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## 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.: 354-8416  
SRP Section: 19.03 – Beyond Design Basis External Event  
Application Section: 19.3  
Date of RAI Issue: 12/23/2015

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### **Question No. 19.03-11**

NRC Order EA-12-049 requires that reasonable protection be provided for the mitigation equipment from applicable external events including seismic. For structures that house permanent plant equipment credited for APR1400 mitigation strategies, potential seismic interaction effect between these structures with adjacent structures that are not designed to be seismically robust should be assessed. Similarly, potential seismic interaction effect between a non-seismically robust structure with standalone tank(s) that contain cooling and makeup water inventories or fuel for equipment credited for APR1400 mitigation strategies should be assessed. The applicant is requested to provide information which demonstrates that the failure of a non-seismically robust structure will not affect the integrity of the structure(s) that house permanent plant equipment credited for APR1400 mitigation strategies or the function of the standalone tank(s) that contain cooling and makeup water inventories or fuel for equipment credited for APR1400 mitigation strategies.

### **Response**

The structures and tanks outside the auxiliary building that APR1400 credited for mitigation strategies include the following:

- ✓ The FLEX equipment storage building(s) that stores FLEX pumps and associated connection components;
- ✓ The emergency diesel generator (EDG) building that stores fuel oil storage tanks and fuel oil day tanks which contain fuel oil for FLEX strategies;
- ✓ The boric acid storage tank (BAST) that stores borated water for RCS makeup; and
- ✓ The raw water tank (RWT) that is water source for FLEX strategies.

The above design features are designed as seismic Category I, and protected reasonably from applicable external events including seismic.

In terms of the interaction effect between these structures and tanks with adjacent structures that are not designed to be seismically robust, the COL applicant is to confirm that any site-specific non-seismic Category I SSCs are designed not to degrade the function of a seismic Category I SSC to an unacceptable safety level due to their structural failure or interaction (COL 3.7(4)) in accordance with DCD Tier 2, Subsection 3.7.2.8, re-numbered by the response to RAI 249-8323, Question 03.08.01-16.

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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 Environment Report.