KHNPDCDRAIsPEm Resource

From:	Ciocco, Jeff
Sent:	Tuesday, September 08, 2015 1:13 PM
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Cc:	Som, Swagata; Wunder, George; Lee, Samuel
Subject:	APR1400 Design Certification Application RAI 203-8214 (08.03.01 - AC Power Systems (Onsite))
Attachments:	APR1400 DC RAI 203 EEB 8214.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. However, KHNP requests, and we grant, 45 days to respond to this RAI. We may adjust the schedule accordingly.

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

Thank you,

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Hearing Identifier: KHNP_APR1400_DCD_RAI_Public
Email Number: 252

Mail Envelope Properties (45beac9fb69541ed9b6dc3174d121aa1)

Subject: APR1400 Design Certification Application RAI 203-8214 (08.03.01 - AC Power Systems (Onsite))
Sent Date: 9/8/2015 1:12:30 PM
Received Date: 9/8/2015 1:12:34 PM
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Files	**Size**	**Date & Time**
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APR1400 DC RAI 203 EEB 8214.pdf	128036	
image001.jpg	5040	

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Priority: Standard
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REQUEST FOR ADDITIONAL INFORMATION 203-8214

Issue Date: 09/08/2015
Application Title: APR1400 Design Certification Review – 52-046
Operating Company: Korea Hydro & Nuclear Power Co. Ltd.
Docket No. 52-046
Review Section: 08.03.01 - AC Power Systems (Onsite)
Application Section: 8.3.1

QUESTIONS

08.03.01-18

DCD, Tier 2, Section 8.3.1.1.2, "Class 1E Onsite AC Power System," states that "The Class 1E 480V MCC buses are connected to the Class 1E load center buses".

The single line diagrams, Figures 8.1-1 and 8.3.1-1, show one circuit breaker as the connector between the load center and the motor control center (MCC) as typical. GDC 17 states that onsite power systems shall provide sufficient capacity and capability in the event of postulated accidents. Please clarify why an incoming breaker (Main Disconnect) at the MCC is not provided for protection of the MCC. Otherwise, please discuss how protection of the MCC with selective protection coordination is achieved from electrical faults.

08.03.01-19

In DCD Tier 2, Section 8.3.1.1.2.3, "System Independence", it is stated that "Non-Class 1E loads are connected to the Class 1E bus by Class 1E isolation devices", in discussion related to conformance to RG 1.75 for separation and independence. However, RG 1.75 as endorsed by IEEE Std. 384-1992 requires that the isolation devices be properly coordinated and periodically tested to ensure the overall protection coordination remains. The DCD has not addressed that the isolation devices used will be periodically tested.

Please discuss how periodic testing of isolation devices (e.g., visual inspection of fuses and fuse holders) during every refueling outage is performed to demonstrate that the overall coordination scheme under multiple faults of non-safety-related loads provides protection for the safety-related loads, in accordance with RG 1.75.

Please include this in the DCD as appropriate.


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