
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.: 323-8281
SRP Section: 07.03 - Engineered Safety Features Systems
Application Section:
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Question No. 07.03-20

Provide and clarify necessary design information associated with ESF-1 and ESF-2 safety command signals for the ESF components in Technical Report APR1400-Z-J-NR-14001-P, Rev. 0, "Safety I&C System."

10 CFR 52.47(a)(2) requires, in part, that the description of the structures, systems, and components shall be sufficient to permit understanding of the system designs and their relationship to the safety evaluations. The guidance of SRP Appendix 7.1-C, "Guidance for Evaluation of Conformance to IEEE Std. 603", Section 4, "Safety System Designation", states that the information provided for the design basis items, taken alone and in combination, should have one and only one interpretation.

In Section 4.4.2 of Technical Report APR1400-Z-J-NR-14001-P, Rev. 0, "Safety I&C System," the ESFAS signals are generally categorized as ESF-1 and ESF-2. However, there is lack of design information in the APR1400 application regarding the identification of those ESF components associated with ESF-1 and ESF-2 safety command signals. Provide a list of components associated with ESF-1 and ESF-2 safety command signals and location in the ESF-CCS where these safety command signals are generated.

Response

The list of components associated with ESF-1 and ESF-2 safety command signals is provided as an attachment to this response.

The ESF-1 and ESF-2 command signals are generated and split in the engineered safety features-component control system (ESF-CCS) group controller (GC), and distributed to the ESF-CCS loop controller (LC) through the serial data link (SDL).

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

Section 4.4.2 of Safety I&C System Technical Report, APR1400-Z-J-NR-14001-NP, Rev.0 will be revised as indicated in the attachment associated with this response.

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4.4.3 Architecture Description

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