

**Southern Nuclear Operating Company  
Joseph M. Farley Nuclear Plant Units 1 and 2;  
Edwin I. Hatch Nuclear Plant Units 1 and 2;  
Vogtle Electric Generating Plant Units 1 and 2;  
Vogtle Electric Generating Plant Units 3 and 4**

**Enclosure 1  
Evaluation of the Proposed Changes**

***This enclosure contains 6 pages.***

Evaluation of Proposed Changes

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## 1. SUMMARY DESCRIPTION

Pursuant to 10 CFR 50.90, Southern Nuclear Operating Company (SNC) requests amendments to the licenses for Joseph M. Farley Nuclear Plant Units 1 and 2, Edwin I. Hatch Nuclear Plant Units 1 and 2, Vogtle Electric Generating Plant Units 1 and 2, and Vogtle Electric Generating Plant Units 3 and 4.

Specifically, the proposed changes would revise each plant's license in order to adopt a fleet SNC Standard Emergency Plan (SEP) that includes site-specific Annexes. The SEP establishes an updated licensing basis for the SNC operating plants that complies with current NRC regulations in 10 CFR 50.47, 10 CFR 50 Appendix E, and NRC-generated guidance in NUREG-0654/FEMA-REP-1 Revision 1.

By standardizing emergency plans, SNC will make improvements to the fleet by increasing consistency of organizations, duties and responsibilities, procedures, and training. SNC also will align the plants using consistent standards and definitions.

Among the more notable proposed changes are a) the adoption of a standard staff augmentation time period of 75 minutes from time of declaration of an Alert or higher Emergency Classification, b) changes in staffing numbers, c) changes in staffing duties, and d) consolidation of the Joint Information Center. Although SNC has implemented significant improvements in overall staffing, procedures, training, and technology since the NRC's initial approval of the plant emergency plans, SNC has conservatively evaluated the proposed changes as reductions in effectiveness requiring NRC approval.

## 2. DETAILED DESCRIPTION and TECHNICAL EVALUATION

The SNC SEP is attached as Enclosure 2. A detailed description and technical evaluation of the Corporate Joint Information Center staffing is documented in Enclosure 3.

Detailed descriptions and technical evaluations of the site emergency plan staffing changes are documented in Enclosures 4 (Farley), 7 (Hatch), 10 (Vogtle 1-2), and 13 (Vogtle 3-4).

The SNC Standard Emergency Plan is supplemented by plant-specific annexes documented in Enclosures 5 (Farley), 8 (Hatch), 11 (Vogtle 1-2), and 14 (Vogtle 3-4).

A Justification Matrix for each plant identifies the wording in the current plant emergency plan sections, the revised wording and location in the Standard Emergency Plan or Annex, and the reasoning behind or justification for the change. Justification matrices are documented in Enclosures 6 (Farley), 9 (Hatch), 12 (Vogtle 1-2), and 15 (Vogtle 3-4).

At the end of each Justification Matrix are two additional tables for the Site On-Shift and Site Augmented Emergency Response Organization that compare the number of persons performing major tasks in each major functional area with the guidance in NUREG 0654, the emergency plan first approved by the NRC, the current emergency plan, and the proposed SNC Standard Emergency Plan.

### 3. REGULATORY EVALUATION

#### 3.1 Applicable Regulatory Requirements

The SNC Standard Emergency Plan establishes an updated licensing basis for the SNC plants that complies with current NRC regulations in 10 CFR 50.47(b) and 10 CFR 50, Appendix E. In addition, the SNC plan complies with NRC-generated guidance in NUREG-0654/FEMA-REP-1 Revision 1.

#### 3.2 Precedent

The SNC SEP was modeled generally after the Exelon Standardized Radiological Emergency Plan. (See ML13200A124.) The NRC has previously approved increases in staff augmentation times. (See, e.g., ML112450464.)

#### 3.3 No Significant Hazards Consideration Determination

Pursuant to 10 CFR 50.90, Southern Nuclear Operating Company (SNC) requests amendments to the licenses for Joseph M. Farley Nuclear Plant Units 1 and 2, Edwin I. Hatch Nuclear Plant Units 1 and 2, Vogtle Electric Generating Plant Units 1 and 2, and Vogtle Electric Generating Plant Units 3 and 4.

Specifically, the proposed changes would revise each plant's license in order to adopt a fleet SNC Standard Emergency Plan (SEP) that includes site-specific Annexes. The SEP establishes an updated licensing basis for the SNC operating plants that complies with current NRC regulations in 10 CFR 50.47, 10 CFR 50 Appendix E, and NRC-generated guidance in NUREG-0654/FEMA-REP-1.Revision 1.

By standardizing emergency plans, SNC will make improvements to the fleet by increasing consistency of organizations, duties and responsibilities, procedures, and training. SNC also will align the plants using consistent standards and definitions. Put simply, the changes will make SNC's emergency plan easier to follow and understand.

Among the more notable changes are a) the adoption of a standard staff augmentation time period of 75 minutes from time of declaration of an Alert or higher Emergency Classification, b) changes in staffing numbers, c) changes in staffing duties, and d) consolidation of the Joint Information Center. Although SNC has implemented significant improvements in overall staffing, procedures, training, and technology since the NRC's initial approval of the plant emergency plans, SNC has conservatively evaluated these changes as reductions in effectiveness requiring NRC approval per 10 CFR 50.54(q).

SNC has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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1) Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed changes have no effect on normal plant operation or on any accident initiator or precursors, and do not impact the function of plant structures, systems, or components (SSCs). The proposed changes do not alter or prevent the ability of the emergency response organization to perform its intended functions to mitigate the consequences of an accident or event. The ability of the emergency response organization to respond adequately to radiological emergencies has been demonstrated as acceptable through a staffing analysis as required by 10 CFR 50 Appendix E.IV.A.9.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed changes will not change the design function or operation of SSCs. The changes do not impact the accident analysis. The changes do not involve a physical alteration of the plant, a change in the method of plant operation, or new operator actions. The proposed changes do not introduce failure modes that could result in a new accident, and the changes do not alter assumptions made in the safety analysis. As demonstrated by the SNC staffing analysis performed in accordance with 10 CFR 50 Appendix E.IV.A.9, the proposed changes do not alter or prevent the ability of the emergency response organization to perform its intended functions to mitigate the consequences of an accident or event.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

Margin of safety is associated with confidence in the ability of the fission product barriers (i.e., fuel cladding, reactor coolant system pressure boundary, and containment structure) to limit the level of radiation dose to the public. The proposed changes are associated with the Emergency Plan and do not impact operation of the plant or its response to transients or accidents. The changes do not affect the Technical Specifications. The changes do not involve a change in the method of plant operation, and no accident analyses will be affected by the proposed changes. Safety analysis acceptance criteria are not affected. The Standard Emergency Plan will continue to provide the necessary response staff for emergencies as demonstrated by staffing and functional analyses including the necessary timeliness of performing major tasks for the functional areas of the Emergency Plan. The proposed changes do not adversely affect SNC's ability to meet the requirements of 10 CFR 50 Appendix E and the emergency planning standards of 10 CFR 50.47.

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Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Based on the above evaluation, SNC has determined that operation of the subject facilities in accordance with the proposed changes does not involve a significant hazards consideration as defined in 10 CFR 50.92(c), in that it does not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety.

#### 4. STATE CONSULTATION

SNC has consulted with the appropriate state and county officials from Alabama, Georgia, and South Carolina and has received their support for the SEP.

#### 5. ENVIRONMENTAL ASSESSMENT

In accordance with 10 CFR 51, the following information is provided in support of a finding that the adoption of the SNC Standard Emergency Plan has no significant effect on the quality of the human environment.

Pursuant to 10 CFR 50.90, Southern Nuclear Operating Company (SNC) has requested amendments to the licenses for Joseph M. Farley Nuclear Plant Units 1 and 2, Edwin I. Hatch Nuclear Plant Units 1 and 2, Vogtle Electric Generating Plant Units 1 and 2, and Vogtle Electric Generating Plant Units 3 and 4.

Specifically, the proposed changes would revise each plant's license in order to adopt a fleet SNC Standard Emergency Plan (SEP) that includes site-specific Annexes. The SEP establishes an updated licensing basis for the SNC operating plants that complies with current NRC regulations in 10 CFR 50.47, 10 CFR 50 Appendix E, and NRC-generated guidance in NUREG-0654/FEMA-REP-1 Revision 1.

By standardizing emergency plans, SNC will make improvements to the fleet by increasing consistency of organizations, duties and responsibilities, procedures, and training. SNC also will align the plants using consistent standards and definitions. Put simply, the changes will make SNC's emergency plan easier to follow and understand.

Among the more notable changes are a) the adoption of a standard staff augmentation time period of 75 minutes from time of declaration of an Alert or higher Emergency Classification, b) changes in staffing numbers, c) changes in staffing duties, and d) consolidation of the Joint Information Center. Although SNC has implemented significant improvements in overall staffing, procedures, training, and technology since the NRC's initial approval of the plant emergency plans, SNC has conservatively evaluated the proposed changes as reductions in effectiveness requiring NRC approval per 10 CFR 50.54(q).

SNC has determined that the proposed changes do not individually or cumulatively have a significant effect on the human environment. The proposed amendment updates the licensing

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basis for the plants and creates a standardized emergency plan. The associated changes to the organization, staffing, and augmentation times will not affect the quality of the human environment.

As described above, SNC has determined that operation of the subject facilities in accordance with the proposed changes does not involve a significant hazards consideration, in that it does not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety.

SNC has determined that operation of the subject facilities in accordance with the proposed changes does not authorize a significant change in the types or a significant increase in the amounts of any effluent that may be released offsite. The proposed changes are unrelated to any aspects of plant construction or operation that would introduce any changes to effluent types (e.g., effluents containing chemicals or biocides, sanitary system effluents, or other effluents) or affect any plant radiological or non-radiological effluent release quantities. Furthermore, these changes do not diminish the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation.

SNC has determined that operation of the subject facilities in accordance with the proposed changes does not result in a significant increase in individual or cumulative occupational radiation exposure. The proposed changes will not affect how a structure, system, or component will be used to meet the design bases of the nuclear plant. The proposed changes will have no effect on the construction or operation of the nuclear plants, and therefore would not introduce any changes to the amount of occupational radiation exposure.

In conclusion, SNC has determined that anticipated construction and operational effects of the proposed amendment do not involve 1) a significant hazards consideration, 2) a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or 3) a significant increase in the individual or cumulative occupational radiation exposure. Consequently, the proposed amendment will not have a significant effect on the quality of the human environment.