PCT</b>
Previously Reported PCT (2009 Change Report dated December 16, 2009)	N/A	1994°F
Analysis changes due to the replacement of steam generators	0	1994°F
Cumulative Change	0	
Sum of absolute magnitude of changes	0	

<b>CR-3 SB LOCA PCT Change Summary Cycle 17 Full Core of Mark-B-HTP Assemblies</b>		
	<b>Delta PCT</b>	<b>PCT</b>
Previously Reported PCT (2009 Change Report dated December 16, 2009)	N/A	1248°F
Analysis changes due to the replacement of steam generators	62°F	1310°F
Cumulative Change	62°F	
Sum of absolute magnitude of changes	62°F	