



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
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September 26, 2018

OMB Control No. 3150-0231

Ms. Cheryl A. Gayheart
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
3535 Colonnade Parkway
Birmingham, AL 35243

**SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 – CLOSEOUT OF
GENERIC LETTER 2016-01, "MONITORING OF NEUTRON-ABSORBING
MATERIALS IN SPENT FUEL POOLS" (CAC NOS. MF9410 AND MF9411;
EPID L-2016-LRC-0001)**

Dear Ms. Gayheart:

On April 7, 2016, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2016-01, "Monitoring of Neutron-Absorbing Materials in Spent Fuel Pools" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16097A169), to address the degradation of neutron-absorbing materials (NAMs) in wet storage systems for reactor fuel at power and non-power reactors.

The generic letter requested that licensees provide information to allow the NRC staff to verify continued compliance through effective monitoring to identify and mitigate any degradation or deformation of NAMs credited for criticality control in spent fuel pools (SFPs).

By letter dated November 2, 2016 (ADAMS Accession No. ML16307A297), as supplemented by letter dated May 31, 2018 (ADAMS Accession No. ML18151B046), Southern Nuclear Operating Company, Inc. (the licensee), responded to GL 2016-01 for Vogtle Electric Generating Plant, Units 1 and 2 (Vogtle 1 and 2). In the licensee's response to GL 2016-01, as supplemented, the licensee stated that, for Vogtle 2, no NAMs are currently credited to meet NRC subcritically requirements in the SFP. The NRC staff performed a thorough review of the licensee's response, any documents referenced therein, and other applicable licensing basis documents. Based on the review, the NRC staff concludes that the licensee has correctly identified that the Vogtle 2 licensing basis is consistent with the criteria for Category 1 as defined in GL 2016-01.

In the licensee's response to GL 2016-01, as supplemented, the licensee stated that, for Vogtle 1, it relies on continual monitoring industry operating experience, including ongoing participation in the Electric Power Research Institute (EPRI) Neutron Absorber Users Group (NAUG) and its related programs, to evaluate the condition of the Boral in its SFP. The licensee indicated that the NAUG, through EPRI, has completed a study which analyzes the criticality impact of blisters and pits on Boral. This study is described in EPRI document 3002013119, "Evaluation of the Impact of Neutron Absorber Material Blistering and Pitting on Spent Fuel Pool Reactivity," May 2018 (ADAMS Accession No. ML18226A292). The licensee also stated that the NAUG, through EPRI, is developing an industry-wide program to gather water chemistry and

Boral coupon data for SFPs. This program is described in EPRI document 3002013122, "Roadmap for the Industrywide Learning Aging Management Program (i-LAMP) for Neutron Absorber Materials in Spent Fuel Pools," May 2018 (ADAMS Accession No. ML18226A291). The licensee stated that relevant issues emerging from such industry efforts will be monitored through the licensee's Operating Experience Program and Corrective Action Program.

The stated purpose of this program is to inform the condition of the Boral at sites with no coupon, or in-situ, testing of its Boral, with results from other sites using the "sister pool criteria." The NRC staff notes that aspects of the industry-wide program referenced in EPRI Report 3002013122 (i.e., the Boral coupon database, water chemistry database, sister pool criteria, etc.) are not yet complete and some guidelines might not be fully developed until 2020. While the program as described in EPRI Report 3002013122 is not yet complete, the NRC staff did use the information found in EPRI Report 300203119 to support the conclusion that no additional information is needed, at this time, to address the five areas of information described in Appendix A to GL 2016-01 for Boral.

The NRC staff also notes that the studies documented in EPRI Reports 3002013119 and 3002013122 are intended to be generic analyses and were not provided as site-specific analyses. Therefore, the results of the analyses, or any part of those analyses, have currently not been shown as directly applicable to Vogtle 1 and 2. In addition, the NRC staff did not review whether the EPRI Reports could be used to justify equipment operability, design basis changes, or licensing changes requested pursuant to Title 10 of the *Code of Federal Regulations*, Section 50.90, "Application for amendment of license, construction permit, or early site permit." However, the NRC staff's review determined that the EPRI reports provide the information required to satisfy the request in GL 2016-01 for Boral, at this time.

For Vogtle 1 and 2, the NRC staff's review determined that the information provided sufficiently addressed the five areas of information described in Appendix A to GL 2016-01. Based on the review of the information provided, the NRC staff concludes no further information is requested regarding GL 2016-01.

Sincerely,



Douglas A. Broaddus, Chief
Special Projects and Process Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

cc: ListServ

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ADAMS Accession No.: ML18249A075***via email**

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