## KHNPDCDRAIsPEm Resource

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| **From:** | Ciocco, Jeff |
| **Sent:** | Monday, November 14, 2016 3:16 PM |
| **To:** | apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Jungho Kim (jhokim082 @gmail.com); Andy Jiyong Oh; Tony Daegeun Ahn; Steven Mannon |
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| **Subject:** | APR1400 Design Certification Application RAI 529-8711 (14.02 - Initial Plant Test Program - Design Certification and New License Applicants) |
| **Attachments:** | APR1400 DC RAI 529 EEB 8711.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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# REQUEST FOR ADDITIONAL INFORMATION 529-8711

Issue Date: 11/14/2016
Application Title: APR1400 Design Certification Review – 52-046
Operating Company: Korea Hydro & Nuclear Power Co. Ltd.
Docket No. 52-046
Review Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants
Application Section: 8.4

QUESTIONS

14.02-71

REQUIREMENTS

10 CFR Part 50, Appendix A, GDC 17 requires that onsite and offsite power systems provide sufficient capacity and capability and 10 CFR Part 50, Appendix A, GDC 18 requires the testing of electrical power systems.

ISSUE AND INFORMATION NEEDED

In response to RAI 191-8210, Question 14.02-11, dated October 5, 2016 (ML16279A510), the applicant provided revised DCD Tier 2 Sections 14.2.12.1.89, “Alternate AC Source System Test (Mechanical),” and 14.2.12.1.90, “Alternate AC Source System Test (Electrical).” Furthermore, in response to RAI 191-8210, Question 14.02-11, the applicant added a new section, DCD Tier 2 Section 8.4.1.3.1, “AAC Instrumentation and Control.”

In its response to RAI 165-8192, Question 08.04-6(b), dated November 18, 2015 (ML15322A404) and in its response to follow-up RAI 412-8525, Question 08.04-13(b) and RAI 412-8525, Question 08.04-15(b), dated May 2, 2016 (ML16123A384), the applicant stated that the MCR and RSR contain all of the control and/or monitoring provision for the operator to manually actuate the components of the systems necessary to cope with an SBO condition. In revised DCD Tier 2 Section 14.2.12.1.89, item 3.1 states “demonstrate that the GTG and its supporting systems can be started in automatic and manual modes using Main Control Room (MCR) and local control station.” Please discuss how the initial test program in DCD Tier 2 Section 14.2.12.1.89, demonstrates that the AAC Gas Turbine Generator (GTG) and its supporting systems can be started, controlled and monitored from the RSR to cope with an SBO.

The new section, DCD Tier 2 Section 8.4.1.3.1, discusses parameters for monitoring in the MCR and local control panel. The applicant further discusses status indications in the local control panel. The applicant stated, as discussed above, that the RSR contains all of the control and/or monitoring provision for the operator to cope with an SBO condition. Please discuss how parameters for monitoring and status indications in the RSR are addressed in DCD Tier 2 Section 8.4.1.3.1.

In response to RAI 165-8192, Question 08.04-7(b), dated November 18, 2015 (ML15322A404), the applicant stated that the performance of the AAC power source (voltage, current, frequency, volt-ampere reactive, watts, watt-hour, and power factor) and status of circuit breaker position will be monitored from the control room. This information is on performance monitoring of the AAC, and DCD Tier 2 Section 8.4.1.3.1 discusses various monitoring and control devices to provide the operator with control and operational status information for the AAC system. Please discuss why the above information on monitoring the performance of the AAC source is not included in the new DCD Section 8.4.1.3.1, or add the information to the new DCD Section 8.4.1.3.1.


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