

## **KHNPDCDRAIsPEm Resource**

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**From:** Ciocco, Jeff  
**Sent:** Wednesday, July 01, 2015 6:31 AM  
**To:** apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Harry (Hyun Seung) Chang; Yunho Kim; Seung Choi  
**Cc:** Le, Tuan; Clark, Theresa; Umana, Jessica; Betancourt, Luis; Lee, Samuel  
**Subject:** APR1400 Design Certification Application RAI 56-7996 (06.02.02 - Containment Heat Removal Systems)  
**Attachments:** APR1400 DC RAI 56 MEB 7996.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  
**Email Number:** 61

**Mail Envelope Properties** (A67A2D233B3FBB4C8B5109AD7C39550715C4F5083B)

**Subject:** APR1400 Design Certification Application RAI 56-7996 (06.02.02 - Containment Heat Removal Systems)  
**Sent Date:** 7/1/2015 6:31:06 AM  
**Received Date:** 7/1/2015 6:31:12 AM  
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MESSAGE	607	7/1/2015 6:31:12 AM
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United States Nuclear Regulatory Commission

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## REQUEST FOR ADDITIONAL INFORMATION 56-7996

Issue Date: 07/01/2015

Application Title: APR1400 Design Certification Review – 52-046

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

Docket No. 52-046

Review Section: 06.02.02 - Containment Heat Removal Systems

Application Section: Section 6.2.2

### QUESTIONS

#### 06.02.02-11

DCD Tier 2, Section 6.8.2.2.1 states that, following an accident, water introduced into containment drains to the hold-up volume tank (HVT). Any debris in the containment could be transported to the HVT with this fluid. Debris greater than 3.81 cm (1.5 in) in diameter is prevented from entering the HVT by a vertical trash rack at the entrance to the HVT. Particles that are smaller than the trash rack mesh enter the HVT. RG 1.82, Revision 4, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," Section 1.3.9.2 states that licensees (or applicants) should compute structural loads on a strainer using the maximum pressure drop across the strainer. The evaluation addresses the limiting conditions corresponding to the break location and debris source term that induce the maximum total head loss at the ECCS strainer. The NRC staff requests that the applicant provide the discussion of the structural loads, analysis methodology, and total differential pressure ( $\Delta P$  in psi) across the trash racks with and without latent debris greater than 3.81 cm (1.5 in) in diameter.