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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 3
ITAAC Closure Notification on Completion of ITAAC 2.5.02.09d [Index Number 548]

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 3 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.5.02.09d [Index Number 548] for verifying that the Protection and Safety Monitoring System (PMS) provides the interlock functions identified in Table 2.5.2-7. 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 is 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 A. Roberts at 706-848-6991.

Respectfully submitted,

Jamie M. Coleman
Regulatory Affairs Director Vogtle 3 & 4Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of ITAAC 2.5.02.09d [Index Number 548]

JMC/JTK/sfr

U.S. Nuclear Regulatory Commission

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**Southern Nuclear Operating Company
ND-22-0262
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of 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 Determination Basis

Testing was 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 15) 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 Updated Final Safety Analysis Report (UFSAR) Chapter 7 (Reference 3).

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 and 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 4 and 5). The results of the testing are documented in the FAT test reports APP-PMS-T2R-008 and APP-PMS-T2R-009 (References 6 and 7).

Additional hardware and software installation and associated inspections and testing were performed on-site to verify that the cabinets are intact and functional in accordance with Unit 3 PMS Initial Software Installation documented in SV3-PMS Cabinet Software Loading-001 (Reference 10) performed by Work Order 1123193 (Reference 8), and Cabinet Diagnostics documented in SV3-PMS-ITR-800548 (Reference 14). References 8 through 11 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) was performed for hardware changes and software changes (References 12 and 13) and determined that no additional testing is needed for the as-built system.

The completed Unit 3 FAT (References 4 through 7), Software Installation (Reference 8), Regression test results (References 12 and 13) and Cabinet Diagnostics (Reference 14) confirm that appropriate PMS output signals are generated as the interlock conditions are changed.

References 1 through 14 are available for NRC inspection as part of the ITAAC 2.5.02.09d Unit 3 Completion Package (Reference 16).

ITAAC Finding Review

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. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.5.02.09d (Reference 16) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.5.02.09d was performed for VEGP Unit 3 and the prescribed acceptance criteria were 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. 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. Vogtle U3 and U4 UFSAR Rev 10.1 Chapter 7
4. APP-PMS-T1P-008, Rev 3 "AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Procedure"
5. APP-PMS-T1P-009, Rev 7 "AP1000 Protection and Safety Monitoring System Integrated Logic Processor Component Logic Channel Integration Test Procedure"
6. APP-PMS-T2R-008, Rev 1, "AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Report"
7. APP-PMS-T2R-009, Rev 0, "AP1000 Protection and Safety Monitoring System Integrated Logic Processor Component Logic Channel Integration Test Report"
8. Work Order 1123193, "(ITAAC) Implement FCN SV3-GW-GCW-300"
9. SV3-GW-GCW-300, Rev 0, Field Change Notice "AP1000 Vogtle Unit 3 PMS Initial Software Installation - Software Release 8.7.0.1"
10. SV3-PMS Cabinet Software Loading-001, Rev 0 "Unit 3 Software Loading for PMS Cabinets for Multiple ITAACs"
11. B-GEN-ITPCI-001-011 Revs 1.1 & 1.2, "PMS CABINETS - Cabinet Diagnostics"
12. 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"
13. SV3-PMS-T2R-050, Rev 0, "Vogtle AP1000 Protection and Safety Monitoring System Fuel Load Regression Test Report"
14. SV3-PMS-ITR-800548 Rev 0, Unit 3 PMS Cabinet Diagnostic Testing: ITAAC 2.5.02.09d
15. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"
16. ITAAC 2.5.02.09d-U3-CP-Rev0, ITAAC Completion Package

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