



May 8, 2017  
NND-17-0235  
10 CFR 52.99(c)(1)

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

Subject: Virgil C. Summer Nuclear Station (VCSNS) Unit 3  
Combined License No. NPF-94  
Docket Number 52-028  
ITAAC Closure Notification on Completion of ITAAC 3.2.00.01a [Index No. 739]

Attachments: (1) References

The purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) in accordance with 10 CFR 52.99(c)(1) of the completion of Virgil C. Summer Nuclear Station (VCSNS) Unit 3 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 3.2.00.01a to verify that 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 Human-System Interface (HSI) match the display and control requirements generated by the function-based task analyses and operational sequence analyses. The closure process for this ITAAC is based on the guidance described in NEI 08-01 (Reference 1), which was endorsed by the NRC in Regulatory Guide 1.215. This ITAAC Closure Notification (ICN) supersedes the ICN dated November 14, 2016 (ML16320A017).

### **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 confirm the Human Factors Engineering (HFE) verification and validation (V&V) program, as described in Chapter 18 of the Updated Final Safety Analysis Report, is performed in accordance with the HFE verification and validation implementation plan. The subject ITAAC performs an evaluation of the implementation of the Human System Interface (HSI) task support verification.

The Human Factors Engineering task support verification (TSV) plan, APP-OCS-GEH-220 (Reference 2), was developed based on the information and guidance described in NUREG-0711, "Human Factors Engineering Program Review Model" and approved by the NRC. The HFE V&V activities which include task support verification confirm the adequacy of the 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 Human Factors adequacy and thereby contributes to the safety, operability and maintainability of the plant.

The objective of the task support verification 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 task support verification plan includes the methodology by which the HSI resources, and Operation and Control Centers 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 personnel tasks 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 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 HEDs were

subsequently captured in Human Factors Tracking Database for further assessment and resolution using APP-OCS-GER-420, "AP 1000 Human Engineering Discrepancy Resolution Report." The HED resolution results will be provided in subsequent ITAAC 3.2.00.01d.

The results of the HFE Task Support Verification are documented in the AP1000 Human Factors Engineering Task Support Verification Summary Report, APP-OCS-GER-220 (Reference 3), and conclude the HSI task support verification was conducted in accordance with the implementation plan and includes verification of 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 Finding Review**

In accordance with plant procedures for ITAAC completion, SCE&G performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found that there are no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 3.2.00.01a (Reference 4) and available for NRC inspection.

### **ITAAC Completion Statement**

Based on the above information, SCE&G hereby notifies the NRC that ITAAC 3.2.00.01a was performed for VCSNS Unit 3 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.

We request NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99(e)(1).

If there are any questions, please contact Ryder Thompson at (803) 941-9812.

Sincerely,



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**Attachment 1**

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

1. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"
2. APP-OCS-GEH-220, "AP1000 Human Factors Engineering Task Support Verification Plan"
3. APP-OCS-GER-220, "AP1000 Human Factors Engineering Task Support Verification Summary Report"
4. ITAAC 3.2.00.01a Completion Package