

## **KHNPDCDRAIsPEm Resource**

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**From:** Ciocco, Jeff  
**Sent:** Tuesday, March 01, 2016 7:53 AM  
**To:** apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Andy Jiyong Oh; Steven Mannon  
**Cc:** Som, Swagata; Zimmerman, Jacob; Wunder, George; Lee, Samuel  
**Subject:** APR1400 Design Certification Application RAI 421-8500 (08.03.01 - AC Power Systems (Onsite))  
**Attachments:** APR1400 DC RAI 421 EEB 8500.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, 60 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  
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**Received Date:** 3/1/2016 7:53:25 AM  
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## REQUEST FOR ADDITIONAL INFORMATION 421-8500

Issue Date: 03/01/2016  
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: 08.03.01

### QUESTIONS

08.03.01-23

By letter dated September 17, 2015, the applicant provided a response to RAI 8017, Question 08.03.01-9 regarding Containment Electrical penetration Assembly (EPA).

In the response, the applicant confirms that the protection devices are capable of being tested, calibrated and inspected. In the inspection/test details provided by the applicant, the staff noted that the inspection/functional test period indicated by the applicant is “once per 60 months” for all circuit breakers for EPA conductors. Also for the overcurrent relay for medium voltage circuit breaker for EPA conductors, the applicant stated that the inspection/functional test period is provided as “at every overhaul.”

10CFR 50, GDC 18 requires that electric power system important to safety shall be designed to permit appropriate periodic inspection and testing of important areas and features, such as wiring, insulation, connections, and switchboards, to assess the continuity of the systems and the conditions of their components. Please provide a discussion as how the above intervals are determined. Also, provide the expected interval in days/months for the next overhaul typical schedule for the overcurrent relay for the medium voltage circuit breaker for containment electrical penetration conductor. The staff is concerned that the periodic inspection and testing intervals provided in this response is not explained adequately. Provide an explanation how the inspection/test period is determined so that the equipment and component are not impacted from gradual undetected degradation.

Since the DCD Section 8.3.1.1.9 did not address the periodic inspection and testing of the Containment EPA, the proposed revision of the DCD Section 8.3.1.1.9 should provide reference of the periodic inspection and testing program and the details of the specific inspection/test as provided in the RAI 08.03.01- 9 response, in compliance with GDC 18 and GDC 50.



**U.S.NRC**

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