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.:	**434-8352**
SRP Section:	**SRP 19**
Application Section:	**19.1**
Date of RAI Issue:	**03/08/2016**

Question 19-89

10 CFR 52.47(a)(27) states that a DC application must contain an FSAR that includes a description of the design-specific PRA and its results. In addition, SRP Chapter 19.0, draft Revision 3, Section I, "Areas of Review," states "The purpose of the staff's review is to ensure that the applicant has adequately addressed the Commission's objectives regarding the appropriate way to address consideration of severe accidents and the use of PRA in the design and operation of facilities under review."

The staff reviewed APR1400 DCD Section 19.1.1, "Uses and Applications of the PRA," and found the following statement "At the design phase, the PRA results are used as information providing input to Technical Specifications (Chapter 16), reliability assurance program (RAP) (Section 17.4), human factors engineering (Section 18.6), severe accident evaluation (Section 19.2), and other design areas." However, the staff found no explanation on how the APR1400 PRA affected these programs.

In order for the staff to reach a reasonable assurance finding that the APR1400 PRA is appropriately used during the DC stage, please describe in detail, in addition to the discussion provided in Section 19.1.3.4 "Uses of the PRA in the Design Process," how the APR1400 PRA has been used in providing input to the Technical Specifications (Chapter 16), human factors engineering (Section 18.6), and severe accident evaluation (Section 19.2) as mentioned in the APR1400 DCD and the impacts on these programs.

Response – (Rev. 1)

The interface between PRA and other design discipline is controlled in accordance with internal provision and procedures. Especially, the design interface between design disciplines and PRA is procedurally controlled by Engineering Procedures for Design Interface Control. Design input information is transmitted to the related department by using Design Information Transmittal (DIT).

In the case of human factors engineering (Section 18.6), PRA provided risk important human actions (RIHAs) with additional detailed information such as HIS inventory, staffing, stress degree, procedure and time available by DIT to Human Factor Engineering.

In the case of severe accident evaluation (Section 19.2), PRA provided the dominant accident sequences by DIT for identification of best estimation scenario of severe accident analysis.

At the design phase, the PRA results are used as information providing input to Technical Specifications (Chapter 16). For example, TS 3.6.7 was added as the PRA results during APR1400 design phase.

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

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