

KHNPDCDRAIsPEm Resource

From: Ciocco, Jeff
Sent: Tuesday, December 15, 2015 2:48 PM
To: apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Harry (Hyun Seung) Chang; Andy Jiyong Oh; Erin Wisler
Cc: Pieringer, Paul; Junge, Michael; Ward, William; Lee, Samuel
Subject: APR1400 Design Certification Application RAI 337-8388 (18 - Human Factors Engineering)
Attachments: APR1400 DC RAI 337 COLP 8388.pdf

KHNP,

The attachment contains the subject request for additional information (RAI). This RAI was sent to you in draft form. Your licensing review schedule assumes technically correct and complete responses within 30 days of receipt of RAIs

Please submit your RAI response to the NRC Document Control Desk.

Thank you,

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Hearing Identifier: KHNP_APR1400_DCD_RAI_Public
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Subject: APR1400 Design Certification Application RAI 337-8388 (18 - Human Factors Engineering)
Sent Date: 12/15/2015 2:47:46 PM
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REQUEST FOR ADDITIONAL INFORMATION 337-8388

Issue Date: 12/15/2015
Application Title: APR1400 Design Certification Review – 52-046
Operating Company: Korea Hydro & Nuclear Power Co. Ltd.
Docket No. 52-046
Review Section: 18 - Human Factors Engineering
Application Section:

QUESTIONS

18-58

NUREG-0711, Section 12.4.1, " Final HFE Design Verification for New Plants and Control Room Modifications," Criterion 1, states that the applicant should evaluate aspects of the design that were not addressed in V&V by an appropriate V&V method.

APR1400-K-I-NR-14009-P, Rev. 0, "Design Implementation Plan," (DI IP) Section 4.2.3, "Condition Measurements," provides the process to measure environmental conditions such as humidity, temperature, lighting, etc. In the verification step (bullet c – "Condition Verification"), the SME is to "Check that the mean value for each condition ... " The text is not clear on which documents are *human factors engineering guidelines* and which are *approved HSI design documentation*.

Revise the DI IP to state specifically which document(s) are the *human factors engineering guidelines*, and which are (or which is) the *approved HSI design documentation*.



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