

March 18, 2013

Mr. B. L. Ivey, Vice President  
Regulatory Affairs  
Southern Nuclear Operating Company, Inc.  
P.O. Box 1295  
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Birmingham, AL 35201

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4 –  
APPROVAL TO USE SUBSEQUENT EDITION AND ADDENDA OF  
SECTION XI OF ASME B&PV CODE FOR PRESERVICE  
INSPECTION (TAC NO.RP9432)

Dear Mr. Ivey:

By letter dated November 9, 2012, Southern Nuclear Operating Company (SNC or the licensee) requested, pursuant to 10 CFR 50.55a(g)(3)(v), that the NRC authorize the licensee to use the 2007 Edition, including the 2008 Addenda, of Section XI of the American Society for Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (the Code) for preservice inspection (PSI) of ASME Code Class 1, 2, and 3 components (including supports for components which are classified as Code Class 1, 2, and 3) for Vogtle Electric Generating Plant Units 3 and 4 (VEGP 3&4).

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the subject request and notes that for PSI, the use of later editions and addenda of the ASME Code Section XI is governed by the requirements in 10 CFR 50.55a(g)(3)(v). Pursuant to 10 CFR 50.55a(g)(3)(v), the use of later editions and addenda of the ASME Code Section XI that have been incorporated by reference into 10 CFR 50.55a(b), and subject to the conditions therein, does not require NRC approval or authorization under 10 CFR 50.55a. An explanation of the NRC staff's determination is provided in Enclosure 1.

B. Ivey

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If you have any questions, please contact Ravindra Joshi, Senior Project Manager, at (301) 415-6191 or [ravindra.joshi@nrc.gov](mailto:ravindra.joshi@nrc.gov).

Sincerely,

*/RA/*

Lawrence J. Burkhart, Acting Chief  
Licensing Branch 4  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos.: 52-025  
52-026

Enclosure:  
As stated

cc: See next page

B. Ivey

- 2 -

If you have any questions, please contact Ravindra Joshi, Senior Project Manager, at (301) 415-6191 or [ravindra.joshi@nrc.gov](mailto:ravindra.joshi@nrc.gov).

Sincerely,

**/RA/**

Lawrence J. Burkhart, Acting Chief  
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Division of New Reactor Licensing  
Office of New Reactors

Docket Nos.: 52-025  
52-026

Enclosure:  
Staff's Evaluation

cc: See next page

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NRC STAFF EXPLANATION OF WHY NRC APPROVAL UNDER 10 CFR 50.55A IS NOT  
REQUIRED FOR AUTHORIZATION REQUEST BY  
SOUTHERN NUCLEAR OPERATING COMPANY, INC  
GEORGIA POWER COMPANY  
OGLETHORPE POWER COMPANY  
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA  
CITY OF DALTON, GEORGIA  
VOGTLE ELECTRIC GENERATING PLANT UNITS 3 AND 4  
DOCKET NOS. 52-025 AND 52-026

**1.0 INTRODUCTION**

By letter dated November 9, 2012, Southern Nuclear Operating Company (SNC or the licensee) requested, pursuant to 10 CFR 50.55a(g)(3)(v), that the NRC authorize the licensee to use the 2007 Edition, including the 2008 Addenda, of Section XI of the American Society for Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (the Code) for preservice inspection (PSI) of ASME Code Class 1, 2, and 3 components (including supports for components which are classified as Code Class 1, 2, and 3) for Vogtle Electric Generating Plant , Units 3 and 4 (VEGP 3&4). The licensee's request would allow the use of a later edition and addenda of the ASME Code Section XI than the edition and addenda described in the VEGP 3&4 plant-specific design control document (DCD).

In the VEGP 3&4 plant-specific DCD, Section III of the ASME B&PV Code is identified as Tier 1 information. The edition and addenda of the ASME Code to be used for PSI of ASME Code Class 1, 2 and 3 components (including supports for components that are classified as ASME Code Class 1, 2, and 3) are identified in Tier 2 of the plant-specific DCD as the 1998 Edition up to and including the 2000 Addenda for VEGP 3&4.

**2.0 REGULATORY BASIS**

For boiling and pressurized water-cooled nuclear power facilities whose construction permit, design certification, design approval, combined license, or manufacturing license was issued after July 1, 1974, the regulations in Sections 50.55a(g)(3)(i) and 50.55a(g)(3)(ii) of Title 10 of the *Code of Federal Regulations* (10 CFR) require that ASME Code Class 1, 2, and 3 components (including supports) must meet the preservice examination requirements set forth in the editions and addenda of Section III or Section XI of the ASME B&PV Code incorporated by reference in paragraph (b) of § 50.55a applied to the construction of the particular component. Paragraph (g)(3)(i) of § 50.55a applies to ASME Code Class 1 components (including supports), and paragraph (g)(3)(ii) of § 50.55a applies to ASME Code Class 2 and 3 components (including supports for components that are classified as ASME Code Class 1, 2 and 3). Paragraph (g)(3)(v) of § 50.55a states that all components (including supports) may meet the requirements set forth in subsequent editions of codes and addenda or portions thereof which are incorporated by reference in paragraph (b) of § 50.55a, subject to the conditions listed therein.

### **3.0 DISCUSSION OF WHY NRC APPROVAL IS NOT REQUIRED UNDER 10 CFR 50.55a**

#### **3.1 Code Requirement**

The regulations in paragraphs (g)(3)(i) and (g)(3)(ii) of § 50.55a require that ASME Code Class 1, 2, and 3 components (including supports) must meet the preservice examination requirements set forth in the editions and addenda of Section III or Section XI of the ASME B&PV Code incorporated by reference in paragraph (b) of § 50.55a applied to the construction of the particular component. The construction code for ASME Code Class 1, 2, and 3 components (including supports) at VEGP 3&4 is the 1998 Edition up to and including the 2000 Addenda of Section III of the Code. The 1998 Edition up to and including the 2000 Addenda of the Code states that the Code Edition and Addenda for PSI and for initial and successive inservice inspection intervals shall be in accordance with 10 CFR 50.55a, as specified in Section XI, Subsection IWA-2410.

#### **3.2 Summary of the Licensee's Request**

The licensee proposes to use the 2007 Edition including the 2008 Addenda of Section XI of the ASME Code for PSI of ASME Code Class 1, 2, and 3 components (including supports for components classified as Code Class 1, 2, and 3) in lieu of the 1998 Edition up to and including the 2000 Addenda of the ASME Code Section XI as stated in the plant-specific DCD. In its letter, the licensee stated that the 1998 Edition up to and including the 2000 Addenda of Section III of the Code addresses PSI requirements, and these requirements are still applicable to VEGP 3&4 regardless of the edition and addenda of Section XI of the Code that is used for performing PSI. For example, these edition and addenda of ASME Code Section III require the owner (i.e., licensee or combined license holder) to designate PSI requirements using the requirements in subparagraph NCA-3252(c) of Section III. Subparagraph NCA-3252(c) of this edition and addenda requires the design specification to identify those components and/or parts that require a preservice examination and to include the edition and addenda of Section XI to be used for examination; examination category and method; examination qualifications of personnel, procedures and equipment; weld surface conditioning requirements; weld personnel, procedures, and equipment; and weld identification/marketing system to be used. Also, in accordance with the requirements of subparagraph NB-5281(a) of the ASME Code Section III, examinations required by subparagraph NCA-3252(c) shall be completed prior to completion of the ASME Code N-5 Data Report.

The licensee conducted an assessment of the 1998 Edition up to and including the 2000 Addenda of the ASME Code to ensure design and access provisions for all ASME Code Class 1, 2, and 3 components (including supports)—required by subparagraph NCA-3220(r) of Section III of the Code, subarticles IWA-1400 and IWA-1500 of Section XI of the Code, and paragraphs (g)(3)(i) and (g)(3)(ii) of § 50.55a—were adequate to enable the performance of inservice inspection. The licensee also performed a comparative evaluation of both the 1998 Edition up to and including the 2000 Addenda of Section XI of the Code and the 2007 Edition including the 2008 Addenda of Section XI of the Code for all ASME Code Class 1, 2, and 3 components (including supports) and found that the accessibility and inspectability requirements were identical. On this basis, the licensee concluded that access provisions for all components are not affected by performing PSI using the 2007 Edition including the 2008 Addenda of Section XI of the ASME Code.

Lastly, the licensee noted that the 2007 Edition up to and including the 2008 Addenda of Section XI of the ASME Code have been approved by the NRC and incorporate 8 years of operational experience, technical advancement, and lessons learned when compared to the edition and addenda of the Code required by paragraphs (g)(3)(i) and (g)(3)(ii) of § 50.55a.

### **3.3 Staff Assessment of Whether NRC Approval is Required**

The regulations in paragraph (g)(3) of § 50.55a provide requirements for complying with inservice inspection requirements of the Code prior to commercial operation. Paragraphs (g)(3)(i) and (g)(3)(ii) of § 50.55a require that ASME Code Class 1, 2, and 3 components (including their supports) must meet the PSI examination requirements set forth in the editions and addenda of Section III or Section XI incorporated by reference in paragraph (b) of § 50.55a applied to the construction of the particular component. Paragraph (g)(3)(v) of § 50.55a addresses meeting requirements for PSI set forth in subsequent Code editions and addenda and states:

(v) All components (including supports) may meet the requirements set forth in subsequent editions of codes and addenda or portions thereof which are incorporated by reference in paragraph (b) of this section, subject to the conditions listed therein.

The staff notes that paragraph (g)(3)(v) of § 50.55a allows for the use of later editions and addenda of the code that are incorporated by reference in paragraph (b) of § 50.55a, and subject to the conditions therein, without the need for NRC approval or authorization. Currently, paragraph (b) of § 50.55a incorporates by reference the ASME Code, Section III and Section XI, up to and including the 2008 Addenda to the 2007 Edition. Therefore, the licensee's proposal to use the 2007 Edition including the 2008 Addenda of Section XI for PSI is in compliance with the regulations. On this basis, the staff concludes that NRC approval or authorization under 10 CFR 50.55a is not required.

In order to understand the reasoning for the NRC allowing the use of later editions and addenda to the code for PSI without prior NRC approval, it is necessary to understand the structure of the requirements in 10 CFR 50.55a relevant to PSI. The following reasoning also applies to the requirements for preservice testing (PST) of pumps, valves and dynamic restraints in paragraph (f)(3)(v) of § 50.55a.

Paragraph (g)(3) of § 50.55a provides the inservice inspection requirements before a new plant is placed into commercial operation, including (1) designing the plant for accessibility to enable the performance of ISI and (2) performing a preservice examination to be used as a baseline for inservice examinations to be performed after the plant is placed into commercial operation. For preservice examination, the applicable components must meet the requirements set forth in the Code edition and addenda applied to the construction of the particular component, but may also meet the requirements set forth in subsequent editions of the Code. When a plant is placed into commercial operation, paragraph (g)(4)(i) of § 50.55a requires that the initial 120-month inspection interval comply with the requirements in the latest edition and addenda of the Code incorporated by reference in paragraph (b) of § 50.55a on the date 12 months before the date of issuance of the operating license under Part 50 or 12 months before the date scheduled for initial loading of fuel under a combined license under Part 52. Because a plant owner would already be required to use the latest edition and addenda of the Code incorporated by reference in paragraph (b) 12 months prior to the issuance of the operating license or scheduled initial fuel loading, requiring approval to use a later Code edition and addenda to that applied to the construction of a particular component for PSI would result in a redundant and unnecessary

requirement. Furthermore, using later Code editions and addenda for PSI which are closer to the date of the Code edition and addenda required to be used for the first ISI inspection interval, would provide baseline examination results that are more relevant for comparison with inservice examination results obtained during a plant's operational life. On this basis, the licensee's use of the 2007 Edition including the 2008 Addenda of Section XI of the ASME Code for PSI of ASME Code Class 1, 2, and 3 components (including supports for components which are classified as Code Class 1, 2, and 3) for VEGP 3&4 is acceptable. As stated above, NRC approval or authorization under 10 CFR 50.55a to use the 2007 Edition including the 2008 Addenda of Section XI for PSI is not required.

It should be noted that for ISI (not PSI), the requirements governing the use of later Code editions and addenda are different and are covered in paragraph (g)(4)(iv) of § 50.55a. Therein, the regulations require NRC approval to use later Code editions and addenda (or portions thereof) than the Code edition and addenda in effect for that particular inspection interval.

#### **4.0 CONCLUSION**

The NRC staff concludes that, for PSI, the use of later editions and addenda of the ASME Code that are incorporated by reference in paragraph (b) of § 50.55a subject to the conditions listed therein does not require NRC approval or authorization.

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(Revised 02/06/2013)

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