
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.: 108-7973
SRP Section: 15.00.03 - Design Basis Accidents Radiological Consequence Analyses for Advanced Light Water Reactors
Application Section: Chapter 15 including 15A
Date of RAI Issue: 07/23/2015

Question No. 15.00.03-22

10 CFR 52.47(a)(2)(iv) requires that an application for a design certification include a final safety analysis report that provides a description and safety assessment of the facility. The safety assessment analyses are done, in part, to show compliance with the radiological consequence evaluation factors in 52.47(a)(2)(iv)(A) and 52.47(a)(2)(iv)(B) for offsite doses, 10 CFR 50, Appendix A, GDC 19 for control room radiological habitability, and the requirements related to the technical support center in 10 CFR 52.47(b)(8) and (b)(11) and Paragraph IV.E.8 of Appendix E to 10 CFR Part 50. The radiological consequences of design basis accidents are evaluated against these regulatory requirements and the dose acceptance criteria given in SRP 15.0.3.

DCD Table 15.6.3-5 states that the onsite χ/Qs used in the SGTR analysis are given in Tables 2.3-6 and 2.3-7.

- a. DCD Table 2.3-6 gives the onsite χ/Qs for releases from the south main steam safety valve (MSSV) room to the south auxiliary building intake.
 - i. Verify that these are the values used for the control room unfiltered inleakage from a release from the MSSVs.
 - ii. If so, which are the values used for the CR HVAC intake for a release from the MSSVs, and did your analysis use those values?
- b. DCD Table 2.3-7 gives the onsite χ/Qs for releases from the atmospheric dump valves (ADV) to the closest CR HVAC intake.
 - i. Which are the values to use for the control room unfiltered inleakage for a release from the ADV, and did your analysis use those values?

- c. Clarify which set of onsite χ/Q s were used for each pair of release point and receptor (both CR HVAC intake and unfiltered inleakage) relevant to the SGTR dose analysis and document in the DCD.

Response

Table 1 in the response to Question No. 15.00.03-8 provides the onsite χ/Q values used for each of the radiological consequence analysis. For the SGTR dose calculation, the following onsite χ/Q sets are used:

- (1) MCR HVAC Intake : South Atmospheric Dump Valve Releases to MCR South Intake (DCD Table 2.3-7)
- (2) Unfiltered Inleakage : South Main Steam Valve Room Release to Auxiliary Building South Intake (DCD Table 2.3-6)

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.