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October 19, 2010
L-2010-231
10 CFR 50.46

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

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" – 30 Day Special Report

References:

1. Letter from Michael Kiley to US NRC Document Control Desk, "Turkey Point Units 3 & 4, Dockets Nos. 50-250 and 50-251, 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems in Light Water Nuclear Power Reactors" – 2009 Annual Report," L-2010-074, April 15, 2010.
2. "Turkey Point Units 3 and 4 Fuel Transition to 15x15 Upgrade Reload Transition Safety Report," April 2010, transmitted by Westinghouse letter from T. L. Pepple to A. Katz, "Transmittal of Final Fuel Reload Transition Safety Report," FPL-10-194, May 5, 2010.

FPL letter L-2010-074 (Reference 1), documented the 2009 Annual Report of Peak Clad Temperature (PCT) for the Small Break Loss of Coolant Accident (SBLOCA) and the Large Break Loss of Coolant Accident (LBLOCA) for Turkey Point Units 3 and 4. The LBLOCA PCT reported was 1986 °F, and the SBLOCA PCT reported was 1689 °F. The cumulative changes reported in L-2010-074 for the LBLOCA and SBLOCA were 271 °F and 105 °F, respectively.

10 CFR 50.46(a)(3)(ii) requires that changes to the LBLOCA Evaluation Model (EM) and SBLOCA EM PCT exceeding 50 °F have to be reported to the NRC within 30 days. Turkey Point Units 3 and 4 will be implementing the new 15x15 Upgrade fuel assemblies in support of the Turkey Point Units 3 and 4 power uprate. The 15x15 Upgrade fuel assemblies will first be inserted in the core during Unit 3 Cycle 25 and Unit 4 Cycle 26 refueling outages scheduled for Fall 2010 and Spring 2011, respectively.

The new 15x15 Upgrade fuel assemblies have different thermal-hydraulic characteristics than the old 15x15 debris resistant fuel assemblies (DRFAs). The differences between the two fuel designs include the addition of intermediate flow mixing grids, a change in the structural grid design and a change in the elevation of the active fuel stack which is 2.103 inches lower for the Upgrade fuel. As per Reference 2, Westinghouse has identified a mixed core penalty for the Turkey Point Units 3 and 4 LBLOCA PCT of 12°F due to the presence of the new 15x15 Upgrade fuel assemblies and the old 15x15 DRFAs in the same core. The mixed core penalty is applicable to both Turkey Point Units 3 and 4 only for cycles during which 15x15 DRFAs and 15x15 Upgrade fuel assemblies are both present in the core.

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The SBLOCA PCT is not affected by the mixed core effects. Table 1 below provides a summary of the Units 3 and 4 LBLOCA PCT for mixed cores.

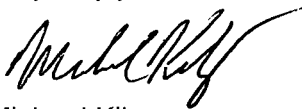
Table 1

<u>UNITS 3 AND 4 LBLOCA</u>	<u>Peak Cladding Temperature</u>	<u>Cumulative Change</u>
2009 10 CFR 50.46 Annual Report (Ref. 1)	1986 °F	271 °F
Mixed Core Penalty	12 °F	283 °F
Mixed Core PCT	1998 °F	283 °F

10 CFR 50.46(a)(3)(ii) 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 1998 °F, and the SBLOCA PCT of 1689 °F, both remaining well below the limit of 2200 °F and by the total cumulative PCT changes having been calculated conservatively. Accordingly, a schedule for reanalysis is not required; however, a reanalysis of the LBLOCA and SBLOCA have been performed as part of the Turkey Point Units 3 and 4 power uprate project currently scheduled for submittal to the NRC by the end of 2010.

Should there be any questions, please contact Robert Tomonto, Licensing Manager, at 305-246-7327.

Very truly yours,



Michael Kiley
Vice President
Turkey Point Nuclear Plant

Attachment

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