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.: **306-8240**

SRP Section: **06.02.06 – Containment Leakage Testing**

Application Section:

Date of RAI Issue: **11/16/2015**

Question No. 06.02.06-1

10 CFR Part 50, Appendix J, Option B, requires containment leakage rate testing be performed at the calculated peak containment internal pressure related to the design basis accident (DBA) and specified either in the technical specification or associated bases. DCD Tier 2, Section 6.2.6, specifies that the test pressure for the Type A, B , and C tests will be at the maximum calculated peak containment pressure under DBA. DCD Tier 2, Table 6.2.1-2, lists the maximum calculated peak containment pressure under DBA as 3.59 kg/cm^2 (51.09 psig). This pressure value of 51.09 psig is used in DCD Chapter 16, Technical Specifications (TS) Bases Section B.3.6.1 for containment leak rate test. But in TS Section 5.5.16 “Containment Leakage Rate Testing Program” under item b, the value of peak containment pressure for leak rate test is listed as 51.77 psig.

Please justify why a different value of peak containment pressure under DBA is used in TS Section 5.5.16.

Response

The pressure value of 51.77 psig listed in Technical Specifications (TS) 5.5.16 is an incorrect value.

The value of 51.77 psig will be revised to the correct value listed in Table 6.2.1-2 of DCD Tier 2, 51.09 psig, as indicated in the attachment associated with this response.

Impact on DCD

DCD Tier 2, Chapter 16, Section TS 5.5.16 will be revised, as indicated in the attachment associated with this response.

Impact on PRA

There is no impact on the PRA.

Impact on Technical Specifications

There is no other impact on the Technical Specifications.

Impact on Technical/Topical/Environmental Report

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

5.5 Programs and Manuals

5.5.15 Safety Function Determination Program (SFDP) (continued)

a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable, or

b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable, or

c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered. When a loss of safety function is caused by the inoperability of a single Technical Specification support system, the appropriate Conditions and Required Actions to enter are those of the support system.

5.5.16 Containment Leakage Rate Testing Program

a. A program shall establish the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in NRC RG 1.163, "Performance- Based Containment Leak-Test Program," dated September, 1995, as modified by the following exceptions:

1. The visual examination of containment concrete surfaces intended to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements of and frequency specified by the ASME Section XI Code, Subsection IWL, except where relief has been authorized by the NRC.

2. The visual examination of the steel liner plate inside containment intended to fulfill the requirements of 10 CFR50, Appendix J, Option B, will be performed in accordance with the requirements of and frequency specified by the ASME Section XI Code, Subsection IWE, except where relief has been authorized by the NRC.

b. The calculated peak containment internal pressure for the design basis loss of coolant accident, P_a is ~~51.77~~ psig. The containment design pressure is 60 psig.

51.09

c. The maximum allowable containment leakage rate, L_a at P_a, shall be 0.1 % of containment air weight per day.