

## KHNPDCDRAIsPEm Resource

---

**From:** Ward, William  
**Sent:** Friday, July 10, 2015 4:58 PM  
**To:** 'apr1400rai@khnp.co.kr'; KHNPDCDRAIsPEm Resource; 'Chang, Harry'; 'Yunho Kim (yshh8226@gmail.com)'; 'Mannon, Steven (steven.mannon@aecon.com)'  
**Cc:** Ciocco, Jeff; Lee, Samuel; Thomas, Kenneth; Rivera, Alison; Olson, Bruce  
**Subject:** APR1400 Design Certification Application RAI 67-8019 (13.3 Emergency Planning)  
**Attachments:** image001.jpg; APR1400 DC RAI 67 LIB 8019.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 the RAI question. We may adjust the schedule accordingly.

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

Thank you,

**William R. Ward, P.E.**  
**Senior Project Manager**  
**U.S. Nuclear Regulatory Commission**  
**m/s T6-D38M**  
**Washington, DC, 20555-0001**  
NRO/DNRL/Licensing Branch 2  
ofc T6-D31  
ofc (301) 415-7038 fax (301) 415-6350



**Hearing Identifier:** KHNP\_APR1400\_DCD\_RAI\_Public  
**Email Number:** 76

**Mail Envelope Properties** (61efc9759a6b42cfbddac55e0bf5d4c9)

**Subject:** APR1400 Design Certification Application RAI 67-8019 (13.3 Emergency Planning)  
**Sent Date:** 7/10/2015 4:57:42 PM  
**Received Date:** 7/10/2015 4:57:44 PM  
**From:** Ward, William

**Created By:** William.Ward@nrc.gov

**Recipients:**

"Ciocco, Jeff" <Jeff.Ciocco@nrc.gov>  
Tracking Status: None  
"Lee, Samuel" <Samuel.Lee@nrc.gov>  
Tracking Status: None  
"Thomas, Kenneth" <Kenneth.Thomas@nrc.gov>  
Tracking Status: None  
"Rivera, Alison" <Alison.Rivera@nrc.gov>  
Tracking Status: None  
"Olson, Bruce" <Bruce.Olson@nrc.gov>  
Tracking Status: None  
"apr1400rai@khnp.co.kr" <apr1400rai@khnp.co.kr>  
Tracking Status: None  
"KHNPDCDRAIsPEM Resource" <KHNPDCDRAIsPEM.Resource@nrc.gov>  
Tracking Status: None  
"Chang, Harry" <hyunseung.chang@gmail.com>  
Tracking Status: None  
"Yunho Kim (yshh8226@gmail.com)" <yshh8226@gmail.com>  
Tracking Status: None  
"Mannon, Steven (steven.mannon@aecom.com)" <steven.mannon@aecom.com>  
Tracking Status: None

**Post Office:** HQPWMSMRS05.nrc.gov

Files	Size	Date & Time
MESSAGE	777	7/10/2015 4:57:44 PM
image001.jpg	4205	
APR1400 DC RAI 67 LIB 8019.pdf		80774

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**



## REQUEST FOR ADDITIONAL INFORMATION 67-8019

Issue Date: 07/10/2015

Application Title: APR1400 Design Certification Review – 52-046

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

Docket No. 52-046

Review Section: 13.03 - Emergency Planning

Application Section:

### QUESTIONS

#### 13.03-1

##### Regulatory Basis:

Appendix E to 10 CFR Part 50, Section IV.E.2: Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;

NUREG-0654/FEMA-REP 1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Planning Standard H.1: Each licensee shall establish a Technical Support Center (TSC) and an onsite operations support center (assembly area) in accordance with NUREG-0696, Revision 1.

NUREG-0696, Revision 1, "Functional Criteria for Emergency Response Facilities," Section 2.8 (excerpted), "Instrumentation, Data System Equipment, and Power Supplies": The TSC electrical equipment load shall not degrade the capability or reliability of any safety-related power source. Circuit transients or power-supply failures and fluctuations shall not cause a loss of any stored data vital to the TSC functions. Sufficient alternate or backup power sources shall be provided to maintain continuity of TSC functions and to immediately resume data acquisition, storage, and display of TSC data if loss of the primary TSC power sources occurs.

Application: Tier 1, Section 2.10 "Emergency Planning;" Table 2.10-1 "Emergency Planning ITAAC;" Tier 1, Section 2.7.3.1 "Control Room HVAC System;" Tier 2 Chapter 7; Tier 2 Chapter 8; Tier 2 Chapter 9; Tier 2 Section 13.3 Emergency Planning; Tier 2 Section 14.3.2.10 Emergency Planning ITAAC

In Tier 1, Section 2.10, "Emergency Planning," the applicant provides information that describes the design of the Technical Support Center (TSC). In Tier 1, Section 2.7.3.1, the applicant provides the design description of the Control Room Heating Ventilation and Air Condition System including the backup power supplies for the components. In Tier 2, Chapter 7 the applicant provides the design description of the Instrument and Controls. In Tier 2, Chapter 8 the applicant provides design details of the electric power systems. In Tier 2, Chapter 9, the applicant provides the design details for auxiliary systems.

##### Request:

The TSC is within the Control Room Envelope. However, the backup power supplies to the plant computer, Safety Parameter Display System (SPDS), and TSC displays and lighting are not explicitly provided such that the design for the TSC to continuously assess the impacts of a release of radioactive materials to the environment can be evaluated. The applicant should provide the description of the backup power supplies to the plant computer systems, SPDS, and TSC SPDS displays and lighting so that the staff can determine that the application meets the requirements in Appendix E to 10 CFR Part 50 and the application conforms to guidance provided above, or explain why it is not needed.