



APR 27 2005

L-2005-096  
10 CFR 50.46

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
10 CFR 50.46, "Acceptance Criteria for  
Emergency Core Cooling Systems in Light Water  
Nuclear Power Reactors" - Annual Report and 30-Day Report

10 CFR 50.46(a)(3)(ii) requires that licensees report to the Commission at least annually the nature of changes to, or errors discovered in, the Emergency Core Cooling System (ECCS) evaluation models, or in the application of such models that affect the peak clad temperature calculation and their effect on the limiting ECCS analysis. The attachment to this letter provides the Florida Power and Light Company (FPL) report for Turkey Point Units 3 and 4 for 2004.

Attachment 1 provides the summary of changes in Peak Clad Temperature (PCT) identified during 2004 for the Small Break Loss of Coolant Accident (SBLOCA) and Large Break Loss of Coolant Accident (LBLOCA) for Turkey Point Units 3 and 4. The cumulative changes for the LBLOCA and SBLOCA are 113 °F and 105 °F, respectively.

The cumulative changes to the LBLOCA EM and SBLOCA EM PCT exceed 50 °F by 63 °F and 55 °F, respectively. As per 10 CFR 50.46 requirements, a change exceeding 50 °F has to be reported within 30 days from its determination. This letter meets the 30-day reporting requirement. In addition to reporting, 10 CFR 50.46 also requires that a schedule for reanalysis be provided or compliance with the requirements of the regulation be shown. Compliance with 10 CFR 50.46 requirements is demonstrated by the total estimated LBLOCA PCT of 2064 °F and the SBLOCA PCT of 1689 °F remaining well below the limit of 2200 °F and by the total cumulative PCT changes having been calculated conservatively. Accordingly, no schedule for reanalysis is required.

Should there be any questions, please contact Walter Parker, Licensing Manager, at 305-246-6632.

Very truly yours,

A handwritten signature in black ink that reads "Terry Jones".

Terry O. Jones  
Vice President  
Turkey Point Nuclear Plant

Attachment

cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

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### Turkey Point Units 3 and 4 SBLOCA PCT Changes During 2004

By letter L-2004-116, dated May 26, 2004, Florida Power and Light Company (FPL) reported a Peak Clad Temperature (PCT) of 1689°F applicable for Units 3 and Unit 4, for the SBLOCA transient analysis. There are no reported changes for the Units 3 and 4 in the SBLOCA PCT during 2004.

### Turkey Point Units 3 and 4 LBLOCA PCT Changes During 2004

By letter L-2004-116, dated May 26, 2004, FPL reported a PCT of 2089°F for the LBLOCA transient analysis for Turkey Point Units 3 and 4. The cumulative PCT change for LBLOCA was 78 °F during 2003.

There are two changes to the reported LBLOCA PCT for Turkey Point Units 3 and 4 in 2004 (see Table 1). These changes and their impact are summarized below.

- REVISED BLOWDOWN HEATUP UNCERTAINTY DISTRIBUTION  
WCOBRA/TRAC reanalyses of the LOFT and ORNL tests with corrections of modeling inconsistencies and input errors in the original LOFT input decks resulted in new blowdown heatup heat transfer coefficients and a new HOTSPOT cumulative distribution function. The overall code uncertainty for blowdown was also revised and programmed into a new version of MONTECF. The overall code uncertainty for reflood was not affected. Estimates of the effect of the revised overall code uncertainty for blowdown were made on a plant-specific basis by repeating the MONTECF analysis for those plants that track the blowdown period. The effect on the Turkey Point calculated PCT is a penalty of 5 °F (+5 °F).
- REACTOR COOLANT PUMP (RCP) REFERENCE CONDITIONS  
An inconsistency between the RCP performance conditions and the reference homologous curves used in the WCOBRA/TRAC LBLOCA analysis was discovered. Correction of the error resulted in a 30 °F benefit (-30 °F ) on the Reflood 1 predicted PCT and a 93 °F benefit (-93 °F ) on the Reflood 2 predicted PCT. Since the Reflood 1 yields the limiting PCT for Turkey Point, the 30 °F benefit is the one selected in the rack up.

### Summary

The PCT of 1689°F for Units 3 and Unit 4 for the SBLOCA and the PCT of 2064°F for the LBLOCA, are below the 10 CFR 50.46 ECCS acceptance criteria limit of 2200°F. Turkey Point Units 3 and 4 remain in compliance with the Emergency Core Cooling System performance criteria specified in 10 CFR 50.46 (b).

**Table 1**

**Turkey Point Units 3 and 4 SBLOCA and LBLOCA PCTs**

	<b><u>Peak Cladding Temperature</u></b>	<b><u>Cumulative Change</u></b>
<b><u>UNITS 3 AND 4 SBLOCA</u></b>		
2003 10 CFR 50.46 Annual Report	1689 °F	105 °F
Changes in 2004	0 °F	0 °F
<b>2003 10 CFR 50.46 Annual Report</b>	<b>1689 °F</b>	<b>105 °F</b>
	<b><u>Peak Cladding Temperature</u></b>	<b><u>Cumulative Change</u></b>
<b><u>UNITS 3 AND 4 LBLOCA</u></b>		
2003 10 CFR 50.46 Annual Report	2089 °F	78 °F
<b><u>2004 Permanent Assessments</u></b>		
Revised Blowdown Heatup Uncertainty Distrib.	+5 °F	5 °F
RCP Reference Conditions Error	-30 °F	30 °F
<b>2004 10 CFR 50.46 Annual Report</b>	<b>2064 °F</b>	<b>113 °F</b>