

## KHNPDCDRAIsPEm Resource

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**From:** Ciocco, Jeff  
**Sent:** Thursday, June 18, 2015 10:42 AM  
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**Cc:** Ray, Sheila; Zimmerman, Jacob; Steckel, James; Lee, Samuel  
**Subject:** APR1400 Design Certification Application RAI 39-7937 (08.02 - Offsite Power System)  
**Attachments:** APR1400 DC RAI 39 EEB 7937.pdf; image001.jpg

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 the 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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MESSAGE	631	6/18/2015 10:41:40 AM
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image001.jpg	5020	

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## REQUEST FOR ADDITIONAL INFORMATION 39-7937

Issue Date: 06/18/2015

Application Title: APR1400 Design Certification Review – 52-046

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

Docket No. 52-046

Review Section: 08.02 - Offsite Power System

Application Section:

### QUESTIONS

#### 08.02-3

GDC 17 requires that each plant onsite electrical distribution system is supplied by at least two physically independent circuits designed and located to minimize, to the extent practical, the likelihood of their simultaneous failure during operating and postulated accident and environmental conditions. SRP 8.2, Part III (Review Procedures), Section 1 C provides criterion for review to verify the requirements of GDC 17 have been met. It requires that the electrical schematics of the switchyard breaker control system, its power supply configuration and breaker arrangement should be examined for possibility of simultaneous failure of both circuits from single events such as breaker not operating during fault conditions, spurious relay trip, loss of a control circuit power supply or a fault in a switchyard bus or transformer. Therefore, in order to determine that no single event will simultaneously fail both offsite power circuits, the failure mode and effects analysis (FMEA) of the switchyard is necessary for the staff's review.

In the DCD Section 8.2, the applicant described that the offsite power complies with GDC 17, but did not provide any FMEA since COL item 8.2 (6) states that the "the COL applicant is to provide an FMEA for switchyard components." However, the staff requests additional information regarding the conformance to GDC 17 to specifically show that no single event will simultaneously fail both offsite power circuits. The additional information should include the electrical schematics and discussion of the switchyard breaker control system, its power supply configuration and breaker arrangement to demonstrate that there would be no simultaneous failure of both offsite power circuits.

