

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

APR1400 Design Certification

Korea Electric Power Corporation / Korea Hydro & Nuclear Power Co., LTD

Docket No. 52-046

RAI No.: 352-8205
SRP Section: 18 – Human Factors Engineering
Application Section: 18.10
Date of RAI Issue: 12/22/2015

Question No. 18-65

NUREG-0711, Criterion 11.4.2.3(2), "General Methodology," states in part that the applicant's HFE Design Verification methodology should include procedures for comparing the characteristics of the HSIs with HFE guidelines for the general environment in which HSIs are sited.

Evaluation: The HFE Design Verification methodology is described in Sections 4.4.1, "Verification Criteria," and 4.4.2, "General Methodology," of the V&V IP. The methodology is summarized in Figure 4-2, "Design Verification Process," of the IP. The methodology specifies five steps. It is not clear from the methodology description, how the Style Guide's criteria are used.

Action: Provide a more detailed description of how the Style Guide's criteria are used. Specifically

- Revise the V&V IP to state what is actually being reviewed during Step 2.
- Revise the V&V IP to show how the HSI inventory in Step 2 relates to the Step 1 checklist.

If the HSI are verified against the Style Guide, revise the IP to state that it is, and how it is done. If the HSI are not verified against the style guide provide an explanation as to why.

Response

The HSIs are verified against the Style Guide by using the specific HSI's sampled to be used in the design verification to select the specific guideline, from the Style Guide, applicable to the sampled HSIs. The selected guidelines are then assembled into the checklist in order to facilitate their use by the SMEs in the design verification. This results in a clear and concise list of applicable guidelines that meet the Style Guide and are applicable to the Design Verification

HSIs. To clarify this, Section 4.4.2 of Human Factors Verification and Validation Implementation plan will be revised, as indicated in the Attachment associated with this response.

Impact on DCD

There is no impact on the DCD.

Impact on PRA

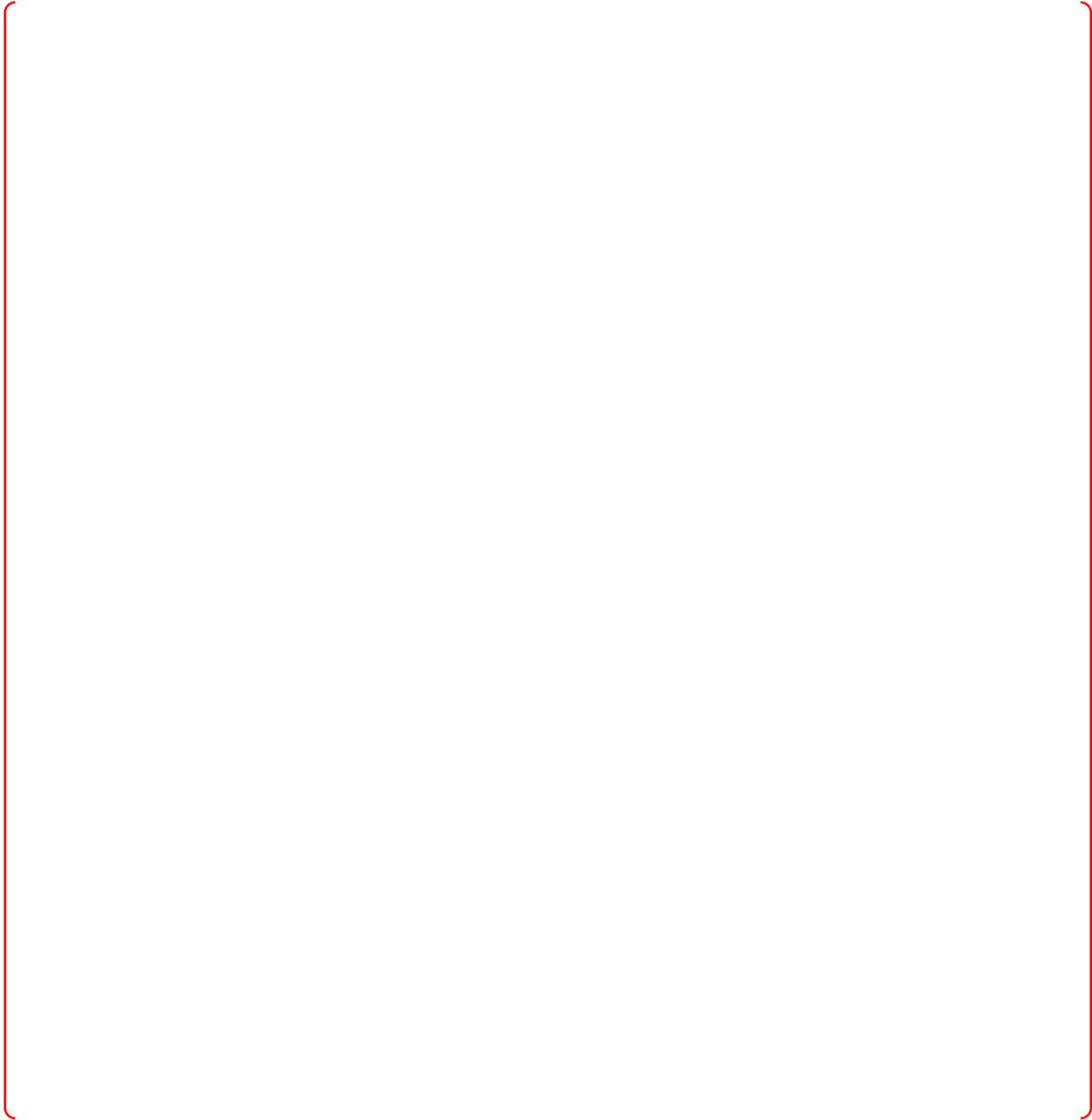
There is no impact on the PRA.

Impact on Technical Specifications

There is no impact on the Technical Specifications.

Impact on Technical/Topical/Environmental Reports

Technical report APR1400-E-I-NR-14008-NP, Rev.0, "Human Factors Verification and Validation Implementation Plan," Section 4.4.2 will be revised, as indicated in the Attachment associated with this response.

4.4.2. General Methodology**TS****Figure 4-2 Design Verification Process**

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