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Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 3 and Unit 4  
Resubmittal of ITAAC Closure Notification on Completion of  
ITAAC 3.2.00.01a [Index Number 739]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 3.2.00.01a [Index Number 739] for verifying the Human Factors Engineering Task Support Verification (TSV) was performed in conformance with the implementation plan. 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.

Southern Nuclear Operating Company (SNC) previously submitted ITAAC Closure Notification on Completion of ITAAC 3.2.00.01a [Index Number 739], ND-16-1590 [ML16245A300], dated August 31, 2016 and ND-16-1591 [ML16245A302], dated August 31, 2016. This resubmittal provides additional details requested by the NRC staff during public meetings and supersedes ND-16-1590 and ND-16-1591 in their entirety.

This letter contains no new NRC regulatory commitments.

If there are any questions, please contact David Woods at 706-848-6903.

Respectfully submitted,



Michael J. Yox  
Regulatory Affairs Director Vogtle 3 & 4

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Completion of ITAAC 3.2.00.01a [Index Number 739]

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**Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4  
Completion of ITAAC 3.2.00.01a [Index Number 739]**

## **ITAAC Statement**

### **Design Commitment**

1. The HFE verification and validation program is performed in accordance with the HFE verification and validation implementation plan and includes the following activities:
  - a) HSI Task support verification

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

- a) An evaluation of the implementation of the HSI task support verification will be performed.

### **Acceptance Criteria**

- a) A report exists and concludes that: Task support verification was conducted in conformance with the implementation plan and includes verification that the information and controls provided by the HSI match the display and control requirements generated by the function-based task analyses and the operational sequence analyses.

## **ITAAC Determination Basis**

Multiple ITAAC are performed to verify that the Human Factors (HF) Engineering (HFE) verification and validation (V&V) program, as described in VEGP 3 & 4 Updated Final Safety Analysis Report, Section 18.11, Human Factors Engineering Verification and Validation, is performed in accordance with the HFE V&V implementation plan. The subject ITAAC requires that an evaluation of the implementation of the Human-System Interface (HSI) task support verification (TSV) be performed.

The HFE TSV plan (Reference 1) for the AP1000 plant was developed based on the information and guidance described in NUREG-0711, "Human Factors Engineering Program Review Model", approved by the NRC. The HFE V&V activities, which include TSV, confirm the adequacy of HSI resources and Operations and Control Center System (OCS) design. The overall objective of HFE V&V is to ensure that the AP1000 design attains a high standard of HF adequacy and thereby contributes to the safety, operability and maintainability of the plant.

The objective of the TSV activities is to confirm the availability of the required OCS and HSI resources in the final AP1000 design, identify deviations, and formally document the results. The HFE TSV plan includes the methodology by which the HSI resources and OCS are checked against the information and control requirements identified in:

- Function-based task analyses for assessing the functional displays that are part of the AP1000 non-safety control system visual display units
- Operational sequence task analyses for assessing the list of HSI resources (i.e., controls, displays, alarms) that were identified in the task analysis conducted on the AP1000 normal and emergency operating procedures).
- Operational sequence task analyses performed for risk-important human actions as defined by the Probabilistic Risk Assessment
- Required minimum inventory of alarms, displays, and controls as listed in Table 18.12.2-1 of the Updated Final Safety Analysis Report
- Required federally mandated 10 CFR 50.34(f) indications and control features

The TSV was conducted per the plan and methodology described above and deviations were noted as Human Engineering Discrepancies (HEDs). The identified HEDs were captured in Human Factors (HF) Tracking Database for further assessment and resolution using APP-OCS-GEH-420 (Reference 3), "AP1000 Human Factors Engineering Discrepancy Resolution Process." The HED resolution results will be provided in subsequent ITAAC 3.2.00.01d [Index No. 743].

Following the execution of the HSI TSV, an evaluation was conducted to ensure the TSV was conducted in conformance with the AP1000 Human Factors Engineering Task Support Verification Plan (Reference 1) and to verify that the TSV includes verification that the information and controls provided by the HSI match the display and control requirements generated by the function-based task analyses and the operational sequence analyses.

The results of the HSI TSV are documented in the AP1000 Human Factors Engineering Task Support Verification Summary Report (Reference 2). This report concludes that the HSI TSV is conducted in conformance with the implementation plan and includes verification that the information and controls provided by the HSI match the display and control requirements generated by the function-based task analyses and the operational sequence analyses. The AP1000 Human Factors Engineering Task Support Verification Summary Reports are available for NRC inspection as part of the ITAAC Completion Packages (References 4 and 5).

### **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 document numbers are referenced in the Vogtle Unit 3 and Unit 4 ITAAC completion packages for ITAAC 3.2.00.01a (References 4 and 5, respectively) and available for NRC inspection.

### **ITAAC Completion Statement**

Based on the above information, SNC hereby notifies the NRC that ITAAC 3.2.00.01a was performed for VEGP Unit 3 and 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 approved plant programs and procedures.

**References (available for NRC inspection)**

1. APP-OCS-GEH-220 Revision 4, "AP1000 Human Factors Engineering Task Support Verification Plan"
2. APP-OCS-GER-220 Revision 1, "AP1000 Human Factors Engineering Task Support Verification Summary Report"
3. APP-OCS-GEH-420 Revision 2, "AP1000 Human Factors Engineering Discrepancy Resolution Process"
4. SVP\_SV0\_003966, "Submittal of Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) Completion Package for Unit 3 ITAAC 3.2.00.01a [COL Index Number 739] (HFE – Task Support Verification)," Attachment 1, "ITAAC Completion Package for Unit 3 ITAAC 3.2.00.01a"
5. SVP\_SV0\_003967, "Submittal of Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) Completion Package for Unit 4 ITAAC 3.2.00.01a [COL Index Number 739] (HFE – Task Support Verification)," Attachment 1, "ITAAC Completion Package for Unit 4 ITAAC 3.2.00.01a"