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Docket Nos.: 52-025
52-026

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ND-19-1538
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 December 18, 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.

Southern Nuclear Operating Company (SNC) previously submitted Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load for Item 2.5.02.09d [Index Number 548] ND-19-0830 [ML19193A203], dated July 12, 2019. This resubmittal supersedes ND-19-0830 in its entirety.

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-19-1538
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 (Reference 16) 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 Chapter 7 (Reference 15).

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).

Additional hardware and software installation and associated inspections and testing are performed on-site to verify that the cabinets are intact and functional in accordance with Units 3 and 4 for applicable Field Change Notifications (FCNs) AP1000 Vogtle Unit 3 PMS Initial Software Installation - Software Release 8.7.0.1 and AP1000 Vogtle Unit 4 PMS Initial Software Installation - Software Release 8.7.0.1, and B-GEN-ITPCI-001 (References 7, 8, and 9). References 7, 8, and 9 include steps that confirm and document successful software load and further confirm the physical properties of the as-built PMS. A regression analysis (i.e., change

evaluation) is performed for hardware changes (References 10 and 11) and software changes (Reference 12) to determine if additional testing is needed for the as-built system.

The completed Unit 3 and Unit 4 FAT test reports (references 5 and 6), FCNs (References 7 and 8), B-GEN-ITPCI-001 (Reference 9), and regression test results (References 10 through 12) confirm that appropriate PMS output signals are generated as the interlock conditions are changed.

References 5 through 12 are available for NRC inspection as part of the ITAAC 2.5.02.09d Unit 3 and 4 Completion Packages (References 13 and 14).

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. SV3-GW-GCW-300, Field Change Notice "AP1000 Vogtle Unit 3 PMS Initial Software Installation - Software Release 8.7.0.1" (WO SCNXXXXXX)
8. SV4-GW-GCW-XXX, Field Change Notice "AP1000 Vogtle Unit 4 PMS Initial Software Installation - Software Release 8.7.0.1" (WO SCNYYYYYY)
9. B-GEN-ITPCI-001, "PMS CABINETS"
10. GIC-AP1000-HEDS-19-001, Rev. 0 "Regression Testing Analysis for Vogtle Unit 3 Protection and Safety Monitoring System (PMS) Baseline 8.2 to 8.4 Hardware Modifications Performed at Site"
11. GIC-AP1000-HEDS-YY-XXX, Rev. X "Regression Testing Analysis for Vogtle Unit 4 Protection and Safety Monitoring System (PMS) Baseline X.X to X.X Hardware Modifications Performed at Site" (YY-XXX is the Year-Letter #)
12. SV0-PMS-T2R-050, "AP1000 Protection and Safety Monitoring System Channel Integration Test Integrated System Validation Test Report"
13. ITAAC 2.5.02.09d-U3-CP-Rev0, ITAAC Completion Package
14. ITAAC 2.5.02.09d-U4-CP-Rev0, ITAAC Completion Package
15. Vogtle Electric Generating Plant (VEGP) Units 3 and 4 Updated Final Safety Analysis Report (UFSAR)
16. 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

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