

## KHNPDCDRAIsPEm Resource

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**From:** Ciocco, Jeff  
**Sent:** Wednesday, January 13, 2016 9:34 AM  
**To:** apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Harry (Hyun Seung) Chang; Andy Jiyong Oh; James Ross  
**Cc:** Rodriguez, Ricardo; Devlin-Gill, Stephanie; Crane, Samantha; Roy, Tarun; Lee, Samuel  
**Subject:** APR1400 Design Certification Application RAI 367-8436 (02.05.04 - Stability of Subsurface Materials and Foundations)  
**Attachments:** APR1400 DC RAI 367 RGS1 8436.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.

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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## REQUEST FOR ADDITIONAL INFORMATION 367-8436

Issue Date: 01/13/2016

Application Title: APR1400 Design Certification Review – 52-046

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

Docket No. 52-046

Review Section: 02.05.04 - Stability of Subsurface Materials and Foundations

Application Section: SRP 2.5.4

### QUESTIONS

02.05.04-16

In response to RAI 8-7847, Question 02.05.04-13 (9/17/2015, ML15260B316), updates were made to the DCD Tier 1, Table 2.1-1 and Tier 2, Table 2.0-1 parameter descriptions related to backfill material dynamic properties. Specifically, the response states “For clarification to COL applicants, the shear moduli values are defined as the minimum and damping values are the maximum values”. This may imply that the maximum values for backfill damping can be greater than 15% as it is the case for strains larger than 0.1% as stated in the table. According to SRP section 3.7, “The maximum soil damping value acceptable to the staff is 15 percent.” The staff understands that the damping values presented in the aforementioned tables were likely used as input to calculate the shear-strain-compatible shear-wave-velocity profiles for the SFG backfill as explained in Section 4.5 of APR1400-E-S-NR-14003-P, Rev. 0. In order to avoid confusion with a COL applicant referencing the APR1400 design, please clarify the purpose of the damping values listed; and provide modifications in appropriate sections of 2.5.4, in DCD Tier 1 Table 2.1-1 and Tier 2 Table 2.0-1.



**U.S.NRC**

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