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10 CFR 50.46

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

**SHEARON HARRIS NUCLEAR POWER PLANT (HAR), UNITS 2 AND 3  
DOCKET NOS. 52-022 AND 52-023**

**LEVY NUCLEAR PLANT (LNP), UNITS 1 AND 2  
DOCKET NOS. 52-029 AND 52-030**

**10 CFR 50.46 THIRTY DAY REPORT FOR THE AP1000 STANDARD PLANT DESIGN**

Reference: Letter from Richard A. DeLong, Westinghouse Electric Company (WEC), to the Nuclear Regulatory Commission (NRC), 10 CFR 50.46 Thirty Day Report for the AP1000 Standard Plant Design, Letter No. DCP\_NRC\_003214, dated June 13, 2012

Ladies and Gentlemen:

The purpose of this letter is to provide a required thirty day report in accordance with 10 CFR 50.46, Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors, paragraph (a)(3)(ii) for the combined license (COL) applications submitted for the Progress Energy Carolinas, Inc. (PEC) Shearon Harris Nuclear Power Plant (HAR) and the Progress Energy Florida (PEF) Levy Nuclear Plant (LNP).

On June 13, 2012, Westinghouse Electric Company (WEC) submitted a thirty-day report to the Staff (Reference), to document the effects of fuel thermal conductivity degradation and peaking factor burndown on the Large Break Loss-of Coolant Accident (LBLOCA) Analysis of Record for the AP1000 Standard Plant Design. A summary of the updated peak cladding temperature (PCT) allocations and their bases including a proposed schedule for reanalysis of the LBLOCA were provided in the WEC report.

The PEC combined license (COL) application for the proposed HAR Units 2 and 3, and the PEF COL application for the proposed LNP Units 1 and 2, incorporate by reference the AP1000 design control document (DCD), thus, utilizing the calculations performed by WEC. Therefore the WEC report and reanalysis schedule are also applicable to the HAR and LNP units.

If you have any further questions, or need additional information, please contact Robert H. Kitchen, Nuclear Development Licensing Manager at (919) 546-6992.

Sincerely,

Christopher M. Fallon  
Vice President  
Nuclear Development

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cc : U.S. NRC Region II, Regional Administrator  
U.S. NRC Resident Inspector, SHNPP Unit 1  
Mr. Brian Hughes, U.S. NRC Project Manager  
Mr. Don Habib, U.S. NRC Project Manager