



Progress Energy

JUN 21 2007

James Scarola
Vice President
Brunswick Nuclear Plant
Progress Energy Carolinas, Inc.

10 CFR 50.90

SERIAL: BSEP 07-0053
TSC-2006-06

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

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Docket Nos. 50-325 and 50-324/License Nos. DPR-71 and DPR-62
Additional Information in Support of Request for License Amendment
Regarding Linear Heat Generation Rate and Core Operating Limits Report
References for AREVA NP Fuel (NRC TAC Nos. MD4061 and MD4062)

Reference: Letter from James Scarola to the U.S. Nuclear Regulatory Commission
(Serial: BSEP 06-0129), "Request for License Amendment Regarding
Linear Heat Generation Rate and Core Operating Limits Report References
for AREVA NP Fuel," dated January 22, 2007 (ADAMS Accession
Number ML070300570)

Ladies and Gentlemen:

By letter dated January 22, 2007, Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., submitted a license amendment request to revise the Technical Specifications (TS) for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. The proposed changes include: (1) revising TS 5.6.5, "Core Operating Limits Report (COLR)" to add AREVA NP, Inc. (AREVA) topical report references applicable to the use of ATRIUM-10™ fuel, (2) adding a new definition and TS 3.2.3 for linear heat generation rate (LHGR) requirements, and (3) incorporating the new LHGR requirements into existing TS 3.4.1 and 3.7.6. These changes are being made to support the BSEP transition to AREVA-manufactured fuel assemblies.

On April 25, 2007, a telephone conference call was held between CP&L, NRC, and AREVA to discuss the scope of additional information needed by the NRC to support review of the license amendment application. Subsequently, on May 23, 2007, a meeting was held to review CP&L's plan and schedule for submitting additional information and analyses being prepared to support the process of transitioning to AREVA ATRIUM-10™ fuel.

A001
NRR

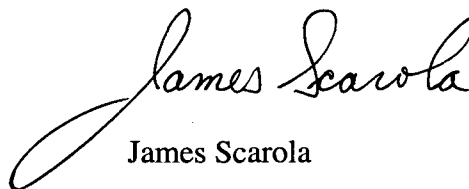
Enclosure 1 provides a copy of AREVA Topical Report ANP-2637, Revision 1, *Boiling Water Reactor Licensing Methodology Compendium*. This topical report provides a summary of the AREVA topical reports being used to support the Brunswick transition to ATRIUM-10™, including the AREVA topical reports being added to the list of approved analytical methodologies for the Core Operating Limits Report; a summary of the NRC-issued restrictions and conclusions for each topical report; a summary of the relationships between the various topical reports; and, for certain methodologies, descriptions of their unique characteristics or applications. As discussed during the meeting held on May 23, 2007, CP&L is submitting this information to demonstrate compliance with the NRC safety evaluations and safety evaluation report restrictions for the AREVA topical reports being used to support the AREVA fuel transition.

As presented in the meeting held on May 23, 2007, subsequent submittals will provide additional information addressing mixed core operation; operation at the current, approved, post-power uprate level; and the results of plant-specific neutronic, thermal-hydraulic, loss-of-coolant accident, and transient analyses.

No regulatory commitments are contained in this letter. Please refer any questions regarding this submittal to Mr. Randy C. Ivey, Manager – Support Services, at (910) 457-2447.

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on June 21, 2007.

Sincerely,



James Scarola

WRM/wrm

Enclosure: AREVA NP, Inc. Topical Report ANP-2637, Revision 1, *Boiling Water Reactor Licensing Methodology Compendium*, June 2007

cc (with enclosure):

U. S. Nuclear Regulatory Commission, Region II
ATTN: Dr. William D. Travers, Regional Administrator
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303-8931

U. S. Nuclear Regulatory Commission
ATTN: Mr. Eugene M. DiPaolo, NRC Senior Resident Inspector
8470 River Road
Southport, NC 28461-8869

U. S. Nuclear Regulatory Commission **(Electronic Copy Only)**
ATTN: Mr. Stewart N. Bailey (Mail Stop OWFN 8B1)
11555 Rockville Pike
Rockville, MD 20852-2738

Chair - North Carolina Utilities Commission
P.O. Box 29510
Raleigh, NC 27626-0510

Ms. Beverly O. Hall, Section Chief
Radiation Protection Section, Division of Environmental Health
North Carolina Department of Environment and Natural Resources
3825 Barrett Drive
Raleigh, NC 27609-7221