

KHNPDCDRAIsPEm Resource

From: Ciocco, Jeff
Sent: Thursday, November 12, 2015 9:42 AM
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Cc: Chien, Nan; Segala, John; Umana, Jessica; Lee, Samuel
Subject: APR1400 Design Certification Application RAI 304-8361 (06.04 - Control Room Habitability System)
Attachments: APR1400 DC RAI 304 SCVB 8361.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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REQUEST FOR ADDITIONAL INFORMATION 304-8361

Issue Date: 11/12/2015

Application Title: APR1400 Design Certification Review – 52-046

Operating Company: Korea Hydro & Nuclear Power Co. Ltd.

Docket No. 52-046

Review Section: 06.04 - Control Room Habitability System

Application Section:

QUESTIONS

06.04-2

Questions on Control Room HVAC System:

APR-1400 Design Control Document (DCD) Tier 2, Chapter 16, “Technical Specifications (TSs),” states that the APR-1400 TSs were developed using NUREG-1432, “Standard Technical Specifications (STS) — Combustion Engineering (CE) Plants: Specifications,” Revision 4. CE STS 3.7.11, “Control Room Emergency Air Cleanup System (CREACS),” applies to the APR-1400 control room HVAC system (CRHS) design. The APR-1400 CRHS consists of two divisions of CREACS and control room supply and return system (CRSRS).

1. APR-1400 DCD Tier 2, Chapter 16 includes TS 3.7.11 which requires two CRHS divisions be operable. The Bases for the TS 3.7.11 limiting condition for operation (LCO) states that each CREACS division is considered operable when individual components, including fans are operable. Please define the operability of CREACS related to fans. For example, AU01A has two fans and each fan is rated to provide 100 percent of the required flow. When one of two fans in AU01A is not functioning, do we consider one CREACS division in-operable? The same question applies to AU01B in another CREACS division.

2. CE STS Surveillance Requirement (SR) 3.7.11.1 requires operation of each CREACS train for “[\geq 10 continuous hours with heaters operating or (for systems without heaters) \geq 15 minutes].” Since the APR1400 CREACS air cleanup units (ACUs) contain heaters, SR 3.7.11.1 should be conducted for \geq 10 continuous hours with heaters operating. APR-1400 TS Bases B 3.7.11, Background, is consistent with the CE STS by stating, “continuous operation of each ACU for at least 10 hours per month with the heaters on reduces moisture buildup on the HEPA filters and absorbers”. However, APR-1400 SR 3.7.11.1 only requires operation of each CREACS division for \geq 15 minutes with heaters operating. Please explain the mismatch between these two TS sections and the CE STS. In addition, the word "absorbers" in TS Bases B 3.7.11, Background, appears to be a typo for "adsorbers."



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