

KHNPDCDRAIsPEm Resource

From: Ciocco, Jeff
Sent: Friday, March 17, 2017 7:56 AM
To: apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Jung-ho Kim (jhokim082@gmail.com); Andy Jiyong Oh; David Wagner (david.wagner@aec.com)
Cc: Williams, Stephen; Burkhardt, Lawrence; Roy, Tarun; McCoppin, Michael
Subject: APR1400 Design Certification Application RAI 542-8731 (11.02 - Liquid Waste Management System)
Attachments: APR1400 DC RAI 542 RPAC 8731.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,

Jeff Ciocco
New Nuclear Reactor Licensing
301.415.6391
jeff.ciocco@nrc.gov



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From: Ciocco, Jeff
Created By: Jeff.Ciocco@nrc.gov

Recipients:

"Williams, Stephen" <Stephen.Williams@nrc.gov>
Tracking Status: None
"Burkhart, Lawrence" <Lawrence.Burkhart@nrc.gov>
Tracking Status: None
"Roy, Tarun" <Tarun.Roy@nrc.gov>
Tracking Status: None
"McCoppin, Michael" <Michael.McCoppin@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
"Junggho Kim (jhokim082@gmail.com)" <jhokim082@gmail.com>
Tracking Status: None
"Andy Jiyong Oh" <jiyong.oh5@gmail.com>
Tracking Status: None
"David Wagner (david.wagner@aecom.com)" <david.wagner@aecom.com>
Tracking Status: None

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REQUEST FOR ADDITIONAL INFORMATION 542-8731

Issue Date: 03/17/2017
Application Title: APR1400 Design Certification Review – 52-046
Operating Company: Korea Hydro & Nuclear Power Co. Ltd.
Docket No. 52-046
Review Section: 11.02 - Liquid Waste Management System
Application Section: 11.2 and 11.5

QUESTIONS

11.02-11

RAI 13-7856 and RAI 8144 coordination

The staff review of the applicant response to RAI 13-7856, Question 12.02-2 Revision 2 is not in agreement with the information presented for, (1) the coolant inventories for liquid tanks in the Liquid Tank Failure Analysis in DCD section 11.2.3.2 and (2) the radionuclide information presented by the applicant in the response to RAI 8144, Question 11.02-1.

The staff reviewed the updated coolant source terms for the Hold-up Tank, the Reactor Makeup Water Tank and the Boric Acid Storage Tank in revised DCD Table 12.2-13. The response from RAI 13-7856, Question 12.02-2 indicated that these source terms are representative of 0.25% failed fuel. The staff used the information in the revised Table 12.2-13 to develop a source term representative of 0.12% failed fuel in accordance with BTP 11-6 of the Standard Review Plan section 11.2 or one half of the activity presented in the revised Table 12.2-13. The staff reanalyzed the required dilution factor needed to meet 10 CFR Part 20, Appendix B, Table 2 limits and determined a higher dilution factor to meet the 10 CFR Part 20, Appendix B, Table 2 limits.

The applicant response to RAI 8144, Question 11.02-1, highlights the use of ANSI 18.1-1999 to be representative of 0.12% failed fuel. However, the information (currently) presented in the RAI 13-7856, Question 12.02-2 response indicates that the 0.12% failed fuel source term would be greater than the coolant activity described by ANSI 18.1-1999.

The staff requests that the applicant determine and justify the source term for the BTP 11-6 calculation and that the responses to RAI 13-7856, Question 12.02-2 and RAI 8144, Question 11.02-1 use and describe source terms that are correct, coordinated if necessary and justified.

Please address these items and provide a markup for the proposed DCD changes.



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