

## SummerRAIsPEm Resource

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**From:** Hoellman, Jordan  
**Sent:** Wednesday, April 05, 2017 12:21 PM  
**To:** SummerRAIsPEm Resource  
**Subject:** ITAAC Clarifications for ITAAC 739 and 740

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**From:** THOMPSON, RYDER CLARK [mailto:RYDER.THOMPSON@scana.com]  
**Sent:** Wednesday, April 05, 2017 12:12 PM  
**To:** Hoellman, Jordan <Jordan.Hoellman2@nrc.gov>  
**Cc:** Haggerty, Neil <X2NHAGGE@SOUTHERNCO.COM>; Chamberlain, Amy Christine <ACCHAMBE@southernco.com>; Woods, David F. <DFWOODS@southernco.com>; Rivera-Varona, Aida <Aida.Rivera-Varona@nrc.gov>; Welch, Christopher <Christopher.Welch@nrc.gov>; Stacy, Kara M. <KMSTACY@southernco.com>; Gleaves, Bill <Bill.Gleaves@nrc.gov>; Patel, Chandu <Chandu.Patel@nrc.gov>; KELLENBERGER, NICHOLAS ROY <NICHOLAS.R.KELLENBERGER@scana.com>; Willis, Frederick H. <FWWILLIS@SOUTHERNCO.COM>  
**Subject:** [External\_Sender] RE: ITAAC Discussion documents for 4/6/17 public meeting

SCE&G and SNC provide the following draft ICN clarifications for ITAAC 739 and 740 for discussion purposes. There may be some minor adjustments made when they go through the final signature process.

### ITAAC 739 IDB

The Human Factors (HF) Engineering (HFE) task support verification (TSV) plan (Reference2), for the AP 1000 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 task support verification confirm the adequacy of Human System Interface (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 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 HF 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 [Index No. 743].

### ITAAC 740 IDB

The Human Factors Engineering design verification (DV) plan for the AP 1000 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 Human Factors (HF) Engineering (HFE) verification and validation (V&V) activities which include design verification are a check of the adequacy of Human System Interface (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 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 HF 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 HF Tracking Database for further assessment and resolution, and will be documented in APP-OCS-GER-420, "AP 1000 Human Engineering Discrepancy Resolution Report" and ITAAC 3.2.00.01d [Index No. 743].

Thank you

*Ryder Thompson*

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**From:** Hoellman, Jordan [<mailto:Jordan.Hoellman2@nrc.gov>]

**Sent:** Wednesday, April 05, 2017 11:32 AM

**To:** THOMPSON, RYDER CLARK; Willis, Frederick H.

**Cc:** Haggerty, Neil; Chamberlain, Amy Christine; Woods, David F.; Rivera-Varona, Aida; Welch, Christopher; Stacy, Kara M.; Gleaves, Bill; Patel, Chandu; KELLENBERGER, NICHOLAS ROY

**Subject:** ITAAC Discussion documents for 4/6/17 public meeting

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Good Morning –

Please see the attached documents providing comments related to the outstanding ITAAC items from the March 23, 2017, public meeting. These will be discussed at the public meeting tomorrow, April 6, 2017.

Let me know if you have any questions/concerns.

Thank you,

Jordan Hoellman

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