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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.: 128-7980  
SRP Section: 18 – Human Factors Engineering  
Application Section: 18.6 Treatment of Important Human Actions (TIHAs)  
Date of RAI Issue: 08/05/2015

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### **Question No. 18-18**

Section 4.2, “Deterministically-Important Human Actions Analyses,” of the TIHA IP discusses a relationship between Type A variables (as described in IEEE Std. 497-2002) and DIHAs identified in the transient and accident analysis in DCD Chapter 15.

The staff reviewed the TAA in DCD Chapter 15 and did not find any discussion of “Type A variables.” Additionally, DCD Chapter 7, Section 7.5.1.1, “Accident Monitoring Instrumentation,” (AMI) states, “There are no AMI Type A variables in the APR1400 design.”

Clarify whether or not Type A variables are used to identify DIHAs.

If they are used, describe how.

Revise the submittal to reflect the RAI response.

### **Response**

To clarify potential discrepancies between the DIHAs that will be identified in the TIHA results summary report (ReSR), Type A variables identified in Chapter 7, and the resolution of that potential discrepancy, Section 3.2 of the TIHA Implementation Plan (APR1400-E-I-NR-14006-P) will be revised, as indicated in the attachment associated with this response.

Based on the clarifications in the Attachment, Chapter 7 of the DCD identifies only the minimum set of accident monitoring variables. If the TIHA program element (PE) identifies deterministically identified important human actions (DIHAs) from the transient and accident analysis (TAA), and the task analysis (TA) program element (PE) identifies the need for additional accident monitoring variables to execute those DIHAs, including Type A variables, the discrepancy will be resolved through the human engineering discrepancy (HED) resolution process.

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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**

Technical report APR1400-E-I-NR-14006-NP, Rev.0, "Treatment of Important Human Actions Implementation Plan," Subsection 3.2 will be revised, as indicated in the Attachment associated with this response.

**3.1 Risk-Important Human Actions****TS****3.2 Deterministically-Important Human Actions****TS**

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