

## **U.S. Nuclear Regulatory Commission Public Meeting Summary**

April 14<sup>th</sup>, 2021

**Title:** HEAF Research Working Group Update

**Meeting Identifier:** 20210336

**Date of Meeting:** April 6<sup>th</sup>, 2021

**Location:** Virtual, Microsoft Teams

**Type of Meeting:** Information with Q&A

**Purpose of the Meeting(s):** Provide stakeholders with an update on the progress of the joint NRC/EPRI HEAF working group, including advancements of the PRA methodology, modeling tools, and target fragility assessment.

**General Details:** This was a virtual meeting held on April 6<sup>th</sup>, 2021 from 9:00 AM to 12:00 PM. The meeting was open to the public, and participants included NRC staff, EPRI staff, NRC contractors from the National Institute of Standards and Technology and Sandia National Laboratories, representatives from the Nuclear Energy Institute, and utility companies. There were approximately 70 participants.

**Summary of Presentations:** Mark Thaggard (RES/DRA Director) opened the meeting. Nick Melly (RES/DRA/FXHAB) provided a brief summary of the working group structure and overall schedule, and introduced the HEAF web page for the project plan and most up-to-date information. Marko Randelovic and Ashley Lindeman (EPRI) presented the working group progress on updating the PRA methodology for HEAFs. Gabriel Taylor (RES/DRA/FXHAB) provided a summary of the modeling strategy for hazard analysis, and Matt Hopkins (SNL), Kevin McGrattan (NIST), and Jason Floyd (Jensen Hughes) presented progress in using specific modeling tools like ARIA, FUEGO and Fire Dynamics Simulator (FDS). Kenneth Hamburger (RES/DRA/FXHAB) and Austin Glover (SNL) presented the strategy and progress in modeling target failure from HEAF events. Marko Randelovic (EPRI) presented the results of the EPRI survey on the location and amounts of aluminum in the nuclear fleet. A half hour was reserved for public questions and comments.

**Action Items/Next Steps:** The following action items and comments were noted at the meeting:

- The joint working group will continue to adhere to the schedule, and the NRC will keep stakeholders informed via the website and other communications as appropriate.
- Industry representatives suggested the use of operating experience in model validation. Gabriel Taylor noted that the types of data needed for model validation are typically not available from operating experience, but requested any data that does exist.
- Industry representatives asked about how the working group will prevent the methods and tools from being overly conservative. Nick Melly noted that operating experience is being used to evaluate these tools and methods, and that the pilot plant effort will also help inform the tools and methods.
- Industry representatives asked about the practice of modeling the zone of influence from the perimeter of the cabinet vs. modeling it from a particular point within the cabinet. Nick Melly noted that the exact location within the cabinet where the arc originates is

difficult to predict, but that the hazard differs depending on where in the cabinet the arc originates and the model will account for the various possibilities.

- An industry representative asked how variations in targets (like cable tray configurations and conduits) are being addressed in target fragility analysis. Austin Glover explained that the current effort is to identify a base model which will eventually be expanded to account for these variations.

**Attachments:**

- Meeting Materials ([ML21098A124](#))