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Manager
New Nuclear Licensing

May 8, 2017
NND-17-0237
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 3.2.00.01b [Index
No. 740]

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 3.2.00.01b for verifying the Human Factors Engineering Design Verification was performed in conformance with the implementation plan. 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.

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:*
 - b) *HFE design verification*

Inspections, Tests, Analyses:

- b) *An evaluation of the implementation of the HFE design verification will be performed.*

Acceptance Criteria:

- b) *A report exists and concludes that: HFE design verification was conducted in conformance with the implementation plan and includes verification that the HSI design is consistent with the AP1000 specific design guidelines developed for each HSI resource.*

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 V.C. Summer Units 2&3 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 Factors Engineering (HFE) design verification.

The Human Factors Engineering design verification (DV) plan (Reference 2) for the AP1000 plant 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 design verification are a check of 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 Human Factors adequacy and thereby contributes to the safety, operability and maintainability of the plant.

The objective of HFE design verification is to confirm that HSI resources and OCS conform to the project's HFE design guidelines. The HSI design guidelines are established to ensure that the HSI design can accommodate human capabilities and limitations and to provide a consistent HSI design approach across the AP1000 project. As required by the DV plan, the HSI resources were compared with the Human Factors design guidelines using design documentation and AP1000 displays. Deviations from these guidelines were noted as Human Engineering Discrepancies (HEDs) for further analysis and resolution within the HFE V&V process.

The identified HEDs were captured in Human Factors Tracking Database for further assessment and resolution, and will be documented in APP-OCS-GER-420, "AP1000 Human Engineering Discrepancy Resolution Report" and ITAAC 3.2.00.01d.

The results of the HFE design verification are documented in the AP1000 Human Factors Engineering Design Verification Report (Reference 3). This report concluded the HFE design verification was conducted in conformance with the implementation plan and included verification that the HSI design is consistent with the AP1000 specific design guidelines developed for each HSI resource.

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 3.2.00.01b (Reference 4) and available for NRC inspection.

ITAAC Completion Statement

Based on the above information, SCE&G hereby notifies the NRC that ITAAC 3.2.00.01b 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-120, "AP1000 Human Factors Engineering Design Verification Plan"
3. APP-OCS-GER-120, "AP1000 HFE Design Verification Report"
4. ITAAC 3.2.00.01b Completion Package