

**Southern Nuclear
Operating Company, Inc.**
42 Inverness Center Parkway
Birmingham, Alabama 35242



JUN 04 2010

Docket Nos.: 52-025
52-026

ND-10-1124

U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4 Combined License Application
Response to Request for Additional Information Letter No. 054, Supplement 1
Loss of Large Areas of the Plant Due to Explosions or Fire - Mitigative Strategies Description

Ladies and Gentlemen:

By letter dated March 28, 2008, Southern Nuclear Operating Company (SNC) submitted an application for combined licenses (COLs) for proposed Vogtle Electric Generating Plant (VEGP) Units 3 and 4 to the U.S. Nuclear Regulatory Commission (NRC) for two Westinghouse AP1000 reactor plants, in accordance with 10 CFR Part 52. SNC subsequently submitted a letter dated May 29, 2009, that identified changes that will be made to a future revision of the VEGP Units 3 and 4 COL Application to address NRC requirements in 10 CFR 52.80(d). During their detailed review of this application, the NRC identified a need for additional information required to complete their review of the COL application's Loss of Large Areas of the Plant Mitigative Strategies Description and Plan (MSD) that was submitted to the NRC by the May 29, 2009 letter. By letter dated April 9, 2010, the NRC provided SNC with Request for Additional Information (RAI) letter No. 054 concerning this information need. The response to RAI letter No. 054 was submitted on May 24, 2010. On May 18, 2010, representatives from SNC discussed the proposed RAI responses with the NRC staff. During that discussion, the staff asked a supplemental question regarding the specific separation criteria used to address the key safety functions in the MSD. The enclosure to this letter provides SNC's response to the staff's supplemental question.

The enclosure to this letter contains Security-Related Information, and accordingly SNC requests that this enclosure be withheld from public disclosure under 10 CFR 2.390(d).

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This letter identifies changes that will be made to a future revision of the VEGP Units 3 and 4 Combined License Application (COLA) to address NRC requirements in 10 CFR 52.80(d).

If you have any questions regarding this letter, please contact Mr. Wes Sparkman at (205) 992-5061.

Mr. Charles R. Pierce states he is the AP1000 Licensing Manager for Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

Charles R. Pierce

Charles R. Pierce

Sworn to and subscribed before me this 4th day of June, 2010

Notary Public: Dana M Williams

My commission expires: December 29, 2010

CRP/BJS/dmw

Enclosure: Supplemental Response to NRC RAI Letter No. 054 on the VEGP Units 3 & 4 COL Application Involving the Loss of Large Areas of the Plant Due to Explosions or Fire Mitigative Strategies Description



cc: Southern Nuclear Operating Company

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File AR.01.02.06

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