



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

July 26, 2018

Ms. Cheryl A. Gayheart  
Regulatory Affairs Director  
Southern Nuclear Operating Company, Inc.  
P. O. Box 1295, Bin 038  
Birmingham, AL 35201-1295

**SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2; EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2, AND VOGTLE ELECTRIC GENERATING PLANT, UNITS 1, 2, 3, AND 4; ISSUANCE OF AMENDMENTS REGARDING THE RELOCATION OF THE EMERGENCY OPERATIONS FACILITY (CAC NOS. MG0188, MG0189, MG0190, MG0191, MG0192, MG0193, MG0194, AND MG0195; EPID L-2017-LLA-0293)**

Dear Ms. Gayheart:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 220 to the Joseph M. Farley Nuclear Plant (Farley), Unit 1, Renewed Facility Operating License No. NPF-2; Amendment No. 217 to Farley, Unit 2, Facility Combined License No. NPF-8; Amendment No. 291 to the Edwin I. Hatch Nuclear Plant (Hatch), Unit No. 1, Renewed Facility Operating License DPR-57; and Amendment No. 236 to Hatch, Unit No. 2, Renewed Facility Operating License NPF-5; Amendment No. 195 to the Vogtle Electric Generating Plant (Vogtle), Unit 1, Renewed Facility Operating License NPF-68; Amendment No. 178 to Vogtle, Unit 2, Renewed Facility Operating License NPF-81; Amendment No. 136 to Vogtle, Unit 3, Facility Combined License No. NPF-91; Amendment No. 135 to Vogtle, Unit 4, Facility Combined License No. NPF-92.

The amendments are in response to your application dated August 30, 2017. The amendments approve the 1.3-mile move of the common (fleet-wide) emergency operations facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,



Michael D. Orenak, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-348, 50-364, 50-321,  
50-366, 50-424, 50-425,  
52-025, and 52-026

Enclosures:

1. Amendment No. 220 to NPF-2
2. Amendment No. 217 to NPF-8
3. Amendment No. 291 to DPR-57
4. Amendment No. 236 to NPF-5
5. Amendment No. 195 to NPF-68
6. Amendment No. 178 to NPF-81
7. Amendment No. 136 to NPF-91
8. Amendment No. 135 to NPF-92
9. Safety Evaluation

cc: Listserv



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

ALABAMA POWER COMPANY

DOCKET NO. 50-348

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 220  
Renewed License No. NPF-2

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Joseph M. Farley Nuclear Plant, Unit 1, (the facility), Renewed Facility Operating License No. NPF-2, filed by Southern Nuclear Operating Company, Inc. (the licensee), dated August 30, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the Emergency Operations Facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.
3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Date of Issuance: July 26, 2018



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY

ALABAMA POWER COMPANY

DOCKET NO. 50-364

JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 217  
Renewed License No. NPF-8

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Joseph M. Farley Nuclear Plant, Unit 2, (the facility), Renewed Facility Operating License No. NPF-8, filed by Southern Nuclear Operating Company, Inc. (the licensee), dated August 30, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the Emergency Operations Facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.
3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Date of Issuance: July 26, 2018



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-321

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 291  
Renewed License No. DPR-57

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit No. 1 (the facility) Renewed Facility Operating License No. DPR-57 filed by Southern Nuclear Operating Company, Inc. (the licensee), acting for itself, Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the owners), dated August 30, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the Emergency Operations Facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.
3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Date of Issuance: July 26, 2018





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-366

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 236  
Renewed License No. NPF-5

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Edwin I. Hatch Nuclear Plant, Unit No. 2 (the facility) Renewed Facility Operating License No. NPF-5 filed by Southern Nuclear Operating Company, Inc. (the licensee), acting for itself, Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the owners), dated August 30, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

Enclosure 4

2. Accordingly, the license is hereby amended to authorize the relocation of the Emergency Operations Facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.
3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Date of Issuance: July 26, 2018



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-424

VOGTLE ELECTRIC GENERATING PLANT, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 195  
Renewed License No. NPF-68

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 1 (the facility) Renewed Facility Operating License No. NPF-68 filed by the Southern Nuclear Operating Company, Inc. (the licensee), acting for itself, Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the owners), dated August 30, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the Emergency Operations Facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.
3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Date of Issuance: July 26, 2018



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

DOCKET NO. 50-425

VOGTLE ELECTRIC GENERATING PLANT, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 178  
Renewed License No. NPF-81

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 2 (the facility) Renewed Facility Operating License No. NPF-81 filed by the Southern Nuclear Operating Company, Inc. (the licensee), acting for itself, Georgia Power Company Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the owners), dated August 30, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the Emergency Operations Facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.
3. This license amendment is effective as of its date of issuance and shall be implemented within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Date of Issuance: July 26, 2018



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MEAG POWER SPVM, LLC

MEAG POWER SPVJ, LLC

MEAG POWER SPVP, LLC

CITY OF DALTON, GEORGIA

DOCKET NO. 52-025

VOGTLE ELECTRIC GENERATING PLANT UNIT 3

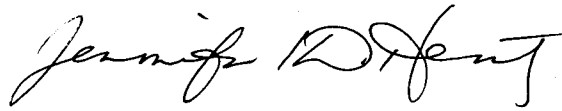
AMENDMENT TO FACILITY COMBINED LICENSE

Amendment No. 136  
License No. NPF-91

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Southern Nuclear Operating Company (licensee), dated August 30, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will be constructed and will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the Emergency Operations Facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.
3. This license amendment is effective as of the date of its issuance and shall be implemented by within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION:



Jennifer L. Dixon-Herrity, Chief  
Licensing Branch 4  
Division of Licensing, Siting, and Environmental Analysis  
Office of New Reactors

Date of Issuance: July 26, 2018





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MEAG POWER SPVM, LLC

MEAG POWER SPVJ, LLC

MEAG POWER SPVP, LLC

CITY OF DALTON, GEORGIA

DOCKET NO. 52-026

VOGTLE ELECTRIC GENERATING PLANT UNIT 4

AMENDMENT TO FACILITY COMBINED LICENSE

Amendment No. 135  
License No. NPF-92

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Southern Nuclear Operating Company (licensee), dated August 30, 2017, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will be constructed and will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended to authorize the relocation of the Emergency Operations Facility from 40 Inverness Center Parkway, Birmingham, Alabama, to North Tower 3525 Colonnade Parkway, Birmingham, Alabama.
3. This license amendment is effective as of the date of its issuance and shall be implemented by within 180 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION:



Jennifer L. Dixon-Herrity, Chief  
Licensing Branch 4  
Division of Licensing, Siting, and Environmental Analysis  
Office of New Reactors

Date of Issuance: July 26, 2018



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2

AMENDMENT NO. 220 TO RENEWED FACILITY OPERATING LICENSE NPF-2

AMENDMENT NO. 217 TO RENEWED FACILITY OPERATING LICENSE NPF-8

EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

AMENDMENT NO. 291 TO RENEWED FACILITY OPERATING LICENSE DPR-57

AMENDMENT NO. 236 TO RENEWED FACILITY OPERATING LICENSE NPF-5

VOGTLE ELECTRIC GENERATING PLANT, UNITS 1, 2, 3, AND 4

AMENDMENT NO. 195 TO RENEWED FACILITY OPERATING LICENSE NPF-68

AMENDMENT NO. 178 TO RENEWED FACILITY OPERATING LICENSE NPF-81

AMENDMENT NO. 136 TO FACILITY COMBINED LICENSE NPF-91

AMENDMENT NO. 135 TO FACILITY COMBINED LICENSE NPF-92

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

DOCKET NOS. 50-348, 50-364, 50-321, 50-366, 50-424, 50-425, 52-024, AND 52-025

1.0 INTRODUCTION

By letter dated August 30, 2017 (Reference 1), Southern Nuclear Operating Company (SNC, the licensee) requested U.S. Nuclear Regulatory Commission (NRC, or the Commission) approval to relocate the SNC existing consolidated emergency operations facility (EOF) for the Edwin I. Hatch Nuclear Plant, Units 1 and 2 (Hatch), Joseph M. Farley Nuclear Plant, Units 1 and 2 (Farley), and Vogtle Electric Generating Plant, Units 1, 2, 3 and 4 (Vogtle). The existing Commission-approved EOF is located in the SNC Corporate Headquarters at 40 Inverness Center Parkway, Birmingham, Alabama. The existing consolidated EOF, as described in the SNC Standard Emergency Plan and Annexes, was approved in a letter to SNC, "Joseph M. Farley, Units 1 and 2; Edwin I. Hatch, Units 1 and 2; and Vogtle Electric Generating Plant,

Units 1, 2, 3, and 4 - Issuance of Amendments Related to SNC Fleet Emergency Plan (CAC Nos. MF6670, MF6671, MF6672, MF6673, MF6674, MF6675, and RP9516),” dated March 14, 2017 (Reference 2).

SNC is proposing to relocate its consolidated EOF to the new SNC Headquarters at the North Tower 3525 Colonnade Parkway, Birmingham, Alabama. SNC does not propose to alter the facility functions, capabilities, and staffing as currently described in the SNC Standard Emergency Plan and Annexes.

While only a 1.3 mile straight-line distance from the existing facility location, the proposed new facility location is more than 25 miles from the Hatch, Farley, and Vogtle sites and, therefore, requires prior Commission approval per paragraph IV.E.8.b of Appendix E, “Emergency Planning and Preparedness for Production and Utilization Facilities,” to Part 50, “Domestic Licensing of Production and Utilization Facilities,” of Title 10 of the *Code of Federal Regulations* (10 CFR).

## 2.0 REGULATORY EVALUATION

The NRC staff considered the following regulatory requirements and guidance during its review of the proposed changes.

### 2.1 Applicable Regulations

- Paragraph 50.47(b)(1) of 10 CFR Part 50 states, in part: “Primary responsibilities for emergency response by the nuclear facility licensee...have been assigned...and each principal response organization has staff to respond and to augment its initial response on a continuing basis.”
- Paragraph 50.47(b)(3) of 10 CFR Part 50 states, in part: “...arrangements to accommodate State and local staff at the licensee’s Emergency Operations Facility have been made...”
- Paragraph 50.47(b)(8) of 10 CFR Part 50 states: “Adequate emergency facilities and equipment to support the emergency response are provided and maintained.”
- Paragraph 50.47(b)(9) of 10 CFR Part 50 states: “Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.”
- Paragraph 52.103(g) of 10 CFR Part 52 states, in part: “... the licensee shall not operate the facility until the Commission makes a finding that the acceptance criteria in the combined license are met...”
- Paragraph IV.E.8.b of Appendix E to 10 CFR Part 50, states, in part: “A licensee desiring to locate an emergency operations facility more than 25 miles from a nuclear power reactor site shall request prior Commission approval by submitting an application for an amendment to its license. For an emergency operations facility located more than 25 miles from a nuclear power reactor site, provisions must be made for locating NRC and offsite responders closer to the nuclear

power reactor site so that NRC and offsite responders can interact face-to-face with emergency response personnel entering and leaving the nuclear power reactor site.”

- Paragraph IV.E.8.c of Appendix E of 10 CFR Part 50 establishes minimum capabilities for an applicant/licensee EOF.

## 2.2 Regulatory Guidance

- Revision 1 to NUREG-0654/FEMA-REP-1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants” (Reference 3), provides specific acceptance criteria that the NRC has determined is an acceptable means of complying with the standards in 10 CFR 50.47, “Emergency plans.”
- NUREG-0696, “Functional Criteria for Emergency Response Facilities” (Reference 4), describes the facilities and systems to be used by nuclear power plant licensees to improve responses to emergencies.
- Office of Nuclear Security and Incident Response (NSIR)/Division of Preparedness and Response (DPR) Interim Staff Guidance (ISG) NSIR/DPR-ISG-01, “Emergency Planning for Nuclear Power Plants” (Reference 5), provides updated guidance for addressing emergency planning requirements for nuclear power plants, based on changes to emergency preparedness regulations in 10 CFR 50.47 and Appendix E to 10 CFR Part 50 that were published in the *Federal Register* (FR) on November 23, 2011 (76 FR 72560).

## 3.0 TECHNICAL EVALUATION

### 3.1 Background

In the Staff Requirements Memorandum (SRM) for SECY-04-0236, “Southern Nuclear Operating Company’s Proposal to Establish a Common Emergency Operating Facility at its Corporate Headquarters,” (Reference 6) the Commission previously approved the relocation of the near-site EOFs for Hatch, Farley, and Vogtle - Units 1 and 2 only, into a consolidated EOF at the existing SNC Corporate Headquarters at 40 Inverness Center Parkway in Birmingham, Alabama. Subsequently, NUREG-1923, “Safety Evaluation Report for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant (VEGP) ESP Site” (Reference 7), also established the existing SNC Corporate Headquarters as the future EOF location for Vogtle, Units 3 and 4, once completed.

By letter dated August 30, 2017, SNC requested Commission approval to relocate the consolidated EOF for Hatch, Farley, and Vogtle from the existing SNC Corporate Headquarters to the new proposed EOF location, which is a 1.3-mile straight-line distance from the current location. While the impact of the relocation on the EOF capability and effectiveness based on the distance from the respective sites is negligible, Commission approval is required per Appendix E to 10 CFR Part 50, since the new facility is still located more than 25 miles from the Hatch, Farley, and Vogtle sites.

### 3.2 NRC Staff Evaluation

The purpose of an EOF is to provide a facility from which the licensee can manage the overall licensee emergency response during an event, including coordinating radiological and environmental assessments, determining protective actions, and communicating and coordinating with Federal, State, and local agencies. This facility complements other licensee emergency response facilities, such as the Technical Support Center (TSC), which is located onsite at each respective site. The TSC is a facility from which the licensee staff provides plant management and technical support to plant operations personnel during emergency conditions; relieves the reactor operators of peripheral duties and communications not directly related to reactor system manipulations; prevents congestion in the control room; and performs EOF functions until the EOF is staffed and ready to respond. EOF functions can be fulfilled by each respective site's TSC under emergency response conditions, as needed.

The NRC staff considered relevant regulations and guidance documents in its evaluation of SNC's request to relocate its consolidate EOF. In particular, paragraph IV.E.8.c of Appendix E of 10 CFR Part 50 establishes the following minimum capabilities for an applicant/licensee EOF, which were added in a 2011 Final Rule, "Enhancements to Emergency Preparedness Regulations" (76 FR 72598; November 23, 2011):

- The capability for obtaining and displaying plant data and radiological information for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves;
- The capability to analyze plant technical information and provide technical briefings on event conditions and prognosis to licensee and offsite response organizations for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves, and
- The capability to support response to events occurring simultaneously at more than one nuclear power reactor site if the emergency operations facility serves more than one site.

In accordance with paragraph IV.E.8.b to Appendix E of 10 CFR Part 50, a licensee with an EOF located more than 25 miles from a nuclear power reactor site must also have an additional facility closer than 25 miles to the nuclear power reactor site so that NRC and offsite responders can interact face-to-face with emergency response personnel entering and leaving the nuclear power reactor site, and which meets the following requirements:

- Space for members of an NRC site team and Federal, State, and local responders;
- Additional space for conducting briefings with emergency response personnel;
- Communication with other licensee and off-site emergency response facilities;
- Access to plant data and radiological information, and
- Access to copying equipment and office supplies.

Evaluation Criterion 2 to Section II.H, "Emergency Facilities and Equipment," of NUREG-0654/FEMA-REP-1 states, in part, that, "Each licensee shall establish an Emergency Operations facility...in accordance with NUREG-0696, Revision 1."

The NRC's guidance document NUREG-0696 established specific criteria for the NRC staff to use in evaluating whether an applicant or licensee met the existing requirements in paragraph IV.E.8 to Appendix E of 10 CFR Part 50. Section 4, "Emergency Operations Facility," of NUREG-0696 provided compliance criteria for the EOF in the following categories:

- Functions (Section 4.1),
- Location, Structure and Habitability (Section 4.2),
- Staffing and Training (Section 4.3),
- Size (Section 4.4),
- Radiological Monitoring (Section 4.5),
- Communications (Section 4.6),
- Instrumentation, Data System Equipment, and Power Supplies (Section 4.7),
- Technical Data and Data System (Section 4.8), and
- Records Availability and Management (Section 4.9).

The NRC amended its EOF regulations as part of the 2011 Final Rule in response to Commission direction in the Staff Requirements Memorandum for SECY-04-0236, which states, in part:

The staff should consider revising 10 CFR Part 50 to make the requirements for EOFs more performance-based to allow other multi-plant licensees to consolidate their EOFs, if those licensees can demonstrate their emergency response strategies will adequately cope with an emergency at any of the associated plants....

NUREG-0696 was supplemented, as part of the 2011 Final Rule, by Section VI.I, "Emergency Operations Facility – Performance-Based Approach," of NSIR/DPR-ISG-01. As such, the guidance provided in Section 4 of NUREG-0696, as supplemented by Section VI.I of NSIR/DPR-ISG-01, was used in the NRC staff's evaluation of SNC's proposal.

### 3.2.1 Functions:

In Section 3.1 of Enclosure 1, "Evaluation of Proposed Changes," of its August 30, 2017, letter, SNC discusses how the proposed new consolidated EOF will have the facilities and capability for the: (1) management of overall licensee response; (2) coordination of radiological and environmental assessment; (3) determination of recommended public protective actions; (4) notification of offsite agencies; (5) coordination of event, plant, and response information provided to public information staff for dissemination to the media and the public; (6) staffing and activation of the facility within time frames and at emergency classification levels defined in the licensee emergency plan; (7) coordination of emergency response activities with Federal, State, tribal and local agencies; (8) locating NRC and offsite agency staff closer to a site if the EOF is greater than 25 miles from the site; (9) obtaining and displaying key plant data and radiological information for each unit or plant the EOF serves; (10) analyzing plant technical information and providing technical briefings on event conditions and prognosis to licensee staff and offsite agency responders for each type of unit or plant, and (11) effectively responding to

and coordinating response efforts for events occurring simultaneously at more than one site for a consolidated EOF.

The respective TSCs located at all three sites will continue to have the responsibility for event classification. Licensee emergency response organization (ERO) staff in the new consolidated EOF will continue to perform the following functions that are currently performed in the existing facility:

- Coordinate field team activities to monitor radiological activity;
- Perform dose assessments, and develop and provide protective action recommendations (PAR) to offsite agencies based upon plant conditions or dose projections;
- Make emergency event notifications to designated State and local agencies for each of the SNC sites, which include initial notifications, changes in emergency classification or PARs, and periodic updates, and
- Provide event, plant, and response information to public information staff for dissemination to the media and public through the respective sites' Joint Information Centers.

On January 23, 2018, NRC staff performed a walkthrough of the proposed consolidated EOF with SNC personnel during the construction phase to verify the size, proposed layout, and capabilities of the new facility as described in SNC's August 30, 2017, letter. On June 18, 2018, NRC Headquarters and Region II staff performed a subsequent walkthrough of the completed facility. On June 19, 2018, the NRC staff, along with representatives from the Federal Emergency Management Agency (FEMA), observed an emergency preparedness drill at the new consolidated EOF that involved simulated, concurrent events at the Hatch and Farley sites. The States of Alabama and Georgia also participated in the dual-site drill. The successful completion of this dual-site drill demonstrated the ability of the new SNC Consolidated EOF to effectively function during simultaneous events at multiple nuclear power reactor sites with different reactor technologies and to interface effectively with multiple State agencies.

Based on a review of the licensee's submittal, as confirmed by the walkthrough of the proposed new facility and observation of the dual-site drill, the NRC staff finds that: (1) these facility functions and responsibilities are consistent with that currently described in Section B, "Emergency Response Organization," and Section H, "Emergency Facilities and Equipment," of the SNC Standard Emergency Plan for the management of overall licensee emergency response, and (2) the new consolidated EOF provides equivalent or improved capabilities over the existing facility, including updated equipment that monitors plant and environmental conditions to provide information required for dose assessment and development of PARs. The new consolidated EOF will also provide working space for representatives from offsite response organizations, including Federal agencies, to coordinate information and deploy emergency resources from State and Federal agencies. Separate, dedicated rooms are available for the representatives from the States of Alabama, Georgia, South Carolina, and Florida. As such, no change is proposed to existing EOF functions, responsibilities, or capabilities to support the co-location of designated offsite response organizations.



The guidance in Section 4.1 to NUREG-0696 suggests that the licensee use normal industrial security for the EOF. Responsibility for establishing and maintaining access control for the EOF will continue to be the responsibility of the EOF Security Coordinator, as described in Section B.3.1, "EOF Organization," of the SNC Standard Emergency Plan. In addition, access to the EOF itself is controlled through the use of electronic card readers to allow entry only to authorized personnel. The licensee explained that the use of the new consolidated EOF during normal daily operations will be limited to activities that will not degrade readiness, operations, or reliability. As such, no change is proposed to facility security capabilities as compared to the security of SNC's existing EOF.

Section IV.I of NSIR/DPR-ISG-01, which supplements the guidance in Section 4.1 of NUREG-0696, states, in part, that the EOF will have facilities and capabilities for "Effectively responding to and coordinating response efforts for events occurring simultaneously at more than one site for a co-located or consolidated EOF." In Section 3.1.11 to Enclosure 1 of its August 30, 2017, letter, SNC states, in part:

SNC will continue to maintain the EOF capability to support simultaneous events at two SNC sites. The new EOF will be equipped with facilities to monitor and analyze events at more than one site. Enough workstations are available for data retrieval, and the facility has adequate display capability to simultaneously present this information to the EOF staff. In addition, the new EOF has the capability to support communications to offsite agencies for more than one event. If the EOF must respond to an event at more than one site simultaneously, the normal EOF staff complement is augmented with additional personnel as needed.

The new EOF will have provisions to have dedicated lead responders assigned for each plant should there be multiple events affecting two or more plant sites. Diverse communication pathways are provided between the plant emergency response facilities and the EOF such that management can be expanded to provide communication with multiple State organizations. The four States potentially affected by multiple plant events are provided dedicated rooms and equipment to support simultaneous response activities....

Due to the improved space and upgraded equipment, SNC has the capability to expand the new EOF response beyond two unit or two site events. Additional lead responders can be supported within the proposed EOF should it be necessary to expand coordination in the facility beyond two units or sites....

As such, no changes are proposed to the SNC Standard Emergency Plan that would negatively impact the ability of the EOF to effectively respond to and coordinate response efforts for events occurring simultaneously at more than one SNC site.

Based on a review of the licensee's submittal, and the NRC staff's walkthroughs of the new facility and observation of the dual-site drill, the NRC staff finds that the size, layout and capabilities of the new consolidated EOF will serve to enhance the functions of the EOF as currently described in the SNC Standard Emergency Plan. Therefore, the NRC staff concludes that the new consolidated EOF is consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the standards of 10 CFR 50.47(b) and requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

3.2.2 Location, Structure and Habitability:

a. *Location*

Section 4.2 of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, provides guidance on considerations for the location of an EOF. Specifically, Footnote 1 to Table 2, "Relation of EOF Location to Habitability Criteria," in Section IV.I of NSIR/DPR-ISG-01 states, in part, "Specific Commission approval is required for EOF locations beyond 25 miles of the TSC." The new consolidated EOF will be located at the new SNC Headquarters on North Tower 3525 Colonnade Parkway in Birmingham, Alabama, which is a 1.3-mile straight-line distance from its current location at 40 Inverness Center Parkway in Birmingham, Alabama. The new consolidated EOF is off the same major thoroughfare providing access to the existing facility. As such, the impact of the relocation based on the distance from the respective sites is negligible (see table below).

Site	Straight-line Distance to EOF	
	Existing	Proposed
Farley Nuclear Plant	178.5 miles	179.7 miles
Hatch Nuclear Plant	274.0 miles	275.3 miles
Vogtle Electric Generating Plant	286.0 miles	287.1 miles

Based on the Commission's approval of the new SNC Consolidated EOF location in the Staff Requirements Memorandum (SRM) to SECY-18-0013, "Southern Nuclear Operating Company Request to Relocate the Existing Commission-Approved Consolidated Emergency Operations Facility," dated February 8, 2018 (Reference 8), the NRC staff finds that the physical location of the new consolidated EOF is consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

The NRC staff also evaluated the following considerations in determining the adequacy of the location for the new SNC Consolidated EOF:

1) Offsite Agreement

The regulations in 10 CFR 50.47(b)(3) require that arrangements to accommodate State and local staff are available at the licensee's EOF. The new consolidated EOF has separate, dedicated offices for representatives from the States of Alabama, Georgia, South Carolina, and Florida, which would be expected to respond to the EOF based on the site(s) impacted. Local agencies do not currently respond to the consolidated EOF and are expected to continue to coordinate through respective State agencies after the move to the new consolidated EOF.

Section 4.2 to NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, states: "It is strongly recommended that the EOF location be coordinated with State and local authorities to improve the relationship between the licensee and offsite organizations." As such, in Enclosure 2, "State Letters of Agreement," to its August 30, 2017, letter, SNC provided signed letters of concurrence from the following State agencies, which currently respond to the existing SNC consolidated EOF, indicating that they concur with the proposed facility relocation:

- Alabama Emergency Management Agency,
- Office of Homeland Security – Georgia Emergency Management Agency,
- South Carolina Emergency Management Division, and
- Florida Division of Emergency Management.

The NRC staff finds that no changes are proposed to what is currently described in the SNC Standard Emergency Plan in support of designated State representatives responding to the new consolidated EOF. In addition, per the “Memorandum of Understanding Between the Department of Homeland Security/Federal Emergency Management Agency and Nuclear Regulatory Commission Regarding Radiological Response, Planning and Preparedness,” dated December 7, 2015 (Reference 9), the NRC requested that FEMA evaluate the impact of the proposed relocation of the SNC consolidated EOF on offsite radiological emergency plans and preparedness, and provide its findings to the NRC. By letter dated September 22, 2017 (Reference 10), FEMA stated:

Based on our review, FEMA does not find any impediments to Florida, Georgia, South Carolina, and Alabama emergency response organizations operating effectively from Southern Nuclear Company’s new common EOF and offsite radiological emergency plans and preparedness are not negatively impacted by this change.

Based on the above, the NRC staff concludes that the new consolidated EOF is consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(3) and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

## 2) Impact on NRC’s Incident Response

During the January 23, 2018, walkthrough of the new facility, NRC staff observed that the increased size and enhanced layout of the facility provided additional space for the co-location of NRC Site Team personnel with their licensee counterparts and access to dedicated NRC telephone lines. In addition, a dedicated conference room will be provided for NRC Site Team use, if deployed.

Paragraph IV.E.8.b of Appendix E to 10 CFR Part 50 requires that for an EOF located more than 25 miles from a nuclear reactor site, provisions be made for locating NRC and off-site responders closer to the reactor site to facilitate face-to-face interaction with emergency personnel entering and leaving the site. Section IV.I of NSIR/DPR-ISG-01 states, in part, that the EOF will have facilities and capabilities for “Locating NRC and offsite agency staff closer to a site if the EOF is greater than 25 miles from the site,” and establishes guidance on minimum provisions at this location.

SNC’s near-site response locations are described in the SNC Standard Emergency Plan Annexes for each affected reactor site. No changes to the near-site response locations are planned or required due to the relocation of the consolidated EOF. At each near-site location, SNC will continue to provide a functional working space for NRC and State representatives. SNC will also continue to provide telecommunications and habitability provisions, including telephones, ERO contact lists, standard office lighting, HVAC (heating, ventilation, and air conditioning), furniture, copiers, office supplies, computers with internet access, electrical power

outlets, conference area with whiteboards, separate areas suitable for briefing and debriefing response personnel, and radiation monitoring capability.

SNC's existing near-site response locations and capabilities, as reflected in the respective site annexes, will continue to remain as follows:

- Farley Training Center (per Section 5.1.5 of Revision 0 to the SNC Standard Emergency Plan Annex for Farley Nuclear Plant, Units 1 and 2 (Reference 11));
- Hatch Simulator Building (per Section 5.1.5 of Revision 0 to the SNC Standard Emergency Plan Annex for Hatch Nuclear Plant, Units 1 and 2 (Reference 12)), and
- Vogtle Training Center (per Section 5.1.5 of Revision 0 to the SNC Standard Emergency Plan Annex for Vogtle Electric Generating Plant, Units 1 and 2 (Reference 13), and Revision 0 to the SNC Standard Emergency Plan Annex for Vogtle Electric Generating Plant, Units 3 and 4 (Reference 14)).

Because SNC is not proposing any changes to the near-site response locations, or the existing capabilities at these locations, the NRC staff has not identified any impact on NRC incident response efforts related to the near site locations. Therefore, the existing near site locations, as identified in each respective site's SNC Standard Emergency Plan Annex, continue to be consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meet the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

*b. Structure*

Section 4.2 of NUREG-0696, as supplemented by Table 2 to Section IV.I of NSIR/DPR-ISG-01, provides guidance stating that for an EOF located at or beyond 10 miles of the site's TSC, the structure be "well engineered for design life of plant." Footnote 2 to Table 2 provides an example of "well engineered" as referring to the applicable Uniform Building Code, and states that the structure must be able to withstand adverse conditions of high winds (other than tornados) and floods, referencing a 100-year recurrence frequency as an acceptable design basis. SNC states that the new consolidated EOF is built to withstand wind loads consistent with the 2009 International Building Code, as adopted by the State of Alabama, and that the facility is not located on a flood plain. As such, the NRC staff finds that the physical structure of the new consolidated EOF is consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

*c. Habitability*

Section 4.2 of NUREG-0696, as supplemented by Table 2 to Section IV.I of NSIR/DPR-ISG-01, provides guidance for the ventilation standards and protection factor for a radiological release. Because the new EOF is located beyond 10 miles from the respective nuclear power reactor sites it supports, EOF functions would not be impacted by a radiological release from any SNC site due to the distance from each respective site as illustrated in Section 3.2.1. In these situations, the criteria in Table 2 of NSIR/DPR-ISG-01 states that no specialized ventilation system or protection factor is needed. As such, the NRC staff finds the habitability of the new consolidated EOF is consistent with the guidance in NUREG-0696, as supplemented by

Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

### 3.2.3 Staffing and Training:

Section 4.3 of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, provides guidance on EOF staffing and training to provide for the overall management of licensee resources and the continuous evaluation and coordination of licensee activities during and after an accident. In addition, Section 4.3 to NUREG-0696 provides guidance on the conduct of periodic EOF activation drills in accordance with the licensee's emergency plan.

The proposed consolidated EOF is in the same location as the new SNC Corporate Headquarters, which allows for corporate support and management personnel to quickly staff the EOF with expertise from various disciplines. In addition, SNC stated, and NRC staff observed during their January 23, 2018, walkthrough of the new consolidated EOF, that the roadway capacity and relative location results in little change for EOF responders staffing the new consolidated EOF. As such, the staffing and activation of the new consolidated EOF should remain unchanged from that described in Section B.3, "EOF Organization," of the SNC Standard Emergency Plan. In addition, the response time for EOF staffing, as described in the SNC Standard Emergency Plan, also remains unchanged (75 minutes from the time of the declaration of an Alert or higher classification).

The associated training and drill requirements for EOF staff positions in the new consolidated EOF remain consistent with those for the current consolidated EOF as described in Section N, "Exercises and Drills," and Section O, "Radiological Emergency Response Training," of the SNC Standard Emergency Plan. In Section 3.3, "Staffing and Training," to Enclosure 1 of its August 30, 2017, letter, SNC states, in part,

Facility walk-through activities and familiarization drills will be conducted to provide existing staff an opportunity to occupy and implement the facility. SNC has planned a two-site simultaneous demonstration drill for June 2018. SNC will provide the opportunity for offsite response organizations to participate....

In order to ensure that EOF staff remain proficient in skills required to perform EOF functions for the reactors of various designs within the SNC fleet, including for the Vogtle, Units 3 and 4, passive reactor design, SNC will continue to use the ERO Performance Indicator (PI) under the Emergency Preparedness Cornerstone, as described in the Nuclear Energy Institute (NEI) document, NEI 99-02, Revision 7, "Regulatory Assessment Performance Indicator Guideline," dated August 31, 2013 (Reference 15). The use of this ERO PI allows the licensee and NRC staff to verify the licensee's ability to meet the performance-based consolidated EOF criteria and to adequately cope with an emergency at any of the licensee's sites. The PI tracks the participation of ERO members assigned to fill key positions in performance enhancing experiences, and ensures that the risk-significant aspects of classification, notification, and PAR development are evaluated and included in the PI process. The PI also ensures that utilities with common EOFs where personnel are assigned to the key positions that support multiple nuclear sites are monitored to ensure that each receives a meaningful opportunity to gain proficiency.

Based on a review of the licensee's submittal and the NRC staff's walkthroughs of the new facility and observation of the dual-site drill, the NRC staff finds that the staffing and training of EOF staff, including ERO response times and periodic drills and exercises, remains unchanged

from that currently described in the SNC Standard Emergency Plan. As such, the NRC staff concludes that the staffing and training of the new consolidated EOF is consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(1) and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

#### 3.2.4 Size:

Section 4.4 to NUREG-0696, as supplemented by Section IV.I to NSIR/DPR-ISG-01, provides guidance that the EOF building will be large enough to provide adequate work space for personnel assigned to the EOF, as specified in the licensee's emergency plan, at the maximum level of occupancy without crowding, as well as provide separate office space to accommodate NRC staff and other Federal personnel.

Although SNC is not proposing to change the staffing levels and capabilities of the EOF as currently described in the SNC Standard Emergency Plan, the physical layout of the facility has been revised. Figure H.2.A, "Emergency Operations Facility Layout (Typical)," included as Enclosure 2, "Layout Diagram – New EOF," to SNC's August 30, 2017, letter, provides the proposed layout for the new consolidated EOF. The licensee stated that the total usable space and working space of the new consolidated EOF is sized to meet the guidance in Section 4.4 of NUREG-0696, as described above. Specifically, the new EOF will provide adequate working space for the number of ERO staff as specified in Revision 0 of the SNC Standard Emergency Plan, including State and NRC responders, at the maximum level of occupancy without crowding. SNC also stated that additional space is factored into the new EOF design in order to provide for sufficient personnel to respond to multi-unit events, if necessary.

Consistent with the existing facility, space in the new consolidated EOF is allocated for functional activities of accident assessment, radiation assessment, offsite monitoring, offsite communications, command and control, conferences, NRC personnel, and storage. There is sufficient space for the service of equipment, displays, and instrumentation within the new facility. Phones and special communications equipment are provided as needed throughout the new facility at personnel workstations. Individuals needing access to plant data are provided access via personal computers with Internet access. Functional displays of EOF data are made available through use of computer monitors and video display monitors. In Section 3.1.1, "Management of Overall Licensee Emergency Response," of Enclosure 1 of its August 30, 2017, letter, SNC states, in part, that "the new facility will be furnished with updated equipment that monitors plant and environmental conditions to provide information required for dose assessment and development of protective action recommendations."

As part of its evaluation, the NRC staff conducted a walkthrough of the new consolidated EOF on January 23, 2018, and verified that the new facility provides for increased work space and a revised layout, which will significantly enhance SNC's ability to effectively support simultaneous events at multiple nuclear power reactor sites, while providing dedicated work space for NRC Site Team and State representatives responding to the facility.

Based on a review of the licensee's submittal, the NRC staff's walkthroughs of the new facility, and observation of the dual-site drill, the NRC staff finds that the new consolidated EOF will be of sufficient size to accommodate and support Federal, State, and licensee ERO personnel, and equipment and documentation, which is consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8 to Appendix of 10 CFR Part 50.

### 3.2.5 Radiological Monitoring:

The guidance in Section 4.5 of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, specifies that to ensure adequate radiological protection of EOF personnel, radiation monitoring systems should be provided in the EOF. Similar to the existing SNC consolidated facility, the new consolidated EOF is located beyond 10 miles from any of the SNC plant sites that it serves. In addition, no other NRC-licensed nuclear power reactor site is located within 10 miles of the new consolidated EOF. As such, the NRC staff finds that personnel staffing the facility would not be impacted by a radiological release from any nuclear power plant site. Therefore, radiological monitoring capabilities for EOF personnel, as described in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, are not needed, and as such, the new consolidated EOF meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8 to Appendix of 10 CFR Part 50.

### 3.2.6 Communications:

Section 4.6 of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, provides guidance that the EOF shall have reliable voice communications to the TSC, the control room, NRC, and State and local emergency operations centers, and describes the primary functions of the EOF voice communications.

The new consolidated EOF will provide the capability for the respective plant control rooms, TSCs, simulator control rooms, and alternative emergency response facilities for the eight SNC nuclear units to communicate with the required offsite response organizations and with each other. The Emergency Notification Network will continue to serve as the primary means of communication between the new consolidated EOF, the respective plant control rooms, and the offsite response organizations, with the commercial telephone system providing the backup means of emergency notification. In addition, the licensee's submittal describes that the internet connections, long distance calling networks, satellite connectivity, local area network (LAN) connections, and the number of telephones and multifunction machines with fax capability in the new consolidated EOF are equal or superior to the existing consolidated EOF location. Based on a review of the licensee's submittal and the NRC staff's January 23, 2018, walkthrough of the new facility, the NRC staff confirmed that the description of the EOF facilities and equipment related to communications for the new consolidated EOF remains consistent to that currently described in Section F, "Emergency Communications," to the SNC Standard Emergency Plan and equivalent to the existing facility.

Communications with the NRC are established through the Federal Telephone System (FTS) telephone network, which connects the respective SNC plant sites and the consolidated EOF with the NRC Operations Center. The FTS is comprised of dedicated telephone circuits that tie into the Emergency Notification System (ENS), Health Physics Network (HPN), Protective Measures Counterpart Link, Reactor Safety Counterpart Link, Management Counterpart Link, and NRC Operations Center LAN in order to continue ensure effective and efficient communication capabilities. Fax transmission capability between the EOF, TSCs, and NRC Operations Center will continue to exist in the new consolidated EOF. Extensions for the ENS and HPN circuits will also be available in the designated NRC work spaces. The NRC staff verified during its facility walkthrough that NRC Site Team personnel will have access to respective FTS telephones in the dedicated NRC conference room and in various locations within the facility in support of Site Team operations.



Personnel in the new consolidated EOF will be able to communicate with the respective SNC sites using the SNC intra-plant phone system and portable radio systems. A radio system for communication with field monitoring teams is provided in the new consolidated EOF to coordinate radiological monitoring efforts.

Backup power to voice and data communications in the new consolidated EOF is provided by a backup diesel generator. In addition, voice communication systems in the new consolidated EOF are provided with 2-hour back-up power via a stand-alone uninterruptible power supply. The testing of communications systems at the new consolidated EOF will be performed as described in Section F.3, "Communications Tests," to the SNC Standard Emergency Plan to ensure the reliable, timely flow of information between all parties having an emergency response role.

Emergency Plan Inspection, Test, Analyses, and Acceptance Criterion (ITAAC) No. E.3.9.03.00.01 for the Vogtle, Units 3 and 4, Combined Operating License (COL) will verify the program commitment that a means exists for the new SNC Consolidated EOF to interface effectively with Vogtle, Units 3 and 4, when completed. The acceptance criteria will ensure that communications are established between the control room, operations support center (OSC), TSC, EOF, and principal State and local emergency operations centers (EOCs). The regulations in 10 CFR Part 52.103(g) require that a licensee not operate the facility until the Commission makes a finding that the acceptance criteria in the combined license are met. As part of the inspection program for Vogtle, Units 3 and 4, a test of these communications capabilities will be verified through the ITAAC closure process leading to the 10 CFR Part 52.103(g) finding.

Based on a review of the licensee's submittal, and the NRC staff's walkthroughs of the new facility and observation of the dual-site drill, the NRC staff finds that the new consolidated EOF has sufficient internal and external telecommunications capabilities to support EOF functions and staffing for simultaneous events involving multiple sites, as currently described in the SNC Standard Emergency Plan. As such, the NRC staff concludes that the new consolidated EOF will provide for reliable EOF voice and data communications and information collection consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(8) and paragraph IV.E.8 to Appendix of 10 CFR Part 50.

### 3.2.7 Instrumentation, Data System Equipment, and Power Supplies:

Section 4.7 of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, provides guidance on equipment to gather, store and display data needed in the EOF to analyze and exchange information on plant conditions, as well as criteria to perform these functions. Data communication networks are installed to provide secure access to plant data and parameters for display in the new consolidated EOF. The networks are installed in accordance with the requirements of Section 4.7 of NUREG-0696 and 10 CFR 73.54, "Protection of digital computer and communication systems and networks." Data acquisition will be achieved through a secure proxy server, which allows the new consolidated EOF to access displays that are representative of the displays in the respective site control room via the SNC Wide Area Network (WAN) and LAN. These displays provide data points and parameters that are available to the operators in the respective plant control rooms and emergency responders in the respective site's TSC and operations support center. The new consolidated EOF video display system presents the graphics on screens in the main EOF area. Based on a review of the licensee's submittal, the NRC staff confirmed that the description of the facilities and equipment related to



instrumentation, data system equipment, and power supplies for the new consolidated EOF remain as currently described in Section H.2.1, "Emergency Operations Facility," to the SNC Standard Emergency Plan.

SNC states that the LAN/WAN equipment and core computer network equipment in the new consolidated EOF have a backup electrical power supply and, therefore, loss of primary power would not cause the loss of any stored data vital to the new consolidated EOF functions. The primary commercial electric service for the new consolidated EOF is provided by Alabama Power's underground distribution system. Backup electrical power for the new EOF is supplied by an onsite diesel generator sized to carry the electrical load for the entire SNC Corporate Headquarters building, thereby providing backup power to instrumentation and data system equipment in the new consolidated EOF. Furthermore, since the new consolidated EOF is located offsite, its electrical equipment loads cannot affect any safety-related power source at the respective SNC sites.

Based on a review of the licensee's submittal and the NRC staff's walkthroughs of the new facility and observation of the dual-site drill, the NRC staff finds that the new consolidated EOF provides for reliable EOF instrumentation, data system equipment, and power supplies. As such, the NRC staff concludes that the new consolidated EOF will provide for reliable equipment to gather, store, and display data needed in the EOF to analyze and exchange information on plant conditions consistent with the guidance in Section 4.7 to NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(8) and (9), and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

### 3.2.8 Technical Data and Data Systems:

Section 4.8 of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, provides guidance on the technical data system needed to receive, store, process and display information sufficient to perform assessments of the actual and potential onsite and offsite environmental consequences of an emergency condition. On January 23, 2018, the NRC staff, along with SNC personnel, conducted a walkthrough of the new EOF. The NRC staff confirmed that in the event of an actual or potential release of airborne radioactivity to the environment offsite dose assessment capabilities at the new consolidated EOF will continue to be performed using the existing dose assessment computer analysis program.

SNC states in its submittal that the new EOF data system is unchanged from the current consolidated EOF and continues to comply with data display and data storage requirements discussed in Section 4.8 of NUREG-0696. This capability will include sensor data of the Type A, B, C, D, and E variables as described in Regulatory Guide 1.97, "Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants" (Reference 16), and the meteorological variables required by both Regulatory Guide 1.23, "Meteorological Monitoring Programs for Nuclear Power Plants," (Reference 17) and NUREG-0654/FEMA-REP-1.

SNC also states in its submittal that the new consolidated EOF can receive, store, process, and display information needed to perform assessments of actual and potential offsite consequences of an emergency. The new consolidated EOF has access to the same data points that are available to operators in each respective site's control room and emergency responders in the TSC and OSC. The data set at the new consolidated EOF will include radiological, meteorological, and other environmental information needed to assess environmental conditions, coordinate radiological monitoring activities, and recommend implementation of offsite protective actions.

Because the new consolidated EOF will have similar capabilities as the existing consolidated EOF, the NRC staff finds that the new consolidated EOF provides for reliable EOF technical data and data systems. As such, based on a review of the licensee's submittal and the NRC staff's walkthroughs of the new facility and observation of the dual-site drill, the NRC staff concludes that the new consolidated EOF will provide for the sufficient receipt, storage, processing, and display of information to perform assessments of the actual and potential onsite and offsite environmental consequences of an emergency condition consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(8) and (9), and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

### 3.2.9 Records Availability and Management:

Section 4.9 of NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, provides guidance on the ready access to up-to-date plant records, procedures and emergency plans needed to exercise overall management of licensee emergency response resources. The new consolidated EOF is located near the SNC Document Services. Based on a review of the licensee's submittal and the NRC staff's walkthroughs of the new facility and observation of the dual-site drill, the NRC staff finds that the description of the key reference materials for the Farley, Hatch, and Vogtle sites, is consistent with that referenced in Section H.2.1 to the SNC Standard Emergency Plan, and will be kept up-to-date and readily available in the new consolidated EOF. Therefore, the NRC staff concludes that the new consolidated EOF provides for records availability and management consistent with the guidance in NUREG-0696, as supplemented by Section IV.I of NSIR/DPR-ISG-01, and meets the requirements of 10 CFR 50.47(b)(8), and paragraph IV.E.8 of Appendix E to 10 CFR Part 50.

### 3.3 NRC STAFF CONCLUSION

The NRC staff finds that the relocation of the SNC Consolidated EOF for the Farley, Hatch, and Vogtle sites, as described in SNC's letter dated August 30, 2017, meets the applicable requirements in 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50, and will fulfill the necessary emergency response functions set forth in NUREG-0696, as supplemented by NSIR/DPR-ISG-01. Given the enhanced technological capabilities, layout and increase size of the new facility, the EOF's capacity to address multi-site events, and an ERO comprised of experienced and diverse personnel from the SNC corporate office that currently staff the existing facility, the proposed consolidated EOF will effectively support SNC's emergency response at all of the sites that the facility serves. The NRC staff finds that there will be reasonable assurance that protective measures can and will be implemented in the event of a radiological emergency at any of the sites that the facility serves.

In SECY-18-0013, "Southern Nuclear Operating Company Request to Relocate the Existing Commission-Approved Consolidated Emergency Operations Facility," dated January 25, 2018, (Reference 18), the NRC staff recommended approval to relocate the SNC Consolidated EOF. The Commission subsequently approved the NRC staff's recommendation in the SRM to SECY-18-0013. Therefore, the NRC staff concludes that the licensee's proposed relocation of the SNC Consolidated EOF, as detailed in SNC's letter dated August 30, 2017, is acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, States of Georgia and Alabama officials were notified of the proposed issuance of the amendments on July 2, 2018. On July 2, the NRC staff verified that the State officials had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on October 10, 2017 (82 FR 47038). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

#### 7.0 REFERENCES

1. Southern Nuclear Operating Company, "Request for Relocation of the Emergency Operations Facility," dated August 30, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17243A202).
2. U.S. Nuclear Regulatory Commission, "Joseph M. Farley, Units 1 and 2; Edwin I. Hatch, Units 1 and 2; and Vogtle Electric Generating Plant, Units 1, 2, 3, and 4 - Issuance of Amendments Related to SNC Fleet Emergency Plan (CAC Nos. MF6670, MF6671, MF6672, MF6673, MF6674, MF6675, and RP9516)," dated March 14, 2017 (ADAMS Accession No. ML16141A090).
3. U.S. Nuclear Regulatory Commission and Federal Emergency Management Agency, NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980 (ADAMS Accession No. ML040420012).
4. U.S. Nuclear Regulatory Commission, NUREG-0696, "Functional Criteria for Emergency Response Facilities," February 1981 (ADAMS Accession No. ML051390358).

5. U.S. Nuclear Regulatory Commission, NSIR/DPR-ISG-01, Revision 0, "Interim Staff Guidance – Emergency Planning for Nuclear Power Plants," dated November 20, 2011 (ADAMS Accession No. ML113010523).
6. U.S. Nuclear Regulatory Commission, Staff Requirements Memorandum to SECY-04-0236, "Southern Nuclear Operating Company's Proposal to Establish a Common Emergency Operating Facility at its Corporate Headquarters," dated February 23, 2005 (ADAMS Accession No. ML050550131).
7. NUREG-1923, "Safety Evaluation Report for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant (VEGP) ESP Site," July 2009 (ADAMS Accession No. ML092290639).
8. U.S. Nuclear Regulatory Commission, Staff Requirements Memorandum to SECY-18-0013, "Southern Nuclear Operating Company Request to Relocate the Existing Commission-Approved Consolidated Emergency Operations Facility," dated February 8, 2018, (ADAMS Accession No. ML18039A953).
9. U.S. Nuclear Regulatory Commission and Federal Emergency Management Agency, "Memorandum of Understanding Between the Department of Homeland Security/FEMA and NRC Regarding Radiological Response, Planning, and Preparedness," dated December 7, 2015 (ADAMS Accession No. ML15344A371).
10. Federal Emergency Management Agency, "FEMA Review of Southern Nuclear Company Request for Consolidated Emergency Operations Facility Relocation," dated September 22, 2017 (ADAMS Accession No. ML17275B332).
11. Southern Nuclear Operating Company, "Standard Emergency Plan," Enclosure 5, "Farley Standard Emergency Plan," dated August 31, 2015 (ADAMS Accession No. ML15246A050).
12. Southern Nuclear Operating Company, "Standard Emergency Plan," Enclosure 8, "Hatch Standard Emergency Plan," dated August 31, 2015 (ADAMS Accession No. ML15246A053).
13. Southern Nuclear Operating Company, "Standard Emergency Plan," Enclosure 11, "Vogtle (Units 1 and 2) Standard Emergency Plan," dated August 31, 2015 (ADAMS Accession No. ML15246A056).
14. Southern Nuclear Operating Company, "Standard Emergency Plan," Enclosure 14, "Vogtle (Units 3 and 4) Standard Emergency Plan," dated August 31, 2015 (ADAMS Accession No. ML15246A058).
15. Nuclear Energy Institute, NEI 99-02 [Revision 7], "Regulatory Assessment Performance Indicator Guideline," dated August 31, 2013 (ADAMS Accession No. ML13261A116).
16. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.97, Revision 4, "Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants," June 2006 (ADAMS Accession No. ML061580448).

17. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.23, Revision 1, "Meteorological Monitoring Programs for Nuclear Power Plants," March 2007 (ADAMS Accession No. ML070350028).
18. U.S. Nuclear Regulatory Commission, SECY-18-0013, "Southern Nuclear Operating Company Request to Relocate the Existing Commission-Approved Consolidated Emergency Operations Facility," dated January 25, 2018 (ADAMS Accession No. ML17276B541).

Principal Contributor: E. Robinson

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2; EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2, AND VOGTLE ELECTRIC GENERATING PLANT, UNITS 1, 2, 3, AND 4; ISSUANCE OF AMENDMENTS REGARDING THE RELOCATION OF THE EMERGENCY OPERATIONS FACILITY (CAC NOS. MG0188, MG0189, MG0190, MG0191, MG0192, MG0193, MG0194, AND MG0195; EPID L-2017-LLA-0293) DATED JULY 26, 2018

**DISTRIBUTION:**

Public	RidsAcrs_MailCTR Resource
PM R/F	RidsNrrPMVogtle Resource (hard copy)
RidsNrrLAKGoldstein Resource	RidsRgn2MailCenter Resource
RidsNrrDorlDpr Resource	RidsNrrDorlLp2-1 Resource
RidsNsirDrp Resource	RidsNrrPMHatch Resource
RidsNrrPMFarley Resource	ERobinson, NSIR
CPatel, NRO	

**ADAMS Accession No.: ML18183A073**

OFFICE	NRR/DORL/LPL2-1/PM	NRR/DORL/LPL2-1/LA	NSIR/DSO/RLB/BC	OGC
NAME	MOrenak	KGoldstein	JAnderson	BHarris
DATE	7/26/18	7/11/18 & 7/16/18	6/25/18	7/13/18
OFFICE	NRO/DNRL/LB4/BC	NRR/DORL/LPL2-1/BC	NRR/DORL/LPL2-1/PM	
NAME	JDixon-Herrity	MMarkley (AKlett for)	MOrenak	
DATE	7/25/18	7/24/18	7/26/18	

**OFFICIAL RECORD COPY**