

April 6, 2006

Mr. D. E. Grissette  
Vice President  
Southern Nuclear Operating  
Company, Inc.  
Post Office Box 1295  
Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 RE:  
CLARIFICATION OF CRITICALITY ACCIDENT REQUIREMENTS REGARDING  
AMENDMENT NOS. 139 AND 118 (TAC NOS. MC8751 AND MC8752)

Dear Mr. Grissette:

By letter dated August 13, 2004, as supplemented by letters dated May 3 and July 7, 2005, Southern Nuclear Operating Company, Inc. (SNC, the licensee), requested an amendment to Facility Operating Licenses NPF-68 and NPF-81 for Vogtle Electric Generating Plant, Units 1 and 2 (Vogtle 1 and 2), respectively. The amendments consisted of changes to the Technical Specifications to reflect updated spent fuel rack criticality analyses for the subject reactor plants. On September 22, 2005, the Nuclear Regulatory Commission (NRC) staff issued Amendment No. 139 for Facility Operating License NPF-68 and Amendment No. 118 for Facility Operating License NPF-81, approving the proposed revisions. During the implementation of the amendments by SNC, the licensee informed the NRC staff of an error in the NRC staff Safety Evaluation (SE) included with the amendments. The purpose of this letter is to correct the error and clarify the licensing basis with regard to criticality accident requirements.

In the NRC staff's September 22, 2005, SE, the staff incorrectly stated that the licensee uses Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.68, as the licensing basis for criticality accident requirements. The NRC staff concluded in its regulatory evaluation that the approval of the amendment was acceptable because Vogtle 1 and 2 complied with 10 CFR 50.68, "Criticality accident requirements." The staff recognizes that this statement was incorrect and that the current licensing basis for Vogtle 1 and 2 for criticality accident requirements is 10 CFR 70.24, as modified by the exemptions that were issued on August 21, 1986, to NRC Materials License No. SNM-1967 for Vogtle 1, and on July 13, 1988, to NRC Materials License SNM-1981 for Vogtle 2. The exemptions were incorporated into Facility Operating Licenses NPF-68 and NPF-81 for Vogtle 1 and 2, as a condition of the license on March 16, 1987, and March 31, 1989, respectively, when the operating licenses were issued.

On February 20, 1998, the NRC staff approved a revision to the licensing bases affecting criticality analyses for Vogtle 1 and 2 in Amendment Nos. 99 and 78 to the Facility Operating Licenses. The amendments eliminated the credit for Boraflex as a neutron absorbing material in the fuel storage pool criticality analyses for the two units. The amendments included revised criticality analyses performed using the methodology developed by the Westinghouse Owners Group (WOG) and described in WCAP-14416-NP-A, "Westinghouse Spent Fuel Rack Criticality Analysis Methodology."

Based on problems identified with the WOG methodology after the issuance of these amendments, the licensing basis was further revised with the issuance of Amendment Nos. 139 and 118 on September 22, 2005, which updated the spent fuel rack criticality analysis with a revised analysis for each unit. Changes to the licensing basis for this amendment were limited to the criticality analysis and did not include a conversion of the criticality accident requirements to those described in 10 CFR 50.68. Therefore, the NRC staff concludes that the licensing basis for Vogtle 1 and 2 criticality accident requirements is contained in 10 CFR 70.24, as modified by the exemptions contained in Section 2.D of the respective Facility Operating Licenses. The methodology for conducting criticality analyses is described in the licensee's application dated August 13, 2004, as modified by supplemental letters dated May 3 and July 7, 2005.

The NRC staff has reviewed the conclusions of its September 22, 2005, SE against the requirements of the current licensing basis for each unit and concluded that the NRC staff's previous conclusions that spent fuel would be safely stored in a subcritical configuration in the Vogtle 1 and 2 spent fuel pools are still valid.

If you have any further questions regarding this matter, please contact the Vogtle Project Manager, Christopher Gratton, at 301-415-1055. We regret any confusion this error may have caused.

Sincerely,

**/RA/**

Evangelos C. Marinos, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

cc: See next page

April 6, 2006

Based on problems identified with the WOG methodology after the issuance of these amendments, the licensing basis was further revised with the issuance of Amendment Nos. 139 and 118 on September 22, 2005, which updated the spent fuel rack criticality analysis with a revised analysis for each unit. Changes to the licensing basis for this amendment were limited to the criticality analysis and did not include a conversion of the criticality accident requirements to those described in 10 CFR 50.68. Therefore, the NRC staff concludes that the licensing basis for Vogtle 1 and 2 criticality accident requirements is contained in 10 CFR 70.24, as modified by the exemptions contained in Section 2.D of the respective Facility Operating Licenses. The methodology for conducting criticality analyses is described in the licensee's application dated August 13, 2004, as modified by supplemental letters dated May 3 and July 7, 2005.

The NRC staff has reviewed the conclusions of its September 22, 2005, SE against the requirements of the current licensing basis for each unit and concluded that the NRC staff's previous conclusions that spent fuel would be safely stored in a subcritical configuration in the Vogtle 1 and 2 spent fuel pools are still valid.

If you have any further questions regarding this matter, please contact the Vogtle Project Manager, Christopher Gratton, at 301-415-1055. We regret any confusion this error may have caused.

Sincerely,

/RA/

Evangelos C. Marinos, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

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DATE	4/5/06	4/5/06	2/9/06	4/4/06	4/6/06

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Vogtle Electric Generating Plant, Units 1 & 2

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