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10 CFR 52.99(c)(3)U.S. Nuclear Regulatory Commission  
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Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 3 and Unit 4  
Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load  
Item 2.5.02.09d [Index Number 548]

Ladies and Gentlemen:

Pursuant to 10 CFR 52.99(c)(3), Southern Nuclear Operating Company hereby notifies the NRC that as of July 8, 2019, Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 Uncompleted Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.5.02.09d [Index Number 548] has not been completed greater than 225-days prior to initial fuel load. The Enclosure describes the plan for completing this ITAAC. Southern Nuclear Operating Company will, at a later date, provide additional notifications for ITAAC that have not been completed 225-days prior to initial fuel load.

This notification is informed by 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. In accordance with NEI 08-01, this notification includes ITAAC for which required inspections, tests, or analyses have not been performed or have been only partially completed. All ITAAC will be fully completed and all Section 52.99(c)(1) ITAAC Closure Notifications will be submitted to NRC to support the Commission finding that all acceptance criteria are met prior to plant operation, as required by 10 CFR 52.103(g).

This letter contains no new NRC regulatory commitments.

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

Respectfully submitted,

  
Michael J. Yox  
Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4  
Completion Plan for Uncompleted ITAAC 2.5.02.09d [Index Number 548]

MJY/DLW/sfr

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**Southern Nuclear Operating Company  
ND-19-0830  
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4  
Completion Plan for Uncompleted ITAAC 2.5.02.09d [Index Number 548]**

## **ITAAC Statement**

### **Design Commitment**

9.d) The PMS provides the interlock functions identified in Table 2.5.2-7.

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

An operational test of the as-built PMS will be performed using real or simulated test signals.

### **Acceptance Criteria**

Appropriate PMS output signals are generated as the interlock conditions are changed.

## **ITAAC Completion Description**

Testing is performed to verify that the Protection and Safety Monitoring System (PMS) provides interlock functions identified in Combined License Appendix C Table 2.5.2-7 (Attachment A).

ITAAC 2.5.02.09d is completed as a combination of:

- Factory Acceptance Test – functional testing of interlocks
- Site software installation and regression test – Hardware and software integration verification and testing of post system delivery changes

The Factory Acceptance Testing (FAT) follows the guidance of NEI 08-01 Section 9.4 for the as-built tests to be performed at other than the final installed location. The FAT was performed in accordance with PMS Software Program Manual WCAP-16096 (Reference 1), PMS Test Plan APP-PMS-T5-001 (Reference 2) and applicable Codes and Standards described in Vogtle 3 and 4 UFSAR Section 7.2.

The FAT included testing of PMS inputs and outputs, logic, and functionality. During this test, the initial condition for the test scenarios was established and confirmed that the interlocks actuate as appropriate for the interlocks described in Vogtle 3&4 UFSAR Chapter 7, Section 7.6. During the test, the process parameters were simulated and adjusted to create applicable interlock conditions, PMS outputs were monitored, and it was confirmed that the interlocks work as designed, in accordance with PMS Channel Integration Test procedures APP-PMS-T1P-008 and APP-PMS-T1P-009 (References 3 and 4). The results of the testing are documented in the FAT test reports APP-PMS-T2R-008 and APP-PMS-T2R-009 (References 5 and 6). Attachment B provides a listing of test cases used to test the interlocks.

Software installation and testing are performed on site to verify that the cabinets are intact and functional in accordance with Units 3 and 4 Field Change Notification (FCN) xxxx (References 7 and 8). Automated diagnostics further confirm the physical properties of the as-built PMS. A regression analysis (i.e., change evaluation) is performed post delivery and installation for hardware and software changes to determine if additional testing is needed for the as-built system.

The completed Unit 3 and Unit 4 factory (references 5 and 6) and regression test results (References 7 and 8) confirm that PMS provides the interlock functions identified in Table 2.5.2-7.

References 1 through 8 are available for NRC inspection as part of the ITAAC 2.5.02.09d Unit 3 and 4 Completion Packages (References 9 and 10).

### **List of ITAAC Findings**

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there are no relevant ITAAC findings associated with this ITAAC.

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

1. WCAP-16096 "Software Program Manual for Common Q Systems" Revision 4A
2. APP-PMS-T5-001 "AP1000 Protection and Safety Monitoring System Test Plan"
3. APP-PMS-T1P-008 "AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Procedure"
4. APP-PMS-T1P-009 "AP1000 Protection and Safety Monitoring System Integrated Logic Processor Component Logic Channel Integration Test Procedure"
5. APP-PMS-T2R-008 "AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Report"
6. APP-PMS-T2R-009 "AP1000 Protection and Safety Monitoring System Integrated Logic Processor Component Logic Channel Integration Test Report"
7. Unit 3 Field Change Notice "PMS Software"
8. Unit 4 Field Change Notice "PMS Software"
9. ITAAC 2.5.02.09d-U3-CP-Rev0, ITAAC Completion Package
10. ITAAC 2.5.02.09d-U4-CP-Rev0, ITAAC Completion Package
11. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"

**Attachment A**

**COL Appendix C Table 2.5.2-7**

<b>Table 2.5.2-7 PMS Interlocks</b>
RNS Suction Valves PRHR Heat Exchanger Inlet Isolation Valve CMT Cold Leg Balance Line Isolation Valves Containment Vacuum Relief Isolation Valves

**Attachment B**  
**Factory Acceptance Test - Test Cases**

**RNS Suction Valves**

Tag	Test Report	Test Case
RNS-V001A	PMS-T2R-009	TPS03D-01.46 TPS03D-02.3
RNS-V001B	PMS-T2R-009	TPS03D-01.47 TPS03D-02.4
RNS-V002A	PMS-T2R-009	TPS03B-01.46 TPS03B-02.4
RNS-V002B	PMS-T2R-009	TPS03B-01.47 TSP03B-02.5

**PRHR Heat Exchanger Inlet Isolation Valve**

Tag	Test Report	Test Case
PXS-V101	PMS-T2R-009	TPS03A-01.36
	PMS-T2R-009	TPS03A-07.17
	PMS-T2R-008	TPS02A-04.1
	PMS-T2R-008	TPS02A-08.1
	PMS-T2R-008	TPS02A-08.2
	PMS-T2R-008	TPS02A-08.3
	PMS-T2R-008	TPS02A-08.4

**CMT Cold Leg Balance Line Isolation Valves**

Condition	Test Report	Test Case
P-12	PMS-T2R-008	TPS02A-04.2
	PXS-T2R-100	PXS_V002A_Init_Cond PXS_V002A_PA_Input PXS_V002A_PA_O PXS_V002B_Init_Cond PXS_V002B_PA_Input PXS_V002A_PA_O



**Containment Vacuum Relief Isolation Valves**

Tag	Procedure	Test Case
VFS-V800A	PMS-T2R-009	TPS03A-01.33
	PMS-T2R-008	TPS03A-02.4 TPS03A-07.14 TPS02A-27
VFS-V800B	PMS-T2R-009	TPS03C-01.22
	PMS-T2R-008	TPS03C-02.3 TPS03C-07.11 TPS02C-27