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NUCLEAR REGULATORY COMMISSION

[Docket Nos. 52-027 and 52-028; NRC-2015-0072]

South Carolina Electric and Gas Company

AGENCY: Nuclear Regulatory Commission.

ACTION: Exemption; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is granting a one-time exemption to South Carolina Electric and Gas Company (the licensee) from NRC regulations that require that a licensee must use the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," in effect six months before the examination date to prepare the written examinations and the operating tests. NUREG-1021, Revision 10, which was published on January 2, 2015, adds guidance for licensing operators of new reactors and includes NUREG-2103, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized-Water Reactors, Westinghouse AP1000," dated October 2011, but does not go into effect until July 2, 2015. The exemption allows the licensee to use NUREG-1021, Revision 10, prior to July 2, 2015, to prepare, proctor, and grade the written examinations and to prepare the operating tests required by NRC regulations.

ADDRESSES: Please refer to Docket ID **NRC-2015-0072** when contacting the NRC about the

availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2015-0072**. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select [ADAMS Public Documents](#) and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced (if that document is available in ADAMS) is provided the first time that a document is referenced.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Denise McGovern, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001, telephone: 301-415-0681, e-mail: Denise.McGovern@nrc.gov

SUPPLEMENTARY INFORMATION: The following sections include the text of the exemption in its entirety as issued to South Carolina Electric and Gas Company (the licensee).

I. Background

South Carolina Electric and Gas Company (the licensee) is the holder of Combined

Licenses No. NPF-93 and No. NPF-94, issued March 30, 2012, which authorize construction and operation of the Virgil C. Summer Nuclear Station, Units 2 and 3 (VCSNS). The licenses provide, among other things, that the licenses are subject to, and the licensee shall comply with, all applicable provisions of the Atomic Energy Act of 1954, as amended, and the rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

The facility consists of two Westinghouse AP1000 pressurized-water reactors located in Fairfield County, South Carolina, which are currently under construction.

II. Request/Action

Title 10 of the *Code of Federal Regulations* (10 CFR) part 55, "Operators' Licenses," § 55.40, "Implementation," paragraph (a) states in part, "The Commission shall use the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," in effect six months before the examination date to prepare the written examinations required by 10 CFR 55.41 and 55.43 and the operating tests required by 10 CFR 55.45. The Commission shall also use the criteria in NUREG-1021 to evaluate the written examinations and operating tests prepared by power reactor facility licensees pursuant to paragraph (b) of this section." 10 CFR 55.40(b)(1) requires licensees to prepare and evaluate written examinations and operating tests in accordance with NUREG-1021 as described in 10 CFR 55.40(a). NUREG-1021 explains the policies, procedures, and practices for a particular aspect of the operator testing program.

NUREG-1021, Revision 9, Supplement 1, establishes the policies, procedures, and practices for administering the required initial written examinations and operating tests, and is appropriate to use for currently operating pressurized water reactors (PWR) and boiling water reactors (BWR). NUREG-1021, Revision 10, allows for the preparation, administration, and

evaluation of initial operator licensing examinations for the currently operating PWRs, BWRs, as well as the Westinghouse AP1000 reactors (AP1000), and the General Electric Advanced Boiling Water Reactor (ABWR). NUREG-1021, Revision 10, also contains a new examination standard, ES-401N, "Preparing Initial Site-Specific Written Examinations," which ensures the equitable and consistent administration and evaluation of examinations for all applicants.

Under 10 CFR 55.40(b)(1), the licensee is required, as described in 10 CFR 55.40(a), to use NUREG-1021, Revision 9, Supplement 1, to prepare the AP1000 operator licensing written examinations and operator testing for the initial licensing examination of reactor operators and senior reactor operators (applicants) because NUREG-1021, Revision 10, which was published on January 2, 2015, will not be in effect for six months, or until July 2, 2015. This limited, one-time exemption would allow the licensee to use NUREG-1021, Revision 10, for the preparation and administration of the VCSNS initial operator licensing written examinations and operator testing prior to July 2, 2015.

III. Discussion

Pursuant to 10 CFR 55.11, the Commission may, upon application by an interested person, or upon its own initiative, grant exemptions from the requirements of 10 CFR part 55 when the exemptions are authorized by law and will not endanger life or property and are otherwise in the public interest.

A. Authorized by Law.

This exemption would allow the licensee to develop, prepare, and evaluate initial operator licensing written examinations and operator testing for the AP1000 reactors under construction at its Fairfield County, South Carolina site prior to July 2, 2015. Under 10 CFR 55.11, the Commission's regulations allow the Commission to grant exemptions

from the regulations in 10 CFR part 55 as the Commission determines are authorized by law and will not endanger life or property and are otherwise in the public interest. The NRC staff has determined that granting of this limited, one-time exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, or other laws, and will not endanger life or property and is otherwise in the public interest. Therefore, the exemption is authorized by law.

B. No Endangerment of Life or Property

The purpose of 10 CFR Part 55 is to establish the procedures and criteria for the issuance of licenses to reactor operators and senior reactor operators, provide the terms and conditions upon which the Commission will issue or modify those licenses, and provide the terms and conditions to maintain and renew those licenses. Specifically, 10 CFR 55.40(b) establishes the criteria licensees must use for the preparation and evaluation of the written examinations required by 10 CFR 55.41 and 10 CFR 55.43, and the operating tests required by 10 CFR 55.45. 10 CFR 55.40(b)(1) requires licensees to prepare these written examinations and operating tests in accordance with the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," as described in 10 CFR 55.40(a), which requires the use of the version of NUREG-1021 in effect six months before the examination date. NUREG-1021, Revision 9, Supplement 1, which does not address examination standards for the AP1000 reactor, is currently in effect. NUREG-1021, Revision 9 requires the use of NUREG-1122, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized-Water Reactors." NUREG-1122 provides the basis for developing content-valid PWR licensing examinations and, in conjunction to the instructions in NUREG-1021, will ensure that the initial licensing examination includes a representative sample of the items specified in the regulations.

VCSNS will include two new Westinghouse AP1000 pressurized-water reactors, which are currently under construction at the site. The most significant new features in the AP1000 design involve the increased use of passive safety systems for accident prevention and mitigation that rely on passive means, such as gravity, natural circulation, condensation and evaporation, and stored energy. As a result, the AP1000 design includes many features that are not found in the designs of currently operating reactors, and certain systems, components, and processes that are part of the currently operating pressurized-water reactors are not a part of the AP1000 design. The AP1000 has numerous systems, including safety systems, not covered in NUREG-1122 that should be tested as part of a comprehensive operator licensing examination. Similarly, the knowledge, skills, and abilities of current PWR licensed operators are somewhat different from those of the future AP1000 licensed operators.

NUREG-1021, Revision 10, which addresses the AP1000 reactor, was issued on January 2, 2015, and does not go into effect until July 2, 2015. NUREG-1021, Revision 10, in addition to providing guidance for currently operating PWRs and BWRs, contains a new examination standard, ES-401N, "Preparing Initial Site-Specific Written Examinations." ES-401N will provide guidance for the preparation and evaluation of the AP1000 design and site specific examinations. ES-401N provides for the use of NUREG-2103, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Westinghouse AP1000 Pressurized-Water Reactors." NUREG-2103 provides the basis for developing content-valid AP1000 licensing examinations and, in conjunction with the instructions in NUREG-1021, will ensure that the initial licensing examination includes a representative sample of the items specified in the regulations and improve the comprehensiveness of the examination over an examination developed using NUREG-1021, Revision 9. Accordingly, the NRC staff has determined that granting of the exemption will not endanger life or property.

C. *Otherwise in the Public Interest*

The purpose of 10 CFR Part 55 is to establish the procedures and criteria for the issuance of licenses to reactor operators and senior reactor operators, provide the terms and conditions upon which the Commission will issue or modify those licenses, and provide the terms and conditions to maintain and renew those licenses. Specifically, 10 CFR 55.40(b)(1) establishes the criteria licensees are required to use for the preparation and evaluation of the written examinations required by 10 CFR 55.41 and 10 CFR 55.43, and the operating tests required by 10 CFR 55.45. 10 CFR 55.40(b)(1) requires licensees to prepare these written examinations and operating tests in accordance with the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," as described in 10 CFR 55.40(a), which requires the use of the version of NUREG-1021 in effect six months before the examination date.

NUREG-1021, Revision 9, Supplement 1, which does not address AP1000, is currently in effect, while NUREG-1021, Revision 10, which does address AP1000, was issued on January 2, 2015, does not go into effect until July 2, 2015. Because the exemption enables the use of guidance specific to the new AP1000 reactors that was not available in the previous revision of NUREG-1021, and will allow the licensee to utilize the appropriate criteria to prepare and evaluate operator licensing written examinations and operating tests, the NRC staff determined that the exemption is otherwise in the public interest.

IV. Eligibility for Categorical Exclusion From Environmental Review

With respect to the exemption's impact on the quality of the human environment, the NRC has determined that this specific exemption request is eligible for categorical exclusion as identified in 10 CFR 51.22(c)(25) and justified by the NRC staff as discussed below.

10 CFR 51.22(c)(25)(i): The criteria for determining whether there is no significant

hazards consideration are found in 10 CFR 50.92(c)(1) through (3):

(1) The proposed exemption is administrative in nature and is limited to allowing the licensee to use NUREG-1021, Revision 10, to prepare and evaluate operator licensing written examinations and operating tests prior to July 2, 2015. The proposed exemption does not make any changes to the facility or operating procedures and does not alter the design, function or operation of any plant equipment. Therefore, issuance of this exemption does not increase the probability or consequences of an accident previously evaluated.

(2) The proposed exemption is administrative in nature and is limited to allowing the licensee to use NUREG-1021, Revision 10, to prepare and evaluate operator licensing written examinations and operating tests prior to July 2, 2015. The proposed exemption does not make any changes to the facility or operating procedures and would not create any new accident initiators. The proposed exemption does not alter the design, function, or operation of any plant equipment. Therefore, this exemption does not create the possibility of a new or different kind of accident from any accident previously evaluated.

(3) The proposed exemption is administrative in nature and is limited to allowing the licensee to use NUREG-1021, Revision 10, to prepare and evaluate operator licensing written examinations and operating tests prior to July 2, 2015. The proposed exemption does not alter the design, function, or operation of any plant equipment. Therefore, this exemption does not involve a significant reduction in the margin of safety.

The NRC staff has also determined that the exemption involves no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; that there is no significant increase in individual or cumulative occupational radiation exposure; that there is no significant construction impact; and there is no significant increase in the potential for or consequences from radiological accidents. The requirement from which an exemption is sought involves education, training, experience, qualification, requalification or other employment suitability requirements. Accordingly, the exemption meets the eligibility

criteria for categorical exclusion set forth in 10 CFR 51.22(c)(25). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the exemption.

V. Conclusion

Accordingly, the Commission has determined that, pursuant to 10 CFR 55.11, granting a limited, one-time exemption to the licensee from the requirements in 10 CFR 55.40(b)(1), allowing the use of NUREG-1021, Revision 10, for the preparation and evaluation of operator licensing written examinations and operator testing for the AP1000 reactors under construction at VCSNS, prior to July 2, 2015, is authorized by law and will not endanger life or property and is otherwise in the public interest. Therefore, the Commission hereby grants South Carolina Electric and Gas Company an exemption from the requirement of 10 CFR 55.40(b)(1), to allow the use of NUREG-1021, Revision 10, for the preparation and evaluation of operator licensing written examinations and operator testing for the AP1000 reactors under construction at the VCSNS, prior to July 2, 2015.

Pursuant to 10 CFR 51.22, the Commission has determined that the exemption request meets the applicable categorical exclusion criteria set forth in 10 CFR 51.22(c)(25), and the

granting of this exemption will not have a significant effect on the quality of the human environment.

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 19th day of March 2015.

FOR THE NUCLEAR REGULATORY COMMISSION

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