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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.: 407-8447

SRP Section:

Application Section: 19.03

Date of RAI Issue: 02/17/2016

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### **Question No. 19-03-27**

RWT Level Instrument:

10 CFR 52.47(a)(2) requires that a standard design certification applicant provide a description and analysis of the structures, systems, and components (SSCs) of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished.

In SECY 12-0025, the staff provided the Commission with proposed orders requiring mitigation strategies for beyond-design-basis external events to be issued to all power reactor licensees and holders of construction permits. In the paper, the staff indicated that for New Reactors that are currently under active staff review, the staff plans to ensure that the Commission-approved Fukushima recommended actions are addressed prior to licensing. On March 12, 2012, the NRC issued Orders EA-12-049 requiring operating nuclear plants to develop and implement strategies that will allow them to cope without ac power for an indefinite amount of time. The strategies must ensure that the reactor core and spent fuel pool are adequately cooled, and containment function is maintained.

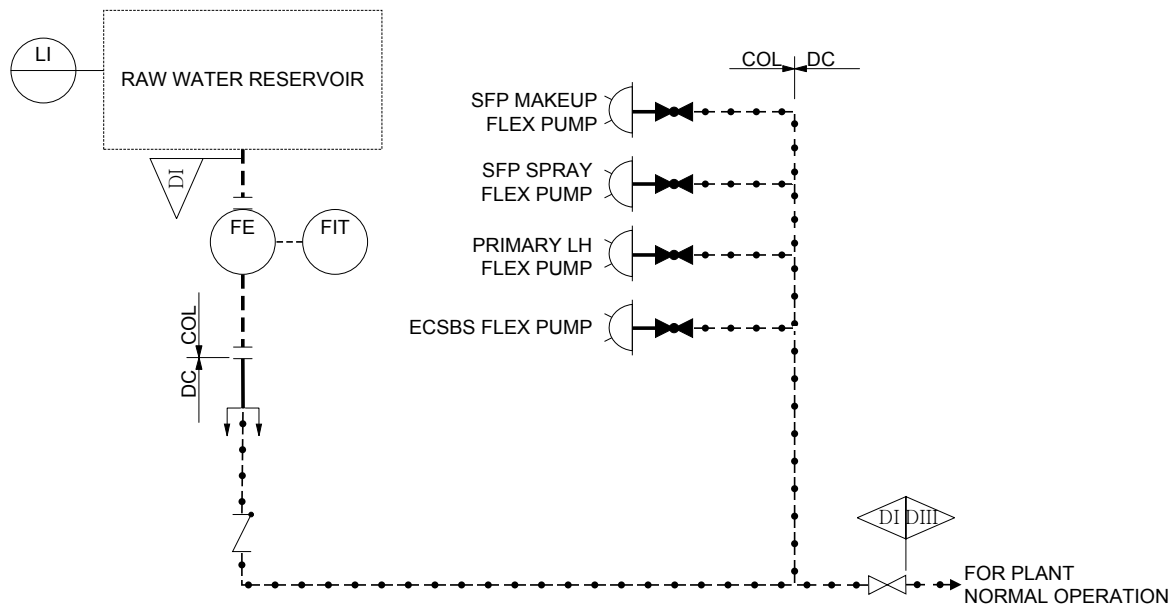
DCD Tier 2, Section 19.3.2.3.2 states that, in Phase 2 and Phase 3, makeup water will be taken from raw water tank (RWT) using a portable pump. It is not clear in the DCD whether there is a level instrument for the RWT being included in the design.

The applicant is requested to explain the design of RWT level instrument, or justify its elimination.

### **Response**

The design of the raw water system including the raw water tank is not involved in the DC phase. The level instrument will be provided to the raw water tank. To design the raw water tank

including level instrument, the site specific design data (water demand, site location, raw water source, etc.) will be determined during the construction phase. While the level instrument is provided for the raw water tank, specific design data is not determined (type, level setting, level alarm, etc.). A conceptual schematic diagram for the raw water tank is shown below as a guide for helping the NRC staff understand this response. Additionally, the information on the required makeup volume and water source in BDBEE is provided in Technical Report, APR1400-E-P-NR-14005-P, Table B-3.



Schematic diagram of the raw water tank and FLEX equipment connection point

### 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.