



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 12, 2015

MEMORANDUM TO: Anthony Hsia, Deputy Director  
Division of Spent Fuel Management, NMSS

FROM: John-Chau Nguyen, Senior Project Manager */RA/*  
Spent Fuel Licensing Branch  
Division of Spent Fuel Management, NMSS

SUBJECT: SUMMARY OF MAY 21, 2015, PARTIALLY CLOSED PUBLIC MEETING  
WITH AREVA INC., TO DISCUSS RESUBMITTAL OF THE NUHOMS<sup>®</sup>  
EOS SYSTEM SPENT FUEL STORAGE CASK DESIGN.

PURPOSE:

For the Nuclear Regulatory Commission (NRC) staff and representatives from AREVA Inc. to discuss issues resulting from the NRC Staff's completed acceptance review of the application for approval of the NUHOMS<sup>®</sup> EOS System spent fuel storage cask design, and AREVA's proposed strategy to address the identified issues.

MEETING SUMMARY:

The meeting took place on May 21, 2015, from 11:30 a.m. to 3:30 p.m., at the NRC's Three White Flint Building in Rockville, Maryland. Attendees included AREVA Inc. staff, NRC's Division of Spent Fuel Management (SFM) staff, and one member of the public. An attendance list is enclosed (Enclosure 1). The meeting began with introductions, and then the public portion of the discussion, followed by the closed portion of the meeting, and ended after the second public portion of the meeting.

In the public portions of the meeting, AREVA staff discussed in more detail the issues NRC staff identified during the acceptance review of the application for approval of the NUHOMS<sup>®</sup> EOS System spent fuel storage cask design. These issues included 1) justification and compensatory measures for partial penetration closure welds, and justification for the interpretation of American Society of Mechanical Engineers (ASME) code for the partial penetration welds; 2) effects of the presence of a gap on the calculated weld stress should also be subjected to a sensitivity analysis; 3) for an appropriate weld size, a sensitivity analysis needs to also be performed for discretizing the weld into layers in the radial direction; and 4) a 2D mesh sensitivity study does not apply to the 3D side drop scenario; a separate sensitivity study is required for 3D side drop scenario. AREVA concluded by stating that it would revise its safety analysis report Appendix 3.9.1 to include 1) a new section to explain how the ASME code classification is pertinent to the analysis; 2) the ANSYS model will be updated with the following changes: a) the gap between the cover plates and shell will be explicitly included b) a converged model from the sensitivity studies will be used for all analyses and; 3) all results will be updated. The NRC staff clarified, and AREVA staff confirmed, that they have a clear path forward in preparing their resubmittal application. The presentation slides are in Enclosure 2.

During the closed portion of the meeting, the NRC staff questioned the classification of the stresses in the partial penetration weld analysis. AREVA stated that the same classification was used in another spent fuel storage cask design application by a competitor, which was approved by the NRC; however, AREVA is not privy to the proprietary information to be certain. The NRC staff stated that they would look into it. In addition, AREVA also discussed using a limit load analysis as an alternative to their previous partial penetration weld analysis.

The member of the public in attendance did not have any questions or comments, and no regulatory decisions were made at the meeting.

If you have any questions or comments, please contact John-Chau Nguyen at (301) 415-0262 or [John-Chau.Nguyen@nrc.gov](mailto:John-Chau.Nguyen@nrc.gov).

Docket No.: 72-1042

TAC No.: L24688

Enclosures:

As stated

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If you have any questions or comments, please contact John-Chau Nguyen at (301) 415-0262 or [John-Chau.Nguyen@nrc.gov](mailto:John-Chau.Nguyen@nrc.gov).

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As stated

**DISTRIBUTION:**

NRC attendees DMarcano  
G:/SFST/Nguyen/Casework/TN EOS/Resubmittal Pre-App/05-21-2015 Mgt Summary.doc  
G:/SFST/Nguyen/Casework/TN EOS/Resubmittal Pre-App/ NUHOMS EOS System Application Resubmittal MASTER .pdf

**ADAMS Package No. ML15165A098 Memo: ML15167A110 Slides: ML15167A115**

<b>OFC:</b>	SFM		SFM		SFM	
<b>NAME:</b>	JNguyen		WWheatley via email		JVera for MSampson	
<b>DATE:</b>	6/5/2015		6/8/15		6/12/15	

May 21, 2015  
ATTENDANCE LIST

<u>Name</u>	<u>Affiliation</u>
Anthony Hsia	NRC/DSFM
Michele Sampson	NRC/DSFM
Jennifer Davis	NRC/DSFM
Gordon Bjorkman	NRC/DSFM
David Tang	NRC/DSFM
Christian Araguas	NRC/DSFM
Chris Allen	NRC/DSFM
John-Chau Nguyen	NRC/DSFM
John Wise	NRC/DSFM
Steve Everard	NRC/DSFM
Bok Hyoung Lee	NRC/DSFM
Young Kim	NRC/DSFM
Daniel Forsyth	NRC/DSFM
Jack Boshoven	AREVA Inc.
Hoi Yee Tom	AREVA Inc.
Miguel Manrique	AREVA Inc.
Don Shaw	AREVA Inc.
Prakash Narayanan	AREVA Inc.
Raheel Haroon	AREVA Inc.
Abhijit Honrao	AREVA Inc.
Kimberly Manzione	Holtec International

**ENCLOSURE 2: AREVA SLIDES**  
**“NUHOMS EOS System Application Resubmittal MASTER” May 21, 2015**