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ND-22-0585  
10 CFR 52.99(c)(1)

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

Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 4  
ITAAC Closure Notification on Completion of 2.2.02.11a.i [Index Number 154]

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 2.2.02.11a.i [Index Number 154] to demonstrate that the Passive Containment Cooling System (PCS) motor-operated valves identified in the Combined License (COL) Appendix C, Table 2.2.2-1 perform an active safety-related function to change position as indicated in the table.

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 (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 Kelli Roberts at 706-848-6991.

Respectfully submitted,



Jamie M. Coleman  
Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4  
Completion of ITAAC 2.2.02.11a.i [Index Number 154]

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U.S. Nuclear Regulatory Commission

ND-22-0585

Page 2 of 2

cc: Regional Administrator, Region II  
Director, Office of Nuclear Reactor Regulation (NRR)  
Director, Vogtle Project Office NRR  
Senior Resident Inspector – Vogtle 3 & 4

**Southern Nuclear Operating Company  
ND-22-0585  
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 4  
Completion of ITAAC 2.2.02.11a.i [Index Number 154]**

## **ITAAC Statement**

### **Design Commitment**

11.a) The motor-operated valves identified in Table 2.2.2-1 perform an active safety-related function to change position as indicated in the table.

### **Inspections/Tests/Analyses**

- i) Tests or type tests of motor-operated valves will be performed to demonstrate the capability of the valve to operate under its design conditions.
- ii) Inspection will be performed for the existence of a report verifying that the capability of the as-built motor-operated valves bound the tested conditions.

### **Acceptance Criteria**

- i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.2-1 under design conditions.
- ii) A report exists and concludes that the capability of the as-built motor-operated valves bound the tested conditions.

## **ITAAC Determination Basis**

Multiple Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) were performed to demonstrate that the Passive Containment Cooling System (PCS) motor-operated valves identified in the Combined License (COL) Appendix C, Table 2.2.2-1 perform an active safety-related function to change position as indicated in the table.

i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.2-1 under design conditions.

This portion of the subject ITAAC required tests or type tests of motor-operated valves to be performed to demonstrate the capability of the valve to operate under its design conditions.

The motor-operated valves identified in COL Appendix C, Table 2.2.2-1 are qualified in accordance with the provisions of American Society of Mechanical Engineers (ASME) QME-1-2007, "Qualification of Active Mechanical Equipment Used in Nuclear Power Plants" (Reference 1).

Functional qualification is performed under the design conditions identified in the design specification for the valves (Reference 2) to demonstrate that each motor-operated valve is qualified to perform its designated function when used in its intended service. In accordance with ASME QME-1-2007, qualification is substantiated by demonstrating the relationship between the service requirements and the type testing and analysis that was conducted as part of this qualification program.

Type testing was performed, including natural frequency determination, side load static deflection testing, final static seat and stem leakage testing, steam testing, and water testing, for the ranges of the pressure, temperature and flow for each valve and the maximum seat-sealing differential pressure. In accordance with ASME QME-1-2007, the functional qualification process for these motor-operated valve assemblies also included valve and actuator internal inspections and measurement, orientation requirements, seat and stem leakage limitations, diagnostic data collection and analysis methods, static and dynamic flow diagnostic testing, and pressure locking and thermal binding evaluations. The qualification also followed the provisions of ASME QME-1-2007 for the extrapolation of functional qualification to another valve assembly, and demonstration of functional capability of production valve assemblies.

The results of the qualification are documented in the Equipment Qualification (EQ) Reports (Reference 3) which are identified in Attachment A for each applicable valve. These reports summarize the test methodology and ASME QME-1-2007 functional qualification that demonstrate that each motor-operated valve changes position as indicated in VEGP Unit 4 COL Appendix C Table 2.2.2-1 under design conditions.

ii) A report exists and concludes that the capability of the as-built motor-operated valves bound the tested conditions.

This portion of the subject ITAAC requires that an inspection is performed for the existence of a report verifying that the capability of the as-built motor-operated valves bound the tested conditions.

The motor-operated valves in VEGP Unit 4 COL Appendix C Table 2.2.2-1 were verified by tests in accordance with section i) above, to demonstrate the capability of the valves to operate under their design conditions. The EQ Reports in Attachment A identify the equipment mounting employed for the testing and the specific conditions tested.

In accordance with the EQ Walkdown ITAAC Guidelines (References 4 and 5), an inspection was conducted of the PCS to confirm the satisfactory installation of the motor-operated valves. The inspection includes verification of equipment make/model/serial number, verification of equipment mounting and location, and verification that the mechanical and electrical connections are bounded by the tested conditions.

The documentation of installed configuration of the motor-operated valves includes photographs and/or sketches of equipment mounting and connections. The verification of installed component configuration is documented in the As-Built EQ Reconciliation Report (EQRR) (Reference 6).

Attachment A identifies the EQRR which verifies that the installed configuration of the motor-operated valves identified in VEGP Unit 4 COL Appendix C Table 2.2.2-1 are bounded by the tests or type tests.

Together, these EQ Reports and EQRR (References 3 and 6), provide evidence that the ITAAC Acceptance Criteria requirements are met:

- A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.2-1 under design conditions; and

- A report exists and concludes that the capability of the as-built motor-operated valves bound the tested conditions.

References 3 and 6 are available for NRC inspection as part of the Unit 4 ITAAC 2.2.02.11a.i Completion Package (Reference 7).

### **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 finding review, which includes now-consolidated ITAAC Index 155, found the following relevant ITAAC findings associated with this ITAAC:

- Notice of Nonconformance 99900905/2012-201-01 (closed)
- Notice of Nonconformance 99900905/2012-201-04 (closed)

The corrective actions are completed. The ITAAC Finding Review is documented in the ITAAC Completion Package for ITAAC 2.2.02.11a.i (Reference 7) and is available for NRC review.

### **ITAAC Completion Statement**

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.2.02.11a.i 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 the approved plant programs and procedures.

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

1. American Society of Mechanical Engineers (ASME) QME-1-2007, "Qualification of Active Mechanical Equipment Used in Nuclear Power Plants"
2. APP-PV01-Z0-001 Revision 10, "3" and Larger Motor Operated Gate and Globe Valves, ASME Boiler and Pressure Vessel Code Section III, Class 1, 2, and 3"
3. Equipment Qualification (EQ) Reports as identified in Attachment A
4. ND-RA-001-014, EQ ITAAC As-built Walkdown Guideline, Version 3.1
5. ND-RA-001-016, EQ ITAAC As-built Installation Documentation Guideline, Version 1.0
6. As-Built Equipment Qualification Reconciliation Report (EQRR) as identified in Attachment A for Unit 4
7. 2.2.02.11a.i-U4-CP-Rev0, "Completion Package for Unit 4 ITAAC 2.2.02.11a.i [Index Number 154]"

**Attachment A**

System: Passive Containment Cooling System (PCS)

<b>Component Name +</b>	<b>Tag No. +</b>	<b>Active Function +</b>	<b>EQ Reports (Reference 3)</b>	<b>As-Built EQRR (Reference 6)*</b>
PCCWST Isolation Valve MOV	PCS-PL-V001C	Transfer Open	SV4-PV01-VBR-011 / SV4-PV01-VBR-012	2.2.02.11a.i-U4-EQRR-PCD001
PCCWST Isolation Block MOV	PCS-PL-V002A	Transfer Open	SV4-PV01-VBR-011 / SV4-PV01-VBR-012	2.2.02.11a.i-U4-EQRR-PCD001
PCCWST Isolation Block MOV	PCS-PL-V002B	Transfer Open	SV4-PV01-VBR-011 / SV4-PV01-VBR-012	2.2.02.11a.i-U4-EQRR-PCD001
PCCWST Isolation Block MOV	PCS-PL-V002C	Transfer Open	SV4-PV01-VBR-011 / SV4-PV01-VBR-012	2.2.02.11a.i-U4-EQRR-PCD001

Notes:

+ Excerpt from COL Appendix C Table 2.2.2-1