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Docket No.: 52-026

ND-17-2100  
10 CFR 52.99(c)(1)U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 4  
ITAAC Closure Notification on Completion of ITAAC 2.3.11.02.i [Index Number 450]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.3.11.02.i [Index Number 450] which confirms Gaseous Radwaste System (WGS) activated carbon delay bed location and seismic analysis. The closure process for this ITAAC is based on the guidance described in Nuclear Energy Institute (NEI) 08-01, "Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52," which was endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Tom Petrak at 706-848-1575.

Respectfully submitted,

Michael J. Yox  
Regulatory Affairs Director Vogtle 3 & 4Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4  
Completion of ITAAC 2.3.11.02.i [Index Number 450]

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**Southern Nuclear Operating Company  
ND-17-2100  
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 4  
Completion of ITAAC 2.3.11.02.i [Index Number 450]**

### **ITAAC Statement**

#### **Design Commitment:**

2. The equipment identified as having seismic design requirements in Table 2.3.11-1 can withstand seismic design basis loads without loss of its structural integrity function.

#### **Inspections, Tests, Analyses:**

- i) Inspection will be performed to verify that the equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island.
- ii) Type tests, analyses, or a combination of type tests and analyses of seismically designed equipment will be performed.
- iii) Inspection will be performed for the existence of a report verifying that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

#### **Acceptance Criteria:**

- i) The equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island.
- ii) A report exists and concludes that the seismically designed equipment can withstand appropriate seismic design basis loads without loss of its structural integrity function.
- iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

### **ITAAC Determination Basis**

This ITAAC requires that inspections, tests, and analyses be performed and documented to ensure the Gaseous Radwaste System (WGS) equipment identified as having seismic design requirements in the Combined License (COL) Appendix C Table 2.3.11-1 (Table) can withstand seismic design basis loads without the loss of its structural integrity function. The subject ITAAC required:

- An inspection be performed to verify that the WGS Activated Carbon Delay Beds are located on the Nuclear Island.
- Type tests, analyses, or a combination of type tests and analyses be performed on the WGS Activated Carbon Delay Beds.
- An inspection be performed for the existence of a report that concludes that the as-built equipment, the WGS Activated Carbon Delay Beds, including anchorage is seismically bounded by the tested or analyzed conditions.

To assure that the equipment identified in the Table can withstand the appropriate seismic design basis loads without loss of its structural integrity function, an inspection was conducted of the WGS to confirm the satisfactory installation of the equipment with seismic design requirements identified in Attachment A. The inspection included verification of equipment

number and location. The inspections to verify installed component locations are documented in Quality Assurance (QA) inspection reports (References 1 and 2). The results of the inspections conclude that each component identified in Attachment A is located on the Nuclear Island.

Seismic loads for the equipment were established using one-half of the AP1000 Safe Shutdown Earthquake (SSE) floor response spectra. Seismic analyses of the equipment identified in the Table were performed to demonstrate structural integrity in accordance with American Society of Mechanical Engineers (ASME) Code Section VIII, Rules for Construction of Pressure Vessels (Reference 3). The analyses are documented in the WGS delay bed design report (Reference 4) and conclude that the equipment identified in the Table as having seismic design requirements can withstand appropriate seismic design basis loads without loss of its structural integrity function.

In accordance with the fabrication and construction installation work packages, inspections were performed on the WGS Activated Carbon Delay Beds and anchorage to confirm the satisfactory installation of the seismically designed equipment. The inspection included verification of equipment fabrication, equipment mounting, equipment anchorage, and critical attributes from the seismic analyses. In accordance with NEI 08-01, Section 9.5, inspection of WGS Activated Carbon Delay Bed equipment mounting and verification of critical attributes from the seismic analyses were performed at other than the final installed location, due to inaccessibility of the equipment after installation. Non-conformances and design changes issued during fabrication and installation against the equipment and anchorage were analyzed against the seismic analyses to ensure inspection results performed at other than the equipment's final location remained valid for supporting ITAAC acceptance criteria. Non-conformances and design changes issued up through installation of the equipment including attachment to the seismic Category 1 structure were analyzed against the seismic analysis to verify that the analyzed conditions were still bounding when considering the cumulative effects of any deviating conditions.

The results of the verifications were documented in the as-built seismic reconciliation report (Reference 5). The verifications demonstrated that the as-built equipment in COL Appendix C, Table 2.3.11-1, including anchorage, is seismically bounded by the analyzed conditions.

Together, these reports (References 1, 2, 4, and 5) provide evidence that the ITAAC Acceptance Criteria requirements are met:

- The equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island.
- A report exists and concludes that the seismically designed equipment can withstand appropriate seismic design basis loads without loss of its structural integrity function.
- A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

### **ITAAC Finding Review**

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of ITAAC Findings and associated corrective actions. This review which included now-consolidated ITAAC Indexes 450, 451, and 452 found no relevant ITAAC Findings associated with this ITAAC. The ITAAC finding review is referenced in the Vogtle Unit 4 ITAAC Completion Package for ITAAC 2.3.11.02.i (Reference 6) and is available for NRC review.

### **ITAAC Completion Statement**

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.3.11.02.i [Index Number 450] was performed for VEGP Unit 4 and that the prescribed acceptance criteria are met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

### **References (available for NRC inspection)**

1. M315-15-10317 Rev. 0, Quality Assurance Type "A" Inspection Report – Mechanical: Fixed Equipment, Vessels and Tanks
2. SV4-WGS-M6K-881481 Rev. 0, SV4 WGS Module KB04 As-Built Location Sketch
3. American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section VIII, Rules for Construction of Pressure Vessels, 2001 Edition with 2003 Addenda
4. APP-MV6H-VDR-001 Rev. 2, AP1000 MV6H WGS Delay Bed Design Report
5. SV4-MV6H-VFR-001 Rev. 1, Vogtle Unit 4 ITAAC 2.3.11.02.i As-Built Seismic Reconciliation Report
6. 2.3.11.02.i-U4-CP-Rev 0, Completion Package for Unit 4 ITAAC 2.3.11.02.i [COL Index Number 450] (WGS Activated Carbon Delay Bed Location and Seismic Analysis)

**Attachment A**

**ITAAC Number: 2.3.11.02.i**

**Excerpt from  
VEGP Unit 4 COL Appendix C Table 2.3.11-1**

<b>Equipment Name</b>	<b>Tag ID</b>	<b>Seismic Category I</b>	<b>Type of Qualification</b>	<b>Design Report Number</b>	<b>As-Built Reconciliation Document</b>
WGS Activated Carbon Delay Bed A	WGS-MV-02A	No <sup>(1)</sup>	Analysis	APP-MV6H-VDR-001 Rev.2	SV4-MV6H-VFR-001 Rev.1
WGS Activated Carbon Delay Bed B	WGS-MV-02B	No <sup>(1)</sup>	Analysis	APP-MV6H-VDR-001 Rev.2	SV4-MV6H-VFR-001 Rev.1

- <sup>(1)</sup> The WGS activated carbon delay beds (WGS-MV-02A and WGS-MV-02B) are designed to one-half Safe Shutdown Earthquake (SSE).