

Brian H. Whitley  
Regulatory Affairs Director  
Nuclear Development

Southern Nuclear  
Operating Company, Inc.  
40 Inverness Center Parkway  
Post Office Box 1295  
Birmingham, AL 35242

Tel 205.992.7079  
Fax 205.992.5296



SEP 10 2014

Docket Nos.: 52-025  
52-026

ND-14-1392

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555-0001

Vogtle Electric Generating Plant – Units 3 and 4  
Response to Request for Additional Information Letter No. 03  
"Mitigating Strategies for Beyond Design Basis External Events"

References:

1. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012.
2. Vogtle Electric Generating Plant - Units 3 and 4 Overall Integrated Plan in Response to Commission Order with Regard to Mitigation Strategies for Beyond-Design-Basis External Events (EA-12-049), dated August 22, 2013.
3. NRC Letter, Request for Additional Information Letter No. 03 Related to Fukushima NTTF Recommendation 4.2, "Mitigating Strategies for Beyond-Design-Basis External Events" for the Vogtle Electric Generating Plant Units 3 and 4 Combined Licenses, dated August 13, 2014.

Ladies and Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued an Order (Reference 1) to Southern Nuclear Operating Company (SNC). Reference 1 was immediately effective and directs the Vogtle Electric Generating Plant - Units 3 and 4 (VEGP 3&4) to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond-design-basis external event. Specific requirements are outlined in Attachment 3 of Reference 1.

Reference 1 required submission of an Overall Integrated Plan (OIP) which was submitted by SNC on August 22, 2013 (Reference 2). On August 13, 2014, SNC received Reference 3 which was the third request for additional information (RAI) related to the OIP.

This letter contains no new regulatory commitments. If you have any questions, please contact John Giddens at 205.992.7924.

Mr. Brian H. Whitley states that: he is the Nuclear Development Regulatory Affairs Director of Southern Nuclear Operating Company; he 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,

*B. H. Whitley*

B. H. Whitley  
Regulatory Affairs Director  
Nuclear Development

BHW/JMG

Sworn to and subscribed before me this 10<sup>th</sup> day of September, 2014.

*Kristin Marie Seibert*  
Notary Public

My commission expires: August 16, 2016

Enclosure: SNC Response to EA-12-049 RAIs - 03



cc:

Southern Nuclear Operating Company / Georgia Power Company

Mr. S. E. Kuczynski (w/o enclosures)  
Mr. J. A. Miller  
Mr. D. A. Bost (w/o enclosures)  
Mr. B. L. Ivey  
Mr. M. D. Rauckhorst (w/o enclosures)  
Mr. J. T. Gasser (w/o enclosures)  
Mr. D. H. Jones (w/o enclosures)  
Mr. J. R. Johnson (w/o enclosures)  
Mr. D. R. Madison  
Mr. D. M. Lloyd  
Mr. B. H. Whitley  
Mr. C. R. Pierce  
Mr. D. L. Fulton  
Mr. M. J. Yox  
Mr. J. C. Harrelson  
Ms. A. G. Aughtman  
Mr. W. A. Sparkman  
Mr. J. P. Redd  
Document Services RTYPE: VND.LI.L00  
File AR.01.02.06

Nuclear Regulatory Commission

Mr. V. M. McCree (w/o enclosures)  
Mr. M. Delligatti (w/o enclosures)  
Mr. L. Burkhardt (w/o enclosures)  
Mr. D. H. Jaffe  
Mr. R. G. Joshi  
Ms. D. L. McGovern  
Mr. B. M. Bovol  
Ms. R. Reyes  
Ms. M. A. Sutton  
Mr. M. E. Ernestes  
Mr. G. Khouri  
Mr. L. M. Cain  
Mr. J. D. Fuller  
Mr. C. B. Abbott  
Mr. C. Huffman  
Ms. S. Temple

Oglethorpe Power Corporation

Mr. M. W. Price  
Ms. K. T. Haynes  
Ms. A. Whaley

Municipal Electric Authority of Georgia

Mr. J. E. Fuller  
Mr. S. M. Jackson

Dalton Utilities

Mr. D. Cope

CB&I

Mr. J. Simmons (w/o enclosures)

Ms. K. Stoner (w/o enclosures)

Mr. C. A. Castell

Westinghouse Electric Company, LLC

Mr. T. C. Geer (w/o enclosures)

Mr. S. W. Gray (w/o enclosures)

Mr. L. Woodcock

Mr. P. A. Russ

Mr. G. F. Couture

Mr. M. Y. Shaqqo

Other

Mr. R. W. Prunty, Bechtel Power Corporation

Ms. K. K. Patterson, Tetra Tech NUS, Inc.

Dr. W. R. Jacobs, Jr., Ph.D., GDS Associates, Inc.

Mr. S. Roetger, Georgia Public Service Commission

Ms. S. W. Kernizan, Georgia Public Service Commission

Mr. K. C. Greene, Troutman Sanders

Mr. S. Blanton, Balch Bingham

**NRC RAI 03-1:**

Following-up to Southern Nuclear Operating Company's (SNC's) response to RAI 02-9, dated June 19, 2014, in which SNC defined the ultimate water source as the Savannah River, based on NRC and industry concerns for potential debris in fluid systems at nuclear power plants, the NRC staff requests that the SNC address its plans to satisfy item 1.a.ix in Section 11.2 of NEI 12-06 as follows:

Potential clogging of strainers, pumps, valves or hoses from debris or ice when using rivers, lakes, ocean or cooling tower basins as a water supply.

The response should not be limited to the FLEX equipment, but should consider the entire flow path credited as part of the mitigating strategy to maintain or restore core, containment, and spent fuel pool cooling.

**SNC Response to RAI 03-1:**

NEI 12-06 states that potential clogging by debris is to be accounted for in design flow requirements. The SNC strategy for this is to minimize the clogging by using the associated intake strainer/screen as well as provide flow margin. In both the primary and alternate strategies, flow margin will allow degraded flow created by clogging of the strainer/screen to still provide adequate flow for some period of time. When flow drops below the minimum required, the paragraphs below describe how stopping the portable pump(s) flow to allow strainer/screen cleaning is accommodated for each strategy.

For the primary strategy using the PCS Ancillary Water Storage Tank and pumps, the river pump flow margin and the flow required by the passive containment cooling system (PCS) and spent fuel pool (SFP), the passive containment cooling Ancillary Water Storage Tank would maintain a level sufficient to provide significant margin such that the flow from the river could be stopped for a period of time. When the flow is stopped, the strainer/screen located on the river inlet could be cleaned. This evolution could be done without losing flow to the PCS or SFP using the stored volume of water in the Ancillary Water Storage Tank.

For the alternate strategy supplying flow directly from the river, when the flow is stopped to clean the strainer/screen located on the river inlet, additional time margin exists in that loss of PCS cooling will result in a slow heat up of the containment. The same is provided in the SFP assuming that the water level is increased above the minimum level and a slow decrease in level will occur until the flow is restored.

The same scenarios apply to ice in freezing conditions considering continuous flow in the lines. The risk of ice clogging the strainer/screen will be minimal since it will be below the surface of the river.

**NRC RAI 03-2:**

During a telephone conference on July 3, 2014 with the NRC staff, SNC indicated its plan to prepare plant-specific documentation and controls for the implementation of the AP1000 FLEX Plan similar to Vogtle Units 1 and 2, rather than preparing a revision to its FSAR to address the plant-specific FLEX plan. The NRC staff requests that SNC specify when its plant-specific documentation and controls for the implementation of the AP1000 FLEX Plan will be available for NRC review. The NRC staff also requests that SNC address its plans regarding an audit of the Regional Response Center to review maintenance activities and implementation of EPRI Technical Report 3002000623.

**SNC Response to RAI 03-2:**

As discussed with the NRC's Japan Lessons-Learned Division staff, when compliance with EA-12-049 is achieved and reported to the NRC for the last unit<sup>1</sup> on each site, the licensee will submit a Final Integrated Plan (FIP) for those units. This FIP will provide the implemented strategy for achieving the requirements of EA-12-049. The FIP will be maintained by the licensee and modifications which could impact implementation compliance will be evaluated to determine whether a strategy is being impacted or whether a strategy change is being considered. Strategy changes not meeting the criteria in NEI 12-06 will be submitted to the NRC for approval prior to implementation.

In like manner, the FIP for Vogtle Units 3 and 4 will be provided upon compliance notification. It is not anticipated that the strategy which will be provided in the FIP for Vogtle 3 and 4 will differ from what was provided in the Overall Integrated Plan submitted to the NRC on August 22, 2013.

Regarding the plan to audit the National SAFER Response Centers (formerly known as the Regional Response Centers), the Nuclear Energy Institute (NEI) is scheduled to submit a White Paper this month (September 2014) requesting endorsement by the NRC. The White Paper discusses maintenance of the equipment, the internal and utility audits of Pooled Equipment Inventory Company (PEI Co), as well as the expectations that PEI Co will be audited by the NRC. One of the many aspects which will be reviewed in these audits includes the maintenance activities performed at the National SAFER Response Centers.

---

<sup>1</sup> Of the same Nuclear Steam Supply System vendor and type