

KHNPDCDRAIsPEm Resource

From: Ciocco, Jeff
Sent: Wednesday, February 01, 2017 10:23 AM
To: apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Andy Jiyong Oh; Jungho Kim (jhokim082@gmail.com); David Wagner (david.wagner@aecom.com); Hyeok Jeong (michael.jeong2@gmail.com)
Cc: Yeshnik, Andrew; Mitchell, Matthew; Wunder, George; McCoppin, Michael
Subject: APR1400 Design Certification Application RAI 536-8725 9 (09.01.01 - Criticality Safety of Fresh and Spent Fuel Storage and Handling)
Attachments: APR1400 DC RAI 536 MCB 8725.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



Hearing Identifier: KHNP_APR1400_DCD_RAI_Public
Email Number: 595

Mail Envelope Properties (644a3803fc59451fba9befe28df74460)

Subject: APR1400 Design Certification Application RAI 536-8725 9 (09.01.01 - Criticality Safety of Fresh and Spent Fuel Storage and Handling)
Sent Date: 2/1/2017 10:22:42 AM
Received Date: 2/1/2017 10:22:45 AM
From: Ciocco, Jeff

Created By: Jeff.Ciocco@nrc.gov

Recipients:

"Yeshnik, Andrew" <Andrew.Yeshnik@nrc.gov>
Tracking Status: None
"Mitchell, Matthew" <Matthew.Mitchell@nrc.gov>
Tracking Status: None
"Wunder, George" <George.Wunder@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
"Andy Jiyong Oh" <jiyong.oh5@gmail.com>
Tracking Status: None
"Jungcho Kim (jhokim082@gmail.com)" <jhokim082@gmail.com>
Tracking Status: None
"David Wagner (david.wagner@aecom.com)" <david.wagner@aecom.com>
Tracking Status: None
"Hyeok Jeong (michael.jeong2@gmail.com)" <michael.jeong2@gmail.com>
Tracking Status: None

Post Office: HQPWMSMRS07.nrc.gov

Files	Size	Date & Time
MESSAGE	496	2/1/2017 10:22:45 AM
APR1400 DC RAI 536 MCB 8725.pdf		96157
image003.jpg	5023	

Options

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

REQUEST FOR ADDITIONAL INFORMATION 536-8725

Issue Date: 02/01/2017

Application Title: APR1400 Design Certification Review – 52-046

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

Docket No. 52-046

Review Section: 09.01.01 - Criticality Safety of Fresh and Spent Fuel Storage and Handling

Application Section: 9.1.1

QUESTIONS

09.01.01-43

Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix A, General Design Criteria 62 requires preventing criticality in the fuel storage and handling system through the use of physical systems or processes.

In response to RAI 8421, Question 28814 (09.01.01-30) and RAI 8578 Question 09.01.01-39 the applicant provided a justification for the use of as-manufactured neutron absorber coupons even though the Metamic material is exposed to elevated temperatures during fuel rack fabrication. The staff has determined that the applicant's justification is inadequate.

The coupon monitoring program is intended to use material that is in the as-fabricated condition. The Metamic material is expected to experience elevated temperatures during fabrication due to the close proximity of welding. As such, the as-fabricated condition may not be the same as the as-supplied condition of the material.

Modify the proposed neutron absorber monitoring program to include neutron absorber coupons that are heat treated to the same conditions as the qualification test described in RAI 8578 Question 09.01.01-38 or provide justification regarding how the as-fabricated (heated) material experiences aging with the same effects and at the same rate as the as-supplied material.

