KHNPDCDRAIsPEm Resource

From: Ward, William
Sent: Friday, October 16, 2015 6:13 PM
To: apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Harry (Hyun Seung) Chang; Andy Jiyong Oh; Erin Wisler (erin.wisler@aecom.com)
Cc: Lee, Samuel; Ciocco, Jeff; Chien, Nan; Segala, John; Wunder, George; Umana, Jessica
Subject: APR1400 Design Certification Application RAI 251-8320 (6.5.1 - ESF Atmosphere Cleanup Systems)
Attachments: APR1400 DC RAI 251 SCVB 8320.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, 45 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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From: Ward, William

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U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

REQUEST FOR ADDITIONAL INFORMATION 251-8320

Issue Date: 10/16/2015
Application Title: APR1400 Design Certification Review – 52-046
Operating Company: Korea Hydro & Nuclear Power Co. Ltd.
Docket No. 52-046
Review Section: 06.05.01 - ESF Atmosphere Cleanup Systems
Application Section:

QUESTIONS

06.05.01-1

Other than DCD Tier 2, Section 6.5.1 committing to meet the guidance in Regulatory Guide (RG) 1.52, “Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants,” the staff determined that there was insufficient detailed information in the DCD regarding the carbon adsorbers to demonstrate conformance to the provisions of RG 1.52. Please provide in DCD Section 6.5.1 the following information on design or testing:

1. The maximum charcoal loading for the adsorbent trains.
2. Design consideration of iodine desorption and adsorbent auto-ignition.
3. Carbon laboratory test method - If it is ASTM D-3803-1989, please state that in the DCD.
4. Total activated carbon bed depth.
5. The Methyl Iodine Penetration Acceptance Criterion while performing laboratory test for carbon adsorbers.

Also, the staff determined that there was insufficient detailed design information to verify how the specific RG 1.52 guidance is met for the HEPA filters to have sufficient design margin to accommodate fission product loading during an accident without restricting the flow rate. The increase in pressure drop between the clean and dirty conditions for the any of the ESF adsorber units should be within the normal expected pressure increase for a typical filtered exhaust fan design.