

KHNPDCDRAIsPEm Resource

From: Ciocco, Jeff
Sent: Thursday, April 21, 2016 6:21 AM
To: apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Jung-ho Kim (jhokim082@gmail.com); Andy Jiyong Oh; Steven Mannon
Cc: Stutzcage, Edward; Burkhardt, Lawrence; Wunder, George; Schiller, Alina; Vera, John; Williams, Donna
Subject: APR1400 Design Certification Application RAI 466-8577 (03.11 - Environmental Qualification of Mechanical and Electrical Equipment)
Attachments: APR1400 DC RAI 466 RPAC 8577.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
Email Number: 518

Mail Envelope Properties (3764face11a04a41a11c7946a3f7364e)

Subject: APR1400 Design Certification Application RAI 466-8577 (03.11 - Environmental Qualification of Mechanical and Electrical Equipment)
Sent Date: 4/21/2016 6:21:01 AM
Received Date: 4/21/2016 6:21:03 AM
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Files	Size	Date & Time
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APR1400 DC RAI 466 RPAC 8577.pdf		86943
image001.jpg	5040	

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REQUEST FOR ADDITIONAL INFORMATION 466-8577

Issue Date: 04/21/2016

Application Title: APR1400 Design Certification Review – 52-046

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

Docket No. 52-046

Review Section: 03.11 - Environmental Qualification of Mechanical and Electrical Equipment

Application Section: 3.11

QUESTIONS

03.11-17

10 CFR 50.49 and 10 CFR 50, Appendix A, criterion 4 require that certain components important to safety be designed to withstand environmental conditions, including the effects of radiation, associated with design basis events, including normal operation, anticipated operational occurrences, and design basis accidents.

As a result of the Chapter 12 shielding audit, it was determined that the 1% failed fuel source term of the boric acid concentrator, provided in Calculation No. 1-321-N376-012, was incorrect. The source term is used in calculating the equipment qualification total integrated dose (TID). During audit related discussions with the applicant, the applicant indicated that the source term incorrectly assumed a concentration factor of 10, instead of 100. Therefore, the applicant is requested to:

1. Update the 1% failed fuel source term for the boric acid concentrator and provide the corrected source term.
2. Update all relevant radiation TID information accordingly and ensure that all associated information in the FSAR and APR1400-E-X-NR-14001, is appropriately updated as a result of this correction.

