
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.: 126-8012
SRP Section: 2.3.1 – Regional Climatology
Application Section: 2.3.1
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Question No. 02.03.01-4

APR1400 DCD, Tier 2, Table 2.0-1, “Site Parameters,” and Tier 1, Table 2.1-1, “Site Parameters,” each contain a site parameter value within the “Precipitation” parameter description row called “Extreme winter precipitation roof load.” This value is indicated in both Tier 1 and Tier 2 tables as 5.985 kPa (125 lbf/ft²).

In order for subsequent ESP and COL applicants to properly associate site characteristic values with the corresponding design parameter values listed in DCD Tier 1, Table 2.1-1 and DCD Tier 2, Table 2.0-1, and consistent with the guidance in SRP Section 2.3.1 for applicants to identify the “FSAR sections in which these conditions are used” (i.e., linked to specific structures, systems, and components (SSCs)), the applicant should clarify where the DCD FSAR already clearly identifies these associations or update the SSAR to indicate where in the APR1400 DCD FSAR this site parameter value is connected to specific SSCs or roof loads.

Response – (Rev. 2)

According to DC/COL-ISG-7 (Reference 1), no Standard Review Plan (SRP) sections such as SRP Section 3.8.4 currently provide guidance regarding how snow loads due to extreme winter precipitation events should be used for design of seismic Category I structures though the applicant should identify the “FSAR sections in which these conditions are used” in accordance with SRP Section 2.3.1.

Deleted

Therefore, the association between the extreme winter precipitation roof load in Tier 1 and Tier 2 tables and seismic Category I structures is not identified in the APR1400 DCD FSAR.

For reference, mass equivalent to 75 percent of the roof design snow load is included in addition to the structural mass of the seismic analysis models of seismic Category I structures in accordance with SRP 3.7.2. Since the extreme environmental loads do not occur simultaneously, the snow load considered in the seismic analysis models is normal winter precipitation roof load.

References

- 1) DC/COL-ISG-7, Assessment of Normal and Extreme Winter Precipitation Loads on the Roofs of Seismic Category I Structures, U.S. Nuclear Regulatory Commission, June 2009.
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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

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