

June 23, 2009

MEMORANDUM TO: Edwin M. Hackett, Executive Director  
Advisory Committee on Reactor Safeguards  
and Advisory Committee on Nuclear Waste

FROM: David B. Matthews, Director **/RA/**  
Division of New Reactor Licensing  
Office of New Reactors

SUBJECT: BELLEFONTE UNITS 3 AND 4 SAFETY EVALUATION REPORT WITH  
OPEN ITEMS FOR CHAPTER 5, "REACTOR COOLANT SYSTEM AND  
CONNECTED SYSTEMS"

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. 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 the application, the staff prepared the enclosed Safety Evaluation Report (SER) with Open Items for Chapter 5, "Reactor Coolant System and Connected Systems." 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 July 23-24, 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.

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 to allow TVA the opportunity to verify the staff's conclusion that the SER contains no such exempt information. Therefore, the staff requests that the ACRS withhold the attached information from public disclosure until the information has been released publicly in the Agencywide Documents Access and Management System (ADAMS). The staff will inform the ACRS immediately if TVA requests that any of the information in the attached document be withheld from public disclosure.

Should you have any questions, please contact Mr. Ravindra Joshi, the NRC project manager at (301) 415-6191, [ravindra.joshi@nrc.gov](mailto:ravindra.joshi@nrc.gov) or Mr. Joseph Sebrosky, the lead project manager for the BLN COL application at (301) 415-1132, [joseph.sebrosky@nrc.gov](mailto:joseph.sebrosky@nrc.gov).

Docket Nos. 52-014  
52-015

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