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Southern Nuclear Operating Company
Vogtle Early Site Permit Application
Response to Regulatory Issue Summary 2007-08

Ladies and Gentlemen:

On April 16, 2007, the U.S. Nuclear Regulatory Commission (NRC) issued Regulatory Issue Summary (RIS) 2007-08, *Updated Licensing Submittal Information to Support the Design-Centered Licensing Review Approach*. This RIS requests current and potential applicants for early site permits (ESPs), combined licenses (COLs), or standard design certifications (DCs) to voluntarily submit information with respect to standardization and the schedules for submitting DC, ESP, and COL applications, as well as respect to quality assurance (QA) activities and construction plans. The requested information is an update to information that the NRC originally requested in RIS 2006-06, *New Reactor Standardization Needed to Support the Design-Centered Licensing Review Approach*. The enclosure to this letter provides Southern Nuclear Operating Company's (SNC's) voluntary response to RIS 2007-08 for proposed Vogtle Electric Generating Plant (VEGP) Units 3 and 4.

If you have any questions or require additional information regarding this matter, please contact C. R. Pierce at (205) 992-7872.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

A handwritten signature in cursive script that reads "JA Miller".

Joseph A. (Buzz) Miller

JAM/BJS/dmw

D079

Enclosure

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Southern Nuclear Operating Company

AR-07-1111

Enclosure

Response to NRC Regulatory Issue Summary 2007-08

for

Proposed VEGP Units 3 and 4

SNC's voluntary response to NRC RIS 2007-08 for proposed VEGP Units 3 and 4 is as follows:

Licensing Submittal Information

1. a) Will the applicants be organized into DCWGs?

Response: Southern Nuclear Operating Company (SNC) is a member of the AP1000 DCWG.

- b) If so, what is the membership and who is the single point of contact designated for each DCWG?

Response: At present, all announced applicants who have indicated their intent to apply for a COL utilizing the AP1000 Design Control Document (DCD) are members of the AP1000 DCWG. As previously identified in NuStart's response to RIS 2006-006, Peter Hastings of Duke Energy is the AP1000 Reference Plant (Bellefonte Site) Licensing Lead for NuStart and the NRC single point of contact for the AP1000 DCWG.

- c) Have protocols been developed to provide coordinated responses for RAIs with generic applicability to a design center?

Response: The AP1000 DCWG does intend to coordinate RAI responses, as appropriate, and is currently developing protocols for this purpose.

2. Which applicant referencing the design will be designated as the R-COL applicant?

Response: The Tennessee Valley Authority (TVA) will be the AP1000 DCWG R-COL applicant for the Bellefonte (BLN) site.

3. a) When (month and year) will each of the COL applications be submitted for review?

Response: SNC intends to submit the COL application during March 2008.

- b) In addition, what is the design, site location, and the number of units at each site?

Response: The SNC application is for two certified Westinghouse AP1000 units, located at the Vogtle Electric Generating Plant (VEGP) near Waynesboro, Georgia. The two AP1000 units are designated as VEGP Units 3 and 4.

4. What portions of the COL application (chapters, sections, subsections) will be relying on the DC?

Response: Most portions of the application for an AP1000 design will be relying on the DC to varying extents. For example, every chapter of the COL application Part 2 (plant-specific DCD including the plant-specific Technical Specifications) will rely on the AP1000 DCD, the VEGP ESP, and will be supplemented as necessary to address additional needed information such as COL information items. The COL application Part 10 will also rely on the Tier 1 ITAAC and associated ITAAC design descriptions. Each Part of the COL application is addressed in the Standardization Matrix included as Attachment 1 of this RIS response, with section by section details provided for Part 2 of the COLA.

5. What portions of the R-COL application (chapters, sections, subsections) will be referenced (i.e., replicated verbatim) in S-COL applications, and what portions of the application are likely to be site-specific?

Response: Details in response to this request are also provided in the Standardization Matrix included as Attachment 1 of this RIS response for each part of the COL application, with section-by-section details provided for Part 2. Additionally, Attachment 1 indicates the parts, chapters, and sections that have been addressed, either wholly or in part, in the VEGP ESP application.

6. a) When (month and year) will applicants complete the detailed design information to be verified under those inspections, tests, analyses, and acceptance criteria that are directed at certification information (design acceptance criteria)?

Response: The detailed design information to be verified under inspections, tests, analyses, and acceptance criteria (ITAAC) that are directed at certification information (i.e., DAC) will be complete at varying times, depending on the availability of the information. Some DAC resolution information is currently being developed and is anticipated to be available at the time of COL application submittal, but other DAC resolution information will not be completed until after the COL is issued.

b) Will this information be completed in a design certification amendment application, in the R-COL application, in S-COL applications, in post-COL Final Safety Analysis Report updates, or a combination thereof?

Response: The detailed design information to be verified under ITAAC will be completed in a combination of a DC amendment application, the R-COL and S-COL applications, post-COL application updates, and post-COL notifications. The design information intended to resolve the Piping DAC will be included in the amendment to the AP1000 Design Certification. In addition, design information to partially resolve the Instrumentation and Control System and Human-System Interface DAC will also be included in the amendment.

Site and Environmental Information

7. Do any applicants intend to apply for an ESP prior to submitting their COL applications? If so, when (month and year) would the proposed ESP be submitted to the NRC for review?

Response: SNC applied for an Early Site Permit for the VEGP site on August 14, 2006. Most recently Revision 2 of the application was submitted to the NRC on May 3, 2007.

8. For ESP applicants, is the applicant going to be seeking approval of either "proposed major features of the emergency plans" per 10 CFR 52.17(b)(2)(i), or "proposed complete and integrated emergency plans" per 10 CFR 52.17(b)(2)(ii)?

Response: The VEGP ESP application, submitted August 14, 2006, requested approval for a "proposed complete and integrated emergency plan" developed in accordance with 10 CFR 52.17(b)(2)(ii).

9. Do the applicants plan to submit an environmental report or limited work authorization request prior to other portions of the COL application, and if so, when (month and year)?

Response: SNC submitted a complete environmental report and limited work authorization (LWA) request (under the regulations in effect at the time of submittal) in the VEGP ESP application. Since the initial ESP application submittal, regulatory changes regarding LWA requests have occurred as provided in SECY-07-0030. SNC submitted letter number AR-07-1048, dated May 21, 2007, to the NRC to inform the staff of SNC's intent to pursue an LWA under the proposed regulations during the ESP review process through a revision to the ESP application.

10. What scope and schedule do applicants project for site characterization activities, such as core borings and testing of core samples?

Response: The scope of site characterization activities related to the COL application is generally complete for VEGP Units 3 and 4. The onsite geotechnical activities for COL site characterization are complete. All lab testing will be complete by June 2007 with the exception of the resonant column/torsional shear (RCTS) testing, which will be complete by September 2007. The scope of the COL site characterization effort is an expansion of the site characterization activities described in the Vogtle ESP. The expansion of scope for COL included a comprehensive boring program for the major site structures, including the main power block buildings, the intake structure, haul roads, cooling towers and construction laydown areas.

11. What interactions have taken place with local and State authorities and other Federal agencies to support licensing new reactors?

Response: Interactions have taken place with local and State authorities and other Federal agencies to support licensing new reactors. SNC has contacted the following Federal, State and local agencies to support the ESP and COL applications:

- U.S. Army Corps of Engineers, Savannah District – contacted regarding the potential for jurisdictional wetlands on the proposed project site and support for navigation on the Savannah River
- U.S. Fish and Wildlife Service, Athens, Georgia Field Office – Contacted regarding rare, threatened or endangered species potentially impacted by the proposed project
- National Marine Fisheries Service, St. Petersburg, Florida Regional Office – Contacted regarding rare, threatened or endangered species potentially impacted by the proposed project
- Georgia Department of Natural Resources, Non-game Program – Contacted regarding rare, threatened or endangered species potentially impacted by the proposed project
- Georgia Department of Natural Resources, Environmental Protection Division – Contacted regarding thermophilic organisms in the Savannah River, schedule for submission of air, water and waste permit applications
- Georgia Department of Natural Resources, State Historic Preservation Office – Contacted regarding cultural resources on the site and transmission corridors

- South Carolina Department of Archives and History, State Historic Preservation Office – Contacted regarding cultural resources on the site and transmission corridors
- Georgia Public Service Commission – Contacted by Georgia Power Company regarding schedule for an application for a Certificate of Convenience for the site
- Georgia Emergency Management Agency – Contacted regarding the site Emergency Plan
- Georgia Department of Natural Resources, Radiological Programs – Contacted regarding the site Emergency Plan
- South Carolina Emergency Management Agency – Contacted regarding the site Emergency Plan
- South Carolina Department of Health and Environmental Control, – Contacted regarding the site Emergency Plan
- Burke County, Georgia, Emergency Management Agency – Contacted regarding the site Emergency Plan
- Aiken County, South Carolina, Emergency Management Agency – Contacted regarding the site Emergency Plan
- Allendale County, South Carolina, Emergency Management Agency – Contacted regarding the site Emergency Plan
- Barnwell County, South Carolina, Emergency Management Agency – Contacted regarding the site Emergency Plan
- U.S. Department of Energy, Savannah River Site – Contacted regarding the site Emergency Plan

In addition to Federal, State and local agencies, this project has contacted the following tribal organizations regarding cultural resources on the site.

- The Georgia Tribe of Eastern Cherokee
- The Lower Muscogee Creek Tribe
- The Cherokee of Georgia

Plant Construction Requirements Information

12. a) Who are the vendors and consultants that are assisting in the preparation of the application?

Response: SNC has procured the services of Bechtel Power Corporation (Bechtel), Tetra Tech NUS, Inc. (TtNUS), and various sub-tier contractors for COLA preparation, and MACTEC Engineering and Consulting, Inc. (MACTEC) for associated activities. SNC also has procured site-specific engineering services from Shaw Stone & Webster.

b) The NRC requests that the potential applicants submit a list of entities that are providing input to and are preparing the COL application under a QA program.

Response: The entities that are providing input to and are preparing the COL application under an 10 CFR 50 Appendix B QA program include Bechtel and MACTEC. Where safety-related efforts are involved, these vendors have been audited in accordance with SNC's QA Program requirements and are on the SNC approved suppliers list where appropriate. The procurement of additional sub-tier vendors is being performed in accordance with each vendors' QA Program requirements for procured services and equipment (where applicable). Additionally, the NRC previously inspected these vendors relative to their services provided for the VEGP ESP application. The inspection occurred in late August 2006 and results are documented in Report No. 52-011/2006001, provided by NRC letter dated October 5, 2006.

13. a) What information do the applicants have regarding the timing of construction, the ordering of long lead time components, and other commitments to construction?

Response: SNC has not yet made a commitment to construction. However, should certification by the Georgia Public Service Commission support such a decision in addition to other factors, construction will begin upon receipt of the COL. No other commitments to construction nor commitments to order long lead time components have been made. SNC has detailed communication and planning initiatives in progress with Westinghouse and Shaw to determine appropriate procurement and construction schedules. When a decision to construct VEGP Units 3 and 4 is made, the NRC will be notified of the procurement and construction schedules.

b) Furthermore, what vendors will be designing, manufacturing, fabricating, and testing safety-related components for eventual plant construction?

Response: The prime vendors for the AP1000 are Westinghouse and Shaw Stone and Webster. A partial list of potential vendors (considered proprietary/business-sensitive information) that may be selected to perform design, manufacturing, fabricating, and testing of safety-related components is provided in the NuStart reference plant (Bellefonte) RIS 2007-08 response. Most vendors will not be determined until a full commitment to construction is made.

Attachment 1 - Standardization Matrix

COLA PART 1 – General and Administrative Information

This document will not rely on the DC and will generally be plant specific.

COLA PART 2 – FSAR / Plant-Specific DCD

This document will rely on the DC and the VEGP ESP. The R-COL is being developed to reference the AP1000 forthcoming proposed amendment to the existing Design Certification (Revision 16). As a result, the review efficiency of the AP1000 COL applications is dependent on NRC review of the AP1000 Design Certification Amendment. The following table indicates the extent of standardization for each section of the FSAR, based on the current best estimate (while not expected to differ substantially, this information is subject to change as FSAR content is finalized). *IBR* in the DC column (of the following table) indicates that the AP1000 DCD is expected to be incorporated by reference. In response to Question 4, these sections will be relying on the DC. An *X* in the STD column indicates that the section is also expected to include standard content in addition to the DC and that the additional information will be used by both the Reference COL application and subsequent COL applications. An *X* in the PS column indicates that the section is also expected to include plant specific content that will be specific to each COL application. An *(E)* in the PS column indicates the section was addressed wholly or in part in the VEGP ESP Site Safety Analysis Report, utilizing guidance document *RS-002, Processing Applications for Early Site Permits*. A *P* in the STD or PS column indicates that the section will be primarily standard or plant specific content, respectively.

| Section | DC | STD | PS |
|---------|-----|-----|------|
| 1.1 | IBR | X | X(E) |
| 1.2 | IBR | | P(E) |
| 1.3 | IBR | | (E) |
| 1.4 | IBR | | P(E) |
| 1.5 | IBR | | |
| 1.6 | IBR | P | |
| 1.7 | IBR | | P |
| 1.8 | IBR | P | X(E) |
| 1.9 | IBR | P | X |
| 1A | IBR | P | X |
| 2.0 | IBR | X | X(E) |
| 2.1 | IBR | | P(E) |
| 2.2 | IBR | | P(E) |
| 2.3 | IBR | | P(E) |
| 2.4 | IBR | | P(E) |
| 2.5 | IBR | | P(E) |
| 3.1 | IBR | P | |
| 3.2 | IBR | X | X |
| 3.3 | IBR | P | |
| 3.4 | IBR | X | X |
| 3.5 | IBR | X | X(E) |
| 3.6 | IBR | P | |
| 3.7 | IBR | P | X |
| 3.8 | IBR | P | |

| Section | DC | STD | PS |
|---------|-----|-----|----|
| 3.9 | IBR | P | |
| 3.10 | IBR | | |
| 3.11 | IBR | P | |
| 3.A | IBR | | |
| 3.B | IBR | | |
| 3.C | IBR | | |
| 3.D | IBR | | |
| 3.E | IBR | | |
| 3.F | IBR | | |
| 3.G | IBR | P | |
| 3.H | IBR | | |
| 4.1 | IBR | | |
| 4.2 | IBR | | |
| 4.3 | IBR | | |
| 4.4 | IBR | | |
| 4.5 | IBR | | |
| 4.6 | IBR | | |
| 5.1 | IBR | | |
| 5.2 | IBR | P | |
| 5.3 | IBR | P | |
| 5.4 | IBR | P | |
| 6.0 | IBR | | |
| 6.1 | IBR | P | |
| 6.2 | IBR | P | |

Attachment 1 – Standardization Matrix (Cont'd)

| Section | DC | STD | PS |
|---------|-----|-----|------|
| 6.3 | IBR | | |
| 6.4 | IBR | P | X |
| 6.5 | IBR | | |
| 6.6 | IBR | P | |
| 6.A | IBR | | |
| 7.1 | IBR | P | |
| 7.2 | IBR | | |
| 7.3 | IBR | | |
| 7.4 | IBR | | |
| 7.5 | IBR | | |
| 7.6 | IBR | | |
| 7.7 | IBR | | |
| 8.1 | IBR | X | X |
| 8.2 | IBR | X | X |
| 8.3 | IBR | X | X |
| 9.1 | IBR | P | |
| 9.2 | IBR | X | X |
| 9.3 | IBR | P | |
| 9.4 | IBR | | P |
| 9.5 | IBR | P | X |
| 9.A | IBR | | X |
| 10.1 | IBR | P | |
| 10.2 | IBR | P | |
| 10.3 | IBR | P | |
| 10.4 | IBR | X | X |
| 11.1 | IBR | | |
| 11.2 | IBR | X | X(E) |
| 11.3 | IBR | X | X(E) |
| 11.4 | IBR | P | |
| 11.5 | IBR | P | |
| 12.1 | IBR | P | |
| 12.2 | IBR | P | |
| 12.3 | IBR | P | |
| 12.4 | IBR | | |
| 12.5 | IBR | P | |
| 13.1 | IBR | P | X |
| 13.2 | IBR | P | |
| 13.3 | IBR | P | (E) |
| 13.4 | IBR | P | |
| 13.5 | IBR | P | |
| 13.6 | IBR | P | (E) |
| 13.7 | IBR | P | |
| 14.1 | IBR | | |
| 14.2 | IBR | P | X |

| Section | DC | STD | PS |
|---------|-----|-----|-----|
| 14.3 | IBR | P | X |
| 14.4 | IBR | P | |
| 14.A | IBR | P | X |
| 15.0 | IBR | | (E) |
| 15.1 | IBR | | |
| 15.2 | IBR | | |
| 15.3 | IBR | | |
| 15.4 | IBR | | |
| 15.5 | IBR | | |
| 15.6 | IBR | | |
| 15.7 | IBR | P | X |
| 15.8 | IBR | | |
| 15.A | IBR | | P |
| 15.B | IBR | | |
| 16.1 | IBR | P | X |
| 16.2 | IBR | | |
| 16.3 | IBR | | |
| 17.1 | IBR | P | (E) |
| 17.2 | IBR | P | |
| 17.3 | IBR | P | |
| 17.4 | IBR | | |
| 17.5 | IBR | P | |
| 17.6 | IBR | | |
| 18.1 | IBR | | |
| 18.2 | IBR | | |
| 18.3 | IBR | | |
| 18.4 | IBR | | |
| 18.5 | IBR | | |
| 18.6 | IBR | | |
| 18.7 | IBR | | |
| 18.8 | IBR | | |
| 18.9 | IBR | | |
| 18.10 | IBR | | |
| 18.11 | IBR | | |
| 18.12 | IBR | | |
| 18.13 | IBR | | |
| 18.14 | IBR | | |
| 19 | IBR | P | X |
| 19A | IBR | | |
| 19B | IBR | | |
| 19C | IBR | | |
| 19D | IBR | | |
| 19E | IBR | | |
| | | | |

Attachment 1 – Standardization Matrix (Cont'd)

Note that COLA Part 2 is expected to contain the following new information that is not in the DC: a) Section 2.0 to address Site Characteristics comparison to Plant Characteristics, and b) multi-unit site construction impact descriptions as the subject matter occurs.

COLA PART 3 – Environmental Report

The Environmental Report was provided in the VEGP ESP application. This Part will contain the New and Significant information required by 10 CFR 51.

COLA PART 4 – Technical Specifications

This document will rely on the DC by incorporating the DC generic technical specifications. In addition, plant specific information will be provided to complete the brackets. A minimal number of changes previously approved via the TSTF review and approval process for Westinghouse designed plants will also be incorporated.

COLA PART 5 – Emergency Plan

This document was submitted with the ESP application, therefore this Part will be reserved in the COL application.

COLA PART 6 – Limited Work Authorization Request

This request was submitted with the ESP application, therefore this Part will be reserved in the COL application. See response to question 9.

COLA PART 7 – Departures, Variances, Exemptions Report

This document will not rely on the DC but will generally be standard with a few plant-specific items.

COLA PART 8 – Safeguards / Security Plans

This document will generally not rely on the DC and will be plant specific. However, some minimal DC information may be utilized to describe the control room or other facilities.

COLA PART 9 – Other Withheld Information

This document will be a mixture of standard and plant specific information.

COLA PART 10 – ITAAC

This document will rely on the DC and will generally be a mixture of standard and plant specific information.

COLA PART 11 – Referenced Material

These documents will include the DCD, ESP, and will be a mixture of standard and plant specific information.