

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
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Question No. 18-66

NUREG-0711, Section 11.4.3, "Integrated System Validation," Criterion 11.4.3.1(1), "Validation Team," states that the applicant should describe how the team performing the validation has independence from the personnel responsible for the actual design.

Evaluation: The applicant's validation team is described in Sections 4.5.1, "Validation Team," of the IP. While the IP states that the team is independent of the design organization, no information concerning the relationship and interfaces between the validation team and the design team is provided.

Action: Revise the V&V IP to describe any and all relationships and interfaces between the validation team and the design team, barriers to prevent them, so that the staff can verify their independence.

Response

The responsibilities of the design team do not include validation. The relations between the design team and the validation team are shown in Figure 4-1 of the Human Factors Engineering Program Plan (HFEPP). The independence between the design team and the validation team are controlled by three distinct barriers:

- First: the relationship between the validation team's organizational placement and the design teams organizational placement
- Second: administrative controls, including the training of the validation team
- Third: the role of the independent team of SMEs to ensure the independence through their review

Sections 4.5, 4.5.1 and 4.5.6.3 of the 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," Sections 4.5, 4.5.1, and 4.5.6.3 will be revised, as indicated in the attachment associated with this response.

4.4.3. HED Identification**TS****4.5. Integrated System Validation****TS**

4.5.1. Validation Team

TS

4.5.6.3. Test Personnel Training

TS

4.5.6.4. Participant Training

TS

4.5.6.5. Pilot Testing

TS