REVISED 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.:	**300-8297**
SRP Section:	**07.03 - Engineered Safety Features Systems**
Application Section:	**7.3**
Date of RAI Issue:	**11/10/2015**

Question No. 07.03-4

Describe the reasons why the response times are calculated differently for some safety actuation signals which are generated from the same ESF-Component Control System (ESF-CCS).

10 CFR 50.55a(h)(3) states “Applications filed on or after May 13, 1999, for construction permits and operating licenses under this part, and for design approvals, design certifications, and combined licenses under part 52 of this chapter, must meet the requirements for safety systems in IEEE Std. 603-1991 and the correction sheet dated January 30, 1995.” IEEE Std. 603-1991, Clause 6.1, requires timely automatic control action when events occur too quickly for operators to intervene.

It is not clear why the response times are calculated differently for some safety actuation signals generated from the same ESF-CCS. For example, Figure 7.12-3, "Response Time Analysis for ESF-CCS," in Technical Report, APR1400-Z-J-NR-14013, Rev. 0, “Response Time Analysis of Safety I&C System” shows multiples of different controller racks and component interface modules (CIM) before sending an actuation signal to its destination. However, Figure 7.12-6, "Response Time Analysis for ESF-CCS," in the same technical report just shows one of each controller rack before sending an actuation signal to its destination. Provide necessary descriptive information or clarification on how the response times are calculated differently for some ESF actuation signals which are executed in the same safety I&C system.

Response – (Rev. 1)

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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-Z-J-NR-14013-NP, Rev. 0, “Response Time Analysis of Safety I&C System,” Section 7.21 will be added, as indicated in the attachment associated with this response.

7.21 SIGNAL PATH OF THE ESF-CCS

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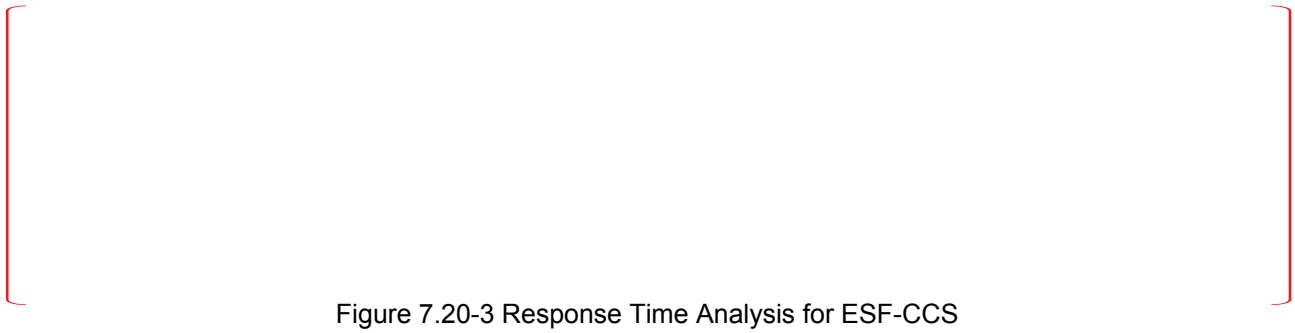

Figure 7.20-3 Response Time Analysis for ESF-CCS

Notes

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