
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.: 71-7906

SRP Section: 14.03.05 - Instrumentation and Controls - Inspections, Tests, Analyses, and Acceptance Criteria

Application Section:

Date of RAI Issued: 07/15/2015

Question No. 14.03.05-12

Demonstrate that the inspectability requirements of 10 CFR 52.47(b)(1) are met for standalone safety I&C systems. Specifically, provide Tier 1 design descriptions and corresponding ITAACs to verify that the as-built system meets the design commitments for standalone safety I&C systems.

10 CFR 52.47(b)(1) requires an application to contain the proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a facility that incorporates the design certification has been constructed and will be operated in conformity with the design certification, the provisions of the Act, and the Commission's rules and regulations. The staff reviewed the Tier 1 descriptions and ITAACs and could not find information regarding the standalone safety I&C systems such as the radiation monitoring system (RMS) and the essential chiller condenser system. Modify Tier 1 of the APR1400 FSAR to include this information.

Response – (Rev. 1)

The design description for the safety-related divisional cabinet (SRDC) of the RMS is in the DCD Tier 1, Item 5 of Subsection 2.7.6.4.1 and Item 6 of Subsection 2.7.6.5.1. The corresponding ITAACs are addressed in the Item 5 of Table 2.7.6.4-3 and the Item 6 of Table 2.7.6.5-3.

The essential chiller condenser system is not a standalone I&C system, but a mechanical safety related process system which is controlled by the safety related I&C system ESF-CCS. Note that in the APR1400, the essential chilled water system is officially designated as the essential chiller condenser system. The design description for the essential chilled water

[system controls](#) is addressed in DCD Tier 1, Item 8 of Subsection 2.7.2.3 and the ITAAC is addressed in Item 8 of Table 2.7.2.3-4.

Since the auxiliary process cabinet-safety (APC-S) and the ex-core neutron flux monitoring system (ENFMS) are parts of the RTS and the ESF system, the design description and ITAAC for the APC-S and the ENFMS are not addressed individually in DCD Tier 1, but are included in the Section 2.5.1 discussion of RTS and ESF Initiation. The design description for the APC-S and the ENFMS are addressed in DCD Tier 1, Item 15 of Subsection 2.5.1.1 and the corresponding ITAAC is addressed in item 15 of Table 2.5.1-5.

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 Specification.

Impact on Technical/Topical/Environmental Reports

There is no impact on the Technical, Topical or Environmental Report.