



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

COMBINED LICENSE

VOGTLE ELECTRIC GENERATING PLANT UNIT 4

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

License No. NPF-92

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for a combined license (COL) for Vogtle Electric Generating Plant (VEGP) Unit 4 filed by Southern Nuclear Operating Company, Inc. (SNC) acting on behalf of Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia,¹ and the City of Dalton, Georgia, an incorporated municipality in the state of Georgia acting by and through its Board of Water, Light and Sinking Fund Commissioners (City of Dalton), herein referred to as "the VEGP owners," which incorporates by reference Appendix D to 10 CFR Part 52 and Early Site Permit No. ESP-004, complies with the applicable standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. There is reasonable assurance that the facility will be constructed and will operate in conformity with the application, as amended, the provisions of the Act, and the Commission regulations set forth in 10 CFR Chapter I, except as exempted from compliance in Sections 2.F and 2.G below;
 - C. There is reasonable assurance (i) that the activities authorized by this COL 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 regulations set forth in 10 CFR Chapter I, except as exempted from compliance in Sections 2.F and 2.G below;

¹ On June 24, 2015, Municipal Electric Authority of Georgia transferred its ownership interest to its wholly owned subsidiaries: MEAG Power SPVM, LLC; MEAG Power SPVJ, LLC; and MEAG Power SPVP, LLC as described in the SNC letter dated December 2, 2013 and in the Commission's Safety Evaluation available in the Agencywide Document Access and Management System (ADAMS) under Accession No. ML14072A340.

- D. SNC² is technically qualified to engage in the activities authorized by this license in accordance with the Commission regulations set forth in 10 CFR Chapter I. SNC and the VEGP owners together are financially qualified to engage in the activities authorized by this COL in accordance with the Commission regulations set forth in 10 CFR Chapter I;
 - E. SNC and the VEGP owners have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements;"
 - F. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
 - G. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering reasonable available alternatives, the issuance of this license subject to the conditions for protection of the environment set forth herein is in accordance with Subpart A of 10 CFR Part 51 and all applicable requirements have been satisfied; and
 - H. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this license will be in accordance with the applicable regulations in 10 CFR Parts 30, 40, and 70.
2. On the basis of the foregoing findings regarding this facility, COL No. NPF-92 is hereby issued to SNC, Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and the City of Dalton, Georgia (the licensees) to read as follows:
- A. This license applies to the VEGP Unit 4, a light-water nuclear reactor and associated equipment (the facility), owned by the VEGP Owners. The facility would be located adjacent to existing VEGP Units 1 and 2 on a 3,169-acre coastal plain bluff on the southwest side of the Savannah River in eastern Burke County, GA, approximately 15 miles east-northeast of Waynesboro, GA, and 26 miles southeast of Augusta, GA, and is described in the licensees' updated final safety analysis report (UFSAR), as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) SNC pursuant to Sections 103 and 185b. of the Act and 10 CFR Part 52, to construct, possess, use, and operate the facility at the designated location in accordance with the procedures and limitations set forth in this license;
 - (2) The VEGP owners pursuant to the Act and 10 CFR Part 52, to possess but not operate the facility at the designated location in Burke County, GA, in accordance with the procedures and limitations set forth in this license;

² SNC is authorized by the VEGP owners to exercise responsibility and control over the physical construction, operation, and maintenance of the facility.

- (3) (a) SNC pursuant to the Act and 10 CFR Part 70, to receive and possess at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and in amounts necessary for reactor operation, described in the UFSAR, as supplemented and amended;
- (b) SNC pursuant to the Act and 10 CFR Part 70, to use special nuclear material as reactor fuel, after a Commission finding under 10 CFR 52.103(g) has been made, in accordance with the limitations for storage and in amounts necessary for reactor operation, described in the UFSAR, as supplemented and amended;
- (4) (a) SNC pursuant to the Act and 10 CFR Parts 30 and 70, to receive, possess, and use, at any time before a Commission finding under 10 CFR 52.103(g), such byproduct and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts, as necessary;
- (b) SNC pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, after a Commission finding under 10 CFR 52.103(g), any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as necessary;
- (5) (a) SNC pursuant to the Act and 10 CFR Parts 30 and 70, to receive, possess, and use, before a Commission finding under 10 CFR 52.103(g), in amounts not exceeding those specified in 10 CFR 30.72, any byproduct or special nuclear material that is (1) in unsealed form; (2) on foils or plated surfaces, or (3) sealed in glass, for sample analysis or instrument calibration or other activity associated with radioactive apparatus or components;
- (b) SNC pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, after a Commission finding under 10 CFR 52.103(g), in amounts as necessary, any byproduct, source, or special nuclear material without restriction as to chemical or physical form, for sample analysis or instrument calibration or other activity associated with radioactive apparatus or components but not uranium hexafluoride; and
- (6) SNC pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. The license is subject to, and the licensees shall comply with, all applicable provisions of the Act and the rules, regulations, and orders of the Commission, including the conditions set forth in 10 CFR Chapter I, now or hereafter in effect.

D. The license is subject to, and SNC shall comply with, the conditions specified and incorporated below:

- (1) Changes during Construction – Removed by Amendment No. 199
- (2) Pre-operational Testing – Removed by Amendment Nos. 194 and 199
- (3) Nuclear Fuel Loading and Pre-critical Testing – Removed by Amendment Nos. 194 and 199
- (4) Initial Criticality and Low-Power Testing – Removed by Amendment No. 199
- (5) Power Ascension Testing – Removed by Amendment No. 199
- (6) Maximum Power Level

SNC is authorized to operate the facility at steady state reactor core power levels not to exceed 3400 MW thermal (100-percent thermal power), as described in the UFSAR, in accordance with the conditions specified herein.

- (7) Reporting Requirements - Removed by Amendment No. 199
- (8) Incorporation

The Technical Specifications and Environmental Protection Plan in Appendices A and B, respectively, of this license, as revised through Amendment No. 202, are hereby incorporated into this license.

- (9) Technical Specifications – Removed by Amendment No. 199
- (10) Operational Program Implementation – Removed by Amendment No. 199
- (11) Operational Program Implementation Schedule – Removed by Amendment No. 199
- (12) Site- and Unit-specific Conditions – Removed by Amendment No. 199

[Blank Pages 5 through 14 removed by Amendment No. 199.]

D. The license is subject to, and SNC shall comply with, the conditions specified and incorporated below:

- (1) Changes during Construction – Removed by Amendment No. 199
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- (3) Nuclear Fuel Loading and Pre-critical Testing – Removed by Amendment Nos. 194 and 199
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- (5) Power Ascension Testing – Removed by Amendment No. 199
- (6) Maximum Power Level

SNC is authorized to operate the facility at steady state reactor core power levels not to exceed 3400 MW thermal (100-percent thermal power), as described in the UFSAR, in accordance with the conditions specified herein.
- (7) Reporting Requirements - Removed by Amendment No. 199
- (8) Incorporation

The Technical Specifications and Environmental Protection Plan in Appendices A and B, respectively, of this license, as revised through Amendment No. 201, are hereby incorporated into this license.
- (9) Technical Specifications – Removed by Amendment No. 199
- (10) Operational Program Implementation – Removed by Amendment No. 199
- (11) Operational Program Implementation Schedule – Removed by Amendment No. 199
- (12) Site- and Unit-specific Conditions – Removed by Amendment No. 199

[Blank Pages 5 through 14 removed by Amendment No. 199.]

(13) Departures from Plant-specific DCD Tier 2* Information

- (a) SNC is exempt from the requirements of 10 CFR Part 52, Appendix D, Paragraphs VIII.B.6 and VIII.B.5.a for prior NRC approval of departures from Tier 2* information and departures from Tier 2 information involving a change to or departure from Tier 2* information; except for departures that:

1. – Removed by Amendment No. 199 |
2. – Removed by Amendment No. 199 |
3. (i) Result in a change to the fuel criteria evaluation process, the fuel principal design requirements, or the evaluation process in WCAP-12488, “Westinghouse Fuel Criteria Evaluation Process,” or |
- (ii) Result in any change to the maximum fuel rod average burn-up limits; or the small break LOCA analysis information in UFSAR Subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3,
4. Adversely affect the containment debris limits or debris screen design criteria,
5. Change the Reactor Coolant Pump (RCP) type from a canned motor to a different type of RCP,
6. – Removed by Amendment No. 199 |
7. – Removed by Amendment No. 199 |
8. – Removed by Amendment No. 199 |
9. – Removed by Amendment No. 199 |

- (b) For a departure from Tier 2* information that does not require prior NRC approval under the exemption in License Condition 2.D.(13)(a), SNC may take the departure provided that SNC complies with the requirements for Tier 2 departures in 10 CFR Part 52, Appendix D, Paragraph VIII.B.5, as modified by the exemption in License Condition 2.D.(13)(a). For each departure authorized by this License Condition:

1. The departure or change to Tier 2* information shall remain Tier 2* information in the plant-specific DCD.

2. SNC shall prepare and maintain a written evaluation that provides the bases for its determinations regarding the criteria in License Condition 2.D.(13)(a). In the report that 10 CFR Part 52, Appendix D, Section X.B.1 requires SNC to submit, SNC shall include a brief description of each departure and a summary of the evaluation of the departure.
- E. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- F. Exemptions
 - (1) The following exemption from any part of the referenced design certification rule meets the requirements of 10 CFR 52.7 and Section VIII.A.4, VIII.B.4, or VIII.C.4 of Appendix D to 10 CFR Part 52, is authorized by law, will not present an undue risk to the public health or safety, and is consistent with the common defense and security. Special circumstances are present in that the application of the regulation in this particular circumstance is not necessary to achieve the underlying purpose of the rule (10 CFR 50.12(a)(2)(ii)) as described in the application and the staff SER dated August 5, 2011.
 - (a) The licensees are exempt from the requirement of 10 CFR Part 52, Appendix D, Section IV.A.2.a to include a plant-specific DCD containing the same type of information and using the same organization and numbering as the generic DCD for the AP1000 certified design. This exemption is specific to the organization and numbering scheme in the FSAR and is related to departure number VEGP DEP 1-1.

- (2) The following exemptions from regulations were granted in the rulemaking for the design certification rule that is referenced in the application. In accordance with 10 CFR Part 52, Appendix D, Section V, Applicable Regulations, Subsection B, and pursuant to 10 CFR 52.63(a)(5), the licensees are exempt from portions of the following regulations:
- (a) Paragraph (f)(2)(iv) of 10 CFR 50.34—Plant Safety Parameter Display Console;
 - (b) Paragraph (c)(1) of 10 CFR 50.62—Auxiliary (or emergency) feedwater system; and
 - (c) Appendix A to 10 CFR Part 50, GDC 17—Second offsite power supply circuit.
- (3) For the reasons set forth below, the following specific exemptions, which are outside the scope of the design certification rule referenced in the application, are granted:
- (a) The licensees are exempt from the requirements of 10 CFR 70.22(b), 10 CFR 70.32(c), 10 CFR 74.31, 10 CFR 74.41, and 10 CFR 74.51 because the licensees meet the requirements of 10 CFR 70.17 and 74.7 as follows: The exemption is authorized by law, will not present an undue risk to the public health or safety, and is consistent with the common defense and security. Additionally, special circumstances are present in that the application of the regulations in this particular circumstance is not necessary to achieve the underlying purpose of the rule (10 CFR 50.12(a)(2)(ii)) as described in the COL Application and the staff SER dated August 5, 2011.
 - (b) The licensees are exempt from the requirements of 10 CFR 52.93(a)(1) as it relates to the exemption granted in Section 2.F.(1)(a) of this license because the exemption meets the requirements of 10 CFR 52.7, because the exemption is authorized by law, will not present an undue risk to the public health or safety, and is consistent with the common defense and security. Additionally, special circumstances are present in that the application of the regulation in this particular circumstance is not necessary to achieve the underlying purpose of the rule (10 CFR 50.12(a)(2)(ii)) as described in the staff SER dated August 5, 2011.

G. Variances

Having applied the technically relevant criteria applicable to the application for the Early Site Permit No. ESP-004, to the variances requested in the application, as described in NUREG-1923, the staff SER dated July 2009, the following variances from the early site permit (ESP) are granted:

- (1) A variance (VEGP VAR 1.6-1) from Section 1.6 of the VEGP ESP site safety analysis report (SSAR) as it references Revision 15 of the AP1000 DCD instead of Revision 19 of the AP1000 DCD, which is incorporated by reference in the FSAR;
- (2) The variance (VEGP VAR 1.6-2) from Section 3.8.5, Foundations, of the VEGP ESP SSAR, which references Revision 15 of the AP1000 DCD, to reference Revision 19 of the AP1000 DCD, which is incorporated by reference in the FSAR;
- (3) The variance (VEGP VAR 1.6-3) from Chapter 15, Accident Analysis, of the VEGP ESP SSAR which references Revision 15 of the AP1000 DCD, to reference Revision 19 of the AP1000 DCD, which is incorporated by reference in the FSAR;
- (4) The variance (VEGP VAR 1.2-1) from the site layout information in Figures 1-4, 1-5, 13.3-2, and Part 5 Figure ii, of the VEGP ESP SSAR, which is superseded by the corresponding information in FSAR Section 1.1, Figure 1.1-202;
- (5) The variance (VEGP VAR 2.2-1) from the information related to onsite chemical hazards in Section 2.2.3.2.3 and Table 2.2-6 of the VEGP ESP SSAR, which is superseded by the corresponding information contained in FSAR Sections 2.2 and 6.4; and
- (6) The variance (VEGP VAR 2.3-1) from the information related to design-basis temperature characteristics in Section 2.3.1.5 and Table 1-1 of the VEGP ESP SSAR, which is superseded by the corresponding information contained in FSAR Section 2.3.1.5 and Table 2.0-201, which conforms to AP1000 DCD, Revision 19.

H. Removed by Amendment No. 199

I. Removed by Amendment No. 199

- J. This license is effective as of February 10, 2012, and shall expire at midnight on July 28, 2063.

FOR THE NUCLEAR
REGULATORY
COMMISSION

A handwritten signature in black ink, appearing to read "Michael R. Johnson", with a long horizontal line extending to the right.

Michael R. Johnson, Director
Office of New
Reactors

Appendices:

Appendix A – Technical Specifications

Appendix B – Environmental Protection Plan

Appendix C -Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

APPENDIX A

VOGTLE ELECTRIC GENERATING PLANT

UNITS 3 AND 4

TECHNICAL SPECIFICATIONS

**See Vogtle 3 License for
Common Technical
Specifications (ML14100A106)**

APPENDIX B

VOGTLE ELECTRIC GENERATING PLANT UNIT 4

ENVIRONMENTAL PROTECTION PLAN

(NONRADIOLOGICAL)

1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) objectives are to ensure compliance with Biological Opinions issued pursuant to the Endangered Species Act of 1973, as amended (ESA), and to ensure that the Commission is kept informed of other environmental matters. The EPP is intended to be consistent with Federal, State, and local requirements for environmental protection.

2.0 Environmental Protection Issues

In the Final Supplemental Environmental Impact Statement (FSEIS) dated March 2011, the staff considered the environmental impacts associated with the construction and operation of Vogtle Electric Generating Plant Unit Nos. 3 and 4. This EPP applies to the licensees' actions affecting the protected environmental resources evaluated in the FSEIS and the licensees' actions that may affect any newly discovered protected environmental resources.

2.1 Aquatic Resources Issues

Federal agencies other than the U.S. Nuclear Regulatory Commission (NRC), such as the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps), have jurisdiction to regulate aquatic resources under the Federal Water Pollution Control Act (Clean Water Act or CWA) and the Rivers and Harbors Appropriation Act of 1899 (RHA). Certain water quality environmental considerations identified in the FSEIS, including effluent limitations, monitoring requirements, and mitigation measures, are regulated under the licensees' CWA permits, such as National Pollutant Discharge Elimination System (NPDES) and Section 404 permits, and RHA Section 10 permit. Nothing within this EPP shall be construed to place additional requirements on the regulation of aquatic resources except the imposition of the requirements in a Biological Opinion under the ESA (see section 2.3). The licensees are required to inform the NRC of events or situations concerning aquatic resources consistent with the provisions of 10 CFR 50.72(b)(2)(xi), and this EPP does not expand any reporting requirement required by that regulation.

2.2 Terrestrial Resources Issues

Several statutes govern the regulation of terrestrial resources. For example, the U.S. Fish and Wildlife Service (FWS) regulates matters involving migratory birds and their nests in accordance with the Migratory Bird Treaty Act. Activities affecting migratory birds or their nests may require permits under the Migratory Bird Treaty Act. The FWS also regulates matters involving the protection and taking of bald and golden eagles in accordance with the Bald and Golden Eagle Protection Act. The licensees shall inform NRC of any events or situations concerning terrestrial resources consistent with the provisions of 10 CFR 50.72(b)(2)(xi), and this EPP does not expand any reporting requirement required by that regulation.

2.3 Endangered Species Act of 1973

The NRC may be required to protect some aquatic resources and terrestrial resources in accordance with the ESA. If a Biological Opinion is issued to the NRC in accordance with ESA Section 7 prior to the issuance of the combined license, the licensees shall comply with the terms and conditions set forth in the Incidental Take Statement of the Biological Opinion. If any Federally listed species or critical habitat occurs in an area affected by construction or operation of the plant that was not previously identified as occurring in such areas, including species and critical habitat that were not previously Federally listed, the licensees shall inform the NRC within four hours of discovery. The time of discovery is identified as the specific time when a decision is made to notify another agency or to issue a press release. Similarly, the licensees shall inform the NRC within four hours of discovery of any take, as defined in the ESA, of a Federally listed species or destruction or adverse modification of critical habitat. The four-hour discovery notifications shall be made to the NRC Operations Center via the Emergency Notification System. The licensees shall provide any necessary information to the NRC if the NRC initiates or reinitiates consultation under the ESA.

Unusual Event - The licensees shall inform the NRC of any onsite mortality, injury, or unusual occurrence of any species protected by the ESA within four hours of discovery, followed by a written report in accordance with Section 4.1. The time of discovery is identified as the specific time when a decision is made to notify another agency or to issue a press release. Such incidents shall be reported regardless of the licensees' assessment of causal relation to plant construction or operation.

3.0 Consistency Requirements

The licensees shall notify the NRC of proposed changes to permits or certifications concerning aquatic or terrestrial resources by providing the NRC with a copy of the proposed change(s) at the same time it is submitted to the permitting agency. The licensees shall provide the NRC with a copy of the application for renewal of permits or certifications at the same time the application is submitted to the permitting agency.

Changes to or renewals of such permits or certifications shall be reported to the NRC within 30 days following the later of the date the change or renewal is approved or the date the change becomes effective. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

4.0 Administrative Procedures

4.1 Plant Reporting Requirements: Non-routine Reports

A written report shall be submitted to the NRC within 30 days of occurrence of any unusual event described in Section 2.3 of this EPP. The report shall: (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact and plant operating characteristics at the time of the event, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection, which also require reports to other Federal, State, or local agencies, shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided a copy of such report at the same time it is submitted to the other agency.

4.2 Review and Audit

The licensees shall provide for review and audit of compliance with Section 2.3 of this EPP. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organizational structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

4.3 Records Retention

Records required by this EPP shall be made and retained in a manner convenient for review and inspection. These records shall be made available to the NRC on request. The records, data, and logs relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

4.4 Changes in Environmental Protection Plan

A request for a change in the EPP shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the EPP.

The licensees shall request a license amendment to incorporate the requirements of any Terms and Conditions set forth in the Incidental Take Statement of applicable Biological Opinions issued subsequent to the effective date of this EPP.

APPENDIX C

VOGTLE ELECTRIC GENERATING PLANT UNIT 4

INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

(Removed by Amendment No. 194)