

## **SUPPLEMENTAL 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.: 261-8253**

**SRP Section: 07.01 – Instrumentation and Controls - Introduction**

**Application Section: 7.1**

**Date of RAI Issue: 10/20/2015**

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### **Question No. 07.01-28**

Identify the relationship between the TeR APR1400-Z-J-NR-14003, "Software Program Manual" and the Common Q Software Program Manual.

10 CFR 50.55a(h)(3) states, in part, that application filed on or after May 13, 1999, for design certifications must meet the requirements for safety systems in IEEE Std. 603-1991 and the correction sheet dated January 30, 1995. IEEE Std 603-1991, Clause 5.3, states, in part, that safety system equipment shall be designed, manufactured, inspected, installed, tested, operated, and maintained in accordance with a prescribed quality assurance program. The APR1400 design certification application (see TeR APR1400-Z-J-NR-14001, "Safety I&C System," Rev. 0, Section 8, "Safety I&C System Platform") identifies Common Q as the digital platform that will be used to implement safety-related instrumentation and control (I&C) systems, such as the Plant Protection System. The NRC approved Topical Report WCAP-16096-NP-A, Revision 4, "Software Program Manual for Common Q Systems," dated Feb. 2013. What is the relationship between the APR1400 Software Program Manual and WCAP-16096?

### **Response**

The Software Program Manual (SPM) TeR (APR1400-Z-J-NR-14003) and the Common Q SPM (WCAP-16096) are separately developed. The documents do not refer to one another. The Common Q platform software has been developed in accordance with the Common Q SPM and is considered to be existing software to be used in the APR1400 safety I&C systems, and it is treated in the manner described in Section 4.1.2 of the SPM TeR. Other software to be developed for the APR1400 I&C systems will be developed in accordance with the SPM TeR.

**Supplemental Response**

The SPM TeR does not provide the assignment of a specific software item to a category that is original software or existing software, as stated in Section 2.1 of the SPM TeR. The SPM TeR is not prepared for a specific platform. The SPM TeR addresses the general software engineering process for the APR1400 I&C systems. Therefore, the SPM TeR does not state the categorization of the Common Q platform software.

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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 Environmental Report.