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Docket No.: 52-026

**JAN 31 2017**

ND-17-0159  
10 CFR 52.99(c)(1)

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 4  
ITAAC Closure Notification on Completion of ITAAC 2.3.05.02.ii [Index Number 341]

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 Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.3.05.02.ii [Index Number 341] for verification that a report exists and concludes that the seismic Category I equipment in the Mechanical Handling System can withstand seismic design basis loads without loss of safety function. The closure process for this ITAAC is based on the guidance described in 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 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 David Woods at 706-848-6903.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Michael J. Yox", written over a horizontal line.

Michael J. Yox  
Regulatory Affairs Director Vogtle 3&4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4  
Completion of ITAAC 2.3.05.02.ii [Index Number 341]

MJY/RAS/amm

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**Southern Nuclear Operating Company**

**ND-17-0159  
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 4  
Completion of ITAAC 2.3.05.02.ii [Index Number 341]**

### **ITAAC Statement**

#### **Design Commitment:**

2. The seismic Category I equipment identified in Table 2.3.5-1 can withstand seismic design basis loads without loss of safety function.

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

- ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.

#### **Acceptance Criteria:**

- ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.

### **ITAAC Determination Basis**

Multiple ITAAC are performed to demonstrate that the Mechanical Handling System (MHS) seismic Category I equipment identified in the Combined License (COL) Appendix C, Table 2.3.5-1 (Attachment A) can withstand seismic design basis loads without loss of safety function. The subject ITAAC requires that type tests, analyses, or a combination of type tests and analyses be performed to verify that the seismic Category I equipment identified in Attachment A can withstand seismic design basis loads without loss of safety function.

The Containment Polar Crane and Cask Handling Crane were modeled and qualified using structural stress analyses of dynamic and gravity loads to demonstrate structural integrity to support the safety function which is prevention of uncontrolled lowering of a heavy load in accordance with the American Society of Mechanical Engineers (ASME) NOG-1-1998, "Rules for Construction of Overhead and Gantry Cranes (Top Running Bridge, Multiple Girder)" (Reference 1). The Hatch Hoists were modeled and qualified using structural stress analyses of all dynamic and gravity loads to demonstrate structural integrity to support the safety function which is prevention of uncontrolled lowering of a heavy load in accordance with Reference 1 and the American Institute of Steel Construction (AISC) N690-1994 "Specification for Safety-Related Steel Structures for Nuclear Facilities" (Reference 2).

The specific qualification method (i.e., type testing, analysis, or combination) used for the equipment is identified in Attachment A. Additional information about the methods used to qualify safety-related equipment supplied for the AP1000 is provided in VEGP UFSAR Appendix 3D, "Methodology for Qualifying AP1000 Safety-Related Electrical and Mechanical Equipment."

Seismic analyses are identified in Attachment A (References 3 through 8) for the seismic Category I equipment. These analyses conclude that the equipment identified in COL Appendix C, Table 2.3.5-1 can withstand seismic design basis loads without loss of safety function.

### **ITAAC Finding Review**

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all ITAAC findings pertaining to the subject ITAAC and associated corrective actions. This review found that there are no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review document number is included in the Vogtle Unit 4 ITAAC Completion Package for ITAAC 2.3.05.02.ii (Reference 9) and available for NRC inspection.

### **ITAAC Completion Statement**

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.3.05.02.ii was performed for Vogtle 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. ASME NOG-1-1998, "Rules for Construction of Overhead and Gantry Cranes (Top Running Bridge, Multiple Girder)"
2. AISC N690-1994, "Specification for Safety-Related Steel Structures for Nuclear Facilities"
3. APP-MH01-S2C-006 Revision 2, "Polar Crane Structural Qualification and Bridge Crane Wheel Forces"
4. CN-PAR-15-031 Revision 7, "AP1000 Polar Crane Mechanical Calculations"
5. APP-MH02-S2C-002 Revision 1, "Cask Handling Crane Structural Qualification and Bridge Crane Wheel Forces"
6. CN-PAR-13-043 Revision 7, "AP1000 Cask Crane Mechanical Calculations"
7. APP-MH40-S2C-002 Revision 3, "APP1000 Hatch Hoist and Hoist Platform Structural Qualification"
8. CN-PAR-14-044 Revision 6, "Domestic AP1000 Hatch Hoists Mechanical Calculations"
9. SVP\_SV0\_004524, Attachment 1, "Submittal of Inspections, Test, Analyses and Acceptance Criteria (ITAAC) Completion Package for Unit 4 ITAAC 2.3.05.02.ii [COL Index Number 341] (MHS System Seismic Category I Design Basis Loads)"

Attachment A  
ITAAC Compliance Matrix

\*Excerpt from COL Appendix C Table 2.3.5-1

SYSTEM NAME: Mechanical Handling System

<b>Equipment Name*</b>	<b>Tag No.*</b>	<b>Seismic Cat. I*</b>	<b>Safety Function*</b>	<b>Type of Qualification</b>
Containment Polar Crane	MHS-MH-01	Yes	Avoid uncontrolled lowering of heavy load.	Analysis Ref. 3 & 4
Cask Handling Crane	MHS-MH-02	Yes	Avoid uncontrolled lowering of heavy load.	Analysis Ref. 5 & 6
Equipment Hatch Hoist	MHS-MH-05	Yes	Avoid uncontrolled lowering of heavy load.	Analysis Ref. 7 & 8
Maintenance Hatch Hoist	MHS-MH-06	Yes	Avoid uncontrolled lowering of heavy load.	Analysis Ref. 7 & 8