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May 22, 2006

Docket No.: 50-425

NL-06-0161

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

**Vogtle Electric Generating Plant**  
**License Renewal: Request for Exemption from the Requirements of 10 CFR 54.17(c)**

Ladies and Gentlemen:

In accordance with 10 CFR 54.15 and 50.12, Southern Nuclear Operating Company (SNC) hereby requests an exemption from the requirement of 10 CFR 54.17(c), which states that an application for a renewed operating license may not be submitted for Nuclear Regulatory Commission (NRC) review earlier than 20 years before the expiration of the operating license currently in effect.

SNC requests this exemption in order to allow submission of a combined License Renewal Application (LRA) for VEGP Units 1 and 2 on June 28, 2007. On this date Unit 1 will have 20 years of operating experience, and Unit 2 will have 18 years of operating experience.

This exemption request applies only to the schedular requirements of the license renewal rule contained in 10 CFR 54.17(c). All substantive requirements related to the preparation and review of the VEGP Unit 2 LRA will be met.

The background and supporting bases for the requested regulatory relief are contained in the Enclosure to this letter.

Should you have any questions, please contact Tom Greene at (205) 992-7103 or Chalmer Myer at (205) 992-6335.

(Affirmation and signature are on the following page.)

Mr. D. E. Grissette states he is a Vice President of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

This letter contains no NRC commitments.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



Don E. Grissette

Sworn to and subscribed before me this 22<sup>nd</sup> day of May, 2006.

  
Notary Public

My commission expires: 11/10/06

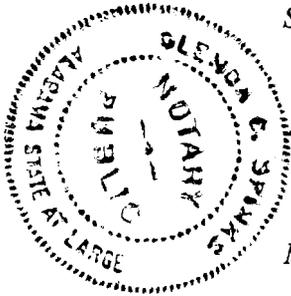
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Enclosure: Basis for Request for Exemption from the Scheduling Requirements  
of 10 CFR 54.17(c)

cc: Southern Nuclear Operating Company  
Mr. J. T. Gasser, Executive Vice President  
Mr. T. E. Tynan, General Manager – Plant Vogtle  
RType: CVC7000

U. S. Nuclear Regulatory Commission  
Dr. W. D. Travers, Regional Administrator  
Mr. C. Gratton, NRR Project Manager – Vogtle  
Mr. G. J. McCoy, Senior Resident Inspector – Vogtle

State of Georgia  
Mr. L. C. Barrett, Commissioner – Department of Natural Resources



**Enclosure**

**Vogtle Electric Generating Plant Unit 2**

**License Renewal**

**Basis for Request for Exemption from the Scheduling Requirements of 10 CFR 54.17(c)**

Enclosure  
Vogtle Electric Generating Plant Unit 2  
License Renewal  
Basis for Request for Exemption from the Scheduler Requirements of 10 CFR 54.17(c)

**Executive Summary**

10 CFR Part 54 sets forth the requirements for the renewal of the operating licenses for nuclear power plants. Per 10 CFR 54.17(c), a license renewal application (LRA) "may not be submitted to the Commission earlier than 20 years before the expiration of the operating license currently in effect." Based on this regulation, an LRA for VEGP Unit 2 could not be submitted prior to February of 2009. The current license renewal schedule calls for the submittal of a combined LRA for both VEGP units on June 28, 2007. For this reason, SNC requests an exemption to 10 CFR 54.17(c) pursuant to 10 CFR 54.15 and 10 CFR 50.12.

In this submittal, SNC demonstrates that sufficient operating experience has been accumulated, both at VEGP and industry-wide, to allow accurate conclusions to be drawn concerning aging degradation at VEGP, thus meeting the intent of 10 CFR 54.17(c). SNC also demonstrates that an exemption is warranted by special circumstances, and that this exemption is mutually beneficial to both SNC and the NRC.

This exemption request seeks schedular relief only. SNC does not seek relief from any of the substantive requirements of 10 CFR Part 54 in preparation of the VEGP Unit 2 LRA. SNC will fully satisfy all of the pertinent requirements of 10 CFR Part 54 when preparing and submitting the VEGP Units 1 and 2 LRA. Public health and safety will not be adversely affected by the granting of this exemption.

### **Background**

VEGP Units 1 and 2 are both pressurized water reactors supplied by Westinghouse Electric Corporation and rated at 3565 megawatts (thermal). The plant was constructed as a two-unit plant with each unit essentially the same. VEGP is a jointly-owned facility. Plant ownership is as follows:

- Georgia Power Company: 45.7%
- Oglethorpe Power Company: 30%
- Municipal Electric Authority of Georgia: 22.7%
- City of Dalton, Georgia: 1.6%

SNC is the exclusive operating licensee of VEGP, and has no ownership interest in the plant. The Unit 1 operating license, NPF-68, has an expiration date of January 16, 2027, and the Unit 2 operating License, NPF-81, has an expiration date of February 9, 2029.

SNC requests an exemption from the requirements of 10 CFR 54.17(c) so that the LRA for both VEGP units can be prepared and submitted concurrently. This exemption will allow SNC to utilize personnel for the VEGP license renewal effort who have successfully completed preparation, submittal, and NRC review of two previous license renewal applications for the E. I. Hatch Nuclear Plant and J. M. Farley Nuclear Plant. These personnel are already familiar with the procedures, processes, and analyses utilized in the preparation and review of an LRA. Also, since the two VEGP units are essentially the same in design, operation, maintenance, materials and environments, there will be little difference in the aging management analyses for the two units. Finally, both SNC and the NRC will benefit from the efficiencies gained by the submittal of a combined VEGP Unit 1 and Unit 2 LRA as opposed to the submittal of a separate LRA at different times for each unit.

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**Basis for Exemption Request Pursuant to 10 CFR 50.12**

10 CFR Part 54 governs the issuance of renewed operating licenses for nuclear power plants. The filing of license renewal applications is addressed in 10 CFR 54.17(c), which states: "An application for a renewed license may not be submitted to the Commission earlier than 20 years before the expiration of the operating license currently in effect." Since SNC desires to file an LRA for VEGP Unit 2 prior to February 9, 2009 (the date after which the 20-year requirement would be satisfied), an exemption from the requirements of 10 CFR 54.17(c) is needed. 10 CFR 54.15 states: "Exemptions from the requirements of this part may be granted by the Commission in accordance with 10 CFR 50.12."

10 CFR 50.12(a) states, in pertinent part:

The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are-

- (1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
- (2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever...
  - (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.

The requested exemption satisfies the requirements of 10 CFR 54.12(a)(1), and the special circumstances of 10 CFR 54.12(a)(2) are applicable, as demonstrated below.

**10 CFR 50.12(a)(1)**

This paragraph of the regulation requires an exemption to satisfy 3 requirements: (1) the request must be authorized by law, (2) the request must not present an undue risk to public health and safety, and (3) the request must be consistent with the common defense and security. These three requirements are discussed below.

**(1) Authorized By Law**

The scheduler requirement of 10 CFR 54.17(c) was adopted solely at the discretion of the NRC in the exercise of its rulemaking authority under Section 161 of the Atomic Energy Act, 42 U.S.C., paragraph 2201. No statute required the NRC to adopt this provision. No other regulation of either the NRC or another agency required the NRC to adopt this provision. The NRC has authority under 10 CFR 50.12 to grant exemptions from the requirements of NRC regulations. Therefore, no statutory or regulatory provision precludes the Commission from granting the requested exemption upon a proper showing. Specifically, 10 CFR 54.15 states that the NRC may grant exemptions from the requirements of 10 CFR Part 54 in accordance with the provisions of 10 CFR 50.12. Accordingly, this requested exemption is "authorized by law," as required by 10 CFR 50.12(a)(1).

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Further, when the current license renewal rule was promulgated in 10 CFR Part 54, the NRC indicated that it would consider an exemption from 10 CFR 54.17(c) if sufficient information is available on a plant-specific basis to justify submission of an application to renew a license before completion of 20 years of operation.<sup>1</sup> The NRC has granted similar exemptions to Duke Energy Corporation for the Catawba and McGuire Nuclear Stations, to Florida Power and Light for St. Lucie Unit 2, and to Constellation Nuclear for Nine Mile Point Unit 2.

(2) No undue risk to Public Health and Safety

The granting of this exemption poses no risk to public health and safety. This exemption is for relief from scheduler requirements only. Granting an exemption from the requirements of 10 CFR 54.17(c) only relieves SNC of the requirement to wait until at least February of 2009 before submitting an application for renewal of the VEGP Unit 2 operating license. The substantive requirements of the license renewal process as provided for in 10 CFR Part 54 still apply to any LRA to be submitted for VEGP Unit 2. The intent of 10 CFR 54.17(c) is to ensure that sufficient operating experience is accrued prior to any application for license renewal. The 10 CFR 50.12(a)(2)(ii) discussion below provides the details and basis for why sufficient operating experience is available to support a license renewal application for VEGP Unit 2.

(3) Common Defense and Security

The granting of this exemption request is consistent with the common defense and security. As noted above, this exemption request is for scheduler relief only; all other NRC requirements pertaining to the renewal of the VEGP Unit 2 operating license will be fully satisfied in the LRA. Further, there are no security or safeguards issues raised by the proposed exemption.

10 CFR 50.12(a)(2)(ii)

10 CFR 50.12(a)(2) lists six “special circumstances” for which an exemption may be granted. Pursuant to the regulation, it is necessary for one of these special circumstances to be present in order for the NRC to consider granting an exemption request. The special circumstance which applies in this case is found in 10 CFR 50.12(a)(2)(ii), which states:

“Application of the regulation in the particular circumstance would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.”

The 20-year requirement of 10 CFR 54.17(c) was a part of the original Part 54 rule as published in 1991. When this rule was first issued, the NRC stated that the purpose of the requirement was “to ensure that substantial operating experience is accumulated by a licensee before it submits a renewal application.”<sup>2</sup> This purpose was reiterated in the Safety Evaluation accompanying the 10 CFR 54.17(c) exemption granted to Duke Energy Corporation, wherein the NRC stated:

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<sup>1</sup> 60 Federal Register at 22488, May 8, 1995

<sup>2</sup> 56 Federal Register at 64963, December 13, 1991

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“The Commission's basis for establishing the 20-year limit contained in Section 54.17(c) is discussed in the 1991 Statements of Consideration for Part 54 (56 FR 64963). The limit was established to ensure that substantial operating experience was accumulated by a licensee before a renewal application is submitted such that any plant-specific concerns regarding aging would be disclosed.”<sup>3</sup>

When developing the Part 54 rule change issued in 1995, the NRC considered revising the 20-year requirement and solicited public comments on the subject. Two commenters, the Nuclear Energy Institute and the U.S. Department of Energy, concluded that some plants might have sufficient operating history and plant experience to provide reasonable assurance that aging concerns can be identified with less than 20-years of operation. In response to the public comments, the NRC noted that it would not revise the 20-year requirement, but the Commission recognized that some license renewal applicants might have sufficient basis for an exemption:

“The Commission is willing to consider, however, plant-specific exemption requests by those applicants who believe they may have sufficient information available to justify applying for a renewal license prior to 20 years from the expiration date of the current license.”<sup>4</sup>

Although the 20-year requirement of 10 CFR 54.17(c) is specifically applicable to the plant applying for a renewed operating license, the operating experience available to a license renewal applicant is not limited solely to the operating experience accumulated by that plant. In the Supplementary Information accompanying the 1991 publication of the rule, the NRC clearly endorsed the use of operating experience available from industry sources when it made the following comment with respect to the 20-year rule:

“...both renewal applicants and the NRC will have the benefit of operational experience from the nuclear industry and are not limited to information developed solely by the utility seeking a renewed license.”<sup>5</sup>

Based on this background, it must be demonstrated that for VEGP Unit 2, sufficient operating experience is available for use in the license renewal process so that accurate evaluations of aging effects can be made. As indicated above, this operating experience is not limited to that accumulated by VEGP Unit 2; it may also include operational experience gained from VEGP Unit 1 and from the nuclear industry as well. The discussion that follows outlines how sufficient operating experience and history is available to support a 10 CFR 54.17(c) exemption for VEGP Unit 2.

### Plant Design

Section 1.1.1 of the VEGP UFSAR states the following:

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<sup>3</sup> Safety Evaluation by the Office of Nuclear Reactor regulation Exemption from 10 CFR 54.17(c) Regarding Schedule to Apply for a Renewed Operating License – Catawba Nuclear Station, Units 1 and 2 Docket Nos. 50-413 and 50-414 and McGuire Nuclear station, Unit 2 Docket No. 50-370, October 1, 1999

<sup>4</sup> 60 Federal Register at 22488, May 8, 1995

<sup>5</sup> 56 Federal Register at 64963, December 13, 1991

“The plant was constructed as a two-unit plant with each unit essentially the same. Descriptions of one unit shall be interpreted as applying to both units. Differences between the two units and, particularly, structures, systems, and components that are shared between the two units are specified in the appropriate location in the FSAR.”

Special effort was made during construction of VEGP to keep the designs of the two units the same. The nuclear steam supply system (NSSS) for each VEGP unit is a pressurized water reactor designed and supplied by Westinghouse Electric Corporation with a design net core power output of 3565 MWt. The containment for each unit is a steel-lined, prestressed, post-tensioned concrete cylinder with a hemispherical dome, designed by the Los Angeles Regional Office of the Bechtel Power Corporation.

The materials of construction of the systems, structures, and components of both units are typically identical. The units were constructed in the same general time frame, with Unit 1 achieving commercial operation in June, 1987 and Unit 2 in June, 1989. Since the two VEGP units share the same design, the environments present in Unit 2 are essentially the same as those present in Unit 1. As such, the aging effects experienced on Unit 1 will in all likelihood be experienced on Unit 2 also. Also, plant programs to be relied upon to manage aging during the renewal term are common to both units. The chemistry control procedures for the major systems containing process fluids are common to both units. The Inservice Inspection, Fire Protection, and Structural Monitoring Programs are also common to both units.

There are differences in the designs of the Unit 1 and 2 spent fuel storage pools and the spent fuel storage racks. The Unit 1 pool has a capacity of 1476 fuel assemblies, while the Unit 2 pool has a capacity of 2098 fuel assemblies. Also, the Unit 1 racks contain boron panels and the Unit 2 racks contain boraflex panels. Any aging effects arising from these differences will be evaluated in the applicable aging management reviews utilizing in-house and industry operating experience. The Spent Fuel Pool Cooling and Purification Systems for the two units are identical.<sup>6</sup>

### Plant Operations

Operators are licensed for both units at VEGP, and are routinely on shift for either unit. Operator training is not unit-specific since the design and operational characteristics of the two units are considered the same.

### Plant Maintenance and Corrective Action Program

Because the VEGP units are essentially mirror images of each other, the maintenance and engineering staffs are common and typically perform assignments for both units.

The requirements of the SNC Corrective Action Program are to identify, document, evaluate, and trend events/conditions and to develop and implement appropriate corrective actions to correct these events/conditions including actions to prevent recurrence for significant conditions adverse to quality. The Corrective Action Program is implemented by a “Nuclear Management Procedure,” which is a procedure applicable to all three SNC nuclear sites as well as the corporate office. Two important elements of the Corrective Action Program are broadness reviews and trending, which help to ensure the proper application of corrective actions. Any corrective

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<sup>6</sup> VEGP UFSAR, Section 9.1.3

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actions initiated through the program are evaluated for applicability to both VEGP units.

#### Operating Experience Program

The implementing procedure for the Operating Experience Program is a Nuclear Management Procedure that establishes organizational responsibilities and implementation instructions to assure that operating experience information pertinent to plant safety and reliable operation, originating both within and outside VEGP, is supplied to appropriate plant personnel. These instructions assure that pertinent in-house and industry operating experience information is purposely evaluated and appropriately incorporated into plant procedures and programs.

The following types of information are reviewed in the Operating Experience Program:

- Internal Operating Experience, including Level 1, 2, and 3 Condition Reports (CRs), Human Performance CRs, NRC Violations, SNC Licensee Event Reports, and SNC OE Alerts;
- Industry Operating Experience, including vendor bulletins, service information letters, Part 21 notifications, and vendor technical reports;
- INPO Nuclear Network Reports, including Significant Operating Experience Reports, Significant Event Reports, Significant Events Notices, and Topical Reports;
- NRC Documents, including Bulletins, Generic Letters, Information Notices, and Regulatory Issue Summaries.

The Operating Experience Program ensures that operating experience originating from all sources is appropriately utilized at VEGP. Specifically, any operating experience originating with VEGP Unit 1 is systematically applied to Unit 2. This systematic review and application of operating experience is sufficient to meet the underlying purpose of the License Renewal Rule as set forth in 10 CFR 54.17(c).

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### **Conclusion**

This exemption request provides sufficient basis to support the issuance of an exemption from the scheduling requirements of 10 CFR 54.17(c). As required by 10 CFR 50.12, this exemption is authorized by law, presents no undue risk to public health and safety, and is consistent with the common defense and security. Furthermore, issuance of this exemption is supported by "special circumstances" as required by 10 CFR 50.12(a)(2)(ii). Specifically, in the case of VEGP Unit 2, it has been determined that the application of the scheduling requirement 10 CFR 54.17(c) is not necessary to meet the underlying purpose of the rule. The primary factor supporting this determination is the physical similarity of the two VEGP units, which allows operating experience originating from Unit 1 to be directly applied to Unit 2. In addition, the operations, maintenance, and engineering organizations are shared between both units, and the Corrective Action and Operating Experience Programs are common to both units. The existing plant programs which will be credited for managing aging are common to both units, as well as those yet to be created during the license renewal process.

SNC hereby requests NRC authorization for the submittal of a license renewal application for VEGP Unit 2 concurrently with Unit 1 on June 28, 2007, prior to meeting the 10 CFR 54.17(c) scheduling requirement. It is expected that any additional operating experience gained by waiting until February of 2009 to submit the Unit 2 application would be minimal and would not affect the outcome of the license renewal process.

This request is similar to, and consistent with the exemption requests made by Duke Energy Corporation, Florida Power and Light, and Constellation Nuclear, which were granted by the NRC.