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

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4
NRC Bulletin 2012-01, "Design Vulnerability In Electric Power System"
15 Day Response

Ladies and Gentlemen:

NRC BULLETIN 2012-01, "Design Vulnerability In Electric Power System," was issued On July 27, 2012 and was addressed to all holders of operating licenses and combined licenses for nuclear power reactors, except those who have permanently ceased operation and have certified that fuel has been removed from the reactor vessel. The Bulletin was issued after the Byron open circuit event in January 2012 which resulted in an automatic reactor trip from full power because the reactor protection scheme detected an undervoltage condition on the 6.9-kV buses that power reactor coolant pumps (RCPs) B and C (one of two phase undervoltage on two of four RCPs initiate a reactor trip).

The purpose of the bulletin is:

- To notify the addressees that the NRC staff is requesting information about the facilities' electric power system designs, in light of the recent operating experience that involved the loss of one of the three phases of the offsite power circuit (single-phase open circuit condition) at Byron Station, Unit 2, to determine if further regulatory action is warranted.
- To require that the addressees comprehensively verify their compliance with the regulatory requirements of General Design Criterion (GDC) 17, "Electric Power Systems," in Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 or the applicable principal design criteria in the updated final safety analysis report; and the design criteria for protection systems under 10 CFR 50.55a(h)(2) and 10 CFR 50.55a(h)(3).

The Bulletin required that addressees respond to the NRC in writing in accordance with 10 CFR 50.54(f).

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For the AP1000 reactors, the AC power system is designed such that plant auxiliaries can be powered from the grid or the standby non-class 1E system under all modes of operation. The offsite power system provides power to the safety-related loads through the battery chargers and provides defense-in-depth capabilities for reactor coolant make-up and decay heat removal during normal, abnormal, and accident conditions. Since the primary means for accident and consequence mitigation in these reactors are not dependent on ac power, the ac power systems are not as risk-important as they are in currently operating plants. While the AP1000 passive reactors are exempt from the requirements of GDC 17 for a second offsite power supply circuit, the regulatory requirements noted in the 2nd bullet above apply to the single offsite power circuit, and the open phase issue as described in this bulletin could be a potential compliance issue. As such, a response from combined license holders is requested for this bulletin.

Specific design information to detect and automatically respond to a single-phase open circuit condition or high impedance ground fault condition on a credited off-site power circuit was requested within 90 days of the issuance of the Bulletin. Addressees who cannot meet the requested completion date must submit written responses within 15 days of the date of this bulletin that address any alternative course of action proposed, including the basis for the acceptability of the proposed alternate course of action.

Southern Nuclear (SNC) is submitting this 15 day letter to inform NRC that the design and verification of the electrical circuitry and components involved may not be complete in time to support a comprehensive 90 day response. SNC will submit a 90 day response based on the information available for the current state of design/procurement. Some information may need to be evaluated for submittal as design/procurement progresses toward completion. SNC will provide updates every 6 months after the 90 day response as the design and procurement of equipment matures.

SNC also understands the NRC will determine whether additional actions are needed to ensure compliance with existing regulatory requirements and whether enhancements to the existing regulations or guidance, or both, are necessary based on our response and the industry's response.

This letter contains NRC commitments as described in the Enclosure.

If you have any questions, please call David Midlik at 205-992-6860.

Mr. C. R. Pierce states that he is the Regulatory Affairs Director 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

C. R. Pierce

C. R. Pierce

CRP/DWM/kms

Sworn to and subscribed before me this 10th day of August, 2012

Notary Public: Dana Marie Williams

My commission expires: 12/01/2014

Enclosure: List of Regulatory Commitments

NOTARY PUBLIC STATE OF ALABAMA AT LARGE
MY COMMISSION EXPIRES: Dec 1, 2014
BONDED THRU NOTARY PUBLIC UNDERWRITERS

cc: Southern Nuclear Operating Company

Mr. S. E. Kuczynski, Chairman, President & CEO (w/o enclosures)
Mr. J. A. Miller, Executive VP, Nuclear Development
Mr. D. A. Bost, Chief Nuclear Officer (w/o enclosures)
Mr. B. L. Ivey, VP, Regulatory Affairs
Mr. M. D. Rauckhorst, VP, Vogtle 3 & 4 Construction (w/o enclosures)
Mr. D. H. Jones, VP, Regulatory Affairs, Vogtle 3 & 4
Mr. J. R. Johnson, VP, Operational Readiness, Vogtle 3 & 4 (w/o enclosures)
Mr. T. E. Tynan, Site VP, Vogtle 1 & 2
Mr. D. M. Lloyd, Project Support Director, Vogtle 3 & 4 (w/o enclosures)
Mr. C. R. Pierce, Regulatory Affairs Director
Mr. M. J. Ajluni, Nuclear Licensing Director
Mr. D. L. Fulton, Environmental Manager
Mr. C. H. Mahan, Site Licensing Manager, Vogtle 3 & 4
Ms. A. G. Aughtman, Corporate Licensing Manager, Vogtle 3 & 4
Mr. M. C. Medlock, ITAAC Project Manager, Vogtle 3 & 4
Mr. W. A. Sparkman, Licensing Supervisor
Mr. D. W. Midlik, Licensing Supervisor
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Nuclear Regulatory Commission

Mr. V. M. McCree, Region II Administrator (w/o enclosures)
Mr. F. M. Akstulewicz, Deputy Director Div. of New Reactor Licensing (w/o enclosures)
Mr. M. E. Tonacci, AP1000 Licensing Branch Chief (w/o enclosures)
Mr. R. G. Joshi, Lead Project Manager of New Reactors
Ms. D. L. McGovern, Project Manager of New Reactors
Mr. B. M. Baval, Project Manager of New Reactors
Ms. M. A. Sutton, Environmental Project Manager
Mr. L. M. Cain, Senior Resident Inspector of VEGP 1 & 2
Mr. J. D. Fuller, Senior Resident Inspector of VEGP 3 & 4
Mr. G. Khouri, Senior Project Engineer VEGP 3 & 4
Mr. C. Abbott, Resident Inspector of VEGP 3 & 4
Mr. C. Huffman, Resident Inspector of VEGP 3 & 4

Georgia Power Company

Mr. B.H. Whitley, Nuclear Development Director

Oglethorpe Power Corporation

Mr. M. W. Price, Executive VP and Chief Operating Officer
Mr. K. T. Haynes, Director of Contracts and Regulatory Oversight

Municipal Electric Authority of Georgia

Mr. J. E. Fuller, Senior VP, Chief Financial Officer
Mr. S. M. Jackson, VP, Power Supply

Dalton Utilities

Mr. D. Cope, President and Chief Executive Officer

Bechtel Power Corporation

Mr. J. S. Prebula, Project Engineer (w/o enclosures)
Mr. R. W. Prunty, Licensing Engineer

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Ms. K. K. Patterson, Project Manager

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Mr. G. Grant, VP, Licensing & Regulatory Affairs (w/o enclosures)
Ms. K. Stoner, Vogtle Project Manager (w/o enclosures)
Mr. C. A. Castell, Licensing Engineer
Mr. E. C. Wenzinger, Licensing Engineer, Vogtle Units 3 & 4

Westinghouse Electric Company, LLC

Ms. J. Falascino, VP, Project Delivery (w/o enclosures)
Mr. T. H. Dent, VP, Consortium Project Director Vogtle Units 3 & 4 (w/o enclosures)
Mr. P. A. Russ, Director, AP1000 Global Licensing
Mr. R. A. DeLong, Director of U.S. & International Licensing (acting)
Mr. S. A. Bradley, Vogtle Project Licensing Manager
Mr. T. J. Ray, Manager, AP1000 COL Licensing Support

Southern Nuclear Operating Company

ND-12-1688

Enclosure

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

List of Regulatory Commitments

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The following table identifies those actions committed to by the Southern Nuclear Operating Company in this submittal. Any other statements are provided for information purposes and are not considered to be regulatory commitments.

Regulatory Commitments	Due Date
SNC will submit a 90 day response to NRC Bulletin 2012-01 based on the information available for the current state of design/procurement.	October 25, 2012
SNC will provide updates for NRC Bulletin 2012-01 every 6 months after the 90 day response as the design and procurement of equipment matures.	April 23, 2013