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Docket Nos.: 52-026

ND-22-0708
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 4
ITAAC Closure Notification on Completion of ITAAC 2.5.01.04 [Index Number 519]

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 2.5.01.04 [Index Number 519]. This ITAAC verifies the Diverse Actuation System (DAS) hardware and any software was developed using a planned design process which provides for specific design documentation and reviews during the design life cycle stages. 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 & 4Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of 2.5.01.04 [Index Number 519]

JMC/TJC/sfr

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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-22-0708
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of 2.5.01.04 [Index Number 519]**

ITAAC Statement

Design Commitment

4. The DAS hardware and any software are developed using a planned design process which provides for specific design documentation and reviews during the following life cycle stages:

- a) Development phase for hardware and any software
- b) System test phase
- c) Installation phase

The planned design process also provides for the use of commercial off-the-shelf hardware and software.

Inspections/Tests/Analyses

Inspection will be performed of the process used to design the hardware and any software.

Acceptance Criteria

A report exists and concludes that the process defines the organizational responsibilities, activities, and configuration management controls for the following:

- a) Documentation and review of hardware and any software.
- b) Performance of tests and the documentation of test results during the system test phase.
- c) Performance of tests and inspections during the installation phase.

The process also defines requirements for the use of commercial off-the-shelf hardware and software.

ITAAC Determination Basis

An inspection was performed to verify that the Diverse Actuation System (DAS) hardware and software were developed using a planned design process which provides for specific design documentation and reviews during the following life cycle stages: Development phase for hardware and any software, system test phase, and Installation phase. The planned design process also provided for the use of commercial off-the-shelf hardware and software.

DAS was developed using defined processes, activities, and organizational responsibilities per APP-DAS-GEH-001 (Reference 1). The defined processes were further incorporated into the vendor's processes and procedures that include the software and hardware development life cycle (i.e., development phase, hardware and software requirements, design, manufacturing, factory testing, and delivery).

An inspection of the vendor's processes and procedures used to develop and test the hardware and software was performed, and it was concluded that the processes define the organizational responsibilities, activities, and configuration management controls for documentation and review of hardware and any software, performance of tests and the documentation of test results during the system test phase, and requirements for the use of commercial off-the-shelf hardware and software. Technical report APP-GW-GLR-623, "AP1000® Design Certification ITAAC 2.5.01.04: Diverse Actuation System Design Process Technical Report" (Reference 2) documents the results of the inspection and includes references to vendor processes and procedures that define each of the Acceptance Criteria.

An inspection of processes used for the performance of tests and inspections during the installation phase was performed. The results of this inspection are documented in Reference 3. DAS cabinets were installed and inspected in accordance with 26139-000-4MP-T81C-N3301, "Electrical Equipment Installation" (Reference 4). The DAS is designed using the Advanced Logic System (ALS) platform. The platform is based on Field Programmable Gate Array (FPGA) technology that does not utilize software-based controls and does not require software loading on site. Software installation for the DAS service unit is per SV4-GW-GCW-0126 (Reference 5). Post-installation tests are performed per the component test procedure B-GEN-ITPCI-002 (Reference 6) after completion of the system energization.

The results of the above DAS inspections conclude that the processes define the organizational responsibilities, activities, and configuration management controls for documentation and review of hardware and any software; performance of tests and the documentation of test results during the system test phase; performance of tests and inspections during the installation phase; and requirements for the use of commercial off-the-shelf hardware and software.

References 1 through 6 are available for NRC inspection as part of the Unit 4 ITAAC 2.5.01.04 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 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 2.5.01.04 (Reference 7) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.5.01.04 was performed for VEGP Unit 4 and that 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. APP-DAS-GEH-001, Rev. 1, "AP1000 Diverse Actuation System Design Process"
2. APP-GW-GLR-623, Rev. 0, "AP1000® Design Certification ITAAC 2.5.01.04: Diverse Actuation System Design Process Technical Report"
3. SV4-DAS-ITR-800519, Rev. 0, " Unit 4 Inspection Results of Diverse Actuation System (DAS) Design Process: Installation Phase: ITAAC 2.5.01.04 NRC Index Number: 519"
4. 26139-000-4MP-T81C-N3301, Rev. 9, "Electrical Equipment Installation"
5. SV4-GW-GCW-0126, Rev. 0, "AP1000 Vogtle Unit 4 Diverse Actuation System (DAS) ASU PC Update and Application Ver 1.11 Installation"
6. B-GEN-ITPCI-002, Rev. 3, "Diverse Actuation System (DAS) Cabinets"
7. 2.5.01.04-U4-CP-Rev0, ITAAC Completion Package