September 4, 2009

Ms. Andrea L. Sterdis
Manager, Nuclear Licensing & Industry Affairs
Nuclear Generation Development & Construction
Tennessee Valley Authority
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Joseph A. (Buzz) Miller
Executive Vice President
Nuclear Development
Southern Nuclear Operating Company
P. O. Box 1295
Birmingham, AL 35201

SUBJECT: BELLEFONTE UNITS 3 AND 4 SAFETY EVALUATION REPORT WITH OPEN ITEMS FOR CHAPTER 18, "HUMAN FACTORS ENGINEERING"

Dear Ms. Sterdis and Mr. Miller:

By letter dated October 30, 2007 (ML073110527), as supplemented by letters dated November 2, 2007 (ML073090428), January 8, 2008 (ML080100104), and January 14, 2008 (ML080160252), the Tennessee Valley Authority (TVA) submitted its application to the U.S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advanced passive pressurized water reactors in accordance with the requirements of 10 CFR 52, "Licenses, Certifications and Approvals for Nuclear Power Plants." The NRC formally docketed the application on January 18, 2008. These reactors are identified as Bellefonte (BLN) Units 3 and 4 and would be located near the town of Scottsboro in Jackson County, Alabama. The docket numbers established for Units 3 and 4 are 52-014 and 52-015, respectively. Subsequent to the original BLN COL application, TVA has updated and revised the application by letters dated October 10, 2008 (ML083100262), November 18, 2008 (ML083250490), and January 21, 2009 (ML090290406).

Based on our review of your application, the staff prepared the enclosed Safety Evaluation Report (SER) with Open Items for Chapter 18, "Human Factors Engineering." Unless otherwise stated in the SER with Open Items, the staff's review was based on revisions and updates made to the BLN COL application through January 21, 2009. The SER with Open Items is being provided to support the upcoming meeting of the subcommittee of the Advisory Committee on Reactor Safeguards (ACRS) scheduled to be held on October 6-7, 2009. The ACRS Full Committee meeting will be held at a later date. Issuance of this SER is an important milestone in the staff's review to determine whether TVA's application meets the Commission's regulations.

In a letter dated April 28, 2009, the NuStart Energy Development, LLC, consortium informed the NRC that it had changed the Reference COL designation for the AP1000 Design Center from BLN Nuclear Plant, Units 3 and 4 to the Vogtle Electric Generating Plant (VEGP), Units 3 and 4. The NRC staff is taking steps necessary to implement this change. During this transition, the BLN Units 3 and 4 docket will continue to be the vehicle of standard content for the ACRS subcommittee reviews. It is the staff's understanding that Southern Nuclear Operating Company will be responsible for responding to open items related to standard content within a 45-day response period.

The staff concludes that the enclosed SER with Open Items does not contain any information for which exemption from public disclosure has been sought or approved. However, the NRC will withhold the enclosed SER from public disclosure for ten calendar days from the date of this letter to allow TVA the opportunity to verify the staff's conclusion that the SER contains no such exempt information. If within that time, you do not request that all or portions of the SER be withheld from public disclosure in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," the enclosure will be made available for public inspection through the NRC's Public Document Room and the Publicly Available Records component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the Public Electronic Reading Room section of the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Should you have any questions, please contact Mr. Donald Habib, the NRC project manager at (301) 415-1035, donald.habib@nrc.gov or Mr. Joseph Sebrosky, the lead project manager for the BLN COL application at (301) 415-1132, joseph.sebrosky@nrc.gov .

Sincerely,

**/RA/**

Stephanie Coffin, Branch Chief
AP1000 Projects Branch 1 (NWE1)
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-014
52-015
52-025
52-026

Enclosure:
As stated

cc w/ encl: see next page

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Sincerely,

**/RA/**

Stephanie Coffin, Branch Chief
AP1000 Projects Branch 1 (NWE1)
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Office of New Reactors

Docket Nos. 52-014
52-015
52-025
52-026

Enclosure:
As stated

cc w/ encl: see next page

**Accession No.: ML091671859** **ACRS Memo: ML091671863**
**SER: ML091190760** **PKG: ML091671851**

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