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## REVISED 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.: 518-8654  
SRP Section: 18 – Human Factors Engineering  
Application Section: HSI Design  
Date of RAI Issue: 08/24/2016

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#### **Question No. 18-130**

NUREG-0711, Criterion 8.4.6.2(2) states that the applicant should base the general approach to testing on the test's objective(s). The following aspects of the tests should be described: tasks or scenarios used, performance measures, test procedures, and data analyses. Also, NUREG-0711, Section 1.2.2, "Review Elements," states that an implementation plan (IP) is acceptable if it is verifiable, i.e., the final results can be evaluated using NUREG-0711 criteria, and the IP describes the products (expected results from executing the methodology).

The Human-System Interface (HSI) Design (HD) IP, APR1400-E-I-NR-14007 (Rev. 0), Section 4.1.7, "Basic HSI Tests and Evaluations," prescribes that a performance-based test will be performed with US operators to ensure the effectiveness of the APR1400 Basic HSI. The response to RAI 8458, Question 18-111 (ADAMS Accession No. ML16123A371) states, "...when there is a need to conduct specific design performance tests using the Basic HSI Test Facility, Section 5 of the Human Factors Verification and Validation Implementation Plan, APR1400-E-I-NR-14008 (Rev. 0) will be used as guidance. Tests will follow a test procedure and results will be documented." However, the HD IP was not revised to include this direction.

Include this direction in the HD IP.

#### **Response – (Rev. 1)**

The HSI Design Implementation Plan, APR1400-E-I-NR-14007 will be revised to include a direction for Basic HSI Tests and Evaluations as indicated in the Attachment associated with this response.

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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-14007-NP, Rev.0, "HSI Design Implementation Plan," Sections 4.1.7 will be revised as indicated in the attachment associated with this response.

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#### 4.1.7 Basic HSI Tests and Evaluations

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## 4.2 APR1400 HSIS and Facilities

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