

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



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Docket Nos.: 52-025
52-026

ND-10-1020

U.S. Nuclear Regulatory Commission
Document Control Desk
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
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 specified in 10 CFR 52.80(d) and associated with the loss of large areas of the plant due to explosions or fire. 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 Plan that was submitted to the NRC in 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. This RAI letter contains eight RAI questions, numbered 19-95 through 19-103, with the exception of RAI question 19-97 which was withdrawn by the NRC. The enclosure to this letter provides the SNC response to these questions.

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 Part 73.

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).

DO92
NRD

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

Mr. C.R. Pierce states he is the AP1000 Licensing Manager of 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

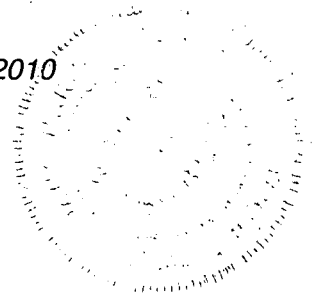
Sworn to and subscribed before me this 24th day of May, 2010

Notary Public: Dana M. Williams

My commission expires: 12/29/2010

CRP/BJS/dmw

Enclosure: 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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