RESPONSE TO AUDIT ISSUES

APR1400 Topical Reports

Korea Electric Power Corporation / Korea Hydro & Nuclear Power Co., LTD

Docket No. PROJ0782

Review Section	**TR Realistic Evaluation Methodology for LBLOCA of the APR1400**
Application Section	**Topical Report: APR1400-F-A-TR-12004 Realistic Evaluation Methodology for Large-Break LOCA of the APR1400**
Issue Date	**08/13/2015**

Audit Issues No. 40

The guidance in RG 1.157, Section 3.11 establishes acceptable controls regarding the calculation of flow distribution. [

]^{TS} Explain these phenomena are sampled in the calculations.

Response

The phenomena mentioned in this issue are not sampled in the calculation, but treated as biases. The descriptions for each bias are in Section 4.2.3 of the topical report. The components of the test facilities designed according to “power-to-volume” scaling can cause a bias due to scale distortions. Phenomena that can be affected from these scale distortions are treated as biases which are evaluated from the assessments against full-scale experimental facilities.

All phenomena that are treated as biases in the topical report are summarized in Table 1. The phenomena treated as biases are those phenomena that the code capability is not confirmed to be used. Downcomer, lower plenum, and upper plenum of test facilities which are designed to "power-to-volume" scaling are known as the components that can cause bias due to scale distortions. Also, these components have strong importance in multi-dimensional characteristics during certain periods, which is difficult to model by 1-dimensional RELAP5. The PIRT shown in Table 1 is revised from the PIRT of the topical report due to some errors that have been included. The complete modified PIRT will be given in association with audit issue no. 15. For each PIRT item, the bias used in the evaluation of the PIRT item is listed in the Table 1. [

]TS

Table 1. PIRT items treated by biases TS

TS

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 Report

Topical report will be revised according to the PIRT revision as described in the attachment for the response of Audit Issue No. 14.

There is no impact on any Technical or Environmental Report.